General Cable

Offshore & Onshore RIG Cables

MARCH 2017

OFFSHORE & ONSHORE RIG CABLES

The arduous environmental challenges of onshore and offshore oil and gas exploration and production have led to effective cable designs created by General Cable's specialized team of expert engineers. Our cabling solutions not only help protect lives but also preserve the operational integrity of mission-critical equipment in the most hazardous environments.

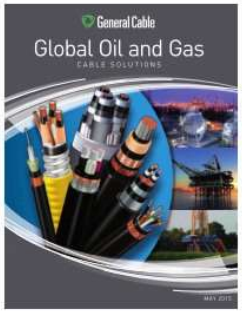
This catalog contains in-depth information on a comprehensive line of offshore and onshore rig cable available today. It features the latest information on products, along with detailed technical and specification data in indexed sections — with an easy-to-use "spec-on-a-page" format. There's also a glossary of technical information for additional assistance.

And, of course, if you need any further data, General Cable's Customer Service staff provides the answers you need quickly and efficiently.

General Cable

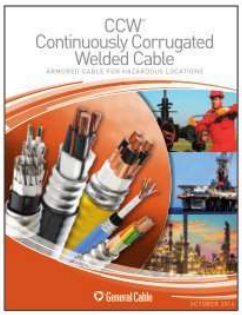
What's New?

GLOBAL OIL AND GAS CABLE SOLUTIONS



Global demand for oil, gas and petroleum-based byproducts has reached record levels. No longer can the industry take a regional or local approach. Diminishing oil reserves call for exploration and production into global extreme environments — deeper, colder, hotter. Successful globalization of the oil, gas and petrochemical industry requires global leaders in cable manufacturing who are both knowledgeable and experienced in international product requirements. With a legacy of innovation that spans more than 170 years, General Cable is uniquely positioned to develop solutions for today's upstream, midstream and downstream application challenges.

CCW® CONTINUOUSLY CORRUGATED WELDED CABLE FOR HAZARDOUS LOCATIONS



When it comes to specifying cables that can handle extreme conditions in hazardous locations, General Cable is your one-source cable provider. Our investment in precision-engineered, state-of-the-art equipment to produce a full line of CCW® cable continues to deliver to our customers a product that sets the standard for the refining industry and is a staple in offshore applications. From 300 V UL Type ITC-HL/PLTC and 600 V UL Type MC-HL to 35 kV UL Type MC-HL or MV-105, General Cable's CCW cables continue to demonstrate their design integrity in the most performance-demanding environments.

CCW® ARCTIC-ARMOR GRADE AUTOMATION CABLE

General Cable's CCW® Arctic-Armor Fieldbus, Category 5e and PROFIBUS cables are recognized for use in Class I, II, and III, Division 1 and 2; or Class I, Zone 1 and 2 hazardous locations per NEC Articles 501, 502, 503, and 505. A continuously corrugated welded armor provides an impervious barrier to moisture, gas and liquids. CCW Arctic-Armor Automation cable insulation passes ASTM D746-04 brittleness temperature impact test at -73ºC, ideal for arctic climates. Contact your General Cable sales representative to learn about our full line of Arctic-Armor grade CCW cables.

GENERAL CABLE WIRE & CABLE SOLUTIONS INTERACTIVE CATALOG SITE

Download our **new app** today!

General Cable
North American Catalogs

One Company Connecting The World

POWERFUL PRESENCE · PRODUCTS PERFORMANCE · PEOPLE

General Cable has been a wire and cable innovator for over 170 years, always dedicated to connecting and powering people's lives. Today, with approximately 13,000 employees and approaching $6 billion in revenues, we are one of the largest wire and cable manufacturers in the world.

Our company serves customers through a network of 38 manufacturing facilities in our core markets and has worldwide sales representation and distribution. We are dedicated to the production of high-quality aluminum, copper and fiber optic wire and cable and systems solutions for the energy, construction, industrial, specialty and communications sectors. With a vast portfolio of products to meet thousands of diverse application requirements, we continue to invest in research and development in order to maintain and extend our technology leadership by developing new materials, designing new products, and creating new solutions to meet tomorrow's market challenges.

In addition to our strong brand recognition and strengths in technology and manufacturing, General Cable is also competitive in such areas as distribution and logistics, marketing, sales and customer service. This combination enables us to better serve our customers globally and as they expand into new geographic markets.

General Cable offers our customers all the strengths and value of a large company, but our people give us the agility and responsiveness of a small one. We service you globally and locally.

General Cable | ONE COMPANY
CONNECTING THE WORLD

Visit our Website at
www.generalcable.com

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Corporate Social Responsibility

CREATING SHARED VALUE

General Cable believes corporate social responsibility (CSR) is about creating shared value. That means keeping a dual focus in our business decisions: what is good for us as a company and what contributes to the greater good of the communities in which we live and work.

SAFETY

Working safer by working together

General Cable has one worldwide safety vision and goal – ***ZERO & BEYOND***. We measure safety performance globally, share best practices and implement sound health and safety management systems. Many of our facilities worldwide are OHSAS 18001 (safety management system) certified. All North American facilities have implemented an equivalent health and safety management system. General Cable was a pioneer in obtaining the OHSAS 18001 Certificate for Occupational Health and Safety Management Systems in Europe and North Africa.

SUSTAINABILITY

Responsible practices in daily operations

As a global leader in the wire and cable industry, General Cable recognizes its role and responsibility in promoting sustainability. Our strongest business value is continuous improvement in all areas of our company. Across our many businesses, the quest to introduce new and better products through continuous improvement in environmental designs reflects our commitment to achieving industry-leading standards and responding proactively to global environmental issues. General Cable was the first cable manufacturer to obtain certification for its environmental management system, in accordance with the ISO 14001 and EMAS Standards.

CITIZENSHIP

A commitment to being good citizens

Being responsible citizens in our communities is of the utmost importance to us. Unequivocal honesty, integrity, forthrightness and fair dealing have long been part of General Cable's core values and are expected globally in all of our business relationships with our customers, employees, suppliers, neighbors and competitors. Our company leaders and employees strive to make a difference throughout a host of volunteer activities and financial support, improving the communities in which we live and work.

INNOVATION

Technologies that power and connect the world

General Cable is delivering innovation that matters. We are focusing on R&D expertise and investing in developing wire and cable solutions that meet the challenges confronting our customers and the world. In working together and using all the ingenuity and creativity we have, we will reach the goal of being the preeminent supplier of wire and cabling solutions in the industry, with both green constructions and designs for the ever-growing renewable energy market.

GREEN INITIATIVE

A commitment to achieving industry-leading standards and responding proactively to environmental global issues.

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info@generalcable.com

Visit www.GeneralCableCSR.com to learn more.

Offshore and Onshore RIG Cables

Introduction

General Cable is a **world leader** in cable manufacturing and one of the world's largest suppliers to the Onshore and Offshore Drilling sectors. General Cable's **extensive experience** in the onshore and offshore markets translates into a clear understanding of international standards and specifications that the global market demands.

When **global demand** for oil and petroleum-based byproducts reached record levels in 2006, investment in new and deeper oilfields boomed. To assist our customers, who include some of the world's top oil companies, General Cable offers **a full range of international cables,** with emphasis on land and sea drilling, exploration and production. Diminishing global shallow water oil reserves are forcing exploration and production to move deeper and into **extreme environments.** With a legacy that spans over 100 years, our experience and record of innovation heighten our ability to develop solutions for the complex challenges deep-water applications pose.

Our company has **best-in-class research and development,** and testing and production facilities in North America, Europe and Asia Pacific, employing more than 14,500 employees worldwide. The development of unique compounds, designed and tested to meet specific needs and stringent specifications, **differentiates General Cable** from all others.

General Cable's **breadth of product** is very extensive, including IEEE Type, IEC Type, and NEK 606 Type low- and medium-voltage and instrumentation cables, as well as onshore and offshore copper and fiber optic communications products and subsea cable solutions.

IEEE Specification

General Cable's extensive range of products lead with one-of-a-kind solutions like IEEE 1580 Type P **MOR® Polyrad®** mud oil-resistant, flexible signal, control and low-voltage cables for oil and gas drilling platforms, ships and FPSOs, as well as land-based drilling rig installations. **CCW®** Continuously Corrugated Welded products are used in hazardous locations requiring cables that are impervious to gas, liquids and vapors and terminated with explosion-proof glands to electrical equipment. CCW cable is a staple in onshore and offshore production platforms. General Cable has developed a complete line of IEEE 1580 Type E **MV-RIG®** cables, engineered to meet the industry demands for greater medium-voltage power generation and distribution in the onshore and offshore environments.

IEC Specification

To support the ongoing expansion of global demand, General Cable offers a full line of **IEC** specified **Exzhellent®** products, while continuing to develop innovative solutions for our evolving world. General Cable's global presence includes products like the **IEC 60092-350** series of instrumentation, low-voltage and medium-voltage cables with **NEK 606** low-smoke and mud oil-resistant capabilities, as well as **IEC 60331** circuit integrity constructions.

Communications

General Cable offers a full line of onshore, offshore and marine shipboard low-smoke, zero-halogen copper and fiber optic **COMMODORE®** communications cables. From standard RS serial data and popular fieldbus solutions to advanced copper and fiber data communications cables, General Cable has the communications cables you need for your regional and global onshore, offshore and marine shipboard applications.

Application-Specific Cable Assemblies

General Cable specializes in engineering distinctive high-end, precision breakout-type cable assemblies utilizing vertically integrated in-house capabilities. From application-specific cable design, engineering and manufacturing to custom-engineered cable assemblies with fully documented and traceable test procedures in accordance with customer specifications, General Cable offers quantifiable quality cabling solutions.

Quality Assurance Guaranteed

Through an ongoing quality assurance initiative, General Cable ensures the quality of product design, manufacture, installation and expected service life, as well as environmentally sound products, processes and policies. Continuous research and development, combined with process control, quality audits and prolonged stringent testing, provide an ever-growing range of specialty materials and designs that meet offshore and marine shipboard industry approvals and standards.

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INS-0167-R0515

PRODUCT SELECTION LOCATOR

Offshore and Onshore RIG Cables

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Offshore and Onshore RIG Cables

IEEE 1580 TYPE P MOR® Polyrad® Cable Selection Guide

IEEE 1580 TYPE P MOR POLYRAD UNARMORED CABLE	Voltage				Industry Compliances										Flame Tests			Class 1		Zone	
	600 V	600 V / 1000 V	2 kV / 1000 V	2 kV / 1000 V HD	API-RP14F	CSA C22.2 No. 38 Type RW90	CSA C22.2 No. 230 Type TC	CSA C22.2 No. 245 Type X110	IEEE 1580-2010 Type P	IEC 60092-350	UL 1309 Type X110	UL Listed 110°C Marine Shipboard Cable	UL Type TC	NEK 606 for mud oil resistance	IEEE 1202	IEC 60332-3-22 Cat. 2	CSA C22.2 No. 0.3 FT4	Division 1	Division 2	1	2
Flexible Single-Conductor Power - Unarmored	x	x	x	x	x	x	x	x	x	x	x	x	x		x	x	x		x		x
Flexible Single-Conductor Power - Unarmored & Sheathed			x	x	x			x	x	x	x	x	x	x	x	x	x		x		x
Flexible Multi-Conductor Control - Unarmored 18 AWG & 16 AWG		x			x			x	x	x	x	x	x	x	x	x	x		x		x
Flexible Multi-Conductor Control - Unarmored 14 AWG, 12 AWG & 10 AWG		x			x	x	x	x	x	x	x	x	x	x	x	x	x		x		x
Flexible Multi-Conductor Power - Unarmored		x			x	x	x	x	x	x	x	x	x	x	x	x	x		x		x
Flexible Variable Frequency Drive Power - Unarmored			x		x	x	x	x	x	x	x	x	x	x	x	x	x	x		x	
Flexible Paired Signal Cable Individually/Overall Shielded - Unarmored		x			x	x	x	x	x	x	x	x	x	x	x	x	x		x		x
Flexible Triad Signal Cable Individually/Overall Shielded - Unarmored		x			x			x	x	x	x	x	x	x	x	x	x		x		x

IEEE 1580 TYPE P MOR POLYRAD ARMORED & SHEATHED CABLE	Voltage				Industry Compliances									Flame Tests			Class 1		Zone	
	600 V	600 V / 1000 V	2 kV / 1000 V	2 kV / 1000 V HD	API-RP14F	CSA C22.2 No. 230 Type TC	CSA C22.2 No. 245 Type X110	IEEE 1580-2010 Type P	IEC 60092-350	UL 1309 Type X110	UL Listed 110°C Marine Shipboard Cable	UL Type TC	NEK 606 for mud oil resistance	IEEE 1202	IEC 60332-3-22 Cat. 2	CSA C22.2 No. 0.3 FT4	Division 1	Division 2	1	2
Flexible Single-Conductor Power - Armored & Sheathed			x	x	x		x	x	x	x	x		x	x	x	x	x		x	
Flexible Multi-Conductor Control - Armored & Sheathed 18 AWG & 16 AWG		x			x		x	x	x	x	x		x	x	x	x	x		x	
Flexible Multi-Conductor Control - Armored & Sheathed 14 AWG, 12 AWG & 10 AWG		x			x		x	x	x	x	x		x	x	x	x	x		x	
Flexible Multi-Conductor Power - Armored & Sheathed		x			x		x	x	x	x	x		x	x	x	x	x		x	
Flexible Variable Frequency Drive Power - Armored & Sheathed			x		x		x	x	x	x	x		x	x	x	x	x		x	
Flexible Paired Signal Cable Individually/ Overall Shielded - Armored & Sheathed		x			x		x	x	x	x	x		x	x	x	x	x		x	
Flexible Triad Signal Cable Individually/ Overall Shielded - Armored & Sheathed		x			x		x	x	x	x	x		x	x	x	x	x		x	

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Offshore and Onshore RIG Cables

IEEE 1580 TYPE P MOR® Polyrad® Product Features and Benefits

Product Features	Application Benefits
Conductor: 18 AWG – 1111 kcmil soft annealed tinned copper flexible strand	- Facilitates ease of cable installation and termination - Tinned copper helps prevent corrosion
Insulation: Polyrad® XT-125 irradiated Cross-linked Polyolefin (XLPO)	- Temperature rated @ 125°C for long life, permitting higher ampacity rating at reduced physical size and protection from thermal overloads
Jacket: Mud oil-resistant, black irradiated Cross-linked Chlorinated Polyethylene (XL-CPE)	- Standard construction is enhanced with mud oil resistance for increased safety and improved productivity - Extra-heavy-duty arctic-grade thermoset jacket provides abrasion resistance to stand up to the severe stresses of installation and operation in hostile environments
Optional: Armor – Bronze braid 88% minimum coverage and Jacket – Mud oil-resistant, black irradiated Cross-linked Chlorinated Polyethylene (XL-CPE)	- Enhanced physical protection and mechanical properties
Irradiation Cross-Linking Thermoset System	- Increased cable flexibility for ease of handling in cold climates - No separator tapes and free stripping for easy installation - Better electrical properties as cable is kept free of moisture for improved cable life - Permanent colors for improved safety and productivity
Exceptional Physical Properties	- Excellent mechanical properties for severe stresses of installation and operation in hostile environments - Meets UL 2225 crush and impact requirements of Type MC-HL cables
Excellent Thermal Stability	- Passes UL cold impact test at -40°C and UL cold bend test at -55°C, allowing for -40°C installation temperatures - Delivers superior performance at the widest temperature range, -55°C - +125°C

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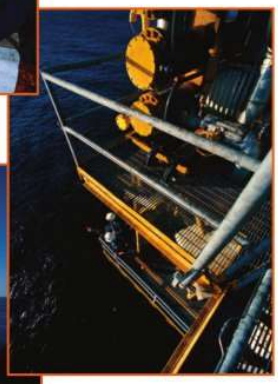
Offshore and Onshore RIG Cables

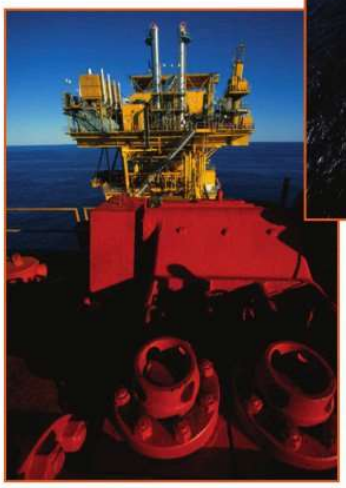
MOR® Polyrad® Flexible IEEE 1580 Type P Offshore and Onshore Cables

Today's competitive offshore environment demands advanced cabling systems that meet requirements well into the future. General Cable's highly reliable and low-maintenance cables meet specific industry demands and specifications, ensuring the utmost performance. Nowhere is the need for robust, high-functioning cable designs greater than in the offshore environment. As a world-class manufacturer, General Cable understands the need to deliver cabling infrastructures that reduce downtime for improved productivity, as well as meeting increased needs for advanced exploration.

This section contains in-depth information on the most comprehensive line of General Cable's next generation of offshore and onshore cables, designed to perform within the tough demands of today's ester-based mud oil drilling for increased safety and improved productivity. MOR® Polyrad® XT-125 product line is proven optimized for enhanced mud oil resistance, while continuing to meet the rigorous requirements of IEEE 1580 Type P with maximum flexibility and flame retardant characteristics, resistance to environmental conditions and excellent mechanical properties.



From drilling rigs and semi-submersibles to offshore platforms, General Cable offers a full line of MOR Polyrad XT-125 Marine IEEE 1580 Type P listed cables. As a leader, General Cable has played a significant role in the development of irradiated cross-linked Chlorinated Polyethylene (XL-CPE) extra-heavy-duty arctic-grade thermoset jacket with **enhanced mud oil resistance, maximum flexibility** and **abrasion resistance** to stand up to the severe stresses of installation and operation in hostile environments. Our insulation features a tough flame-retardant thermosetting Polyrad XT-125 system cross-linked by irradiation, permitting higher ampacity ratings and reduced physical size. As a result, this insulation system has superior heat resistance and abrasion performance.



Our Cross-linked Chlorinated Polyethylene (XL-CPE) based system has superior low temperature properties, passing cold impact at -40°C and cold bend at -55°C, while offering longer aging and ozone resistance beyond that of a neoprene-based system.

General Cable...highly engineered performance cables to meet any specifications.

ABS · CSA · DNV · Lloyd's Register · Intertek · UL

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Offshore and Onshore RIG Cables

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IEEE 1580 Type P

MOR® Polyrad® XT-125 Flexible Unarmored Cables

FLAME-RETARDANT

FLEXIBLE

CRUSH- & IMPACT-RESISTANT

HEAVY-DUTY

OIL-RESISTANT

MUD OIL-RESISTANT

SUNLIGHT-RESISTANT

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Offshore and Onshore RIG Cables

IEEE 1580 Type P
MOR® Polyrad® XT-125, Unarmored

Flexible Single-Conductor Power Unarmored

600 V, 2 kV/1000 V & 2 kV/1000 V Heavy-Duty

Product Construction:

1. **Conductor:**
   - 18 AWG thru 1111 kcmil soft annealed tinned copper flexible strand
2. **Insulation:**
   - Polyrad® XT-125 Irradiated Cross-linked Polyolefin (XLPO) – Black
   - Polyrad® XT-125 Heavy-Duty (HD) Irradiated Cross-linked Polyolefin (XLPO) – 4/0 AWG and larger – Black
3. **Print:** (Including but not limited to)
   - POLYRAD® XT-125 (UL) E85994 BR781 110C 1/C XXAWG 600 V IAW 245/1309 TYPE X110 AND IEEE 1580 TYPE P YEAR OF MFG DAY/MONTH/YEAR
   - POLYRAD® XT-125 (UL) E85994 BR781 HD[1] 110C 1/C XXAWG (XX SQ MM) 2000V -- (CSA) LL 9755 SPEC 245/1309 FT4 -40C RW90 XLPE TC[2] SR 2 KV (ETL) US 109229 IEEE 1580 -- IEC 1 KV 60332.3A DAY/MONTH/YEAR OF MFG SEQUENTIAL FOOTAGE MARK

   [1] Heavy-Duty (HD) – 4/0 AWG and larger

   [2] TC – 4/0 AWG and larger
4. **Option:**
   - Green stripe for use as equipment grounding

Applications:

- Offshore oil and gas drilling platforms, MODUs, ships and FPSOs
- Land-based oil and gas drilling rigs
- Suitable for use in Class I, Division 2 and Zone 2 environments when installed in accordance with API-RP14F or NEC Article 501 (4/0 AWG and larger)

Features:

- Flexible stranding to facilitate ease of cable installation and termination
- Temperature rated @ 125°C for long life, higher ampacities and protection from thermal overloads
- Meets cold bend test at -55°C
- Meets cold impact test at -40°C

Compliances:

Industry:

- API-RP14F
- CSA C22.2 No. 38 Type RW90
- CSA C22.2 No. 230 Type TC
- CSA C22.2 No. 245 Type X110
- IEEE 1580-2010 Type P
- IEC 60092-350
- UL 1309 Type X110
- UL Listed 110°C Marine Shipboard Cable

Flame Test:

- IEEE 1202
- IEC 60332-3-22 Cat. A (supersedes IEC 60332-3A)
- CSA C22.2 No. 0.3 FT4

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Offshore and Onshore RIG Cables

IEEE 1580 Type P
MOR® Polyrad® XT-125, Unarmored

Flexible Single-Conductor Power Unarmored

600 V, 2 kV/1000 V & 2 kV/1000 V Heavy-Duty

600 V

CATALOG NUMBER	# OF CORES	COND. (AWG) SIZE	NOMINAL CABLE DIAMETER		COPPER WEIGHT		NET WEIGHT		AMPACITIES[1] 45°C AMBIENT-SINGLE BANKED			
			INCHES	mm	LBS/1000 FT	kg/km	LBS/1000 FT	kg/km	95°C	100°C	110°C	125°C
387790	1	18	0.110	2.79	6	9	10	15	20	16	17	24
387800	1	16	0.116	2.95	7	10	12	18	23	24	25	35
387810	1	14	0.129	3.28	11	16	17	25	32	37	40	56
387820	1	12	0.147	3.73	17	25	24	36	38	45	48	67
387830	1	10	0.179	4.55	34	51	42	62	51	58	62	87

2 kV/1000 V

CATALOG NUMBER	# OF CORES	COND. (AWG) SIZE	NOMINAL CABLE DIAMETER		COPPER WEIGHT		NET WEIGHT		AMPACITIES[1] 45°C AMBIENT-SINGLE BANKED			
			INCHES	mm	LBS/1000 FT	kg/km	LBS/1000 FT	kg/km	95°C	100°C	110°C	125°C
388090	1	18	0.137	3.48	6	9	15	22	20	16	17	24
388100	1	16	0.144	3.66	8	12	17	25	23	24	25	35
388110	1	14	0.163	4.14	11	16	21	31	32	37	40	56
388120	1	12	0.181	4.60	17	25	29	43	38	45	48	67
388130	1	10	0.213	5.41	33	49	48	71	51	58	62	87
281190	1	8	0.251	6.38	45	67	65	97	70	72	77	90
295370	1	6	0.300	7.62	75	112	102	152	92	96	103	126
357270	1	5	0.368	9.35	114	170	151	225	104	106	117	153
281060	1	4	0.388	9.86	122	182	163	243	123	128	137	158
357280	1	3	0.411	10.44	165	246	210	312	140	146	156	195
281070	1	2	0.433	11.00	190	283	238	354	162	169	181	217
300550	1	1	0.543	13.79	263	391	341	507	180	194	208	281

2 kV/1000 V — 1 AWG and smaller constructions with Regular-Duty insulation thickness.

2 kV/1000 V Heavy Duty

CATALOG NUMBER	# OF CORES	COND. (AWG) SIZE	NOMINAL CABLE DIAMETER		COPPER WEIGHT		NET WEIGHT		AMPACITIES[1] 45°C AMBIENT-SINGLE BANKED			
			INCHES	mm	LBS/1000 FT	kg/km	LBS/1000 FT	kg/km	95°C	100°C	110°C	125°C
387300	1	1/0	0.578	14.68	351	522	438	652	217	227	243	319
387310	1	2/0	0.638	16.21	407	606	501	745	251	262	281	354
387320	1	3/0	0.717	18.21	594	884	692	1030	289	300	321	437
387330	1	4/0	0.840	21.34	668	994	816	1214	337	351	376	495
357290	1	262	0.870	20.10	820	1220	962	1431	392	407	426	559
644010	1	313	0.940	23.88	1009	1501	1125	1674	439	455	491	617
361470	1	373	1.005	25.53	1184	1762	1354	2015	507	526	563	692
644030	1	444	1.085	27.56	1449	2156	1693	2519	567	588	630	772
644050	1	535	1.185	30.10	1664	2476	1994	2967	638	662	709	871
644070	1	646	1.295	32.89	2042	3038	2303	3427	693	715	766	979
644090	1	777	1.390	35.31	2493	3710	2870	4271	750	830	889	1101
274380	1	1111	1.615	41.02	3400	5059	3820	5684	972	1003	1073	1374

2 kV/1000 V Heavy-Duty — 1/0 AWG and larger constructions with Heavy-Duty (HD) insulation thickness.
Note: Dimensions and weights are nominal; subject to industry tolerances.
[1]Reference Ampacity section

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Offshore and Onshore RIG Cables

IEEE 1580 Type P
MOR® Polyrad® XT-125, Unarmored

Flexible Single-Conductor Power Unarmored & Sheathed

2 kV/1000 V & 2 kV/1000 V Heavy-Duty

Product Construction:

1. **Conductor:**
   - 8 AWG thru 1111 kcmil soft annealed tinned copper flexible strand
2. **Insulation:**
   - Polyrad® XT-125 Irradiated Cross-linked Polyolefin (XLPO) – Black
   - Polyrad® XT-125 Heavy-Duty (HD) Irradiated Cross-linked Polyolefin (XLPO) – 4/0 AWG and larger – Black
3. **Sheath**
   - Mud Oil-Resistant, Black Irradiated Cross-linked Chlorinated Polyethylene (XL-CPE)
4. **Print:** (Including but not limited to)
   - MOR® POLYRAD® XT-125 (UL) E85994 BR781 110C 1/C XXAWG 2000 V -- (CSA) LL 9755 SPEC 245/1309 FT4 -40C SR -- IEC 1 KV 60332.3A IEEE 1580 TYPE P (ETL) 109229 YEAR OF MFG SEQUENTIAL FOOTAGE MARK

Applications:

- Offshore oil and gas drilling platforms, MODUs, ships and FPSOs
- Land-based oil and gas drilling rigs
- Suitable for use in Class I, Division 2 and Zone 2 environments when installed in accordance with API-RP14F

Features:

- Meets NEK 606 mud oil resistance requirements with ester-based muds
- Flexible stranding to facilitate ease of cable installation and termination
- Temperature rated @ 125°C for long life, higher ampacities and protection from thermal overloads
- Meets cold bend test at -55°C
- Meets cold impact test at -40°C

Compliances:

Industry:

- API-RP14F
- CSA C22.2 No. 245 Type X110
- IEEE 1580-2010 Type P
- IEC 60092-350
- Mud oil-resistant
- UL 1309 Type X110
- UL Listed 110°C Marine Shipboard Cable

Flame Test:

- IEEE 1202
- IEC 60332-3-22 Cat. A (supersedes IEC 60332-3A)
- CSA C22.2 No. 0.3 FT4

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Offshore and Onshore RIG Cables

IEEE 1580 Type P
MOR® Polyrad® XT-125, Unarmored

Flexible Single-Conductor Power Unarmored & Sheathed
2 kV/1000 V & 2 kV/1000 V Heavy-Duty

CATALOG NUMBER	# OF CORES	COND. (AWG) SIZE	NOMINAL CABLE DIAMETER		COPPER WEIGHT		NET WEIGHT		AMPACITIES[1] 45°C AMBIENT-SINGLE BANKED			
			INCHES	mm	LBS/1000 FT	kg/km	LBS/1000 FT	kg/km	95°C	100°C	110°C	125°C
365470	1	8	0.345	8.76	45	67	89	132	70	72	77	90
365480	1	6	0.385	9.78	75	112	126	187	92	96	103	126
365490	1	5	0.435	11.05	114	170	180	268	104	106	117	153
365500	1	4	0.470	11.94	122	182	193	287	123	128	137	158
365510	1	3	0.495	12.57	165	246	242	360	140	146	156	195
365520	1	2	0.515	13.08	190	283	272	405	162	169	181	217
365530	1	1	0.635	16.13	263	391	381	567	180	194	208	281
365540	1	1/0	0.670	17.02	351	522	487	725	217	227	243	319
365550	1	2/0	0.730	18.54	407	606	555	826	251	262	281	354
365560	1	3/0	0.810	20.57	594	884	762	1134	289	300	321	437

2 kV/1000 V — 3/0 AWG and smaller constructions with Regular-Duty insulation thickness.

CATALOG NUMBER	# OF CORES	COND. (AWG) SIZE	NOMINAL CABLE DIAMETER		COPPER WEIGHT		NET WEIGHT		AMPACITIES[1] 45°C AMBIENT-SINGLE BANKED			
			INCHES	mm	LBS/1000 FT	kg/km	LBS/1000 FT	kg/km	95°C	100°C	110°C	125°C
365570	1	4/0	0.965	24.51	657	978	932	1387	337	351	376	495
365580	1	262	1.000	25.40	793	1180	1086	1616	392	407	426	559
365590	1	313	1.055	26.80	921	1370	1232	1833	439	455	491	617
365600	1	373	1.120	28.45	1093	1626	1425	2120	507	526	563	692
365610	1	444	1.170	29.72	1319	1963	1670	2485	567	588	630	772
365620	1	535	1.290	32.77	1590	2366	2018	3003	638	662	709	871
365630	1	646	1.375	34.93	1876	2791	2333	3472	693	715	766	979
365640	1	777	1.540	39.12	2269	3376	2767	4117	750	830	889	1101
365650	1	1111	1.810	45.97	3400	5059	4101	6102	972	1003	1073	1374

2 kV/1000 V Heavy-Duty — 4/0 AWG and larger constructions with Heavy-Duty (HD) insulation thickness.

Note: Dimensions and weights are nominal; subject to industry tolerances.
[1]Reference Ampacity section

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Offshore and Onshore RIG Cables

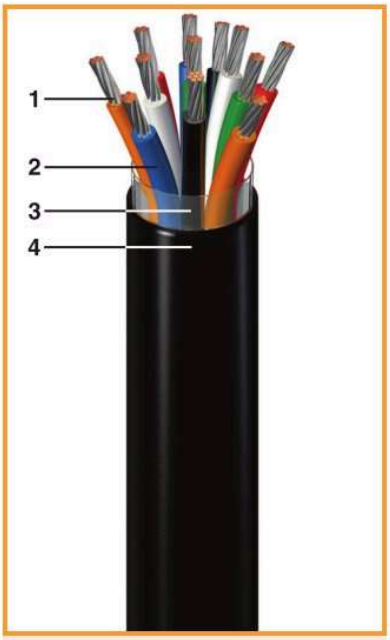
IEEE 1580 Type P
MOR® Polyrad® XT-125, Unarmored

Flexible Multi-Conductor Control Unarmored, 18 AWG & 16 AWG
600 V/1000 V

Product Construction:

1. **Conductor:**
   - 18 AWG and 16 AWG soft annealed tinned copper flexible strand
2. **Insulation:**
   - Polyrad® XT-125 Irradiated Cross-linked Polyolefin (XLPO)
   - Color Code: Per IEEE 1580 Table 22
3. **Cable Core:**
   - Cabled with fillers when required
   - Core binder tape when required
4. **Sheath:**
   - Mud Oil-Resistant, Black Irradiated Cross-linked Chlorinated Polyethylene (XL-CPE)
5. **Print:** (Including but not limited to)
   - MOR® POLYRAD® XT-125 (UL) E85994 BR782 110C XX/C XXAWG TC-ER[1]-HL[2] RFHH-2 -- (CSA) LL 9755 SPEC 245/1309 FT4 -40C SR DIR BUR 600/1000 V -- IEC 1 KV 60332.3A IEEE 1580 TYPE P (ETL) 109229 YEAR OF MFG SEQUENTIAL FOOTAGE MARK

   [1] ER for 3 conductors or more
   [2] HL for 3 conductors or more and O.D. of 1.00" or less
6. **Option:**
   - Other color codes available upon request



Applications:
- Offshore oil and gas drilling platforms, MODUs, ships and FPSOs
- Land-based oil and gas drilling rigs
- Suitable for use in Class I, Division 2 and Zone 2 environments when installed in accordance with API-RP14F or NEC Article 501
- TC-ER-HL is suitable for use in Class 1, Division 1 and Zone 1 environments when installed in accordance with API-RP14F or NEC Article 501

Features:
- Meets NEK 606 mud oil resistance requirements with ester-based muds
- Meets UL 2225 crush and impact requirements of Type MC-HL cables
- Permitted for Exposed Run "ER" (open wiring) use in accordance with NEC for 3 conductors or more
- Permitted for Exposed Run, Hazardous Location "ER-HL" use in accordance with NEC for 3 conductors or more and O.D. of 1.00" or less
- Flexible stranding to facilitate ease of cable installation and termination
- Temperature rated @ 125°C for long life, higher ampacities and protection from thermal overloads
- Meets cold bend test at -55°C
- Meets cold impact test at -40°C

Compliances:

Industry:
- API-RP14F
- CSA C22.2 No. 245 Type X110
- IEEE 1580-2010 Type P
- IEC 60092-350
- Mud oil-resistant
- UL 1309 Type X110
- UL Listed 110°C Marine Shipboard Cable
- UL 2225 Type TC-ER-HL

Flame Test:
- IEEE 1202
- IEC 60332-3-22 Cat. A (supersedes IEC 60332-3A)
- CSA C22.2 No. 0.3 FT4

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Offshore and Onshore RIG Cables

IEEE 1580 Type P
MOR® Polyrad® XT-125, Unarmored

Flexible Multi-Conductor Control Unarmored, 18 AWG & 16 AWG
600 V/1000 V

CATALOG NUMBER	# OF CORES	COND. SIZE (AWG)	NOMINAL CABLE DIAMETER		COPPER WEIGHT		NET WEIGHT		AMPACITIES[1] 45°C AMBIENT-SINGLE BANKED			
			INCHES	mm	LBS/1000 FT	kg/km	LBS/1000 FT	kg/km	95°C	100°C	110°C	125°C
661640	2	18	0.350	8.89	12	18	68	101	13	14	15	-
659140	3	18	0.365	9.27	18	27	73	109	11	12	13	-
659150	4	18	0.395	10.03	24	36	86	128	9	10	11	-
356120	5	18	0.425	10.80	30	45	103	153	9	10	11	-
309890	6	18	0.460	11.68	36	54	118	176	9	10	11	-
661650	7	18	0.460	11.68	42	62	125	186	7	8	9	-
356130	8	18	0.490	12.45	48	71	140	208	7	8	9	-
356140	10	18	0.570	14.48	60	89	174	259	5	6	7	-
309920	12	18	0.585	14.86	72	107	195	290	5	6	7	-
661670	16	18	0.645	16.38	96	143	244	363	5	6	7	-
306030	20	18	0.710	18.03	120	179	293	436	5	6	7	-
356150	24	18	0.785	19.94	144	214	347	516	4	5	6	-
356160	30	18	0.875	22.23	180	268	448	667	4	5	6	-
356170	37	18	0.935	23.75	222	330	534	795	4	5	6	-
356180	44	18	1.055	26.80	264	393	630	937	3	4	5	-
356190	60	18	1.155	29.34	359	534	820	1220	3	4	5	-
356200	91	18	1.385	35.18	545	811	1458	2170	3	4	5	-
664780	2	16	0.360	9.14	15	22	75	112	18	19	20	22
659170	3	16	0.380	9.65	22	33	82	122	15	16	17	18
659180	4	16	0.410	10.41	30	45	96	143	12	13	14	14
656090	5	16	0.445	11.30	37	55	116	173	12	13	14	14
673180	6	16	0.480	12.19	44	65	132	196	12	13	14	14
656060	7	16	0.480	12.19	52	77	142	211	10	11	12	13
661620	8	16	0.515	13.08	59	88	159	237	10	11	12	13
656070	10	16	0.595	15.11	74	110	196	292	7	8	9	9
673150	12	16	0.610	15.49	89	132	222	330	7	8	9	9
326090	16	16	0.675	17.15	118	176	280	417	7	8	9	9
656080	20	16	0.745	18.92	148	220	337	501	7	8	9	9
281050	24	16	0.825	20.96	177	263	400	595	6	7	8	8
356210	30	16	0.915	23.24	222	330	514	765	6	7	8	8
272130	37	16	0.985	25.02	274	408	613	912	5	6	7	7
303320	44	16	1.105	28.07	325	484	725	1079	5	6	7	6
659400	60	16	1.220	30.99	444	661	947	1409	5	6	7	6
307860	91	16	1.485	37.72	722	1074	1659	2469	4	5	6	5

Flexible Multi-Conductor Low-Voltage Power, Unarmored, 16 AWG

358930	3	16	0.380	9.65	22	33	82	122	15	16	17	18

Note: Color Code - Black, White and Green. Dimensions and weights are nominal; subject to industry tolerances.
[1]Reference Ampacity section

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Offshore and Onshore RIG Cables

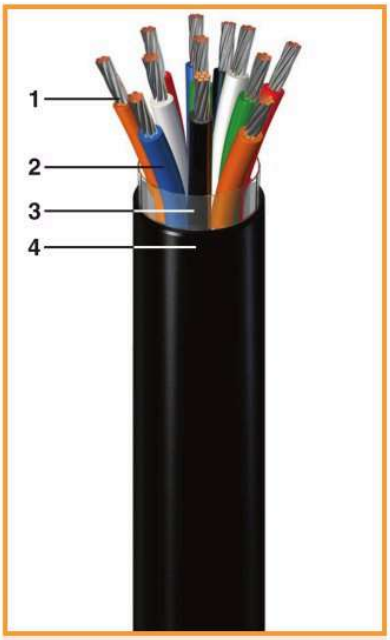
IEEE 1580 Type P
MOR® Polyrad® XT-125, Unarmored

Flexible Multi-Conductor Control Unarmored, 14 AWG, 12 AWG & 10 AWG
600 V/1000 V

Product Construction:

1. **Conductor:**
   - 14 AWG thru 10 AWG soft annealed tinned copper flexible strand
2. **Insulation:**
   - Polyrad® XT-125 Irradiated Cross-linked Polyolefin (XLPO)
   - Color Code: Per IEEE 1580 Table 22
3. **Cable Core:**
   - Cabled with fillers when required
   - Core binder tape when required
4. **Sheath:**
   - Mud Oil-Resistant, Black Irradiated Cross-linked Chlorinated Polyethylene (XL-CPE)
5. **Print:** (Including but not limited to)
   - MOR® POLYRAD® XT-125 (UL) E85994 BR782 110C XX/C XXAWG TC-ER[1]-HL[2] XHHW -- (CSA) LL 9755 SPEC 245/1309 FT4 -40C SR DIR BUR 600/1000 V 600 V RW90 XLPE TC -- IEC 1 KV 60332.3A IEEE 1580 TYPE P (ETL) 109229 YEAR OF MFG SEQUENTIAL FOOTAGE MARK

   [1] ER for 3 conductors or more
   [2] HL for 3 conductors or more and O.D. of 1.00" or less
6. **Option:**
   - Other color codes available upon request



Applications:
- Offshore oil and gas drilling platforms, MODUs, ships and FPSOs
- Land-based oil and gas drilling rigs
- Suitable for use in Class I, Division 2 and Zone 2 environments when installed in accordance with API-RP14F or NEC Article 501
- TC-ER-HL is suitable for use in Class 1, Division 1 and Zone 1 environments when installed in accordance with API-RP14F or NEC Article 501

Features:
- Meets NEK 606 mud oil resistance requirements with ester-based muds
- Meets UL 2225 crush and impact requirements of Type MC-HL cables
- Permitted for Exposed Run "ER" (open wiring) use in accordance with NEC for 3 conductors or more
- Permitted for Exposed Run, Hazardous Location "ER-HL" use in accordance with NEC for 3 conductors or more and O.D. of 1.00" or less
- Flexible stranding to facilitate ease of cable installation and termination
- Temperature rated @ 125°C for long life, higher ampacities and protection from thermal overloads
- Meets cold bend test at -55°C
- Meets cold impact test at -40°C

Compliances:

Industry:
- API-RP14F
- CSA C22.2 No. 38 Type RW90
- CSA C22.2 No. 230 Type TC
- CSA C22.2 No. 245 Type X110
- IEEE 1580-2010 Type P
- IEC 60092-350
- Mud oil-resistant
- UL 1309 Type X110
- UL Listed 110°C Marine Shipboard Cable
- UL 2225 Type TC-ER-HL

Flame Test:
- IEEE 1202
- IEC 60332-3-22 Cat. A (supersedes IEC 60332-3A)
- CSA C22.2 No. 0.3 FT4

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Offshore and Onshore RIG Cables

IEEE 1580 Type P
MOR® Polyrad® XT-125, Unarmored

Flexible Multi-Conductor Control
Unarmored, 14 AWG, 12 AWG & 10 AWG
600 V/1000 V

CATALOG NUMBER	# OF CORES	COND. SIZE (AWG)	NOMINAL CABLE DIAMETER		COPPER WEIGHT		NET WEIGHT		AMPACITIES[1] 45°C AMBIENT-SINGLE BANKED			
			INCHES	mm	LBS/1000 FT	kg/km	LBS/1000 FT	kg/km	95°C	100°C	110°C	125°C
648720	2	14	0.390	9.91	23	34	92	137	30	31	33	33
648730	3	14	0.410	10.41	35	52	107	159	24	25	27	28
646020	4	14	0.440	11.18	46	68	121	180	19	20	22	22
651320	5	14	0.480	12.19	57	85	147	219	19	20	22	22
673170	6	14	0.520	13.21	69	103	170	253	19	20	22	22
659390	7	14	0.520	13.21	80	119	183	272	17	18	19	20
387930	8	14	0.560	14.22	92	137	206	307	17	18	19	20
646910	10	14	0.650	16.51	115	171	256	381	12	13	14	14
672460	12	14	0.665	16.89	138	205	290	432	12	13	14	14
315780	14	14	0.700	17.78	161	240	331	493	12	13	14	14
673110	16	14	0.740	18.80	184	274	369	549	12	13	14	14
646920	20	14	0.815	20.70	230	342	447	665	12	13	14	14
672470	24	14	0.945	24.00	275	409	565	841	10	11	12	13
661690	30	14	1.005	25.53	344	512	679	1010	10	11	12	13
652780	37	14	1.075	27.31	425	632	816	1214	9	10	11	11
356220	44	14	1.205	30.61	505	751	965	1436	8	9	10	10
663200	60	14	1.390	35.31	689	1025	1270	1890	8	9	10	10
356230	91	14	1.740	42.20	1044	1553	2377	3537	7	8	9	8
652800	2	12	0.425	10.80	36	54	117	174	38	40	43	44
646030	3	12	0.445	11.30	53	79	138	205	30	31	33	37
646700	4	12	0.485	12.32	71	106	165	246	24	25	26	30
672730	5	12	0.525	13.34	89	132	194	289	24	25	26	30
356240	6	12	0.570	14.48	107	159	225	335	24	25	26	30
648710	7	12	0.570	14.48	125	186	245	365	21	22	23	26
356250	8	12	0.615	15.62	142	211	276	411	21	22	23	26
646890	10	12	0.720	18.29	178	265	343	510	15	16	17	19
684670	12	12	0.740	18.80	213	317	392	583	15	16	17	19
356260	16	12	0.820	20.83	285	424	502	747	15	16	17	19
646040	20	12	0.955	24.26	356	530	646	961	15	16	17	19
355640	24	12	1.055	26.80	427	635	763	1135	13	14	15	17
356270	30	12	1.115	28.32	534	795	927	1379	13	14	15	17
664710	37	12	1.205	30.61	658	979	1119	1665	12	13	14	15
356280	44	12	1.355	34.42	783	1165	1325	1972	10	11	12	13
356290	60	12	1.495	37.97	1067	1588	1755	2611	10	11	12	13
356300	91	12	1.975	50.17	1619	2409	2828	4208	8	9	10	11

Note: Dimensions and weights are nominal; subject to industry tolerances.
[1]Reference Ampacity section

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Offshore and Onshore RIG Cables

IEEE 1580 Type P
MOR® Polyrad® XT-125, Unarmored

Flexible Multi-Conductor Control
Unarmored, 14 AWG, 12 AWG & 10 AWG
600 V/1000 V

CATALOG NUMBER	# OF CORES	COND. SIZE (AWG)	NOMINAL CABLE DIAMETER		COPPER WEIGHT		NET WEIGHT		AMPACITIES[1] 45°C AMBIENT-SINGLE BANKED			
			INCHES	mm	LBS/1000 FT	kg/km	LBS/1000 FT	kg/km	95°C	100°C	110°C	125°C
652810	2	10	0.490	12.45	68	101	172	256	47	49	52	64
646050	3	10	0.515	13.08	101	150	211	314	39	41	44	49
646060	4	10	0.560	14.22	135	201	256	381	31	33	35	39
648740	5	10	0.610	15.49	169	251	315	469	31	33	35	39
356310	6	10	0.665	16.89	203	302	362	539	31	33	35	39
652760	7	10	0.665	16.89	236	351	399	594	27	29	31	34
326350	8	10	0.725	18.42	270	402	452	673	27	29	31	34
677940	10	10	0.860	21.84	338	503	594	884	19	21	22	25
677850	12	10	0.915	23.24	405	603	670	997	19	21	22	25

[1]Reference Ampacity section

Flexible Multi-Conductor Low-Voltage Power
Unarmored, 14 AWG, 12 AWG & 10 AWG
600 V/1000 V

CATALOG NUMBER	# OF CORES	COND. SIZE (AWG)	NOMINAL CABLE DIAMETER		COPPER WEIGHT		NET WEIGHT		AMPACITIES[1] 45°C AMBIENT-SINGLE BANKED			
			INCHES	mm	LBS/1000 FT	kg/km	LBS/1000 FT	kg/km	95°C	100°C	110°C	125°C
272160	3	14	0.410	10.41	35	52	107	159	24	25	27	28
272150	3	12	0.445	11.30	53	79	138	205	30	31	33	37
354840	3	10	0.515	13.08	101	150	211	314	39	41	44	49

Note: Color Code - Black, White and Green. Dimensions and weight are nominal; subject to industry tolerances.
[1]Reference Ampacity section

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Offshore and Onshore RIG Cables

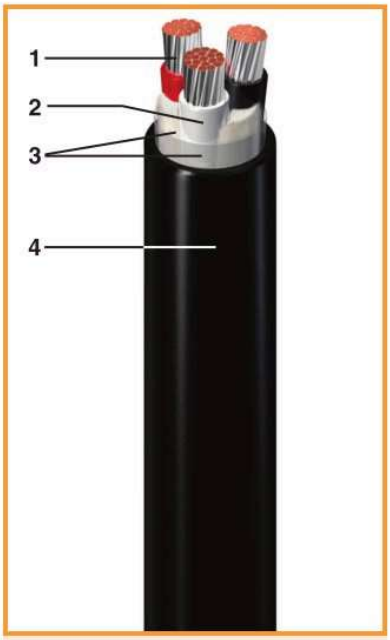
IEEE 1580 Type P
MOR® Polyrad® XT-125, Unarmored

Flexible Multi-Conductor Power Unarmored
600 V/1000 V

Product Construction:

1. **Conductor:**
   - 8 AWG thru 777 kcmil soft annealed tinned copper flexible strand
2. **Insulation:**
   - Polyrad® XT-125 Irradiated Cross-linked Polyolefin (XLPO)
   - Color Code: Per IEEE 1580 Table 22
3. **Cable Core:**
   - Cabled with fillers when required
   - Core binder tape when required
4. **Sheath:**
   - Mud Oil-Resistant, Black Irradiated Cross-linked Chlorinated Polyethylene (XL-CPE)
5. **Print:** (Including but not limited to)
   - MOR® POLYRAD® XT-125 (UL) E85994 BR782 110C XX/C XXAWG TC-ER[1] XHHW -- (CSA) LL 9755 SPEC 245/1309 FT4 -40C SR 600/1000 V 600 V RW90 XLPE TC -- IEC 1 KV 60332.3A IEEE 1580 TYPE P (ETL) 109229 YEAR OF MFG SEQUENTIAL FOOTAGE MARK

   [1] ER for 3 conductors or more, 6 AWG and smaller
6. **Option:**
   - Other color codes available upon request



Applications:
- Offshore oil and gas drilling platforms, MODUs, ships and FPSOs
- Land-based oil and gas drilling rigs
- Suitable for use in Class I, Division 2 and Zone 2 environments when installed in accordance with API-RP14F or NEC Article 501

Features:
- Meets NEK 606 mud oil resistance requirements with ester-based muds
- Meets UL 2225 crush and impact requirements of Type MC-HL cables
- Permitted for Exposed Run "ER" (open wiring) use in accordance with NEC for 3 conductors or more, 6 AWG and smaller
- Flexible stranding to facilitate ease of cable installation and termination
- Temperature rated @ 125°C for long life, higher ampacities and protection from thermal overloads
- Meets cold bend test at -55°C
- Meets cold impact test at -40°C

Compliances:

Industry:
- API-RP14F
- CSA C22.2 No. 38 Type RW90
- CSA C22.2 No. 230 Type TC
- CSA C22.2 No. 245 Type X110
- IEEE 1580-2010 Type P
- IEC 60092-350
- Mud oil-resistant
- UL 1309 Type X110
- UL Listed 110°C Marine Shipboard Cable

Flame Test:
- IEEE 1202
- IEC 60332-3-22 Cat. A (supersedes IEC 60332-3A)
- CSA C22.2 No. 0.3 FT4

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Offshore and Onshore RIG Cables

IEEE 1580 Type P
MOR® Polyrad® XT-125, Unarmored

Flexible Multi-Conductor Power Unarmored
600 V/1000 V

CATALOG NUMBER	# OF CORES	COND. SIZE (AWG)	NOMINAL CABLE DIAMETER		COPPER WEIGHT		NET WEIGHT		AMPACITIES[1] 45°C AMBIENT-SINGLE BANKED			
			INCHES	mm	LBS/1000 FT	kg/km	LBS/1000 FT	kg/km	95°C	100°C	110°C	125°C
651810	2	8	0.590	14.99	92	137	248	369	62	64	69	77
667730	2	6	0.665	16.89	153	228	349	519	82	85	91	111
356320	2	5	0.800	20.32	233	347	503	748	96	101	109	147
652820	2	4	0.885	22.48	249	371	575	856	105	110	118	153
684820	2	3	0.930	23.62	337	501	700	1042	126	132	141	180
661710	2	2	0.975	24.77	388	577	780	1161	143	149	160	196
356330	2	1	1.155	29.34	537	799	1082	1610	162	174	186	245
672720	2	1/0	1.225	31.12	716	1065	1324	1970	191	199	213	278
356400	2	2/0	1.345	34.16	830	1235	1548	2303	232	242	259	309
286410	2	3/0	1.500	38.10	1193	1775	1997	2972	255	265	284	382
661720	2	4/0	1.575	40.01	1340	1994	2205	3281	295	307	329	432
356340	2	262	1.745	44.32	1618	2408	2718	4044	345	358	378	481
356350	2	313	1.855	47.12	1878	2794	3099	4611	378	391	420	539
356360	2	444	2.090	53.09	2691	4004	4185	6227	486	504	556	669
356370	2	535	2.325	59.06	3243	4826	5131	7635	546	566	625	741
356380	2	646	2.495	63.37	3827	5695	5745	8549	603	625	649	944
356390	2	777	2.600	66.04	4628	6886	7043	10480	674	699	784	951
X648700	3	8	0.620	15.75	138	205	298	443	50	52	56	63
274820	3	6	0.705	17.91	230	342	426	634	67	70	75	91
652830	3	5	0.895	22.73	350	521	656	976	78	82	88	120
648670	3	4	0.935	23.75	374	557	717	1067	87	92	99	126
356410	3	3	0.990	25.15	505	751	879	1308	103	108	116	148
652840	3	2	1.035	26.29	581	865	981	1460	116	122	131	161
652970	3	1	1.225	31.12	806	1199	1351	2010	137	143	153	202
659380	3	1/0	1.300	33.02	1074	1598	1687	2510	157	164	176	229
648660	3	2/0	1.435	36.45	1245	1853	1967	2927	180	188	201	254
652860	3	3/0	1.605	40.77	1790	2664	2670	3973	209	218	233	313
652870	3	4/0	1.740	44.20	2009	2989	3029	4507	242	252	270	354
293900	3	262	1.860	47.24	2426	3610	3615	5379	283	294	310	395
661740	3	313	1.975	50.17	2817	4192	4131	6147	309	321	345	442
652910	3	373	2.120	53.85	3346	4979	4814	7163	361	375	406	492
660410	3	444	2.225	56.52	4037	6007	5623	8367	396	411	454	549
656050	3	535	2.485	63.12	4865	7239	6868	10220	448	465	511	608
352510	3	646	2.660	67.56	5740	8541	7983	11879	492	510	525	678
14442.037000[2]	3	777	2.925	74.30	6942	10330	9641	14346	552	573	640	750

Note: Dimensions and weights are nominal; subject to industry tolerances.
[1]Reference Ampacity section
[2]Thermoset CPE jacket (XL-CPE) not tested to NEK 606 Mud Oil Resistance.

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General Cable

INS-0167-R0515

Offshore and Onshore RIG Cables

IEEE 1580 Type P
MOR® Polyrad® XT-125, Unarmored

Flexible Multi-Conductor Power Unarmored
600 V/1000 V

CATALOG NUMBER	# OF CORES	COND. (AWG) SIZE	NOMINAL CABLE DIAMETER		COPPER WEIGHT		NET WEIGHT		AMPACITIES[1] 45°C AMBIENT-SINGLE BANKED			
			INCHES	mm	LBS/1000 FT	kg/km	LBS/1000 FT	kg/km	95°C	100°C	110°C	125°C
658510	4	8	0.680	17.27	183	272	365	543	40	42	45	50
646070	4	6	0.775	19.69	306	455	529	787	54	56	60	73
652920	4	5	0.985	25.02	465	692	808	1202	62	66	70	96
648680	4	4	1.030	26.16	499	743	919	1367	70	74	79	101
667720	4	3	1.085	27.56	673	1001	1085	1614	82	86	93	118
646080	4	2	1.135	28.83	775	1153	1217	1811	93	98	105	129
652770	4	1	1.355	34.42	1074	1598	1702	2533	110	114	122	162
646090	4	1/0	1.435	36.45	1432	2131	2119	3153	126	131	141	183
646100	4	2/0	1.590	40.39	1661	2472	2447	3641	144	150	161	203
664920	4	3/0	1.845	46.86	2387	3552	3421	5090	167	174	186	250
274810	4	4/0	1.920	48.77	2679	3986	3797	5650	194	202	216	283
646110	4	262	2.055	52.20	3235	4814	4538	6753	226	235	248	316
356420	4	313	2.185	55.50	3756	5589	5165	7686	247	257	276	354
356430	4	373	2.340	59.44	4461	6638	6020	8958	289	300	325	394
296160	4	444	2.460	62.48	5382	8008	7090	10550	317	329	363	439
387880	4	535	2.815	71.50	6646	9889	8735	12998	358	372	409	486
387890	4	646	3.015	76.58	7653	11388	10215	15200	394	408	420	542
14442.047000[2]	4	777	3.245	82.42	9256	13773	12150	18079	442	458	512	600
672740	5	8	0.750	19.05	229	341	444	661	40	42	45	50
356440	5	6	0.895	22.73	383	570	680	1012	54	56	60	73
356450	5	5	1.075	27.31	581	865	990	1473	62	66	70	96
665900	5	4	1.135	28.83	623	927	1075	1600	70	74	79	101
356460	5	3	1.195	30.35	842	1253	1337	1989	82	86	93	118
348300	5	2	1.255	31.88	969	1442	1510	2247	93	98	105	129
356470	5	1	1.495	37.97	1535	2284	2084	3101	110	114	122	162
356480	5	1/0	1.595	40.51	1790	2664	2624	3905	126	131	141	183
356490	5	2/0	1.820	46.23	2076	3089	3130	4657	144	150	161	203
356500	5	3/0	2.035	51.69	2983	4439	4224	6285	167	174	186	250
356510	5	4/0	2.120	53.85	3349	4983	4680	6964	194	202	216	283
356520	5	262	2.275	57.79	4044	6017	5597	8328	226	235	248	316
356530	5	313	2.420	61.47	4695	6986	6401	9525	247	257	276	354
387900	5	373	2.590	65.79	5780	8601	7459	11099	289	300	325	394
387910	5	444	2.730	69.34	6728	10011	8783	13069	317	329	363	439
14442.056600[2]	5	535	3.115	79.12	8108	12065	10909	16233	358	372	420	486

Note: Dimensions and weights are nominal; subject to industry tolerances.
[1]Reference Ampacity section
[2]Thermoset CPE jacket (XL-CPE) not tested to NEK 606 Mud Oil Resistance.

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INS-0167-R0515

Offshore and Onshore RIG Cables

IEEE 1580 Type P
MOR® Polyrad® XT-125, Unarmored

Flexible Variable Frequency Drive Power Unarmored
2 kV/1000 V

Product Construction:

1. **Conductor:**
   - 8 AWG thru 777 kcmil soft annealed tinned copper flexible strand
2. **Insulation:**
   - Polyrad® XT-125 Irradiated Cross-linked Polyolefin (XLPO)
   - Color Code: All black with printed numbers
3. **Ground:**
   - 3 split green insulated flexible tinned copper conductors sized to UL 1277
4. **Shield:**
   - Overall tinned copper braid with aluminum/polyester tape – 100% coverage for enhanced shield effectiveness required by VFD applications
5. **Sheath:**
   - Mud Oil-Resistant, Black Irradiated Cross-linked Chlorinated Polyethylene (XL-CPE)
6. **Print:** (Including but not limited to)
   - MOR® POLYRAD® XT-125 VFD (UL) E85994 BR782 110C 3C XXAWG+3GRNDS SHIELDED TC-ER RHW -- (CSA) LL 9755 SPEC 245/1309 FT4 -40C SR 2000 V RW90 XLPE TC (ETL) US 109229 IEEE 1580 -- IEC 1 KV 60332.3A DAY/MONTH/YEAR SEQUENTIAL MARK
7. **Options:**
   - Overall braid wire armor
   - Larger sized insulated ground wires
   - Uninsulated ground wires

Applications:
- AC motor variable frequency drives
- Offshore oil and gas drilling platforms, MODUs, ships and FPSOs
- Land-based oil and gas drilling rigs
- Suitable for use in Class I, Division 2 and Zone 2 environments when installed in accordance with API-RP14F or NEC Article 501

Features:
- Meets NEK 606 mud oil resistance requirements with ester-based muds
- Meets UL 2225 crush and impact requirements of Type MC-HL cables
- Permitted for Exposed Run "ER" (open wiring) use in accordance with NEC
- Flexible stranding to facilitate ease of cable installation and termination
- Temperature rated @ 125°C for long life, higher ampacities and protection from thermal overloads
- Meets cold bend test at -55°C
- Meets cold impact test at -40°C

Compliances:

Industry:
- API-RP14F
- CSA C22.2 No. 38 Type RW90
- CSA C22.2 No. 230 Type TC
- CSA C22.2 No. 245 Type X110
- IEEE 1580-2010 Type P
- IEC 60092-350
- Mud oil-resistant
- UL 1309 Type X110
- UL Listed 110°C Marine Shipboard Cable

Flame Test:
- IEEE 1202
- IEC 60332-3-22 Cat. A (supersedes IEC 60332-3A)
- CSA C22.2 No. 0.3 FT4

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MOR® Polyrad® XT-125, Unarmored

Flexible Variable Frequency Drive Power Unarmored
2 kV/1000 V

CATALOG NUMBER	# OF CORES	COND. (AWG) SIZE	GROUNDING COND. SIZE (AWG)	NOMINAL CABLE DIAMETER		COPPER WEIGHT		NET WEIGHT		AMPACITIES[1] 45°C AMBIENT-SINGLE BANKED			
				INCHES	mm	LBS/1000 FT	kg/km	LBS/1000 FT	kg/km	95°C	100°C	110°C	125°C
381780IG	3	8	3 x #14	0.935	23.75	225	335	589	876	50	52	56	63
381790IG	3	6	3 x #12	1.030	26.16	341	507	762	1134	67	70	75	91
380560IG	3	4	3 x #12	1.115	28.32	513	763	1007	1498	87	92	99	126
381800IG	3	2	3 x #10	1.235	31.37	778	1158	1384	2059	116	122	131	161
381810IG	3	1	3 x #10	1.415	35.94	1020	1518	1830	2723	137	143	153	202
359630IG	3	1/0	3 x #10	1.530	38.86	1245	1853	2160	3214	157	164	176	229
359640IG	3	2/0	3 x #10	1.625	41.28	1479	2201	2473	3680	180	188	201	254
359650IG	3	3/0	3 x #8	1.865	47.37	2076	3089	3369	5013	209	218	233	313
359660IG	3	4/0	3 x #8	1.925	48.90	2306	3431	3658	5443	242	252	270	354
359670IG	3	262	3 x #6	2.075	52.71	2864	4262	4454	6628	283	294	310	395
359680IG	3	313	3 x #6	2.190	55.63	3267	4861	6004	8934	309	321	345	442
386670IG	3	373	3 x #6	2.330	59.18	3815	5677	5708	8494	361	375	406	492
365690IG	3	444	3 x #6	2.440	61.98	4518	6723	6440	9583	396	411	445	608
381680IG	3	535	3 x #6	2.700	68.58	5377	8001	7712	11475	448	465	511	608
387920IG	3	646	3 x #4	2.945	74.80	6414	9544	9197	13685	492	510	525	678
14446.037000IG[2]	3	777	3 x #4	3.145	79.88	7642	11371	10723	15956	552	573	640	750

Note: Dimensions and weights are nominal; subject to industry tolerances.
[1]Reference Ampacity section.
[2]Thermoset CPE jacket (XL-CPE) not tested to NEK 606 Mud Oil Resistance.

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Offshore and Onshore RIG Cables

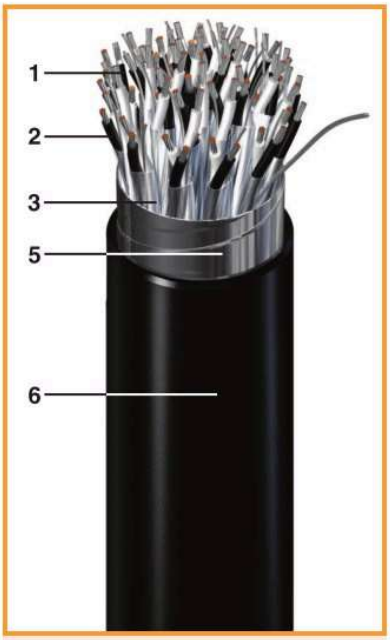
IEEE 1580 Type P
MOR® Polyrad® XT-125, Unarmored

Flexible Paired Signal Cable
Individually/Overall Shielded, Unarmored
600 V/1000 V

Product Construction:

1. **Conductor:**
   - 20 AWG thru 14 AWG soft annealed tinned copper flexible strand
2. **Insulation:**
   - Polyrad® XT-125 Irradiated Cross-linked Polyolefin (XLPO)
   - Color Code: Black and white with printed numbers
3. **Individually Shielded Pairs:**
   - Aluminum/polymer tape and tinned copper drain wire
4. **Cable Core:**
   - Core binder tape when required
5. **Overall Shield:**
   - Overall aluminum/polymer tape with tinned copper drain wire
6. **Sheath:**
   - Mud Oil-Resistant, Black Irradiated Cross-linked Chlorinated Polyethylene (XL-CPE)
7. **Print:** (Including but not limited to)
   - MOR® POLYRAD® XT-125 (UL) E85994 BR782 110C XX/PR XXAWG TC RFHH-2[1] OR XHHW[2] OR TC-ER-HL[3]– (CSA) LL 9755 SPEC 245/1309 FT4 -40C SR 600/1000 V 600 V RW90 XLPE TC[4] – IEC 60332.3A IEEE 1580 TYPE P (ETL) 109229 YEAR OF MFG SEQUENTIAL FOOTAGE MARK

[1] TC RFHH-2 for 18 AWG and 16 AWG
[2] TC XHHW for 14 AWG
[3] TC-ER-HL for 2 pairs or more, 18 AWG and larger and O.D. of 1.00" or less
[4] CSA Listing - 600 V RW90 XLPE TC for 14 AWG



Applications:

- Offshore oil and gas drilling platforms, MODUs, ships and FPSOs
- Land-based oil and gas drilling rigs
- Suitable for use in Class I, Division 2 and Zone 2 environments when installed in accordance with API-RP14F or NEC Article 501
- TC-ER-HL is suitable for use in Class I, Division 1 and Zone 1 environments when installed in accordance with API-RP14F or NEC Article 501

Features:

- Meets NEK 606 mud oil resistance requirements with ester-based muds
- Meets UL 2225 crush and impact requirements of Type MC-HL cables
- Permitted for Exposed Run, Hazardous Location "ER-HL" use in accordance with NEC for 3 conductors or more and O.D. of 1.00" or less
- Flexible stranding to facilitate ease of cable installation and termination
- Temperature rated @ 125°C for long life, higher ampacities and protection from thermal overloads
- Meets cold bend test at -55°C
- Meets cold impact test at -40°C

Compliances:

Industry:
- API-RP14F
- CSA C22.2 No. 38 Type RW90
- CSA C22.2 No. 230 Type TC
- CSA C22.2 No. 245 Type X110
- IEEE 1580-2010 Type P
- IEC 60092-350
- Mud oil-resistant
- UL 1309 Type X110
- UL Listed 110°C Marine Shipboard Cable
- UL 2225 Type TC-ER-HL

Flame Test:
- IEEE 1202
- IEC 60332-3-22 Cat. A (supersedes IEC 60332-3A)
- CSA C22.2 No. 0.3 FT4

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Individually/Overall Shielded, Unarmored
600 V/1000 V

CATALOG NUMBER	# OF PAIRS	COND. SIZE (AWG)	NOMINAL CABLE DIAMETER		COPPER WEIGHT		NET WEIGHT		AMPACITIES[1] 45°C AMBIENT-SINGLE BANKED			
			INCHES	mm	LBS/1000 FT	kg/km	LBS/1000 FT	kg/km	95°C	100°C	110°C	125°C
667750	1	20	0.340	8.64	10	15	60	89	9	10	11	-
357430	2	20	0.505	12.83	23	34	136	202	6	7	8	-
357440	3	20	0.530	13.46	33	49	148	220	6	7	8	-
357450	4	20	0.580	14.73	43	64	171	254	5	6	7	-
357460	5	20	0.635	16.13	53	79	205	305	4	5	6	-
357470	6	20	0.690	17.53	63	94	232	345	4	5	6	-
357480	7	20	0.690	17.53	74	110	247	368	4	5	6	-
357490	8	20	0.745	18.92	84	125	275	409	4	5	6	-
357500	10	20	0.915	23.24	104	155	360	536	4	5	6	-
357510	12	20	0.945	24.00	124	185	403	600	3	4	5	-
357520	16	20	1.045	26.54	165	246	500	744	3	4	5	-
357530	20	20	1.160	29.46	206	307	597	888	3	4	5	-
357540	24	20	1.285	32.64	246	366	703	1046	2	3	4	-
276150	1	18	0.355	9.02	16	24	70	104	13	14	15	-
357560	2	18	0.540	13.72	36	54	165	246	9	10	11	-
357570	3	18	0.570	14.48	52	77	183	272	9	10	11	-
357580	4	18	0.625	15.88	69	103	215	320	8	9	10	-
357590	5	18	0.680	17.27	85	126	254	378	5	6	7	-
357600	6	18	0.745	18.92	101	150	290	432	5	6	7	-
357610	7	18	0.745	18.92	117	174	310	461	5	6	7	-
357620	8	18	0.800	20.32	133	198	346	515	5	6	7	-
357630	10	18	0.985	25.02	165	246	448	667	5	6	7	-
357640	12	18	1.015	25.78	197	293	504	750	5	6	7	-
357650	16	18	1.125	28.58	262	390	632	940	4	5	6	-
357660	20	18	1.280	32.51	332	494	921	1370	4	5	6	-
357670	24	18	1.425	36.20	398	592	1104	1643	3	4	5	-

Note: Dimensions and weights are nominal; subject to industry tolerances.
[1]Reference Ampacity section

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CATALOG NUMBER	# OF PAIRS	COND. SIZE (AWG)	NOMINAL CABLE DIAMETER		COPPER WEIGHT		NET WEIGHT		AMPACITIES[1] 45°C AMBIENT-SINGLE BANKED			
			INCHES	mm	LBS/1000 FT	kg/km	LBS/1000 FT	kg/km	95°C	100°C	110°C	125°C
664750	1	16	0.370	9.40	20	30	78	116	18	19	20	25
357690	2	16	0.565	14.35	45	67	182	271	12	13	14	22
357700	3	16	0.600	15.24	65	97	205	305	12	13	14	18
357710	4	16	0.655	16.64	86	128	239	356	10	11	12	14
357720	5	16	0.720	18.29	106	158	291	433	7	8	9	14
357730	6	16	0.780	19.81	126	187	326	485	7	8	9	14
357740	7	16	0.780	19.81	146	217	351	522	7	8	9	13
357750	8	16	0.895	22.73	166	247	427	635	7	8	9	13
357760	10	16	1.045	26.54	206	307	507	754	7	8	9	9
357770	12	16	1.075	27.31	247	368	580	863	6	7	8	9
357780	16	16	1.190	30.23	327	487	706	1051	6	7	8	9
357790	20	16	1.325	33.66	408	607	847	1260	6	7	8	9
357800	24	16	1.475	37.47	488	726	1002	1491	5	6	7	8
304630	1	14	0.395	10.03	31	46	96	143	30	31	33	39
357820	2	14	0.620	15.75	71	106	231	344	19	20	21	33
357830	3	14	0.655	16.64	103	153	262	390	19	20	21	28
357840	4	14	0.735	18.67	134	199	310	461	17	18	19	22
357850	5	14	0.790	20.07	166	247	374	557	12	13	14	22
357860	6	14	0.900	22.86	197	293	461	686	12	13	14	22
357870	7	14	0.900	22.86	229	341	496	738	12	13	14	20
357880	8	14	0.985	25.02	260	387	557	829	12	13	14	20
357890	10	14	1.145	29.08	323	481	685	1019	12	13	14	14
357900	12	14	1.185	30.10	386	574	752	1119	11	12	13	14
357910	16	14	1.320	33.40	513	763	950	1414	9	10	11	14
357920	20	14	1.465	37.21	639	951	1147	1707	9	10	11	14
357930	24	14	1.640	41.66	765	1138	1359	2022	8	9	10	13

Note: Dimensions and weights are nominal; subject to industry tolerances.
[1]Reference Ampacity section

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Offshore and Onshore RIG Cables

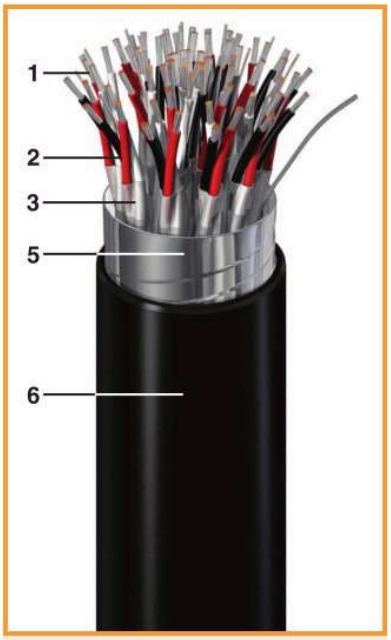
IEEE 1580 Type P
MOR® Polyrad® XT-125, Unarmored

Flexible Triad Signal Cable
Individually/Overall Shielded, Unarmored
600 V/1000 V

Product Construction:

1. **Conductor:**
   - 18 AWG and 16 AWG soft annealed tinned copper flexible strand
2. **Insulation:**
   - Polyrad® XT-125 Irradiated Cross-linked Polyolefin (XLPO)
   - Color Code: Black, white and red with printed numbers
3. **Individually Shielded Triads:**
   - Aluminum/polymer tape and tinned copper drain wire
4. **Cable Core:**
   - Core binder tape when required
5. **Overall Shield:**
   - Overall aluminum/polymer tape with tinned copper drain wire
6. **Sheath:**
   - Mud Oil-Resistant, Black Irradiated Cross-linked Chlorinated Polyethylene (XL-CPE)
7. **Print:** (Including but not limited to)
   - MOR® POLYRAD® XT-125 (UL) E85994 BR782 110C XX/TRI XXAWG TC-ER-HL[1] RFHH-2 -- (CSA) LL 9755 SPEC 245/1309 FT4 -40C SR 600/1000 V 600 V XLPE TC -- IEC 60332.3A IEEE 1580 TYPE P (ETL) 109229 YEAR OF MFG SEQUENTIAL FOOTAGE MARK

[1] TC-ER-HL for O.D. of 1.00" or less



Applications:

- Offshore oil and gas drilling platforms, MODUs, ships and FPSOs
- Land-based oil and gas drilling rigs
- Suitable for use in Class I, Division 2 and Zone 2 environments when installed in accordance with API-RP14F or NEC Article 501
- TC-ER-HL is suitable for use in Class I, Division 1 and Zone 1 environments when installed in accordance with API-RP14F or NEC Article 501

Features:

- Meets NEK 606 mud oil resistance requirements with ester-based muds
- Meets UL 2225 crush and impact requirements of Type MC-HL cables
- Permitted for Exposed Run, Hazardous Location "ER-HL" use in accordance with NEC for 3 conductors or more and O.D. of 1.00" or less
- Flexible stranding to facilitate ease of cable installation and termination
- Temperature rated @ 125°C for long life, higher ampacities and protection from thermal overloads
- Meets cold bend test at -55°C
- Meets cold impact test at -40°C

Compliances:

Industry:

- API-RP14F
- CSA C22.2 No. 230 Type TC
- CSA C22.2 No. 245 Type X110
- IEEE 1580-2010 Type P
- IEC 60092-350
- Mud oil-resistant
- UL 1309 Type X110
- UL Listed 110°C Marine Shipboard Cable
- UL 2225 Type TC-ER-HL

Flame Test:

- IEEE 1202
- IEC 60332-3-22 Cat. A (supersedes IEC 60332-3A)
- CSA C22.2 No. 0.3 FT4

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Offshore and Onshore RIG Cables

IEEE 1580 Type P
MOR® Polyrad® XT-125, Unarmored

Flexible Triad Signal Cable
Individually/Overall Shielded, Unarmored
600 V/1000 V

CATALOG NUMBER	# OF TRIADS	COND. SIZE (AWG)	NOMINAL CABLE DIAMETER		COPPER WEIGHT		NET WEIGHT		AMPACITIES[1] 45°C AMBIENT-SINGLE BANKED			
			INCHES	mm	LBS/1000 FT	kg/km	LBS/1000 FT	kg/km	95°C	100°C	110°C	125°C
358460	1	18	0.375	9.53	22	33	81	121	11	12	13	-
358470	2	18	0.610	15.49	48	71	205	305	8	9	10	-
358480	3	18	0.635	16.13	71	106	229	341	7	8	9	-
358490	4	18	0.695	17.65	93	138	269	400	5	6	7	-
358500	5	18	0.770	19.56	115	171	324	482	5	6	7	-
358510	6	18	0.875	22.23	137	204	403	600	5	6	7	-
358520	7	18	0.875	22.23	160	238	430	640	4	5	6	-
358530	8	18	0.945	24.00	182	271	481	716	4	5	6	-
358540	12	18	1.150	29.21	271	403	643	957	4	5	6	-
358550	16	18	1.275	32.39	360	536	810	1205	3	4	5	-
358560	1	16	0.385	9.78	28	42	90	134	15	16	17	25
358570	2	16	0.630	16.00	61	91	229	341	12	13	14	22
358580	3	16	0.665	16.89	88	131	259	385	11	12	13	18
358590	4	16	0.730	18.54	116	173	305	454	8	9	10	14
358600	5	16	0.800	20.32	143	213	373	555	8	9	10	14
358610	6	16	0.915	23.24	171	254	454	676	8	9	10	14
358620	7	16	0.915	23.24	200	298	488	726	7	8	9	13
358630	8	16	1.000	25.40	227	338	549	817	7	8	9	13
358640	12	16	1.205	30.61	337	501	739	1100	6	7	8	9
358650	16	16	1.335	33.91	448	667	935	1391	5	6	7	9

Note: Dimensions and weights are nominal; subject to industry tolerances.
[1]Reference Ampacity section

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Offshore and Onshore RIG Cables

Table of Contents

IEEE 1580 Type P

MOR® Polyrad® XT-125 Flexible Armored & Sheathed Cables


FLAME-RETARDANT


FLEXIBLE


CRUSH- & IMPACT-RESISTANT


HEAVY-DUTY


OIL-RESISTANT


MUD OIL-RESISTANT


SUNLIGHT-RESISTANT

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Offshore and Onshore RIG Cables

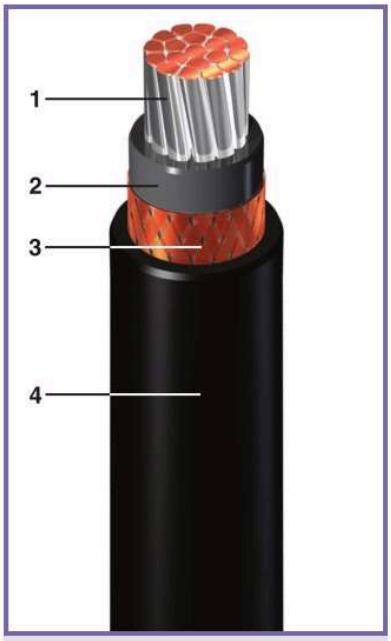
IEEE 1580 Type P MOR® Polyrad® XT-125 Armored & Sheathed

Flexible Single-Conductor Power Armored & Sheathed

2 kV/1000 V & 2 kV/1000 V Heavy-Duty

Product Construction:

1. **Conductor:**
   - 1 AWG thru 1111 kcmil soft annealed tinned copper flexible strand
2. **Insulation:**
   - Polyrad® XT-125 Irradiated Cross-linked Polyolefin (XLPO) – Black
   - Polyrad® XT-125 Heavy-Duty (HD) Irradiated Cross-linked Polyolefin (XLPO) – 4/0 AWG and larger – Black
3. **Armor:**
   - Bronze braid 88% minimum coverage
4. **Sheath:**
   - Mud Oil-Resistant, Black Irradiated Cross-linked Chlorinated Polyethylene (XL-CPE)
5. **Print:** (Including but not limited to)
   - MOR® POLYRAD® XT-125 (UL) E85994 BR781B 110C 1/C XXAWG 2000 V -- (CSA) LL 9755 SPEC 245/1309 FT4 -40C SR -- IEC 1 KV 60332.3A IEEE 1580 TYPE P (ETL) 109229 YEAR OF MFG SEQUENTIAL FOOTAGE MARK



Applications:

- Offshore oil and gas drilling platforms, MODUs, ships and FPSOs
- Land-based oil and gas drilling rigs
- Suitable for use in Class I, Division 1 and Zone 1 Hazardous Locations when installed in accordance with API-RP14F

Features:

- Meets NEK 606 mud oil resistance requirements with ester-based muds
- Flexible stranding to facilitate ease of cable installation and termination
- Temperature rated @ 125°C for long life, higher ampacities and protection from thermal overloads
- Meets cold bend test at -55°C
- Meets cold impact test at -40°C

Compliances:

Industry:

- API-RP14F
- CSA C22.2 No. 245 Type X110
- IEEE 1580-2010 Type P
- IEC 60092-350
- Mud oil-resistant
- UL 1309 Type X110
- UL Listed 110°C Marine Shipboard Cable

Flame Test:

- IEEE 1202
- IEC 60332-3-22 Cat. A (supersedes IEC 60332-3A)
- CSA C22.2 No. 0.3 FT4

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General Cable

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Offshore and Onshore RIG Cables

IEEE 1580 Type P MOR® Polyrad® XT-125 Armored & Sheathed

Flexible Single-Conductor Power Armored & Sheathed

2 kV/1000 V & 2 kV/1000 V Heavy-Duty

CATALOG NUMBER	# OF CORES	COND. (AWG) SIZE	NOMINAL CABLE DIAMETER		COPPER WEIGHT		NET WEIGHT		AMPACITIES[1] 45°C AMBIENT-SINGLE BANKED			
			INCHES	mm	LBS/1000 FT	kg/km	LBS/1000 FT	kg/km	95°C	100°C	110°C	125°C
357370	1	1	0.690	17.53	348	518	479	713	180	194	208	281
300140	1	1/0	0.725	18.42	441	656	583	868	217	227	243	319
357380	1	2/0	0.785	19.94	507	754	661	984	251	262	281	354
326600	1	3/0	0.905	22.99	697	1037	904	1345	289	300	321	437

2 kV/1000 V — 3/0 AWG and smaller constructions with Regular-Duty insulation thickness.

CATALOG NUMBER	# OF CORES	COND. (AWG) SIZE	NOMINAL CABLE DIAMETER		COPPER WEIGHT		NET WEIGHT		AMPACITIES[1] 45°C AMBIENT-SINGLE BANKED			
			INCHES	mm	LBS/1000 FT	kg/km	LBS/1000 FT	kg/km	95°C	100°C	110°C	125°C
281120	1	4/0	0.985	25.02	774	1152	1032	1536	337	351	376	495
357390	1	262	1.045	26.54	919	1367	1211	1802	392	407	426	559
357400	1	313	1.095	27.81	1054	1568	1364	2030	439	455	491	617
357410	1	373	1.165	29.59	1238	1842	1567	2332	507	526	563	692
281130	1	444	1.215	30.86	1472	2190	1821	2710	567	588	630	772
279330	1	535	1.370	34.80	1762	2622	2226	3312	638	662	709	871
279340	1	646	1.450	36.83	2060	3065	2554	3800	693	715	766	979
279350	1	777	1.545	39.24	2469	3674	3006	4473	750	830	889	1101
359080	1	1111	1.820	46.23	3643	5421	4293	6388	972	1003	1073	1374

2 kV/1000 V Heavy-Duty — 4/0 AWG and larger constructions with Heavy-Duty (HD) insulation thickness.

Note: Dimensions and weights are nominal; subject to industry tolerances.
[1]Reference Ampacity section

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Offshore and Onshore RIG Cables

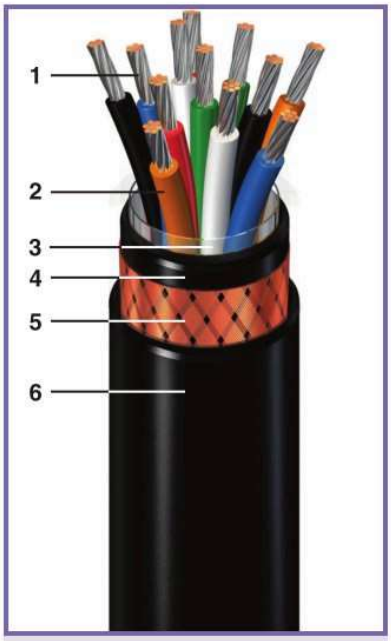
IEEE 1580 Type P MOR® Polyrad® XT-125 Armored & Sheathed

Flexible Multi-Conductor Control Armored & Sheathed 18 AWG & 16 AWG

600 V/1000 V

Product Construction:

1. **Conductor:**
   - 18 AWG and 16 AWG soft annealed tinned copper flexible strand
2. **Insulation:**
   - Polyrad® XT-125 Irradiated Cross-linked Polyolefin (XLPO)
   - Color Code: Per IEEE 1580 Table 22
3. **Cable Core:**
   - Cabled with fillers when required
   - Core binder tape when required
4. **Jacket:**
   - Black Irradiated Cross-linked Chlorinated Polyethylene (XL-CPE)
5. **Armor:**
   - Bronze braid 88% minimum coverage
6. **Sheath:**
   - Mud Oil-Resistant, Black Irradiated Cross-linked Chlorinated Polyethylene (XL-CPE)
7. **Print:** (Including but not limited to)
   - MOR® POLYRAD® XT-125 (UL) E85994 BR782B 110C XX/C XXAWG -- (CSA) LL 9755 SPEC 245/1309 FT4 -40C SR 600/1000 V -- IEC 1 KV 60332.3A IEEE 1580 TYPE P (ETL) 109229 YEAR OF MFG SEQUENTIAL FOOTAGE MARK



Applications:

- Offshore oil and gas drilling platforms, MODUs, ships and FPSOs
- Land-based oil and gas drilling rigs
- Suitable for use in Class I, Division 1 and Zone 1 Hazardous Locations when installed in accordance with API-RP14F

Features:

- Meets NEK 606 mud oil resistance requirements with ester-based muds
- Meets UL 2225 crush and impact requirements of Type MC-HL cables
- Flexible stranding to facilitate ease of cable installation and termination
- Temperature rated @ 125°C for long life, higher ampacities and protection from thermal overloads
- Meets cold bend test at -55°C
- Meets cold impact test at -40°C

Compliances:

Industry:

- API-RP14F
- CSA C22.2 No. 245 Type X110
- IEEE 1580-2010 Type P
- IEC 60092-350
- Mud oil-resistant
- UL 1309 Type X110
- UL Listed 110°C Marine Shipboard Cable

Flame Test:

- IEEE 1202
- IEC 60332-3-22 Cat. A (supersedes IEC 60332-3A)
- CSA C22.2 No. 0.3 FT4

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Offshore and Onshore RIG Cables

IEEE 1580 Type P MOR® Polyrad® XT-125 Armored & Sheathed

Flexible Multi-Conductor Control Armored & Sheathed 18 AWG & 16 AWG

600 V/1000 V

CATALOG NUMBER	# OF CORES	COND. SIZE (AWG)	NOMINAL CABLE DIAMETER		COPPER WEIGHT		NET WEIGHT		AMPACITIES[1] 45°C AMBIENT-SINGLE BANKED			
			INCHES	mm	LBS/1000 FT	kg/km	LBS/1000 FT	kg/km	95°C	100°C	110°C	125°C
356540	2	18	0.535	13.59	12	18	182	271	13	14	15	-
321710	3	18	0.545	13.84	18	27	196	292	11	12	13	-
356550	4	18	0.575	14.61	24	36	216	321	9	10	11	-
356560	5	18	0.605	15.37	30	45	240	357	9	10	11	-
356570	6	18	0.650	16.51	36	54	264	393	9	10	11	-
356580	7	18	0.650	16.51	42	62	272	405	7	8	9	-
356590	8	18	0.675	17.15	48	71	290	432	7	8	9	-
356600	10	18	0.755	19.18	60	89	345	513	5	6	7	-
356610	12	18	0.765	19.43	72	107	370	551	5	6	7	-
356620	16	18	0.870	22.10	96	143	466	693	5	6	7	-
306040	20	18	0.935	23.75	120	179	536	798	5	6	7	-
356630	24	18	1.005	25.53	144	214	611	909	4	5	6	-
356640	30	18	1.100	27.94	180	268	739	1100	4	5	6	-
356650	37	18	1.155	29.34	222	330	843	1254	4	5	6	-
356660	44	18	1.265	32.13	263	391	972	1446	3	4	5	-
356670	60	18	1.375	34.93	359	534	1196	1780	3	4	5	-
356680	91	18	1.600	40.64	545	811	2020	3006	3	4	5	-
356690	2	16	0.545	13.84	15	22	191	284	18	19	20	22
287750	3	16	0.565	14.35	22	33	207	308	15	16	17	18
326110	4	16	0.595	15.11	30	45	228	339	12	13	14	14
356700	5	16	0.625	15.88	37	55	256	381	12	13	14	14
313850	6	16	0.670	17.02	44	65	283	421	12	13	14	14
356710	7	16	0.670	17.02	52	77	289	430	10	11	12	13
287740	8	16	0.695	17.65	59	88	314	467	10	11	12	13
356720	10	16	0.775	19.69	74	110	373	555	7	8	9	9
326080	12	16	0.800	20.32	89	132	413	615	7	8	9	9
356730	16	16	0.895	22.73	118	176	509	757	7	8	9	9
315790	20	16	1.005	25.53	148	220	628	934	7	8	9	9
281140	24	16	1.085	27.56	177	263	717	1067	6	7	8	8
356740	30	16	1.140	28.96	222	330	817	1216	6	7	8	8
356750	37	16	1.200	30.48	274	408	937	1394	5	6	7	7
303330	44	16	1.325	33.66	325	484	1085	1614	5	6	7	6
281150	60	16	1.440	36.58	444	661	1341	1995	5	6	7	6
307870	91	16	1.765	44.83	722	1074	2394	3562	4	5	6	5

Note: Dimensions and weights are nominal; subject to industry tolerances.
[1]Reference Ampacity section

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Offshore and Onshore RIG Cables

IEEE 1580 Type P MOR® Polyrad® XT-125 Armored & Sheathed

Flexible Multi-Conductor Control Armored & Sheathed 14 AWG, 12 AWG & 10 AWG

600 V/1000 V

Product Construction:

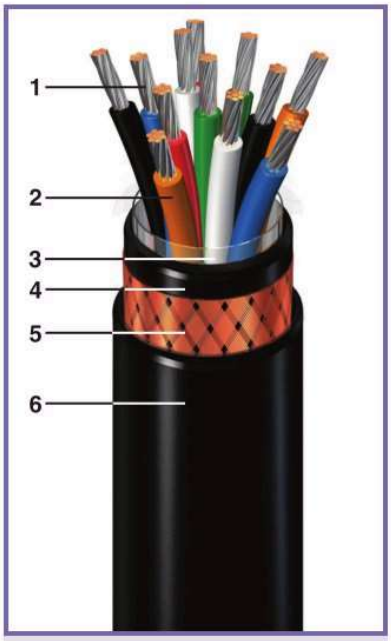
1. **Conductor:**
   - 14 AWG thru 10 AWG soft annealed tinned copper flexible strand
2. **Insulation:**
   - Polyrad® XT-125 Irradiated Cross-linked Polyolefin (XLPO)
   - Color Code: Per IEEE 1580 Table 22
3. **Cable Core:**
   - Cabled with fillers when required
   - Core binder tape when required
4. **Jacket:**
   - Black Irradiated Cross-linked Chlorinated Polyethylene (XL-CPE)
5. **Armor:**
   - Bronze braid 88% minimum coverage
6. **Sheath:**
   - Mud Oil-Resistant, Black Irradiated Cross-linked Chlorinated Polyethylene (XL-CPE)
7. **Print:** (Including but not limited to)
   - MOR® POLYRAD® XT-125 (UL) E85994 BR782B 110C XX/C XXAWG -- (CSA) LL 9755 SPEC 245/1309 FT4 -40C SR 600/1000 V -- IEC 1 KV 60332.3A IEEE 1580 TYPE P (ETL) 109229 YEAR OF MFG SEQUENTIAL FOOTAGE MARK

Applications:

- Offshore oil and gas drilling platforms, MODUs, ships and FPSOs
- Land-based oil and gas drilling rigs
- Suitable for use in Class I, Division 1 and Zone 1 Hazardous Locations when installed in accordance with API-RP14F

Features:

- Meets NEK 606 mud oil resistance requirements with ester-based muds
- Meets UL 2225 crush and impact requirements of Type MC-HL cables
- Flexible stranding to facilitate ease of cable installation and termination
- Temperature rated @ 125°C for long life, higher ampacities and protection from thermal overloads
- Meets cold bend test at -55°C
- Meets cold impact test at -40°C



Compliances:

Industry:

- API-RP14F
- CSA C22.2 No. 245 Type X110
- IEEE 1580-2010 Type P
- IEC 60092-350
- Mud oil-resistant
- UL 1309 Type X110
- UL Listed 110°C Marine Shipboard Cable

Flame Test:

- IEEE 1202
- IEC 60332-3-22 Cat. A (supersedes IEC 60332-3A)
- CSA C22.2 No. 0.3 FT4

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Flexible Multi-Conductor Control Armored & Sheathed 14 AWG, 12 AWG & 10 AWG

600 V/1000 V

CATALOG NUMBER	# OF CORES	COND. SIZE (AWG)	NOMINAL CABLE DIAMETER		COPPER WEIGHT		NET WEIGHT		AMPACITIES[1] 45°C AMBIENT-SINGLE BANKED			
			INCHES	mm	LBS/1000 FT	kg/km	LBS/1000 FT	kg/km	95°C	100°C	110°C	125°C
326120	2	14	0.575	14.61	23	34	215	320	30	31	33	33
279320	3	14	0.595	15.11	34	51	235	350	24	25	27	28
279310	4	14	0.620	15.75	46	68	265	394	19	20	22	22
281180	5	14	0.665	16.89	57	85	298	443	19	20	22	22
302600	6	14	0.705	17.91	69	103	333	496	19	20	22	22
281170	7	14	0.710	18.03	80	119	340	506	17	18	19	20
356760	8	14	0.745	18.92	92	137	373	555	17	18	19	20
279170	10	14	0.875	22.23	115	171	479	713	12	13	14	14
352480	12	14	0.890	22.61	138	205	516	768	12	13	14	14
315770	14	14	0.930	23.62	161	240	569	847	12	13	14	14
356770	16	14	0.970	24.64	184	274	619	921	12	13	14	14
279180	20	14	1.045	26.54	230	342	721	1073	12	13	14	14
315820	24	14	1.175	29.85	275	409	877	1305	10	11	12	13
356780	30	14	1.225	31.12	344	512	1009	1501	10	11	12	13
279190	37	14	1.300	33.02	425	632	1168	1738	9	10	11	11
356790	44	14	1.435	36.45	505	751	1356	2018	8	9	10	10
356800	60	14	1.565	39.75	689	1025	1700	2530	8	9	10	10
356810	91	14	2.020	051.31	1044	1553	3231	4808	7	8	9	8
281160	2	12	0.605	15.37	36	54	248	369	38	40	43	44
279200	3	12	0.625	15.88	53	79	274	408	30	31	33	37
279210	4	12	0.665	16.89	71	106	313	466	24	25	26	30
356820	5	12	0.710	18.03	89	132	359	534	24	25	26	30
356830	6	12	0.755	19.18	107	159	402	598	24	25	26	30
355760	7	12	0.755	19.18	125	186	416	619	21	22	23	26
356840	8	12	0.800	20.32	142	211	459	683	21	22	23	26
287710	10	12	0.950	24.13	178	265	586	872	15	16	17	19
356850	16	12	1.045	26.54	285	424	777	1156	15	16	17	19
281210	20	12	1.190	30.23	356	530	962	1431	15	16	17	19
356860	24	12	1.285	32.64	427	635	1112	1655	13	14	15	17
356870	30	12	1.345	34.16	534	795	1291	1921	13	14	15	17
287730	37	12	1.420	36.07	658	979	1508	2244	12	13	14	15
356880	44	12	1.575	40.01	783	1165	1761	2620	10	11	12	13
356890	60	12	1.790	45.47	1067	1588	2329	3466	10	11	12	13
356900	91	12	2.155	54.74	1619	2409	3562	5300	8	9	10	11

Note: Dimensions and weights are nominal; subject to industry tolerances.
[1]Reference Ampacity section

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Offshore and Onshore RIG Cables

IEEE 1580 Type P MOR® Polyrad® XT-125 Armored & Sheathed

Flexible Multi-Conductor Control Armored & Sheathed 14 AWG, 12 AWG & 10 AWG

600 V/1000 V

CATALOG NUMBER	# OF CORES	COND. SIZE (AWG)	NOMINAL CABLE DIAMETER		COPPER WEIGHT		NET WEIGHT		AMPACITIES[1] 45°C AMBIENT-SINGLE BANKED			
			INCHES	mm	LBS/1000 FT	kg/km	LBS/1000 FT	kg/km	95°C	100°C	110°C	125°C
326130	2	10	0.670	17.02	68	101	230	342	47	49	52	64
279220	3	10	0.695	17.65	101	150	365	543	39	41	44	49
279230	4	10	0.740	18.80	135	201	422	628	31	33	35	39
356910	5	10	0.795	20.19	169	251	494	735	31	33	35	39
356920	6	10	0.895	22.73	203	302	592	881	31	33	35	39
316620	7	10	0.895	22.73	236	351	628	934	27	29	31	34
356930	8	10	0.950	24.13	270	402	698	1039	27	29	31	34
356940	10	10	1.115	28.32	338	503	876	1303	19	21	22	25
356950	12	10	1.150	29.21	405	603	974	1449	19	21	22	25

Note: Dimensions and weights are nominal; subject to industry tolerances.
[1]Reference Ampacity section

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Offshore and Onshore RIG Cables

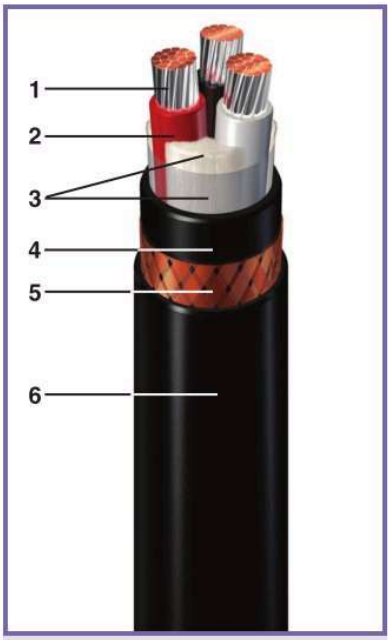
IEEE 1580 Type P MOR® Polyrad® XT-125 Armored & Sheathed

Flexible Multi-Conductor Power Armored & Sheathed

600 V/1000 V

Product Construction:

1. **Conductor:**
   - 8 AWG thru 777 kcmil soft annealed tinned copper flexible strand
2. **Insulation:**
   - Polyrad® XT-125 Irradiated Cross-linked Polyolefin (XLPO)
   - Color Code: Per IEEE 1580 Table 22
3. **Cable Core:**
   - Cabled with fillers when required
   - Core binder tape when required
4. **Jacket:**
   - Black Irradiated Cross-linked Chlorinated Polyethylene (XL-CPE)
5. **Armor:**
   - Bronze braid 88% minimum coverage
6. **Sheath:**
   - Mud Oil-Resistant, Black Irradiated Cross-linked Chlorinated Polyethylene (XL-CPE)
7. **Print:** (Including but not limited to)
   - MOR® POLYRAD® XT-125 (UL) E85994 BR782B 110C XX/C XXAWG -- (CSA) LL 9755 SPEC 245/1309 FT4 -40C SR 600/1000 V -- IEC 1 KV 60332.3A IEEE 1580 TYPE P (ETL) 109229 YEAR OF MFG SEQUENTIAL FOOTAGE MARK



Applications:

- Offshore oil and gas drilling platforms, MODUs, ships and FPSOs
- Land-based oil and gas drilling rigs
- Suitable for use in Class I, Division 1 and Zone 1 Hazardous Locations when installed in accordance with API-RP14F

Features:

- Meets NEK 606 mud oil resistance requirements with ester-based muds
- Meets UL 2225 crush and impact requirements of Type MC-HL cables
- Flexible stranding to facilitate ease of cable installation and termination
- Temperature rated @ 125°C for long life, higher ampacities and protection from thermal overloads
- Meets cold bend test at -55°C
- Meets cold impact test at -40°C

Compliances:

Industry:

- API-RP14F
- CSA C22.2 No. 245 Type X110
- IEEE 1580-2010 Type P
- IEC 60092-350
- Mud oil-resistant
- UL 1309 Type X110
- UL Listed 110°C Marine Shipboard Cable

Flame Test:

- IEEE 1202
- IEC 60332-3-22 Cat. A (supersedes IEC 60332-3A)
- CSA C22.2 No. 0.3 FT4

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Offshore and Onshore RIG Cables

IEEE 1580 Type P MOR® Polyrad® XT-125 Armored & Sheathed

Flexible Multi-Conductor Power Armored & Sheathed

600 V/1000 V

CATALOG NUMBER	# OF CORES	COND. SIZE (AWG)	NOMINAL CABLE DIAMETER		COPPER WEIGHT		NET WEIGHT		AMPACITIES[1] 45°C AMBIENT-SINGLE BANKED			
			INCHES	mm	LBS/1000 FT	kg/km	LBS/1000 FT	kg/km	95°C	100°C	110°C	125°C
356960	2	8	0.770	19.56	92	137	423	629	62	64	69	77
326140	2	6	0.880	22.35	153	228	576	857	82	85	91	111
356970	2	5	1.025	26.04	233	347	777	1156	96	101	109	147
321820	2	4	1.115	28.32	249	371	871	1296	105	110	118	153
356980	2	3	1.115	28.32	337	501	1008	1500	126	132	141	180
326150	2	2	1.200	30.48	388	577	1104	1643	143	149	160	196
356990	2	1	1.375	34.93	537	799	1456	2167	162	174	186	245
357000	2	1/0	1.450	36.83	716	1065	1720	2559	191	199	213	278
357010	2	2/0	1.565	39.75	830	1235	1981	2948	232	242	259	309
286660	2	3/0	1.795	45.59	1193	1775	2665	3966	255	265	284	382
357020	2	4/0	1.860	47.24	1340	1994	2911	4332	295	307	329	432
357030	2	262	2.030	51.56	1618	2408	3515	5230	345	358	378	481
357040	2	313	2.150	54.61	1878	2794	3951	5879	378	391	420	539
387840	2	373	2.270	57.66	2231	3320	4511	6712	440	456	497	599
387850	2	444	2.370	60.20	2691	4004	5157	7674	486	504	556	669
387860	2	535	2.610	66.29	3244	4827	6179	9194	546	566	625	741
14444.026800[2]	2	646	2.845	72.26	3827	5695	7245	10781	603	625	649	944
14444.027000[2]	2	777	3.025	76.84	4628	6886	8427	12539	674	699	784	951
279240	3	8	0.845	21.46	138	205	514	765	50	52	56	63
279260	3	6	0.930	23.62	230	342	666	991	67	70	75	91
357050	3	5	1.125	28.58	349	519	951	1415	78	82	88	120
287700	3	4	1.160	29.46	374	557	1027	1528	87	92	99	126
357060	3	3	1.215	30.86	505	751	1205	1793	103	108	116	148
281220	3	2	1.265	32.13	581	865	1323	1969	116	122	131	161
293880	3	1	1.450	36.83	806	1199	1749	2603	137	143	153	202
281230	3	1/0	1.545	39.24	1074	1598	2110	3140	157	164	176	229
318840	3	2/0	1.730	43.94	1245	1853	2520	3750	180	188	201	254
286670	3	3/0	1.865	47.37	1790	2664	3102	4616	209	218	233	313
326160	3	4/0	2.030	51.56	2009	2989	3689	5489	242	252	270	354
293910	3	262	2.145	54.48	2426	3610	4318	6425	283	294	310	395
286680	3	313	2.255	57.28	2817	4192	4877	7257	309	321	345	442
316610	3	373	2.400	60.96	3346	4979	5602	8336	361	375	406	492
357070	3	444	2.505	63.63	4037	6007	6466	9621	396	411	454	549
357080	3	535	2.835	72.01	5298	7883	7937	11810	448	465	511	608
14444.036800[2]	3	646	3.010	76.45	5740	8541	9085	13518	492	510	525	678
14444.037000[2]	3	777	3.280	83.31	6942	10330	10933	16268	552	573	640	750

Note: Dimensions and weights are nominal; subject to industry tolerances.
[1]Reference Ampacity section
[2]Thermoset CPE jacket (XL-CPE) not tested to NEK 606 Mud Oil Resistance.

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Offshore and Onshore RIG Cables

IEEE 1580 Type P MOR® Polyrad® XT-125 Armored & Sheathed

Flexible Multi-Conductor Power Armored & Sheathed

600 V/1000 V

CATALOG NUMBER	# OF CORES	COND. SIZE (AWG)	NOMINAL CABLE DIAMETER		COPPER WEIGHT		NET WEIGHT		AMPACITIES[1] 45°C AMBIENT-SINGLE BANKED			
			INCHES	mm	LBS/1000 FT	kg/km	LBS/1000 FT	kg/km	95°C	100°C	110°C	125°C
279250	4	8	0.905	22.99	183	272	596	887	40	42	45	50
279270	4	6	0.995	25.27	306	455	787	1171	54	56	60	73
357090	4	5	1.210	30.73	465	692	1130	1681	62	66	70	96
291730	4	4	1.255	31.88	499	743	1204	1792	70	74	79	101
357100	4	3	1.300	33.02	673	1001	1435	2135	82	86	93	118
302610	4	2	1.365	34.67	775	1153	1584	2357	93	98	105	129
302620	4	1	1.580	40.13	1222	1818	2130	3169	110	114	122	162
355660	4	1/0	1.720	43.69	1482	2205	2665	3966	126	131	141	183
302630	4	2/0	1.875	47.63	1661	2472	3052	4541	144	150	161	203
302640	4	3/0	2.130	54.10	2389	3555	4117	6126	167	174	186	250
296180	4	4/0	2.205	56.01	2679	3986	4521	6727	194	202	216	283
357110	4	262	2.340	59.44	3418	5086	5309	7900	226	235	248	316
357120	4	313	2.470	62.74	3756	5589	5983	8903	247	257	276	354
357130	4	373	2.625	66.68	4461	6638	6911	10284	289	300	325	394
14444.046400[2]	4	444	2.800	71.12	5382	8008	8159	12141	317	329	363	439
14444.046600[2]	4	535	3.165	80.39	6486	9651	10020	14910	358	372	409	486
14444.046800[2]	4	646	3.365	85.47	7653	11388	11515	17134	394	408	420	542
14444.047000[2]	4	777	3.600	91.44	9256	13773	13573	20197	442	452	512	600
357140	5	8	0.975	24.77	229	341	697	1037	40	42	45	50
357150	5	6	1.125	28.58	383	570	977	1454	54	56	60	73
357160	5	5	1.305	33.15	581	865	1345	2001	62	66	70	96
357170	5	4	1.360	34.54	623	927	1441	2144	70	74	79	101
357180	5	3	1.425	36.20	842	1253	1724	2565	82	86	93	118
357190	5	2	1.490	37.85	969	1442	1917	2852	93	98	105	129
357200	5	1	1.780	45.21	1343	1998	2658	3955	110	114	122	162
357210	5	1/0	1.875	47.63	1790	2664	3217	4787	126	131	141	183
357220	5	2/0	2.100	53.34	2076	3089	3820	5684	144	150	161	203
357230	5	3/0	2.320	58.93	2984	4440	4989	7424	167	174	186	250
357240	5	4/0	2.405	61.09	3349	4983	5478	8151	194	202	216	283
357250	5	262	2.560	65.02	4044	6017	6456	9607	226	235	248	316
357260	5	313	2.765	70.23	4695	6986	7472	11118	247	257	276	354
357130	5	373	2.940	74.68	5576	8297	8592	12785	289	300	325	394
14444.056400[2]	5	444	3.145	79.88	6728	10011	10100	15029	317	329	363	439
14444.056600[2]	5	535	3.470	88.14	8108	12065	12253	18232	358	372	420	486

Note: Dimensions and weights are nominal; subject to industry tolerances.
[1]Reference Ampacity section
[2]Thermoset CPE jacket (XL-CPE) not tested to NEK 606 Mud Oil Resistance.

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Offshore and Onshore RIG Cables

IEEE 1580 Type P MOR® Polyrad® XT-125 Armored & Sheathed

Flexible Variable Frequency Drive Power Armored & Sheathed

2 kV/1000 V

Product Construction:

1. **Conductor:**
   - 8 AWG thru 777 kcmil soft annealed tinned copper flexible strand
2. **Insulation:**
   - Polyrad® XT-125 Irradiated Cross-linked Polyolefin (XLPO)
   - Color Code: All black with printed numbers
3. **Ground:**
   - 3 split green insulated flexible tinned copper conductors sized to UL 1277
4. **Shield:**
   - Overall tinned copper braid with aluminum/polyester tape – 100% coverage for enhanced shield effectiveness required by VFD applications
5. **Jacket:**
   - Black Irradiated Cross-linked Chlorinated Polyethylene (XL-CPE)
6. **Armor:**
   - Bronze braid 88% minimum coverage
7. **Sheath:**
   - Mud Oil-Resistant, Black Irradiated Cross-linked Chlorinated Polyethylene (XL-CPE)
8. **Print:** (Including but not limited to)
   - MOR® POLYRAD® XT-125 VFD (UL) E85994 BR782B 110C 3C XXAWG+3GRNDS SHIELDED -- (CSA) LL 9755 SPEC 245/1309 FT4 -40C SR (ETL) US 109229 IEEE 1580 -- IEC 1 KV 60332.3A DAY/MONTH/YEAR, SEQUENTIAL MARK
9. **Option:**
   - Full-sized insulated ground wires
   - Uninsulated ground wires

Applications:

- AC motor variable frequency drives
- Offshore oil and gas drilling platforms, MODUs, ships and FPSOs
- Land-based oil and gas drilling rigs
- Suitable for use in Class I, Division 1 and Zone 1 Hazardous Locations when installed in accordance with API-RP14F

Features:

- Meets NEK 606 mud oil resistance requirements with ester-based muds
- Meets UL 2225 crush and impact requirements of Type MC-HL cables
- Flexible stranding to facilitate ease of cable installation and termination
- Temperature rated @ 125°C for long life, higher ampacities and protection from thermal overloads
- Meets cold bend test at -55°C
- Meets cold impact test at -40°C

Compliances:

Industry:

- API-RP14F
- CSA C22.2 No. 245 Type X110
- IEEE 1580-2010 Type P
- IEC 60092-350
- Mud oil-resistant
- UL 1309 Type X110
- UL Listed 110°C Marine Shipboard Cable

Flame Test:

- IEEE 1202
- IEC 60332-3-22 Cat. A (supersedes IEC 60332-3A)
- CSA C22.2 No. 0.3 FT4

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Offshore and Onshore RIG Cables

IEEE 1580 Type P MOR® Polyrad® XT-125 Armored & Sheathed

Flexible Variable Frequency Drive Power Armored & Sheathed

2 kV/1000 V

CATALOG NUMBER	# OF CORES	COND. SIZE (AWG)	GROUNDING COND. SIZE (AWG)	NOMINAL CABLE DIAMETER		COPPER WEIGHT		NET WEIGHT		AMPACITIES[1] 45°C AMBIENT-SINGLE BANKED			
				INCHES	mm	LBS/1000 FT	kg/km	LBS/1000 FT	kg/km	95°C	100°C	110°C	125°C
381820IG	3	8	3 x #14	1.170	29.72	226	336	903	1344	50	52	56	63
381830IG	3	6	3 x #12	1.245	31.62	343	510	1105	1644	67	70	75	91
381840IG	3	4	3 x #12	1.335	33.91	512	762	1400	2083	87	92	99	126
381850IG	3	2	3 x #10	1.450	36.83	778	1158	1803	2683	116	122	131	161
381860IG	3	1	3 x #10	1.705	43.31	1020	1518	2374	3533	137	143	153	202
359690IG	3	1/0	3 x #10	1.780	45.21	1295	1927	2748	4089	157	164	176	229
359700IG	3	2/0	3 x #10	1.920	48.77	1479	2201	3113	4632	180	188	201	254
359710IG	3	3/0	3 x #8	2.150	54.61	2076	3089	4072	6059	209	218	233	313
353040IG	3	4/0	3 x #8	2.215	56.26	2509	3733	4403	6552	242	252	270	354
359720IG	3	262	3 x #6	2.370	60.20	2866	4265	5264	7833	283	294	310	395
359730IG	3	313	3 x #6	2.485	63.12	3270	4866	5855	8712	309	321	345	442
359740IG	3	373	3 x #6	2.625	66.68	3814	5675	6624	9857	361	375	406	492
387870IG	3	444	3 x #6	2.800	71.12	4518	6723	7655	11391	396	411	454	594
14448.036600IG[2]	3	535	3 x #6	3.115	79.12	5385	8013	9239	13748	448	465	511	608
14448.036800IG[2]	3	646	3 x #4	3.300	83.82	6414	9544	10651	15849	492	510	525	678
14448.037000IG[2]	3	777	3 x #4	3.505	89.03	7815	11629	12286	18282	552	573	640	750

Note: Dimensions and weights are nominal; subject to industry tolerances.
[1]Reference Ampacity section
[2]Thermoset CPE jacket (XL-CPE) not tested to NEK 606 Mud Oil Resistance.

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Offshore and Onshore RIG Cables

IEEE 1580 Type P MOR® Polyrad® XT-125 Armored & Sheathed

Flexible Paired Signal Cable Individually/Overall Shielded Armored & Sheathed

600 V/1000 V

Product Construction:

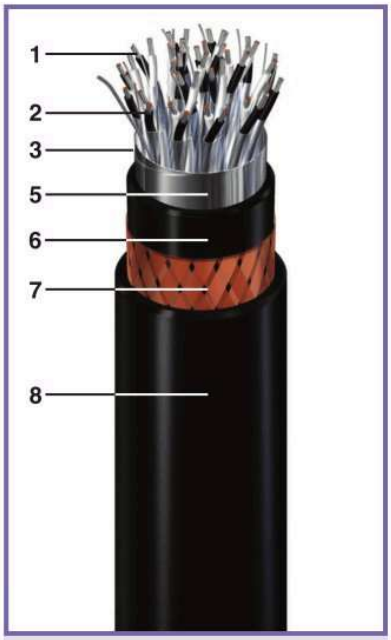
1. **Conductor:**
   - 20 AWG thru 14 AWG soft annealed tinned copper flexible strand
2. **Insulation:**
   - Polyrad® XT-125 Irradiated Cross-linked Polyolefin (XLPO)
   - Color Code: Black and white with printed numbers
3. **Individually Shielded Pairs:**
   - Aluminum/polymer tape and tinned copper drain wire
4. **Cable Core:**
   - Core binder tape when required
5. **Overall Shield:**
   - Overall aluminum/polymer tape with tinned copper drain wire
6. **Jacket:**
   - Black Irradiated Cross-linked Chlorinated Polyethylene (XL-CPE)
7. **Armor:**
   - Bronze braid 88% minimum coverage
8. **Sheath:**
   - Mud Oil-Resistant, Black Irradiated Cross-linked Chlorinated Polyethylene (XL-CPE)
9. **Print:** (Including but not limited to)
   - MOR® POLYRAD® XT-125 (UL) E85994 BR782B 110C XX/PR XXAWG -- (CSA) LL 9755 SPEC 245/1309 FT4 -40C SR 600/1000 V -- IEC 60332.3A IEEE 1580 TYPE P (ETL) 109229 YEAR OF MFG SEQUENTIAL FOOTAGE MARK

Applications:

- Offshore oil and gas drilling platforms, MODUs, ships and FPSOs
- Land-based oil and gas drilling rigs
- Suitable for use in Class I, Division 1 and Zone 1 Hazardous Locations when installed in accordance with API-RP14F

Features:

- Meets NEK 606 mud oil resistance requirements with ester-based muds
- Meets UL 2225 crush and impact requirements of Type MC-HL cables
- Flexible stranding to facilitate ease of cable installation and termination
- Temperature rated @ 125°C for long life, higher ampacities and protection from thermal overloads
- Meets cold bend test at -55°C
- Meets cold impact test at -40°C



Compliances:

Industry:

- API-RP14F
- CSA C22.2 No. 245 Type X110
- IEEE 1580-2010 Type P
- IEC 60092-350
- Mud oil-resistant
- UL 1309 Type X110
- UL Listed 110°C Marine Shipboard Cable

Flame Test:

- IEEE 1202
- IEC 60332-3-22 Cat. A (supersedes IEC 60332-3A)
- CSA C22.2 No. 0.3 FT4

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Offshore and Onshore RIG Cables

IEEE 1580 Type P MOR® Polyrad® XT-125 Armored & Sheathed

Flexible Paired Signal Cable Individually/Overall Shielded Armored & Sheathed

600 V/1000 V

CATALOG NUMBER	# OF PAIRS	COND. SIZE (AWG)	NOMINAL CABLE DIAMETER		COPPER WEIGHT		NET WEIGHT		AMPACITIES[1] 45°C AMBIENT-SINGLE BANKED			
			INCHES	mm	LBS/1000 FT	kg/km	LBS/1000 FT	kg/km	95°C	100°C	110°C	125°C
359290	1	20	0.520	13.21	10	15	168	250	9	10	11	-
357950	2	20	0.690	17.53	23	34	288	429	6	7	8	-
357960	3	20	0.720	18.29	33	49	308	458	6	7	8	-
357970	4	20	0.765	19.43	43	64	345	513	5	6	7	-
357980	5	20	0.860	21.84	53	79	420	625	4	5	6	-
357990	6	20	0.925	23.50	63	94	464	690	4	5	6	-
358000	7	20	0.925	23.50	73	109	477	710	4	5	6	-
358010	8	20	0.980	24.89	83	124	514	765	4	5	6	-
358020	10	20	1.150	29.21	104	155	660	982	4	5	6	-
358030	12	20	1.185	30.10	124	185	707	1052	3	4	5	-
358040	16	20	1.285	32.64	164	244	832	1238	3	4	5	-
358050	20	20	1.400	35.56	205	305	959	1427	3	4	5	-
358060	24	20	1.535	38.99	245	365	1101	1638	2	3	4	-
315750	1	18	0.540	13.72	16	24	183	272	13	14	15	-
358080	2	18	0.725	18.42	35	52	326	485	9	10	11	-
358090	3	18	0.760	19.30	52	77	350	521	9	10	11	-
358100	4	18	0.855	21.72	68	101	424	631	8	9	10	-
358110	5	18	0.915	23.24	84	125	487	725	5	6	7	-
358120	6	18	0.980	24.89	100	149	534	795	5	6	7	-
358130	7	18	0.980	24.89	116	173	553	823	5	6	7	-
358140	8	18	1.070	27.18	132	196	637	948	5	6	7	-
358150	10	18	1.215	30.86	164	244	761	1132	5	6	7	-
358160	12	18	1.250	31.75	196	292	825	1228	5	6	7	-
358170	16	18	1.365	34.67	260	387	972	1446	4	5	6	-
358180	20	18	1.490	37.85	324	482	1141	1698	4	5	6	-
358190	24	18	1.625	41.28	388	577	1315	1957	3	4	5	-

Note: Dimensions and weights are nominal; subject to industry tolerances.
[1]Reference Ampacity section

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Offshore and Onshore RIG Cables

IEEE 1580 Type P MOR® Polyrad® XT-125 Armored & Sheathed

Flexible Paired Signal Cable Individually/Overall Shielded Armored & Sheathed

600 V/1000 V

CATALOG NUMBER	# OF PAIRS	COND. SIZE (AWG)	NOMINAL CABLE DIAMETER		COPPER WEIGHT		NET WEIGHT		AMPACITIES[1] 45°C AMBIENT-SINGLE BANKED			
			INCHES	mm	LBS/1000 FT	kg/km	LBS/1000 FT	kg/km	95°C	100°C	110°C	125°C
279280	1	16	0.550	13.97	20	30	194	289	18	19	20	25
358210	2	16	0.750	19.05	45	67	350	521	12	13	14	22
358220	3	16	0.780	19.81	65	97	380	565	12	13	14	18
358230	4	16	0.875	22.23	86	128	460	684	10	11	12	14
358240	5	16	0.945	24.00	106	158	529	787	7	8	9	14
358250	6	16	1.010	25.65	126	187	583	868	7	8	9	14
358260	7	16	1.010	25.65	146	217	607	903	7	8	9	13
358270	8	16	1.115	28.32	166	247	713	1061	7	8	9	13
358280	10	16	1.265	32.13	206	307	839	1248	7	8	9	9
358290	12	16	1.300	33.02	247	368	913	1359	6	7	8	9
358300	16	16	1.420	36.07	337	501	1093	1626	6	7	8	9
358310	20	16	1.545	39.24	408	607	1274	1896	6	7	8	9
358320	24	16	1.760	44.70	488	726	1567	2332	5	6	7	8
352490	1	14	0.575	14.61	31	46	220	327	30	31	33	39
358340	2	14	0.790	20.07	71	106	412	613	19	20	21	33
358350	3	14	0.875	22.23	103	153	485	722	19	20	21	28
358360	4	14	0.935	23.75	134	199	551	820	17	18	19	22
358370	5	14	1.010	25.65	166	247	634	943	12	13	14	22
358380	6	14	1.125	28.58	197	293	756	1125	12	13	14	22
358390	7	14	1.125	28.58	229	341	791	1177	12	13	14	20
358400	8	14	1.200	30.48	260	387	875	1302	12	13	14	20
358410	10	14	1.365	34.67	323	481	1027	1528	12	13	14	14
358420	12	14	1.410	35.81	386	574	1129	1680	11	12	13	14
358430	16	14	1.525	38.74	513	763	1370	2039	9	10	11	14
358440	20	14	1.740	44.20	639	951	1702	2533	9	10	11	14
358450	24	14	1.900	48.26	765	1138	1974	2937	8	9	10	13

Note: Dimensions and weights are nominal; subject to industry tolerances.
[1]Reference Ampacity section

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Offshore and Onshore RIG Cables

IEEE 1580 Type P MOR® Polyrad® XT-125 Armored & Sheathed

Flexible Triad Signal Cable Individually/Overall Shielded Armored & Sheathed

600 V/1000 V

Product Construction:

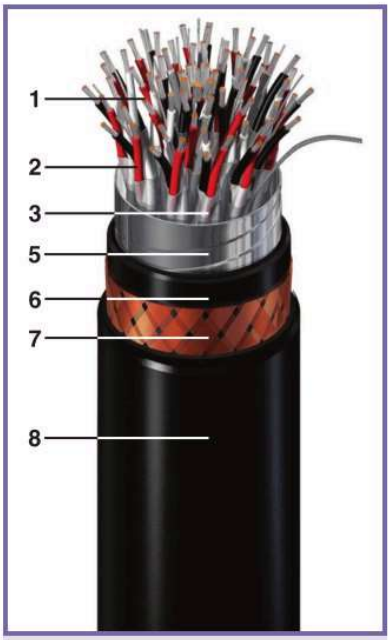
1. **Conductor:**
   - 18 AWG and 16 AWG soft annealed tinned copper flexible strand
2. **Insulation:**
   - Polyrad® XT-125 Irradiated Cross-linked Polyolefin (XLPO)
   - Color Code: Black, white and red with printed numbers
3. **Individually Shielded Triads:**
   - Aluminum/polymer tape and tinned copper drain wire
4. **Cable Core:**
   - Core binder tape when required
5. **Overall Shield:**
   - Overall aluminum/polymer tape with tinned copper drain wire
6. **Jacket:**
   - Black Irradiated Cross-linked Chlorinated Polyethylene (XL-CPE)
7. **Armor:**
   - Bronze braid 88% minimum coverage
8. **Sheath:**
   - Mud Oil-Resistant, Black Irradiated Cross-linked Chlorinated Polyethylene (XL-CPE)
9. **Print:** (Including but not limited to)
   - MOR® POLYRAD® XT-125 (UL) E85994 BR782B 110C XX/TRI XXAWG -- (CSA) LL 9755 SPEC 245/1309 FT4 -40C SR 600/1000 V -- IEC 60332.3A IEEE 1580 TYPE P (ETL) 109229 YEAR OF MFG SEQUENTIAL FOOTAGE MARK

Applications:

- Offshore oil and gas drilling platforms, MODUs, ships and FPSOs
- Land-based oil and gas drilling rigs
- Suitable for use in Class I, Division 1 and Zone 1 Hazardous Locations when installed in accordance with API-RP14F

Features:

- Meets NEK 606 mud oil resistance requirements with ester-based muds
- Meets UL 2225 crush and impact requirements of Type MC-HL cables
- Flexible stranding to facilitate ease of cable installation and termination
- Temperature rated @ 125°C for long life, higher ampacities and protection from thermal overloads
- Meets cold bend test at -55°C
- Meets cold impact test at -40°C



Compliances:

Industry:

- API-RP14F
- CSA C22.2 No. 245 Type X110
- IEEE 1580-2010 Type P
- IEC 60092-350
- Mud oil-resistant
- UL 1309 Type X110
- UL Listed 110°C Marine Shipboard Cable

Flame Test:

- IEEE 1202
- IEC 60332-3-22 Cat. A (supersedes IEC 60332-3A)
- CSA C22.2 No. 0.3 FT4

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Offshore and Onshore RIG Cables

IEEE 1580 Type P MOR® Polyrad® XT-125 Armored & Sheathed

Flexible Triad Signal Cable Individually/Overall Shielded Armored & Sheathed

600 V/1000 V

CATALOG NUMBER	# OF TRIADS	COND. SIZE (AWG)	NOMINAL CABLE DIAMETER		COPPER WEIGHT		NET WEIGHT		AMPACITIES[1] 45°C AMBIENT-SINGLE BANKED			
			INCHES	mm	LBS/1000 FT	kg/km	LBS/1000 FT	kg/km	95°C	100°C	110°C	125°C
358660	1	18	0.555	14.10	22	33	198	295	11	12	13	-
358670	2	18	0.780	19.81	48	71	381	567	8	9	10	-
358680	3	18	0.810	20.57	71	106	412	613	7	8	9	-
358690	4	18	0.915	23.24	93	138	504	750	5	6	7	-
358700	5	18	0.985	25.02	113	168	576	857	5	6	7	-
358710	6	18	1.090	27.69	137	204	687	1022	5	6	7	-
358720	7	18	1.090	27.69	160	238	713	1061	4	5	6	-
358730	8	18	1.165	29.59	182	271	787	1171	4	5	6	-
358740	12	18	1.350	34.29	271	403	1018	1515	4	5	6	-
358750	16	18	1.485	37.72	360	536	1210	1800	3	4	5	-
358760	1	16	0.570	14.48	38	57	212	315	15	16	17	25
358770	2	16	0.810	20.57	61	91	411	612	12	13	14	22
358780	3	16	0.885	22.48	88	131	483	719	11	12	13	18
358790	4	16	0.945	24.00	116	173	549	817	8	9	10	14
358800	5	16	1.020	25.91	143	213	633	942	8	9	10	14
358810	6	16	1.135	28.83	171	254	753	1120	8	9	10	14
358820	7	16	1.135	28.83	200	298	788	1173	7	8	9	13
358830	8	16	1.210	30.73	227	338	871	1296	7	8	9	13
358840	12	16	1.415	35.94	337	501	1122	1670	6	7	8	9
358850	16	16	1.545	39.24	448	667	1360	2024	5	6	7	9

Note: Dimensions and weights are nominal; subject to industry tolerances.
[1]Reference Ampacity section

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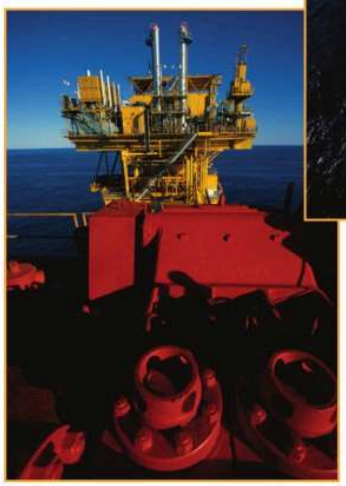
Offshore and Onshore RIG Cables

MV-RIG®
Flexible & Flame-Retardant IEEE 1580 Type E Medium-Voltage Power Cables

Today's competitive offshore environment demands advanced cabling systems that meet requirements well into the future. General Cable's highly reliable and low-maintenance cables meet specific industry demands and specifications, ensuring the utmost performance. Nowhere is the need for robust, high-functioning cable designs greater than in the offshore environment. As a world-class manufacturer, General Cable understands the need to deliver cabling infrastructures that reduce downtime for improved productivity, as well as meeting increased needs for advanced exploration.

With the increasing power demands of offshore rigs, FPSOs and production platforms, the industry is requiring greater medium-voltage power generation and distribution in the offshore environment. General Cable has developed a complete line of MV-RIG® cables engineered to meet the performance criteria of IEEE 1580 Type E, and available in single or three-conductor 5 kV, 8 kV and 15 kV unarmored and armored constructions, depending upon the application. MV-RIG cables are ideally suited for increasing power distribution requirements in production platforms and FPSOs. This premium medium-voltage power cable has a thermoset insulation/jacket system that provides excellent flexibility for easy handling, exceptional flame, moisture, oil and chemical resistance, and ease of installation. When you specify General Cable medium-voltage cable, you are assured of product excellence.

General Cable. . .highly engineered performance cables to meet any specifications.



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Offshore and Onshore RIG Cables

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IEEE 1580 Type E

MV-RIG® Flexible & Flame-Retardant Medium-Voltage Power Cables Unarmored

5 kV, 8 kV & 15 kV

Single-Conductor

Three-Conductor

Three-Conductor VFD


FLAME-RETARDANT


FLEXIBLE


OIL-RESISTANT


MUD OIL-RESISTANT


SUNLIGHT-RESISTANT

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Offshore and Onshore RIG Cables

MV-RIG®
IEEE 1580 Type E, Unarmored

Flexible & Flame-Retardant Medium-Voltage Power Cable Single-Conductor, Unarmored
5 kV, 8 kV & 15 kV, 90°C

Product Construction:
1. **Conductor:**
   - 6 AWG thru 777 kcmil fully annealed flexible tinned copper
2. **Conductor Shield:**
   - Semi-conducting tape and extruded semi-conducting material
3. **Insulation:**
   - Thermoset 90°C Ethylene Propylene Rubber – Type E
4. **Insulation Shield:**
   - Extruded semi-conducting material and semi-conducting tape
5. **Metallic Shield:**
   - A composite braid consisting of tinned copper/colored nylon – Black
6. **Separator Tape**
7. **Sheath:**
   - Black Thermoset Chlorinated Polyethylene – Type XL-CPE
8. **Print:** (Including but not limited to)
   - GENERAL CABLE® MV-RIG® E85994 1/C XXAWG OR KCMIL 90C TYPE E (UL) MARINE SHIPBOARD SPEC 245/1309 (VOLTAGE) kV % INSULATION LEVEL SUN RES ALSO CLASSIFIED IN ACCORDANCE WITH IEEE 1580-2001 FT4 IEC 60332-3-22
9. **Options:**
   - Colored sheaths available upon request: 5 kV Yellow, 8 kV Orange, 15 kV Red
   - Bronze braid armor, 88% minimum coverage

Applications:
- Mobile offshore drilling units and production platforms
- Fixed and floating offshore production platforms
- Commercial and marine ships
- Suitable for use in Class I, Division 2 per API-RP14F

Features:
- Premium medium-voltage power cable for increased power distribution
- Excellent flame resistance
- Flexible for easy handling
- Faster and easier to install
- Meets cold bend test at -40°C per UL 1309 and IEEE 1580
- Meets cold impact test at -35°C per IEEE 1580

Compliances:
Industry:
- API-RP14F
- CSA C22.2 No. 245 Type E
- ICEA S-93-639
- IEEE 1580 Type E
- UL 1072
- UL 1309 Type E
- Mud oil-resistant
- IEC 61892-4

Flame Test:
- IEEE 1202
- IEC 60332-3-22 Cat. A
- CSA C22.2 No. 245
- UL 1309

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Offshore and Onshore RIG Cables

MV-RIG®
IEEE 1580 Type E, 5 kV, Unarmored

Flexible & Flame-Retardant Medium-Voltage Power Cable Single-Conductor, Unarmored

5 kV, 100% / 133% INSULATION LEVELS – 90 MILS

CATALOG NUMBER	NO. OF COND.	COND. SIZE (AWG/kcmil)	NOMINAL CABLE DIAMETER		NET WEIGHT		AMPACITY* IN FREE AIR @ 45°C AMBIENT
			INCHES	mm	LBS/1000 FT	kg/km	90°C
21010.010600	1	6	0.607	15.42	253	377	107
21010.010400	1	4	0.689	17.51	346	515	141
21010.010200	1	2	0.754	19.15	451	672	186
21010.015100	1	1/0	0.881	22.39	662	986	247
21010.015200	1	2/0	0.942	23.92	791	1177	285
21010.015400	1	4/0	1.047	26.60	1091	1624	381
21010.016000	1	262	1.127	28.62	1278	1902	435
21010.016200	1	313	1.193	30.30	1474	2194	486
21010.016300	1	373	1.258	31.96	1700	2531	544
21010.016400	1	444	1.334	33.87	1978	2943	606
21010.016600	1	535	1.415	35.94	2305	3431	682
21010.016800	1	646	1.503	38.19	2685	3996	767
21010.017000	1	777	1.607	40.82	3170	4717	865

* Ampacities are based on API-RP14F.
Note: Dimensions and weights are nominal; subject to industry tolerances.

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Offshore and Onshore RIG Cables

MV-RIG®
IEEE 1580 Type E, 8 kV, Unarmored

Flexible & Flame-Retardant Medium-Voltage Power Cable Single-Conductor, Unarmored

8 kV, 100% INSULATION LEVEL – 115 MILS

CATALOG NUMBER	NO. OF COND.	COND. SIZE (AWG/kcmil)	NOMINAL CABLE DIAMETER		NET WEIGHT		AMPACITY* IN FREE AIR @ 45°C AMBIENT
			INCHES	mm	LBS/1000 FT	kg/km	90°C
21020.010600	1	6	0.659	16.75	284	423	107
21020.010400	1	4	0.742	18.84	380	565	141
21020.010200	1	2	0.805	20.45	488	727	186
21020.015100	1	1/0	0.934	23.71	706	1050	247
21020.015200	1	2/0	0.994	25.25	839	1249	285
21020.015400	1	4/0	1.099	27.93	1141	1698	381
21020.016000	1	262	1.179	29.94	1331	1980	435
21020.016200	1	313	1.245	31.63	1530	2276	486
21020.016300	1	373	1.311	33.29	1759	2617	544
21020.016400	1	444	1.386	35.20	2039	3035	606
21020.016600	1	535	1.467	37.27	2371	3528	682
21020.016800	1	646	1.556	39.52	2755	4100	767
21020.017000	1	777	1.659	42.15	3202	4765	865

8 kV, 133% INSULATION LEVEL – 140 MILS

CATALOG NUMBER	NO. OF COND.	COND. SIZE (AWG/kcmil)	NOMINAL CABLE DIAMETER		NET WEIGHT		AMPACITY* IN FREE AIR @ 45°C AMBIENT
			INCHES	mm	LBS/1000 FT	kg/km	90°C
21030.010600	1	6	0.714	18.12	319	474	107
21030.010400	1	4	0.796	20.22	419	624	141
21030.010200	1	2	0.902	22.92	568	845	186
21030.015100	1	1/0	0.988	25.09	755	1123	247
21030.015200	1	2/0	1.048	26.62	888	1322	285
21030.015400	1	4/0	1.154	29.30	1195	1778	381
21030.016000	1	262	1.233	31.32	1388	2065	435
21030.016200	1	313	1.299	33.01	1592	2369	486
21030.016300	1	373	1.365	34.67	1822	2712	544
21030.016400	1	444	1.440	36.58	2105	3133	606
21030.016600	1	535	1.467	37.27	2371	3528	682
21030.016800	1	646	1.610	40.89	2828	4209	767
21030.017000	1	777	1.776	45.11	3393	5049	865

* Ampacities are based on API-RP14F.
Note: Dimensions and weights are nominal; subject to industry tolerances.

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Offshore and Onshore RIG Cables

MV-RIG®
IEEE 1580 Type E, 15 kV, Unarmored

Flexible & Flame-Retardant Medium-Voltage Power Cable Single-Conductor, Unarmored

15 kV, 100% INSULATION LEVEL – 175 MILS

CATALOG NUMBER	NO. OF COND.	COND. SIZE (AWG/kcmil)	NOMINAL CABLE DIAMETER		NET WEIGHT		AMPACITY* IN FREE AIR @ 45°C AMBIENT
			INCHES	mm	LBS/1000 FT	kg/km	90°C
21040.010200	1	2	1.055	26.80	695	1035	186
21040.015100	1	1/0	1.139	28.92	887	1321	247
21040.015200	1	2/0	1.197	30.40	1029	1532	284
21040.015400	1	4/0	1.304	33.13	1350	2009	378
21040.016000	1	262	1.404	35.66	1576	2345	431
21040.016200	1	313	1.470	37.35	1787	2659	481
21040.016300	1	373	1.536	39.01	2025	3014	536
21040.016400	1	444	1.611	40.92	2325	3459	598
21040.016600	1	535	1.751	44.47	2776	4131	672
21040.016800	1	646	1.839	46.71	3181	4734	754
21040.017000	1	777	1.975	50.16	3748	5577	848

15 kV, 133% INSULATION LEVEL – 220 MILS

CATALOG NUMBER	NO. OF COND.	COND. SIZE (AWG/kcmil)	NOMINAL CABLE DIAMETER		NET WEIGHT		AMPACITY* IN FREE AIR @ 45°C AMBIENT
			INCHES	mm	LBS/1000 FT	kg/km	90°C
21050.010200	1	2	1.138	28.90	775	1153	186
21050.015100	1	1/0	1.221	31.02	975	1451	247
21050.015200	1	2/0	1.279	32.50	1118	1663	284
21050.015400	1	4/0	1.407	35.74	1468	2185	378
21050.016000	1	262	1.486	37.75	1678	2498	431
21050.016200	1	313	1.553	39.44	1893	2818	481
21050.016300	1	373	1.618	41.10	2143	3189	536
21050.016400	1	444	1.756	44.60	2554	3800	598
21050.016600	1	535	1.833	46.56	2903	4321	672
21050.016800	1	646	1.954	49.62	3367	5010	754
21050.017000	1	777	2.057	52.25	3889	5788	848

* Ampacities are based on API-RP14F.
Note: Dimensions and weights are nominal; subject to industry tolerances.

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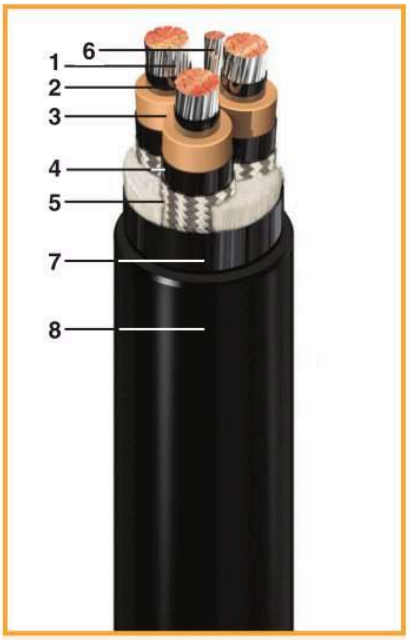
Offshore and Onshore RIG Cables

MV-RIG®
IEEE 1580 Type E, Unarmored

Flexible & Flame-Retardant Medium-Voltage Power Cable Three-Conductor, Unarmored
5 kV, 8 kV & 15 kV, 90°C

Product Construction:
1. **Conductor:**
   - 6 AWG thru 777 kcmil fully annealed flexible tinned copper
2. **Conductor Shield:**
   - Semi-conducting tape and extruded semi-conducting material
3. **Insulation:**
   - Thermoset 90°C Ethylene Propylene Rubber – Type E
4. **Insulation Shield:**
   - Extruded semi-conducting material and semi-conducting tape
5. **Metallic Shield:**
   - A composite braid consisting of tinned copper/colored nylon – Black, Blue, Red
6. **Ground:**
   - Stranded tinned copper, bare
7. **Separator Tape**
8. **Sheath:**
   - Black Thermoset Chlorinated Polyethylene – Type XL-CPE
9. **Print:** (Including but not limited to)
   - GENERAL CABLE® MV-RIG® E85994 3/C XXAWG OR KCMIL 90C TYPE E (UL) MARINE SHIPBOARD SPEC 245/1309 (VOLTAGE) kV % INSULATION LEVEL SUN RES ALSO CLASSIFIED IN ACCORDANCE WITH IEEE 1580-2001 FT4 IEC 60332-3-22
10. **Options:**
   - Colored sheaths available upon request: 5 kV Yellow, 8 kV Orange, 15 kV Red
   - Bronze braid armor, 88% minimum coverage
   - UL Type MV-105 listing available upon request



Applications:
- Mobile offshore drilling units and production platforms
- Fixed and floating offshore production platforms
- Commercial ships
- Suitable for use in Class I, Division 2 per API-RP14F

Features:
- Premium medium-voltage power cable for increased power distribution
- Excellent flame resistance
- Flexible for easy handling
- Faster and easier to install
- Meets cold bend test at -40°C per UL 1309 and IEEE 1580
- Meets cold impact test at -35°C per IEEE 1580

Compliances:
Industry:
- API-RP14F
- CSA C22.2 No. 245 Type E
- ICEA S-93-639
- IEEE 1580 Type E
- UL 1072
- UL 1309 Type E
- Mud oil-resistant
- IEC 61892-4

Flame Test:
- IEEE 1202
- IEC 60332-3-22 Cat. A
- CSA C22.2 No. 245
- UL 1309

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Offshore and Onshore RIG Cables

MV-RIG®
IEEE 1580 Type E, 5 kV, Unarmored

Flexible & Flame-Retardant Medium-Voltage Power Cable Three-Conductor, Unarmored

5 kV, 100% / 133% INSULATION LEVELS – 90 MILS

CATALOG NUMBER	NO. OF COND.	COND. SIZE (AWG/kcmil)	NOMINAL CABLE DIAMETER		NET WEIGHT		AMPACITY* IN FREE AIR @ 45°C AMBIENT
			INCHES	mm	LBS/1000 FT	kg/km	90°C
21310.030600	3	6	1.232	31.30	960	1428	88
21310.030400	3	4	1.409	35.79	1314	1955	116
21310.030200	3	2	1.546	39.26	1698	2528	152
21310.035100	3	1/0	1.792	45.51	2435	3624	201
21310.035200	3	2/0	1.923	48.83	2898	4313	232
21310.035400	3	4/0	2.151	54.63	3957	5888	306
21310.036000	3	262	2.322	58.97	4642	6908	348
21310.036200	3	313	2.465	62.62	5346	7955	386
21310.036300	3	373	2.602	66.09	6138	9134	429
21310.036400	3	444	2.832	71.94	7316	10888	455
21310.036600	3	535	2.989	75.92	8505	12658	528
21310.036800	3	646	3.180	80.77	9863	14678	584
21310.037000	3	777	3.402	86.41	11584	17239	647

* Ampacities are based on API-RP14F.
Note: Dimensions and weights are nominal; subject to industry tolerances.

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Offshore and Onshore RIG Cables

MV-RIG®
IEEE 1580 Type E, 8 kV, Unarmored

Flexible & Flame-Retardant Medium-Voltage Power Cable Three-Conductor, Unarmored

8 kV, 100% INSULATION LEVEL – 115 MILS

CATALOG NUMBER	NO. OF COND.	COND. SIZE (AWG/kcmil)	NOMINAL CABLE DIAMETER		NET WEIGHT		AMPACITY* IN FREE AIR @ 45°C AMBIENT
			INCHES	mm	LBS/1000 FT	kg/km	90°C
21320.030600	3	6	1.345	34.16	1099	1636	88
21320.030400	3	4	1.522	38.65	1469	2187	116
21320.030200	3	2	1.658	42.12	1980	2946	152
21320.035100	3	1/0	1.904	48.37	2630	3914	201
21320.035200	3	2/0	2.035	51.69	3116	4636	232
21320.035400	3	4/0	2.263	57.49	4183	6225	306
21320.036000	3	262	2.434	61.83	4888	7275	348
21320.036200	3	313	2.578	65.48	5609	8347	386
21320.036300	3	373	2.718	69.03	6424	9560	429
21320.036400	3	444	2.945	74.79	7620	11340	455
21320.036600	3	535	3.111	79.03	8850	13171	528
21320.036800	3	646	3.283	83.40	10188	15161	584
21320.037000	3	777	3.530	89.65	12019	17886	647

8 kV, 133% INSULATION LEVEL – 140 MILS

CATALOG NUMBER	NO. OF COND.	COND. SIZE (AWG/kcmil)	NOMINAL CABLE DIAMETER		NET WEIGHT		AMPACITY* IN FREE AIR @ 45°C AMBIENT
			INCHES	mm	LBS/1000 FT	kg/km	90°C
21330.030600	3	6	1.461	37.12	1255	1868	88
21330.030400	3	4	1.638	41.61	1647	2451	116
21330.030200	3	2	1.838	46.69	2173	3234	152
21330.035100	3	1/0	2.022	51.36	2852	4245	201
21330.035200	3	2/0	2.152	54.65	3344	4976	232
21330.035400	3	4/0	2.381	60.47	4439	6606	306
21330.036000	3	262	2.552	64.81	5159	7677	348
21330.036200	3	313	2.693	68.41	5899	8779	386
21330.036300	3	373	2.899	73.65	6918	10296	429
21330.036400	3	444	3.051	77.50	7999	11904	455
21330.036600	3	535	3.226	81.94	9213	13711	528
21330.036800	3	646	3.417	86.79	10607	15785	584

* Ampacities are based on API-RP14F.
Note: Dimensions and weights are nominal; subject to industry tolerances.

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Offshore and Onshore RIG Cables

MV-RIG®
IEEE 1580 Type E, 15 kV, Unarmored

Flexible & Flame-Retardant Medium-Voltage Power Cable Three-Conductor, Unarmored

15 kV, 100% INSULATION LEVEL – 175 MILS

CATALOG NUMBER	NO. OF COND.	COND. SIZE (AWG/kcmil)	NOMINAL CABLE DIAMETER		NET WEIGHT		AMPACITY* IN FREE AIR @ 45°C AMBIENT
			INCHES	mm	LBS/1000 FT	kg/km	90°C
21340.030200	3	2	2.168	55.06	2773	4126	156
21340.035100	3	1/0	2.347	59.61	3483	5184	205
21340.035200	3	2/0	2.473	62.82	4011	5969	234
21340.035400	3	4/0	2.704	68.69	5176	7703	309
21340.036000	3	262	2.763	70.17	5778	8598	352
21340.036200	3	313	2.895	73.54	6515	9696	389
21340.036300	3	373	3.036	77.12	7368	10965	432
21340.036400	3	444	3.199	81.25	8422	12533	456
21340.036600	3	535	3.374	85.69	9647	14357	528

15 kV, 133% INSULATION LEVEL – 220 MILS

CATALOG NUMBER	NO. OF COND.	COND. SIZE (AWG/kcmil)	NOMINAL CABLE DIAMETER		NET WEIGHT		AMPACITY* IN FREE AIR @ 45°C AMBIENT
			INCHES	mm	LBS/1000 FT	kg/km	90°C
21350.030200	3	2	2.346	59.58	3141	4674	156
21350.035100	3	1/0	2.525	64.12	3893	5794	205
21350.035200	3	2/0	2.650	67.31	4433	6597	234
21350.035400	3	4/0	2.991	75.97	5960	8869	309
21350.036000	3	262	3.004	76.30	6444	9590	352
21350.036200	3	313	3.106	78.90	7025	10455	389
21350.036300	3	373	3.220	81.79	7936	11811	432
21350.036400	3	444	3.364	85.44	8923	13280	456
21350.036600	3	535	3.539	89.88	10195	15172	528

* Ampacities are based on API-RP14F.
Note: Dimensions and weights are nominal; subject to industry tolerances.

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Offshore and Onshore RIG Cables

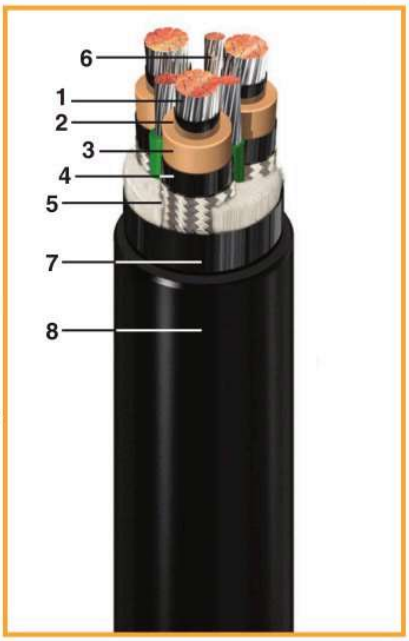
MV-RIG®
IEEE 1580 Type E, Unarmored

Flexible & Flame-Retardant Medium-Voltage VFD Power Cable Three-Conductor, Unarmored

8 kV & 15 kV, 90°C

Product Construction:

1. **Conductor:**
   - 6 AWG thru 777 kcmil fully annealed flexible tinned copper
2. **Conductor Shield:**
   - Semi-conducting tape and extruded semi-conducting material
3. **Insulation:**
   - Thermoset 90°C Ethylene Propylene Rubber – Type E
4. **Insulation Shield:**
   - Extruded semi-conducting material and semi-conducting tape
5. **Metallic Shield:**
   - A composite braid consisting of tinned copper/colored nylon – Black, Blue, Red
6. **Ground:**
   - 3 green covered tinned copper grounding conductors
7. **Shield:**
   - Overall tinned copper braid with aluminum/polyester tape – 100% coverage for shield effectiveness
8. **Sheath:**
   - Black Thermoset Chlorinated Polyethylene – Type XL-CPE
9. **Print:** (Including but not limited to)
   - GENERAL CABLE® MV-RIG® E85994 3/C XXAWG OR KCMIL 90C TYPE E (UL) VFD MARINE SHIPBOARD SPEC 245/1309 (VOLTAGE) kV % INSULATION LEVEL SUN RES ALSO CLASSIFIED IN ACCORDANCE WITH IEEE 1580-2001 FT4 IEC 60332-3-22
10. **Options:**
    - Colored sheaths available upon request: 8 kV Orange, 15 kV Red
    - Bronze braid armor, 88% minimum coverage with overall Type XL-CPE sheath



Applications:

- AC motor Variable Frequency Drives (VFD)
- Offshore oil and gas drilling and production platforms requiring medium voltage
- Mobile offshore drilling units and production platforms
- Fixed and floating offshore production platforms
- Commercial ships
- Suitable for use in Class I, Division 2 per API-RP14F

Features:

- Premium medium-voltage power cable for distribution
- Excellent flame resistance
- Flexible for easy handling
- Faster and easier to install
- Meets cold bend test at -40°C per UL 1309 and IEEE 1580
- Meets cold impact test at -35°C per IEEE 1580

Compliances:

Industry:

- API-RP14F
- CSA C22.2 No. 245 Type E90
- ICEA S-93-639
- IEEE 1580 Type E
- UL 1072
- UL 1309 Type E90
- Mud oil-resistant
- IEC 61892-4

Flame Test:

- IEEE 1202
- IEC 60332-3-22 Cat. A
- CSA C22.2 No. 245
- UL 1309

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Offshore and Onshore RIG Cables

MV-RIG®
IEEE 1580 Type E, 8 kV, Unarmored

Flexible & Flame-Retardant Medium-Voltage VFD Power Cable Three-Conductor, Unarmored

8 kV, 100% INSULATION LEVEL – 115 MILS

CATALOG NUMBER	NO. OF COND.	COND. SIZE (AWG)	GROUNDING COND. SIZE (AWG)	NOMINAL CABLE DIAMETER		NET WEIGHT		AMPACITY* IN FREE AIR @ 45°C AMBIENT
				INCHES	mm	LBS/1000 FT	kg/km	90°C
24320.030600	3	6	3—#10	1.345	34.16	1099	1636	88
24320.030400	3	4	3—#10	1.522	38.65	1469	2187	116
24320.030200	3	2	3—#10	1.658	42.12	1980	2946	152
24320.035100	3	1/0	3—#8	1.904	48.37	2630	3914	201
24320.035200	3	2/0	3—#8	2.035	51.69	3116	4636	232
24320.035400	3	4/0	3—#7	2.263	57.49	4183	6225	306
24320.036000	3	262	3—#7	2.434	61.83	4888	7275	348
24320.036200	3	313	3—#6	2.578	65.48	5609	8347	386
24320.036300	3	373	3—#6	2.718	69.03	6424	9560	429
24320.036400	3	444	3—#5	2.945	74.79	7620	11340	455
24320.036600	3	535	3—#5	3.111	79.03	8850	13171	528
24320.036800	3	646	3—#5	3.283	83.40	10188	15161	584
24320.037000	3	777	3—#4	3.530	89.65	12019	17886	647

8 kV, 133% INSULATION LEVEL – 140 MILS

CATALOG NUMBER	NO. OF COND.	COND. SIZE (AWG)	GROUNDING COND. SIZE (AWG)	NOMINAL CABLE DIAMETER		NET WEIGHT		AMPACITY* IN FREE AIR @ 45°C AMBIENT
				INCHES	mm	LBS/1000 FT	kg/km	90°C
24330.030600	3	6	3—#10	1.461	37.12	1255	1868	88
24330.030400	3	4	3—#10	1.638	41.61	1647	2451	116
24330.030200	3	2	3—#10	1.838	46.69	2173	3234	152
24330.035100	3	1/0	3—#8	2.022	51.36	2852	4245	201
24330.035200	3	2/0	3—#8	2.152	54.65	3344	4976	232
24330.035400	3	4/0	3—#7	2.381	60.47	4439	6606	306
24330.036000	3	262	3—#7	2.552	64.81	5159	7677	348
24330.036200	3	313	3—#6	2.693	68.41	5899	8779	386
24330.036300	3	373	3—#6	2.899	73.65	6918	10296	429
24330.036400	3	444	3—#5	3.051	77.50	7999	11904	455
24330.036600	3	535	3—#5	3.226	81.94	9213	13711	528
24330.036800	3	646	3—#5	3.417	86.79	10607	15785	584

* Ampacities are based on API-RP14F.
Note: Dimensions and weights are nominal; subject to industry tolerances.

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Offshore and Onshore RIG Cables

MV-RIG®
IEEE 1580 Type E, 15 kV, Unarmored

Flexible & Flame-Retardant Medium-Voltage VFD Power Cable Three-Conductor, Unarmored

15 kV, 100% INSULATION LEVEL – 175 MILS

CATALOG NUMBER	NO. OF COND.	COND. SIZE (AWG)	GROUNDING COND. SIZE (AWG)	NOMINAL CABLE DIAMETER		NET WEIGHT		AMPACITY* IN FREE AIR @ 45°C AMBIENT
				INCHES	mm	LBS/1000 FT	kg/km	90°C
24340.030200	3	2	3—#10	2.168	55.06	2773	4126	156
24340.035100	3	1/0	3—#8	2.347	59.61	3483	5184	205
24340.035200	3	2/0	3—#8	2.473	62.82	4011	5969	234
24340.035400	3	4/0	3—#7	2.704	68.69	5176	7703	309
24340.036000	3	262	3—#7	2.763	70.17	5778	8598	352
24340.036200	3	313	3—#6	2.895	73.54	6515	9696	389
24340.036300	3	373	3—#6	3.036	77.12	7368	10965	432
24340.036400	3	444	3—#5	3.199	81.25	8422	12533	456
24340.036600	3	535	3—#5	3.374	85.69	9647	14357	528

15 kV, 133% INSULATION LEVEL – 220 MILS

CATALOG NUMBER	NO. OF COND.	COND. SIZE (AWG)	GROUNDING COND. SIZE (AWG)	NOMINAL CABLE DIAMETER		NET WEIGHT		AMPACITY* IN FREE AIR @ 45°C AMBIENT
				INCHES	mm	LBS/1000 FT	kg/km	90°C
24350.030200	3	2	3—#10	2.346	59.58	3141	4674	156
24350.035100	3	1/0	3—#8	2.525	64.12	3893	5794	205
24350.035200	3	2/0	3—#8	2.650	67.31	4433	6597	234
24350.035400	3	4/0	3—#7	2.991	75.97	5960	8869	309
24350.036000	3	262	3—#7	3.004	76.30	6444	9590	352
24350.036200	3	313	3—#6	3.106	78.90	7025	10455	389
24350.036300	3	373	3—#6	3.220	81.79	7936	11811	432
24350.036400	3	444	3—#5	3.364	85.44	8923	13280	456
24350.036600	3	535	3—#5	3.539	89.88	10195	15172	528

* Ampacities are based on API-RP14F.
Note: Dimensions and weights are nominal; subject to industry tolerances.

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Offshore and Onshore RIG Cables

Table of Contents

IEEE 1580 Type E

MV-RIG® Flexible & Flame-Retardant Medium-Voltage Power Cables Armored & Sheathed

5 kV, 8 kV & 15 kV

Single-Conductor

Three-Conductor

Three-Conductor VFD

FLAME-RETARDANT

FLEXIBLE

OIL-RESISTANT

MUD OIL-RESISTANT

SUNLIGHT-RESISTANT

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Offshore and Onshore RIG Cables

MV-RIG®
IEEE 1580 Type E, Armored & Sheathed

Flexible & Flame-Retardant Medium-Voltage Power Cable Single-Conductor, Armored & Sheathed
5 kV, 8 kV & 15 kV, 90°C

Product Construction:
1. **Conductor:**
   - 6 AWG thru 777 kcmil fully annealed flexible tinned copper
2. **Conductor Shield:**
   - Semi-conducting tape and extruded semi-conducting material
3. **Insulation:**
   - Thermoset 90°C Ethylene Propylene Rubber – Type E
4. **Insulation Shield:**
   - Extruded semi-conducting material and semi-conducting tape
5. **Metallic Shield:**
   - A composite braid consisting of tinned copper/colored nylon – Black
6. **Separator Tape**
7. **Sheath:**
   - Black Thermoset Chlorinated Polyethylene – Type XL-CPE
8. **Armor:**
   - Bronze braid, 88% minimum coverage
9. **Separator Tape**
10. **Sheath:**
    - Black Thermoset Chlorinated Polyethylene – Type XL-CPE
11. **Print:** (Including but not limited to)
    - GENERAL CABLE® MV-RIG® E85994 1/C XXAWG OR KCMIL 90C TYPE E (UL) MARINE SHIPBOARD SPEC 245/1309 (VOLTAGE) kV % INSULATION LEVEL SUN RES ALSO CLASSIFIED IN ACCORDANCE WITH IEEE 1580-2001 FT4 IEC 60332-3-22
12. **Option:**
    - Colored sheaths available upon request: 5 kV Yellow, 8 kV Orange, 15 kV Red

Applications:
- Mobile offshore drilling units and production platforms
- Fixed and floating offshore production platforms
- Commercial and marine ships
- Suitable for use in Class I, Division 1 per API-RP14F

Features:
- Maximum mechanical protection provided by bronze armor and sheath
- Premium medium-voltage power cable for increased power distribution
- Excellent flame resistance
- Flexible for easy handling
- Faster and easier to install
- Meets cold bend test at -40°C per UL 1309 and IEEE 1580
- Meets cold impact test at -35°C per IEEE 1580

Compliances:
Industry:
- API-RP14F
- CSA C22.2 No. 245 Type E
- ICEA S-93-639
- IEEE 1580 Type E
- UL 1072
- UL 1309 Type E
- Mud oil-resistant
- IEC 61892-4

Flame Test:
- IEEE 1202
- IEC 60332-3-22 Cat. A
- CSA C22.2 No. 245
- UL 1309

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Flexible & Flame-Retardant Medium-Voltage Power Cable Single-Conductor, Armored & Sheathed

5 kV, 100% / 133% INSULATION LEVELS – 90 MILS

CATALOG NUMBER	NO. OF COND.	COND. SIZE (AWG/kcmil)	NOMINAL CABLE DIAMETER		NET WEIGHT		AMPACITY* IN FREE AIR @ 45°C AMBIENT
			INCHES	mm	LBS/1000 FT	kg/km	90°C
21115.010600	1	6	0.840	21.34	505	751	107
21115.010400	1	4	0.923	23.43	625	930	141
21115.010200	1	2	0.986	25.04	752	1119	186
21115.015100	1	1/0	1.114	28.28	1009	1502	247
21115.015200	1	2/0	1.174	29.82	1166	1735	285
21115.015400	1	4/0	1.280	32.52	1503	2237	381
21115.016000	1	262	1.360	34.54	1717	2555	435
21115.016200	1	313	1.426	36.22	1936	2881	486
21115.016300	1	373	1.491	37.88	2185	3252	544
21115.016400	1	444	1.567	39.80	2488	3703	606
21115.016600	1	535	1.715	43.55	2964	4411	682
21115.016800	1	646	1.802	45.77	3378	5027	767
21115.017000	1	777	1.890	48.02	3878	5772	865

* Ampacities are based on API-RP14F.
Note: Dimensions and weights are nominal; subject to industry tolerances.

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Offshore and Onshore RIG Cables

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IEEE 1580 Type E, 8 kV, Armored & Sheathed

Flexible & Flame-Retardant Medium-Voltage Power Cable Single-Conductor, Armored & Sheathed

8 kV, 100% INSULATION LEVEL – 115 MILS

CATALOG NUMBER	NO. OF COND.	COND. SIZE (AWG/kcmil)	NOMINAL CABLE DIAMETER		NET WEIGHT		AMPACITY* IN FREE AIR @ 45°C AMBIENT
			INCHES	mm	LBS/1000 FT	kg/km	90°C
21125.010600	1	6	0.892	22.67	552	821	107
21125.010400	1	4	0.975	24.76	676	1007	141
21125.010200	1	2	1.038	26.37	810	1205	186
21125.015100	1	1/0	1.166	29.61	1077	1603	247
21125.015200	1	2/0	1.226	31.14	1232	1834	285
21125.015400	1	4/0	1.333	33.85	1571	2338	381
21125.016000	1	262	1.412	35.87	1788	2661	435
21125.016200	1	313	1.478	37.55	2009	2990	486
21125.016300	1	373	1.544	39.21	2261	3365	544
21125.016400	1	444	1.611	40.92	2551	3796	606
21125.016600	1	535	1.755	44.57	3027	4505	682
21125.016800	1	646	1.842	46.79	3445	5127	767
21125.017000	1	777	1.959	49.75	3964	5899	865

8 kV, 133% INSULATION LEVEL – 140 MILS

CATALOG NUMBER	NO. OF COND.	COND. SIZE (AWG/kcmil)	NOMINAL CABLE DIAMETER		NET WEIGHT		AMPACITY* IN FREE AIR @ 45°C AMBIENT
			INCHES	mm	LBS/1000 FT	kg/km	90°C
21135.010600	1	6	0.947	24.05	606	902	107
21135.010400	1	4	1.021	25.94	729	1084	141
21135.010200	1	2	1.135	28.82	921	1370	186
21135.015100	1	1/0	1.220	30.99	1146	1705	247
21135.015200	1	2/0	1.280	32.52	1299	1934	285
21135.015400	1	4/0	1.387	35.23	1643	2445	381
21135.016000	1	262	1.466	37.24	1863	2773	435
21135.016200	1	313	1.532	38.90	2091	3112	486
21135.016300	1	373	1.590	40.38	2330	3467	544
21135.016400	1	444	1.728	43.88	2748	4089	606
21135.016600	1	535	1.767	44.88	3049	4538	682
21135.016800	1	646	1.897	48.19	3547	5278	767
21135.017000	1	777	2.075	52.71	4202	6253	865

* Ampacities are based on API-RP14F.
Note: Dimensions and weights are nominal; subject to industry tolerances.

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Flexible & Flame-Retardant Medium-Voltage Power Cable Single-Conductor, Armored & Sheathed

15 kV, 100% INSULATION LEVEL – 175 MILS

CATALOG NUMBER	NO. OF COND.	COND. SIZE (AWG/kcmil)	NOMINAL CABLE DIAMETER		NET WEIGHT		AMPACITY* IN FREE AIR @ 45°C AMBIENT
			INCHES	mm	LBS/1000 FT	kg/km	90°C
21145.010200	1	2	1.275	32.39	1093	1627	186
21145.015100	1	1/0	1.359	34.51	1308	1946	247
21145.015200	1	2/0	1.417	35.99	1469	2187	284
21145.015400	1	4/0	1.526	38.75	1826	2718	378
21145.016000	1	262	1.624	41.25	2087	3106	431
21145.016200	1	313	1.753	44.52	2434	3622	481
21145.016300	1	373	1.818	46.18	2698	4016	536
21145.016400	1	444	1.893	48.09	3029	4508	598
21145.016600	1	535	2.034	51.67	3538	5265	672
21145.016800	1	646	2.123	53.91	3980	5923	754
21145.017000	1	777	2.257	57.33	4601	6847	848

15 kV, 133% INSULATION LEVEL – 220 MILS

CATALOG NUMBER	NO. OF COND.	COND. SIZE (AWG/kcmil)	NOMINAL CABLE DIAMETER		NET WEIGHT		AMPACITY* IN FREE AIR @ 45°C AMBIENT
			INCHES	mm	LBS/1000 FT	kg/km	90°C
21155.010200	1	2	1.359	34.51	1200	1786	186
21155.015100	1	1/0	1.441	36.61	1423	2118	247
21155.015200	1	2/0	1.499	38.09	1586	2360	284
21155.015400	1	4/0	1.628	41.35	1981	2948	378
21155.016000	1	262	1.770	44.95	2332	3470	431
21155.016200	1	313	1.836	46.64	2574	3830	481
21155.016300	1	373	1.901	48.30	2850	4242	536
21155.016400	1	444	2.039	51.79	3318	4937	598
21155.016600	1	535	2.117	53.76	3698	5504	672
21155.016800	1	646	2.237	56.82	4212	6268	754
21155.017000	1	777	2.341	59.45	4777	7109	848

* Ampacities are based on API-RP14F.
Note: Dimensions and weights are nominal; subject to industry tolerances.

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5 kV, 8 kV & 15 kV, 90°C

Product Construction:

1. **Conductor:**
   - 6 AWG thru 777 kcmil fully annealed flexible tinned copper
2. **Conductor Shield:**
   - Semi-conducting tape and extruded semi-conducting material
3. **Insulation:**
   - Thermoset 90°C Ethylene Propylene Rubber – Type E
4. **Insulation Shield:**
   - Extruded semi-conducting material and semi-conducting tape
5. **Metallic Shield:**
   - A composite braid consisting of tinned copper/colored nylon – Black, blue, red
6. **Ground:**
   - Stranded tinned copper
7. **Separator Tape**
8. **Sheath:**
   - Black Thermoset Chlorinated Polyethylene – Type XL-CPE
9. **Armor:**
   - Bronze braid, 88% minimum coverage
10. **Separator Tape**
11. **Sheath:**
    - Black Thermoset Chlorinated Polyethylene – Type XL-CPE
12. **Print:** (Including but not limited to)
    - GENERAL CABLE® MV-RIG® E85994 3/C XXAWG OR KCMIL 90C TYPE E (UL) MARINE SHIPBOARD SPEC 245/1309 (VOLTAGE) kV % INSULATION LEVEL SUN RES ALSO CLASSIFIED IN ACCORDANCE WITH IEEE 1580-2001 FT4 IEC 60332-3-22
13. **Option:**
    - Colored sheaths available upon request: 5 kV Yellow, 8 kV Orange, 15 kV Red

Applications:

- Mobile offshore drilling units and production platforms
- Fixed and floating offshore production platforms
- Commercial and marine ships
- Suitable for use in Class I, Division 1 per API-RP14F

Features:

- Maximum mechanical protection provided by bronze armor and sheath
- Premium medium-voltage power cable for increased power distribution
- Excellent flame resistance
- Flexible for easy handling
- Faster and easier to install
- Meets cold bend test at -40°C per UL 1309 and IEEE 1580
- Meets cold impact test at -35°C per IEEE 1580

Compliances:

Industry:

- API-RP14F
- CSA C22.2 No. 245 Type E
- ICEA S-93-639
- IEEE 1580 Type E
- UL 1072
- UL 1309 Type E
- Mud oil-resistant
- IEC 61892-4

Flame Test:

- IEEE 1202
- IEC 60332-3-22 Cat. A
- CSA C22.2 No. 245
- UL 1309

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MV-RIG®
IEEE 1580 Type E, 5 kV, Armored & Sheathed

Flexible & Flame-Retardant Medium-Voltage Power Cable Three-Conductor, Armored & Sheathed

5 kV, 100% / 133% INSULATION LEVELS – 90 MILS

CATALOG NUMBER	NO. OF COND.	COND. SIZE (AWG/kcmil)	NOMINAL CABLE DIAMETER		NET WEIGHT		AMPACITY* IN FREE AIR @ 45°C AMBIENT
			INCHES	mm	LBS/1000 FT	kg/km	90°C
21415.030600	3	6	1.464	37.19	1431	2130	88
21415.030400	3	4	1.633	41.48	1833	2728	116
21415.030200	3	2	1.833	46.56	2384	3548	152
21415.035100	3	1/0	2.091	53.12	3248	4834	201
21415.035200	3	2/0	2.221	56.41	3768	5607	232
21415.035400	3	4/0	2.450	62.23	4923	7327	306
21415.036000	3	262	2.621	66.57	5682	8456	348
21415.036200	3	313	2.810	71.37	6582	9795	386
21415.036300	3	373	3.015	76.58	7439	11071	429
21415.036400	3	444	3.177	80.69	8727	12988	455
21415.036600	3	535	3.334	84.67	10014	14903	528
21415.036800	3	646	3.525	89.52	11464	17061	584
21415.037000	3	777	3.748	95.19	13292	19781	647

* Ampacities are based on API-RP14F.
Note: Dimensions and weights are nominal; subject to industry tolerances.

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Flexible & Flame-Retardant Medium-Voltage Power Cable Three-Conductor, Armored & Sheathed

8 kV, 100% INSULATION LEVEL – 115 MILS

CATALOG NUMBER	NO. OF COND.	COND. SIZE (AWG/kcmil)	NOMINAL CABLE DIAMETER		NET WEIGHT		AMPACITY* IN FREE AIR @ 45°C AMBIENT
			INCHES	mm	LBS/1000 FT	kg/km	90°C
21425.030600	3	6	1.569	39.85	1597	2377	88
21425.030400	3	4	1.808	45.92	2145	3192	116
21425.030200	3	2	2.008	51.00	2739	4076	152
21425.035100	3	1/0	2.192	55.67	3471	5166	201
21425.035200	3	2/0	2.322	58.97	4009	5966	232
21425.035400	3	4/0	2.550	64.76	5166	7688	306
21425.036000	3	262	2.721	69.10	5943	8844	348
21425.036200	3	313	2.929	74.39	6918	10296	386
21425.036300	3	373	3.069	77.96	7799	11606	429
21425.036400	3	444	3.296	83.73	9104	13549	455
21425.036600	3	535	3.456	87.79	10418	15504	528
21425.036800	3	646	3.629	92.18	11839	17619	584
21425.037000	3	777	3.874	98.41	13777	20502	647

8 kV, 133% INSULATION LEVEL – 140 MILS

CATALOG NUMBER	NO. OF COND.	COND. SIZE (AWG/kcmil)	NOMINAL CABLE DIAMETER		NET WEIGHT		AMPACITY* IN FREE AIR @ 45°C AMBIENT
			INCHES	mm	LBS/1000 FT	kg/km	90°C
21435.030600	3	6	1.749	44.42	1905	2836	88
21435.030400	3	4	1.926	48.91	2371	3528	116
21435.030200	3	2	2.125	53.96	2979	4433	152
21435.035100	3	1/0	2.308	58.64	3736	5559	201
21435.035200	3	2/0	2.439	61.95	4280	6370	232
21435.035400	3	4/0	2.667	67.75	5470	8141	306
21435.036000	3	262	2.902	73.72	6454	9605	348
21435.036200	3	313	3.046	77.37	7263	10809	386
21435.036300	3	373	3.251	82.58	8382	12474	429
21435.036400	3	444	3.397	86.28	9538	14195	455
21435.036600	3	535	3.570	90.67	10836	16126	528
21435.036800	3	646	3.761	95.52	12322	18338	584

* Ampacities are based on API-RP14F.
Note: Dimensions and weights are nominal; subject to industry tolerances.

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15 kV, 100% INSULATION LEVEL – 175 MILS

CATALOG NUMBER	NO. OF COND.	COND. SIZE (AWG/kcmil)	NOMINAL CABLE DIAMETER		NET WEIGHT		AMPACITY* IN FREE AIR @ 45°C AMBIENT
			INCHES	mm	LBS/1000 FT	kg/km	90°C
21445.030200	3	2	2.455	62.36	3715	5529	156
21445.035100	3	1/0	2.633	66.88	4499	6696	205
21445.035200	3	2/0	2.824	71.73	5268	7840	234
21445.035400	3	4/0	3.056	77.63	6546	9741	309
21445.036000	3	262	3.168	80.46	7385	10990	352
21445.036200	3	313	3.303	83.91	8225	12240	389
21445.036300	3	373	3.382	85.90	8900	13245	432
21445.036400	3	444	3.545	90.03	10033	14931	456
21445.036600	3	535	3.720	94.48	11341	16878	528

15 kV, 133% INSULATION LEVEL – 220 MILS

CATALOG NUMBER	NO. OF COND.	COND. SIZE (AWG/kcmil)	NOMINAL CABLE DIAMETER		NET WEIGHT		AMPACITY* IN FREE AIR @ 45°C AMBIENT
			INCHES	mm	LBS/1000 FT	kg/km	90°C
21455.030200	3	2	2.632	66.86	4158	6187	156
21455.035100	3	1/0	2.875	73.03	5176	7703	205
21455.035200	3	2/0	3.002	76.25	5777	8597	234
21455.035400	3	4/0	3.342	84.88	7467	11113	309
21455.036000	3	262	3.357	85.26	7870	11712	352
21455.036200	3	313	3.411	86.64	8572	12756	389
21455.036300	3	373	3.566	90.57	9558	14224	432
21455.036400	3	444	3.708	94.19	10613	15794	456
21455.036600	3	535	3.884	98.66	11970	17813	528

* Ampacities are based on API-RP14F.
Note: Dimensions and weights are nominal; subject to industry tolerances.

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Offshore and Onshore RIG Cables

MV-RIG®
IEEE 1580 Type E, Armored & Sheathed

Flexible & Flame-Retardant Medium-Voltage VFD Power Cable Three-Conductor, Armored & Sheathed
8 kV & 15 kV, 90°C

Product Construction:

1. **Conductor:**
   - 6 AWG thru 777 kcmil fully annealed flexible tinned copper
2. **Conductor Shield:**
   - Semi-conducting tape and extruded semi-conducting material
3. **Insulation:**
   - Thermoset 90°C Ethylene Propylene Rubber – Type E
4. **Insulation Shield:**
   - Extruded semi-conducting material and semi-conducting tape
5. **Metallic Shield:**
   - A composite braid consisting of tinned copper/colored nylon– Black, Blue, Red
6. **Ground:**
   - 3 green covered tinned copper grounding conductors
7. **Shield:**
   - Overall tinned copper braid with aluminum/polyester tape – 100% coverage for shield effectiveness
8. **Sheath:**
   - Black Thermoset Chlorinated Polyethylene – Type XL-CPE
9. **Armor:**
   - Bronze braid, 88% minimum coverage
10. **Separator Tape**
11. **Sheath:**
    - Black Thermoset Chlorinated Polyethylene – Type XL-CPE
12. **Print:** (Including but not limited to)
    - GENERAL CABLE® MV-RIG® E85994 3/C XXAWG OR KCMIL 90C TYPE E (UL) VFD MARINE SHIPBOARD SPEC 245/1309 (VOLTAGE) kV % INSULATION LEVEL SUN RES ALSO CLASSIFIED IN ACCORDANCE WITH IEEE 1580-2001 FT4 IEC 60332-3-22
13. **Option:**
    - Colored sheaths available upon request: 8 kV Orange, 15 kV Red

Applications:
- AC motor Variable Frequency Drives (VFD)
- Offshore oil and gas drilling and production platforms requiring medium voltage
- Mobile offshore drilling units and production platforms
- Fixed and floating offshore production platforms and commercial ships
- Suitable for use in Class I, Division 1 per API-RP14F

Features:
- Premium medium-voltage power cable for increased power distribution
- Excellent flame resistance
- Flexible for easy handling
- Faster and easier to install
- Meets cold bend test at -40°C per UL 1309 and IEEE 1580
- Meets cold impact test at -35°C per IEEE 1580

Compliances:
Industry:
- API-RP14F
- CSA C22.2 No. 245 Type E90
- ICEA S-93-639
- IEEE 1580 Type E
- UL 1072
- UL 1309 Type E90
- Mud oil-resistant
- IEC 61892-4

Flame Test:
- IEEE 1202
- IEC 60332-3-22 Cat. A
- CSA C22.2 No. 245
- UL 1309

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8 kV, 100% INSULATION LEVEL – 115 MILS

CATALOG NUMBER	NO. OF COND.	COND. SIZE (AWG)	GROUNDING COND. SIZE (AWG)	NOMINAL CABLE DIAMETER		NET WEIGHT		AMPACITY* IN FREE AIR @ 45°C AMBIENT
				INCHES	mm	LBS/1000 FT	kg/km	90°C
25320.030600	3	6	3—#10	1.569	39.85	1597	2377	88
25320.030400	3	4	3—#10	1.808	45.92	2145	3192	116
25320.030200	3	2	3—#10	2.008	51.00	2739	4076	152
25320.035100	3	1/0	3—#8	2.192	55.67	3471	5166	201
25320.035200	3	2/0	3—#8	2.322	58.97	4009	5966	232
25320.035400	3	4/0	3—#7	2.550	64.76	5166	7688	306
25320.036000	3	262	3—#7	2.721	69.10	5943	8844	348
25320.036200	3	313	3—#6	2.929	74.39	6918	10296	386
25320.036300	3	373	3—#6	3.069	77.96	7799	11606	429
25320.036400	3	444	3—#5	3.296	83.73	9104	13549	455
25320.036600	3	535	3—#5	3.456	87.79	10418	15504	528
25320.036800	3	646	3—#5	3.629	92.18	11839	17619	584
25320.037000	3	777	3—#4	3.874	98.41	13777	20502	647

8 kV, 133% INSULATION LEVEL – 140 MILS

CATALOG NUMBER	NO. OF COND.	COND. SIZE (AWG)	GROUNDING COND. SIZE (AWG)	NOMINAL CABLE DIAMETER		NET WEIGHT		AMPACITY* IN FREE AIR @ 45°C AMBIENT
				INCHES	mm	LBS/1000 FT	kg/km	90°C
25330.030600	3	6	3—#10	1.749	44.42	1905	2836	88
25330.030400	3	4	3—#10	1.926	48.91	2371	3528	116
25330.030200	3	2	3—#10	2.125	53.96	2979	4433	152
25330.035100	3	1/0	3—#8	2.308	58.64	3736	5559	201
25330.035200	3	2/0	3—#8	2.439	61.95	4280	6370	232
25330.035400	3	4/0	3—#7	2.667	67.75	5470	8141	306
25330.036000	3	262	3—#7	2.902	73.72	6454	9605	348
25330.036200	3	313	3—#6	3.046	77.37	7263	10809	386
25330.036300	3	373	3—#6	3.251	82.58	8382	12474	429
25330.036400	3	444	3—#5	3.397	86.28	9538	14195	455
25330.036600	3	535	3—#5	3.570	90.67	10836	16126	528
25330.036800	3	646	3—#5	3.761	95.52	12322	18338	584

* Ampacities are based on API-RP14F.
Note: Dimensions and weights are nominal; subject to industry tolerances.

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15 kV, 100% INSULATION LEVEL – 175 MILS

CATALOG NUMBER	NO. OF COND.	COND. SIZE (AWG)	GROUNDING COND. SIZE (AWG)	NOMINAL CABLE DIAMETER		NET WEIGHT		AMPACITY* IN FREE AIR @ 45°C AMBIENT
				INCHES	mm	LBS/1000 FT	kg/km	90°C
25340.030200	3	2	3—#10	2.455	62.36	3715	5529	156
25340.035100	3	1/0	3—#8	2.633	66.88	4499	6696	205
25340.035200	3	2/0	3—#8	2.824	71.73	5268	7840	234
25340.035400	3	4/0	3—#7	3.056	77.63	6546	9741	309
25340.036000	3	262	3—#7	3.168	80.46	7385	10990	352
25340.036200	3	313	3—#6	3.303	83.91	8225	12240	389
25340.036300	3	373	3—#6	3.382	85.90	8900	13245	432
25340.036400	3	444	3—#5	3.545	90.03	10033	14931	456
25340.036600	3	535	3—#5	3.720	94.48	11341	16878	528

15 kV, 133% INSULATION LEVEL – 220 MILS

CATALOG NUMBER	NO. OF COND.	COND. SIZE (AWG)	GROUNDING COND. SIZE (AWG)	NOMINAL CABLE DIAMETER		NET WEIGHT		AMPACITY* IN FREE AIR @ 45°C AMBIENT
				INCHES	mm	LBS/1000 FT	kg/km	90°C
25350.030200	3	2	3—#10	2.632	66.86	4158	6187	156
25350.035100	3	1/0	3—#8	2.875	73.03	5176	7703	205
25350.035200	3	2/0	3—#8	3.002	76.25	5777	8597	234
25350.035400	3	4/0	3—#7	3.342	84.88	7467	11113	309
25350.036000	3	262	3—#7	3.357	85.26	7870	11712	352
25350.036200	3	313	3—#6	3.411	86.64	8572	12756	389
25350.036300	3	373	3—#6	3.566	90.57	9558	14224	432
25350.036400	3	444	3—#5	3.708	94.19	10613	15794	456
25350.036600	3	535	3—#5	3.884	98.66	11970	17813	528

* Ampacities are based on API-RP14F.
Note: Dimensions and weights are nominal; subject to industry tolerances.

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Offshore and Onshore RIG Cables

Copper and Fiber Optic Communication Cables for the Onshore, Offshore and Marine Shipboard Markets

Today's competitive offshore environment demands advanced information systems that meet requirements well into the future. General Cable's communication cables meet specific industry demands and specifications, ensuring the utmost performance, and are ABS Type Approved and ETL Confirmed. Nowhere is the need for robust, reliable cable designs greater than in the offshore environment. As a world-class manufacturer, General Cable understands the need to deliver cabling infrastructures that reduce network downtime for improved productivity, as well as meeting increased needs for data collection and system monitoring.

COMMODORE® Category Communication Cables
General Cable's **COMMODORE data communications category cables** provide a hardy platform for information transfer designed for all of your I/P-based applications in onshore and offshore production facilities. For applications ranging from security cameras to distribution controls and programmable logic control (PLC), choose the best performing cable in its class – **COMMODORE Category 5e and Category 6** cables. Our **low-smoke, zero-halogen** cables meet the mandatory flame-retardant requirements of the **IEC 60332-3-22** test and are **ABS Type Approved.**

COMMODORE Coaxial Communication Cables and video monitoring low-smoke, zero-halogen constructions are used in legacy process control and PDP coaxial communication applications where performance is critical. **RG-6/U, RG-11/U, RG-58/U, RG-59/U, RG-213/U, RS422 and RS485 cables** are available in armored and sheathed designs.

COMMODORE Control Communication Cables
Closed and open architecture cables meeting **Profibus, Fieldbus and DeviceNet protocols** are suitable for control systems in onshore and offshore applications. When it is critical for systems to operate without error, these **mechanically enhanced products** provide the link between the system and control room. General Cable's **COMMODORE** line meets these requirements.

COMMODORE Fiber Optic Communication Cables
General Cable's fiber optic cables service the onshore and offshore industry when security and information integrity are essential. **From industrial-grade process control and outside plant to commercial-grade marine,** General Cable can meet the most stringent demands with our **COMMODORE Fiber Optic Cables.**

General Cable has responded to feedback for a more cost-competitive standard option for your rugged fiber optic applications with a new line of our **COMMODORE** cables – **COMMODORE Lite™.** Now, you can choose between the **premium performance of COMMODORE** and the **cost-effectiveness of COMMODORE Lite.** Onshore or offshore, our ultra-tough **low-smoke, zero-halogen COMMODORE** and **COMMODORE Lite** lines are rugged and water-blocked for the toughest applications.

General Cable … highly engineered performance cables to meet any specification.

ABS

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INS-0167-R0515

Offshore and Onshore RIG Cables

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COMMODORE® Copper Communication Cables— ABS Type Approved, ETL Confirmed

FLAME-RETARDANT

LOW SMOKE EMISSION

LOW TOXICITY

LOW CORROSIVE FUME EMISSION

MECHANICAL RESISTANCE

OIL-RESISTANT

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Offshore and Onshore RIG Cables

COMMODORE® Copper Communication Cables

Low-Smoke, Zero-Halogen Category 5e UTP Cable, Armored & Sheathed

ABS Type Approved, ETL Confirmed

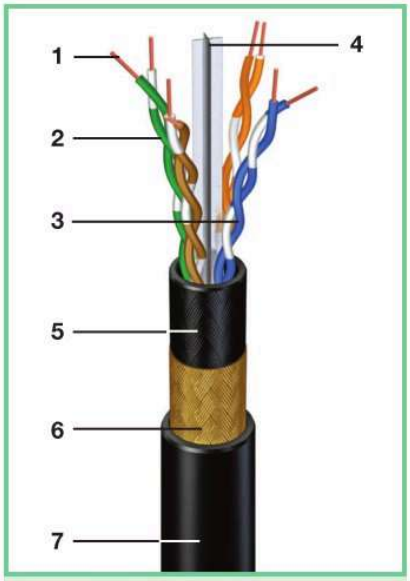
Product Construction:

1. **Conductor:**
   - 24 AWG solid bare copper: .021" nom. O.D.
2. **Insulation:**
   - HDPE: .036" nom. O.D.
3. **Pairs:**
   - Two insulated conductors twisted together – varying pair lays
   - Color Code: P1: White/Blue, Blue P3: White/Green, Green
     P2: White/Orange, Orange P4: White/Brown, Brown
4. **Crossweb**
5. **Inner Sheath:**
   - Flame-retardant Low-Smoke, Zero-Halogen Polyolefin — Black: .260" nom. O.D.
6. **Armor:**
   - 28 AWG bronze braid, 88% min. coverage
7. **Outer Sheath:**
   - Low-Smoke, Zero-Halogen Polyolefin, .045" nom. wall, Black: .405" nom. O.D. — optional jacket colors available
8. **Print:**
   - GENERAL CABLE (F) COMMODORE® LSZH ARMORED MARINE CABLE 4 PR 24 AWG UTP CAT5e PAT 5767441 IEC 60332-3-22 CAT A AAAAA* MO/YR** XXXXXXX***

     *Order Number **Date ***Footage Markings every 2 ft
9. **Cable Weight:**
   - 120 lbs/kft nom.

Features:

- Mechanically enhanced construction renders the cable suitable for installation in cable tray as an interconnect cable
- Suitable for installation in vessels' quarters area



Compliances:

- Flammability: IEC 60332-3-22 Category A
- Smoke: IEC 61034-1 & -2, MIL-DTL-24643B and NES 711
- Halogen Content: IEC 60754-1 & -2
- Toxicity: MIL-DTL-24643B and NES 713
- Acidity: IEC 60754-1 & -2 and MIL-DTL-24643B
- Armor: IEEE 1580 and IEC 60092-350
- Application: TIA-568-B

Third-Party Testing:

ETL has tested and confirmed that this product complies with the above specifications
(report number 3116259CRT-005)

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Offshore and Onshore RIG Cables

COMMODORE® Copper Communication Cables

Low-Smoke, Zero-Halogen Category 5e UTP Cable, Armored & Sheathed

ABS Type Approved, ETL Confirmed

Electrical Characteristics:

DC Resistance: 9.38 Ω/100m (28.6 Ω/Mft) Max.
DCR Unbalanced: 5% Max.
Mutual Capacitance: 55.8 pF/m (17 pF/ft) Max.
Capacitance Unbalance: 330 pF/100m (1 pF/ft) Max.
Characteristic Impedance: 100 Ω ± 15 Ω (1-100 MHz)
Prop. Delay (Skew): 45 ns/100m Max.
Velocity of Propagation: 69% nom.
Temperature & Voltage Rating: -30°C to +75°C/300 V Max.

FREQ (MHz)	ATTENUATION (dB/100m)	NEXT (dB)	PSNEXT (dB)	ELFEXT (dB/100m)	PSELFEXT (dB/100m)	RL (dB)
	MAX.	MIN.	MIN.	MIN.	MIN.	MIN.
0.772	1.8	67.0	64.0	66.0	63.0	—
1	2.0	65.3	62.3	63.8	60.8	20.0
4	4.1	56.3	53.3	51.7	48.7	23.0
8	5.8	51.8	48.8	45.7	42.7	24.5
10	6.5	50.3	47.3	43.8	40.8	25.0
16	8.2	47.3	44.3	39.7	36.7	25.0
20	9.3	45.8	42.8	37.7	34.7	25.0
25	10.4	44.3	41.3	35.8	32.8	24.3
31.25	11.7	42.9	39.9	33.9	30.9	23.6
62.5	17.0	38.4	35.4	27.8	24.8	21.5
100	22.0	35.3	32.3	23.8	20.8	20.1

Catalog number: LO24P0045170X

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Offshore and Onshore RIG Cables

COMMODORE® Copper Communication Cables

Low-Smoke, Zero-Halogen Category 6 UTP Cable Unarmored

ABS Type Approved, ETL Confirmed

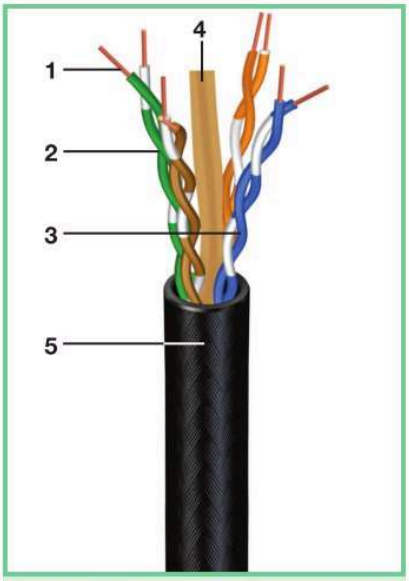
Product Construction:

1. **Conductor:**
   - 23 AWG solid bare copper: .023" nom. O.D.
2. **Insulation:**
   - HDPE: .042" nom. O.D.
3. **Pairs:**
   - Two insulated conductors twisted together – varying pair lays
   - Color Code: P1: White/Blue, Blue P3: White/Green, Green
     P2: White/Orange, Orange P4: White/Brown, Brown
4. **Flat Tape**
5. **Sheath:**
   - Low-Smoke, Zero-Halogen Polyolefin, .025" nom. wall, Black: .230" nom. O.D. — optional jacket colors available
6. **Print:**
   - GENERAL CABLE (L) COMMODORE® LSZH MARINE CABLE 4 PR 23 AWG UTP CAT6 PAT 5767441 IEC 60332-3-22 CAT A AAAAA* MO/YR** XXXXXXX***

   *Order Number **Date ***Footage Markings every 2 ft
7. **Cable Weight:**
   - 29 lbs/kft nom.

Features:

- Mechanically enhanced construction renders the cable suitable for installation in cable tray as an interconnect cable
- Suitable for installation in vessels' quarters area



Compliances:

- Flammability: IEC 60332-3-22 Category A
- Smoke: IEC 61034-1 & -2, MIL-DTL-24643B and NES 711
- Halogen Content: IEC 60754-1 & -2
- Toxicity: MIL-DTL-24643B and NES 713
- Acidity: IEC 60754-1 & -2 and MIL-DTL-24643B
- Application: TIA-568-C

Third-Party Testing:

ETL has tested and confirmed that this product complies with the above specifications
(report number 100722150SAT-001)

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Offshore and Onshore RIG Cables

COMMODORE® Copper Communication Cables

Low-Smoke, Zero-Halogen Category 6 UTP Cable Unarmored

ABS Type Approved, ETL Confirmed

Electrical Characteristics:

DC Resistance: 9.38 Ω/100 m (28.6 Ω/kft) Max.
DCR Unbalanced: 3% Max.
Mutual Capacitance: 5.8 pF/m (17 pF/ft) Max.
Capacitance Unbalance: 30 pF/100 m (1 pF/ft) Max.
Characteristic Impedance: 100 Ω ± 15 Ω (1-250 MHz)
Input Impedance: 100 Ω ± 15 Ω (1-100 MHz)
100 Ω ± 22 Ω (>100-200 MHz)
100 Ω ± 32 Ω (>200-250 MHz)
Prop. Delay (Skew): 45 ns/100 m Max.
Velocity of Propagation: 68%
Temperature & Voltage Rating: -20°C to +75°C/300 V Max.

FREQ (MHz)	ATTENUATION (dB/100m)	NEXT (dB)	PSNEXT (dB)	ELFEXT (dB/100m)	PSELFEXT (dB/100m)	RL (dB)
	MAX.	MIN.	MIN.	MIN.	MIN.	MIN.
0.772	1.8	76.0	74.0	70.0	67.0	—
1	2.0	74.3	72.3	67.8	64.8	20.0
4	3.8	65.3	63.3	55.7	52.7	23.0
8	5.3	60.8	58.8	49.7	46.7	24.5
10	6.0	59.3	57.3	47.8	44.8	25.0
16	7.6	56.3	54.3	43.7	40.7	25.0
20	8.5	54.8	52.8	41.7	38.7	25.0
25	9.5	53.3	51.3	39.8	36.8	24.3
31.25	10.7	51.9	49.9	37.9	34.9	23.6
62.5	15.4	47.4	45.4	31.8	28.8	21.5
100	19.8	44.3	42.3	27.8	24.8	20.1
155	25.2	41.5	39.5	23.9	20.9	18.8
200	29.0	39.8	37.8	21.7	18.7	18.0
250	32.8	38.3	36.3	19.8	16.8	17.3

Catalog number: LO23P0047075

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INS-0167-R0515

Offshore and Onshore RIG Cables

COMMODORE® Copper Communication Cables

Low-Smoke, Zero-Halogen Category 6 UTP Cable, Armored & Sheathed

ABS Type Approved, ETL Confirmed

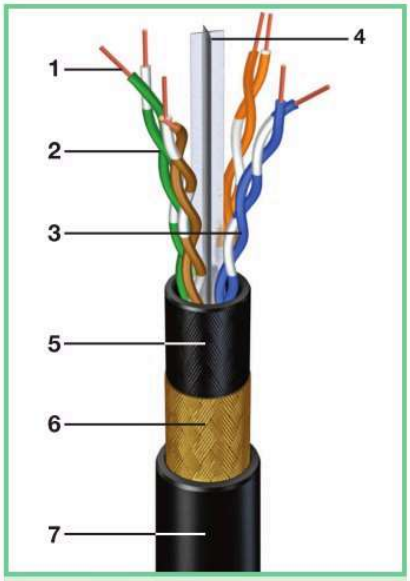
Product Construction:

1. **Conductor:**
   - 23 AWG solid bare copper: .023" nom. O.D.
2. **Insulation:**
   - HDPE: .041" nom. O.D.
3. **Pairs:**
   - Two insulated conductors twisted together – varying pair lays
   - Color Code: P1: White/Blue, Blue P3: White/Green, Green
     P2: White/Orange, Orange P4: White/Brown, Brown
4. **Crossweb**
5. **Inner Sheath:**
   - Flame-retardant Low-Smoke, Zero-Halogen Polyolefin — Black: .295" nom. O.D.
6. **Armor:**
   - 28 AWG bronze braid, 88% min. coverage
7. **Outer Sheath:**
   - Low-Smoke, Zero-Halogen Polyolefin, .045" nom. wall, Black: .455" nom. O.D. — optional jacket colors available
8. **Print:**
   - GENERAL CABLE (F) COMMODORE® LSZH ARMORED MARINE CABLE 4 PR 23 AWG UTP CAT6 PAT 5767441 IEC 60332-3-22 CAT A AAAAA* MO/YR** XXXXXXX***

     *Order Number **Date ***Footage Markings every 2 ft
9. **Cable Weight:**
   - 144 lbs/kft nom.

Features:

- Mechanically enhanced construction renders the cable suitable for installation in cable tray as an interconnect cable
- Suitable for installation in vessels' quarters area



Compliances:

- Flammability: IEC 60332-3-22 Category A
- Smoke: IEC 61034-1 & -2, MIL-DTL-24643B and NES 711
- Halogen Content: IEC 60754-1 & -2
- Toxicity: MIL-DTL-24643B and NES 713
- Acidity: IEC 60754-1 & -2 and MIL-DTL-24643B
- Armor: IEEE 1580 and IEC 60092-350
- Application: TIA-568-B

Third-Party Testing:

ETL has tested and confirmed that this product complies with the above specifications
(report number 3116259CRT-010)

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Offshore and Onshore RIG Cables

COMMODORE® Copper Communication Cables

Low-Smoke, Zero-Halogen Category 6 UTP Cable, Armored & Sheathed

ABS Type Approved, ETL Confirmed

Electrical Characteristics:

DC Resistance: 9.38 Ω/100m (28.6 Ω/kft) Max.
DCR Unbalanced: 3% Max.
Mutual Capacitance: 5.8 pF/m (17 pF/ft) Max.
Capacitance Unbalance: 30 pF/100m (1 pF/ft) Max.
Characteristic Impedance: 100 Ω ± 15 Ω (1-250 MHz)
Input Impedance: 100 Ω ± 15 Ω (1-100 MHz)
100 Ω ± 22 Ω (>100-200 MHz)
100 Ω ± 32 Ω (>200-250 MHz)
Prop. Delay (Skew): 18 ns/100m Max.
Velocity of Propagation: 69%
Temperature & Voltage Rating: -30°C to +75°C/300 V Max.

FREQ (MHz)	ATTENUATION (dB/100m)	NEXT (dB)	PSNEXT (dB)	ELFEXT (dB/100m)	PSELFEXT (dB/100m)	RL (dB)
	MAX.	MIN.	MIN.	MIN.	MIN.	MIN.
0.772	1.8	76.0	74.0	70.0	67.0	—
1	2.0	74.3	72.3	67.8	64.8	20.0
4	3.8	65.3	63.3	55.7	52.7	23.0
8	5.3	60.8	58.8	49.7	46.7	24.5
10	6.0	59.3	57.3	47.8	44.8	25.0
16	7.6	56.3	54.3	43.7	40.7	25.0
20	8.5	54.8	52.8	41.7	38.7	25.0
25	9.5	53.3	51.3	39.8	36.8	24.3
31.25	10.7	51.9	49.9	37.9	34.9	23.6
62.5	15.4	47.4	45.4	31.8	28.8	21.5
100	19.8	44.3	42.3	27.8	24.8	20.1
155	25.2	41.5	39.5	23.9	20.9	18.8
200	29.0	39.8	37.8	21.7	18.7	18.0
250	32.8	38.3	36.3	19.8	16.8	17.3

Catalog number: LO23P0047070

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INS-0167-R0515

Offshore and Onshore RIG Cables

COMMODORE® Copper Communication Cables

Low-Smoke, Zero-Halogen 120 Ω RS485 Network Cable, Two Pair Overall Shielded, Armored & Sheathed

ABS Type Approved, ETL Confirmed

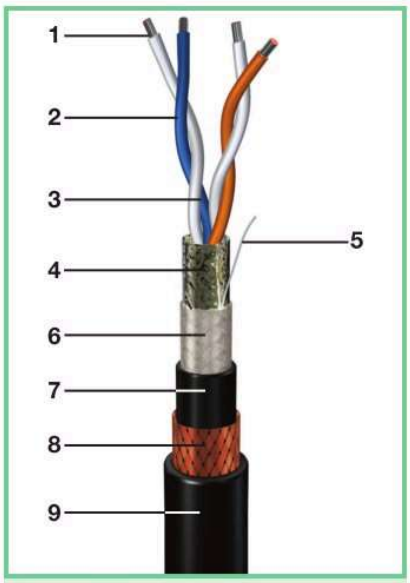
Product Construction:

1. **Conductor:**
   - 24 AWG 7/32 tinned copper: .024" nom. O.D.
2. **Insulation:**
   - Solid Polyethylene: .070" nom. O.D.
3. **Pairs:**
   - Two insulated conductors twisted left-hand lay
   - Color Code: P1: White, Blue P2: White, Orange
4. **Inner Shield:**
   - Aluminum/Polyester tape (aluminum side out)
5. **Drain Wire:**
   - 24 AWG 7/32 tinned copper
6. **Outer Shield:**
   - 36 AWG tinned copper, 85% min. coverage
7. **Inner Sheath:**
   - Low-Smoke, Zero-Halogen Polyolefin — .030" nom. wall, Black: .310" nom. O.D.
8. **Armor:**
   - 28 AWG bronze braid, 88% min. coverage
9. **Outer Sheath:**
   - Low-Smoke, Zero-Halogen Polyolefin, .048" nom. wall, Black: .460" nom. O.D.
10. **Print:**
    - GENERAL CABLE (F) COMMODORE® LSZH ARMORED MARINE CABLE 2 PR 24 AWG 120 OHM RS485 IEC 60332-3-22 CAT A AAAAA* MO/YR** XXXXXXX***

      *Order Number **Date ***Footage Markings every 2 ft
11. **Cable Weight:**
    - 140 lbs/kft nom.
12. **Option:**
    - Four Pair Construction

Features:

- Mechanically enhanced construction renders the cable suitable for installation in cable tray as an interconnect cable
- Suitable for installation in vessels' quarters area



Compliances:

- Flammability: IEC 60332-3-22 Category A
- Smoke: IEC 61034-1 & -2, MIL-DTL-24643B and NES 711
- Halogen Content: IEC 60754-1 & -2
- Toxicity: MIL-DTL-24643B and NES 713
- Acidity: IEC 60754-1 & -2 and MIL-DTL-24643B
- Armor: IEEE 1580 and IEC 60092-350

Third-Party Testing:

ETL has tested and confirmed that this product complies with the above specifications (report number 3116259CRT-003)

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Offshore and Onshore RIG Cables

COMMODORE® Copper Communication Cables

Low-Smoke, Zero-Halogen 120 Ω RS485 Network Cable, Two Pair Overall Shielded, Armored & Sheathed

ABS Type Approved, ETL Confirmed

Electrical Characteristics

Conductor DCR: 25.7 Ω/kft nom.
Mutual Capacitance: 12.8 pF/ft nom.
Impedance: 120 ± 10 Ω
Velocity of Propagation: 66% nom.
Temperature & Voltage Rating: -30°C to +75°C/300 V Max.

Catalog number: EO24P0022188

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Offshore and Onshore RIG Cables

COMMODORE® Copper Communication Cables

Low-Smoke, Zero-Halogen, 100 Ω RS422 Network Cable, Two Pair Overall Shielded, Armored & Sheathed

ABS Type Approved, ETL Confirmed

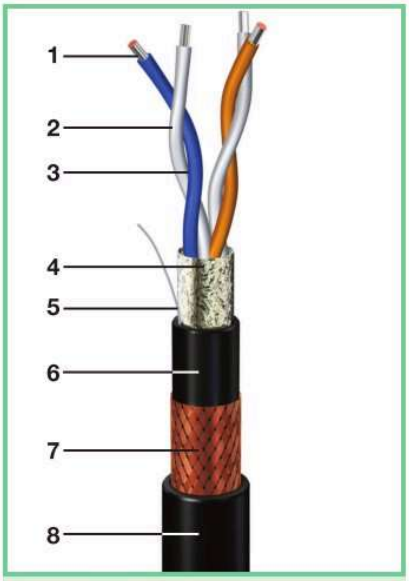
Product Construction:

1. **Conductor:**
   - 24 AWG 7/32 tinned copper: .024" nom. O.D.
2. **Insulation:**
   - Foam Polyethylene: .050" nom. O.D.
3. **Pairs:**
   - Two insulated conductors twisted left-hand lay
   - Color Code: P1: White, Blue P2: White, Orange
4. **Overall Shield:**
   - Aluminum/Polyester tape (aluminum side out)
5. **Drain Wire:**
   - 24 AWG 7/32 tinned copper
6. **Inner Sheath:**
   - Low-Smoke, Zero-Halogen Polyolefin — .030" nom. wall, Black: .227" nom. O.D.
7. **Armor:**
   - 28 AWG bronze braid, 88% min. coverage
8. **Outer Sheath:**
   - Low-Smoke, Zero-Halogen Polyolefin, .048" nom. wall, Black: .375" nom. O.D.
9. **Print:**
   - GENERAL CABLE (F) COMMODORE® LSZH ARMORED MARINE CABLE 2 PR 24 AWG 100 OHM RS422 IEC 60332-3-22 CAT A AAAAA* MO/YR** XXXXXXX***

   *Order Number **Date ***Footage Markings every 2 ft
10. **Cable Weight:**
    - 95 lbs/kft nom.

Features:

- Mechanically enhanced construction renders the cable suitable for installation in cable tray as an interconnect cable
- Suitable for installation in vessels' quarters area



Compliances:

- Flammability: IEC 60332-3-22 Category A
- Smoke: IEC 61034-1 & -2, MIL-DTL-24643B and NES 711
- Halogen Content: IEC 60754-1 & -2
- Toxicity: MIL-DTL-24643B and NES 713
- Acidity: IEC 60754-1 & -2 and MIL-DTL-24643B
- Armor: IEEE 1580 and IEC 60092-350

Third-Party Testing:

ETL has tested and confirmed that this product complies with the above specifications (report number 3116259CRT-002)

Offshore and Onshore RIG Cables

COMMODORE® Copper Communication Cables

Low-Smoke, Zero-Halogen, 100 Ω RS422 Network Cable, Two Pair Overall Shielded, Armored & Sheathed

ABS Type Approved, ETL Confirmed

Electrical Characteristics

Conductor DCR: 25.7 Ω/kft nom.
Mutual Capacitance: 13.5 pF/ft nom.
Impedance: 100 ± 10 Ω
Velocity of Propagation: 76% nom.
Temperature & Voltage Rating: -30°C to +75°C/300 V Max.

Catalog number: EO24P0022186

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Offshore and Onshore RIG Cables

COMMODORE® Copper Communication Cables

Low-Smoke, Zero-Halogen, 100 Ω RS422 Network Cable, Four Pair Overall Shielded, Armored & Sheathed

ABS Type Approved, ETL Confirmed

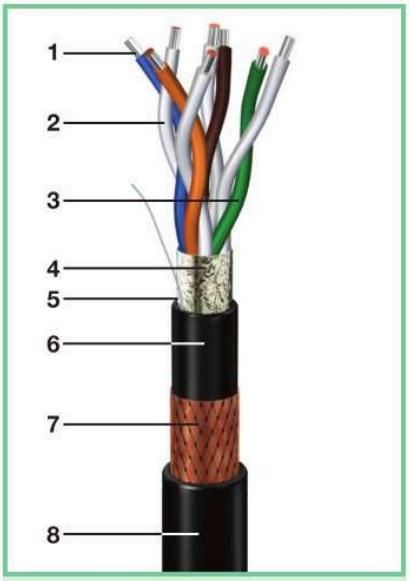
Product Construction:

1. **Conductor:**
   - 24 AWG 7/32 tinned copper: .024" nom. O.D.
2. **Insulation:**
   - Foam Polyethylene: .048" nom. O.D.
3. **Pairs:**
   - Two insulated conductors twisted left-hand lay
   - Color Code:
     P1: White, Blue P3: White, Green
     P2: White, Orange P4: White, Brown
4. **Shield:**
   - Overall Aluminum/Polyester Tape (aluminum side out)
5. **Drain Wire:**
   - 24 AWG 7/32 tinned copper
6. **Inner Sheath:**
   - Low-Smoke, Zero-Halogen Polyolefin — .030" nom. wall, Black: .250" nom. O.D.
7. **Armor:**
   - 28 AWG bronze braid, 88% min. coverage
8. **Outer Sheath:**
   - Low-Smoke, Zero-Halogen Polyolefin, .048" nom. wall, Black: .400" nom. O.D.
9. **Print:**
   - GENERAL CABLE (F) COMMODORE® LSZH ARMORED MARINE CABLE 4 PR 24 AWG 100 OHM RS422 IEC 60332-3-22 CAT A AAAAA* MO/YR** XXXXXXX***

     *Order Number **Date ***Footage Markings every 2 ft
10. **Cable Weight:**
    - 125 lbs/kft nom.

Features:

- Mechanically enhanced construction renders the cable suitable for installation in cable tray as an interconnect cable
- Suitable for installation in vessels' quarters area



Compliances:

- Flammability: IEC 60332-3-22 Category A
- Smoke: IEC 61034-1 & -2, MIL-DTL-24643B and NES 711
- Halogen Content: IEC 60754-1 & -2
- Toxicity: MIL-DTL-24643B and NES 713
- Acidity: IEC 60754-1 & -2 and MIL-DTL-24643B
- Armor: IEEE 1580 and IEC 60092-350

Third-Party Testing:

ETL has tested and confirmed that this product complies with the above specifications (report number 3116259CRT-002)

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Offshore and Onshore RIG Cables

COMMODORE® Copper Communication Cables

Low-Smoke, Zero-Halogen, 100 Ω RS422 Network Cable, Four Pair Overall Shielded, Armored & Sheathed

ABS Type Approved, ETL Confirmed

Electrical Characteristics

Conductor DCR: 25.7 Ω/kft nom.
Mutual Capacitance: 13.5 pF/ft nom.
Impedance: 100 ± 10 Ω
Velocity of Propagation: 76% nom.
Temperature & Voltage Rating: -30°C to +75°C/300 V Max.

Catalog number: EO24P0042186

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INS-0167-R0515

Offshore and Onshore RIG Cables

COMMODORE® Copper Communication Cables

Low-Smoke, Zero-Halogen, 100 Ω RS422 Network Cable, Eight Pair Overall Shielded, Armored & Sheathed

ABS Type Approved, ETL Confirmed

Product Construction:

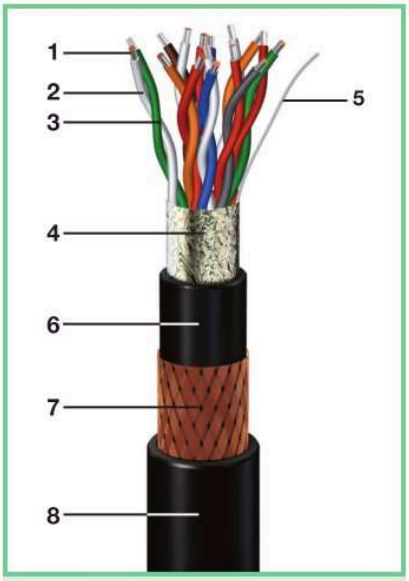
1. **Conductor:**
   - 24 AWG 7/32 tinned copper: .024" nom. O.D.
2. **Insulation:**
   - Foam Polyethylene: .048" nom. O.D.
3. **Pairs:**
   - Two insulated conductors twisted left-hand lay
   - Color Code:

     P1: White, Blue P5: White, Gray
     P2: White, Orange P6: Red, Blue
     P3: White, Green P7: Red, Orange
     P4: White, Brown P8: Red, Green
4. **Shield:**
   - Overall Aluminum/Polyester Tape (aluminum side out)
5. **Drain Wire:**
   - 24 AWG 7/32 tinned copper
6. **Inner Sheath:**
   - Low-Smoke, Zero-Halogen Polyolefin — .030" nom. wall, Black: .325" nom. O.D.
7. **Armor:**
   - 28 AWG bronze braid, 88% min. coverage
8. **Outer Sheath:**
   - Low-Smoke, Zero-Halogen Polyolefin, .048" nom. wall, Black: .475" nom. O.D.
9. **Print:**
   - GENERAL CABLE (F) COMMODORE® LSZH ARMORED MARINE CABLE 8 PR 24 AWG 100 OHM RS422 IEC 60332-3-22 CAT A AAAAA* MO/YR** XXXXXXX***

     *Order Number **Date ***Footage Markings every 2 ft
10. **Cable Weight:**
    - 145 lbs/kft nom.

Features:

- Mechanically enhanced construction renders the cable suitable for installation in cable tray as an interconnect cable
- Suitable for installation in vessels' quarters area



Compliances:

- Flammability: IEC 60332-3-22 Category A
- Smoke: IEC 61034-1 & -2, MIL-DTL-24643B and NES 711
- Halogen Content: IEC 60754-1 & -2
- Toxicity: MIL-DTL-24643B and NES 713
- Acidity: IEC 60754-1 & -2 and MIL-DTL-24643B
- Armor: IEEE 1580 and IEC 60092-350

Third-Party Testing:

ETL has tested and confirmed that this product complies with the above specifications (report number 3116259CRT-006)

Offshore and Onshore RIG Cables

COMMODORE® Copper Communication Cables

Low-Smoke, Zero-Halogen, 100 Ω RS422 Network Cable, Eight Pair Overall Shielded, Armored & Sheathed

ABS Type Approved, ETL Confirmed

Electrical Characteristics

Conductor DCR: 25.7 Ω/kft nom.
Mutual Capacitance: 13.5 pF/ft nom.
Impedance: 100 ± 10 Ω
Velocity of Propagation: 76% nom.
Temperature & Voltage Rating: -30°C to +75°C/300 V Max.

Catalog number: EO24P0082186

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Offshore and Onshore RIG Cables

COMMODORE® Copper Communication Cables

Low-Smoke, Zero-Halogen 120 Ω DeviceNet-Compatible Cable Two Pair, Composite, Shielded & Sheathed

ABS Type Approved, ETL Confirmed

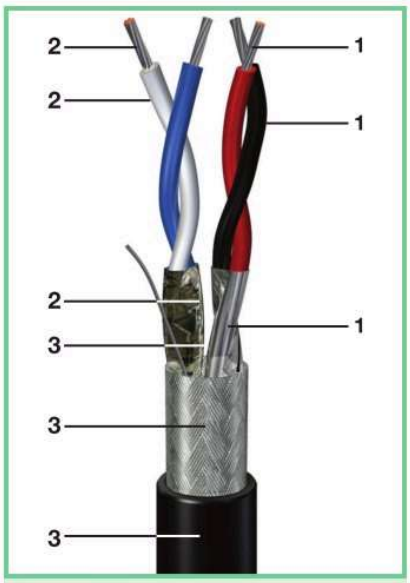
Product Construction:

1. **1 Pair 16 AWG Shielded**
   - a. Conductor:
     - 16 AWG 19/.0117 tinned copper: .056" nom. O.D.
   - b. Insulation:
     - Low-Smoke, Zero-Halogen Polyolefin, .022" nom. wall: .100" nom. O.D.
   - c. Color Code:
     - C1: Red C2: Black
   - d. Shield:
     - Aluminum/Polyester tape 25% overlap 100% coverage (aluminum side out)
2. **1 Pair 18 AWG Shielded**
   - a. Conductor:
     - 18 AWG 19/30 tinned copper: .049" nom. O.D.
   - b. Insulation:
     - Foam Polyolefin, .053" nom. wall: .155" nom. O.D.
   - c. Color Code:
     - C1: Blue C2: White
   - d. Shield:
     - Aluminum/Polyester tape 25% overlap 100% coverage (aluminum side out)
3. **Final Assembly 2 Pairs Cabled Left-Hand Lay**
   - a. Drain Wire:
     - 16 AWG 19/29 tinned copper
   - b. Overall Shield:
     - 36 AWG tinned copper, 65% min. coverage
   - c. Sheath:
     - Low-Smoke, Zero-Halogen, .060" nom. wall, Black: .475" nom. O.D.
4. **Print:**
   - GENERAL CABLE (F) COMMODORE® LSZH MARINE CABLE 1 PR 16 AWG & 1 PR 18 AWG 120 OHM DEVICENET IEC 60332-3-22 CAT A AAAAA* MO/YR** XXXXXXX***

   *Order Number **Date ***Footage Markings every 2 ft
5. **Cable Weight:**
   - 125 lbs/kft nom.

Features:

- Mechanically enhanced construction renders the cable suitable for installation in cable tray as an interconnect cable
- Suitable for installation in vessels' quarters area



Compliances:

- Flammability: IEC 60332-3-22 Category A
- Smoke: IEC 61034-1 & -2, MIL-DTL-24643B and NES 711
- Halogen Content: IEC 60754-1 & -2
- Toxicity: MIL-DTL-24643B and NES 713
- Acidity: IEC 60754-1 & -2 and MIL-DTL-24643B

Third-Party Testing:

ETL has tested and confirmed that this product complies with the above specifications (report number 3316259CRT-004)

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General Cable

INS-0167-R0515

Offshore and Onshore RIG Cables

COMMODORE® Copper Communication Cables

Low-Smoke, Zero-Halogen 120 Ω DeviceNet-Compatible Cable Two Pair, Composite, Shielded & Sheathed

ABS Type Approved, ETL Confirmed

Electrical Characteristics

1/Pair 16 AWG Shielded
Conductor DCR: 4.39 Ω/kft nom.

1/Pair 18 AWG Shielded
Conductor DCR: 6.1 Ω/kft nom.
Capacitance: 12.0 pF/ft nom.
Impedance: 120 ± 10 Ω @ 1 MHz
Velocity of Propagation: 76% nom.
Temperature & Voltage Ratings: -30°C to +75°C/300 V Max.
Attenuation (Nom.):

FREQ. (MHz)	dB/100 FT
0.125	0.13
0.50	0.25
1.0	0.40

Catalog number: ZO16P0022189

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Offshore and Onshore RIG Cables

COMMODORE® Copper Communication Cables

Low-Smoke, Zero-Halogen RG-6/U Type Coax Armored & Sheathed

ABS Type Approved, ETL Confirmed

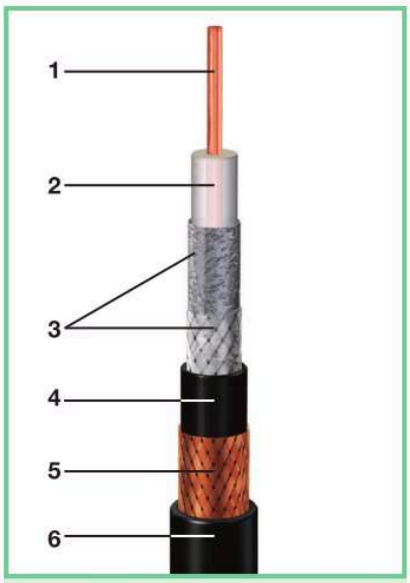
Product Construction:

1. **Conductor:**
   - 18 AWG solid bare copper: .040" nom. O.D.
2. **Insulation:**
   - Foam Polyethylene, .070" nom. wall: .180" nom. O.D.
3. **Shields:**
   - Aluminum/Polyester/Aluminum tape, 100% coverage
   - 34 AWG tinned copper braid, 95% nom. coverage
4. **Inner Sheath:**
   - Low-Smoke, Zero-Halogen Polyolefin, .032" nom. wall, Black: .275" nom. O.D.
5. **Armor:**
   - 28 AWG bronze braid, 88% min. coverage
6. **Outer Sheath:**
   - Low-Smoke, Zero-Halogen Polyolefin, .048" nom. wall, Black: .440" nom. O.D.
7. **Print:**
   - GENERAL CABLE (F) COMMODORE® LSZH ARMORED MARINE CABLE 18 AWG RG-6/U TYPE COAX IEC 60332-3-22 CAT A AAAAA* MO/YR** XXXXXXX***

   *Order Number **Date ***Footage Markings every 2 ft
8. **Cable Weight:**
   - 140 lbs/kft nom.

Features:

- Mechanically enhanced construction renders the cable suitable for installation in cable tray as an interconnect cable
- Suitable for installation in vessels' quarters area



Compliances:

- Flammability: IEC 60332-3-22 Category A
- Smoke: IEC 61034-1 & -2, MIL-DTL-24643B and NES 711
- Halogen Content: IEC 60754-1 & -2
- Toxicity: MIL-DTL-24643B and NES 713
- Acidity: IEC 60754-1 & -2 and MIL-DTL-24643B
- Armor: IEEE 1580 and IEC 60092-350

Third-Party Testing:

ETL has tested and confirmed that this product complies with the above specifications (report number 3116259CRT-001)

Offshore and Onshore RIG Cables

COMMODORE® Copper Communication Cables

Low-Smoke, Zero-Halogen RG-6/U Type Coax Armored & Sheathed

ABS Type Approved, ETL Confirmed

Electrical Characteristics:

Impedance: 75 Ω ± 5 Ω
Capacitance: 16.3 pF/ft nom.
Velocity of Propagation: 83% nom.
Conductor DCR: 6.51 Ω/kft nom.
Shield DCR: 2.29 Ω/kft nom.
Inductance: 0.097 µH/ft
Time Delay: 1.22 ns/ft
Temperature & Voltage Ratings: -30°C to +75°C/300 V Max.
Attenuation (Nom.):

FREQ. (MHz)	dB/100 FT
100.0	2.10
200.0	2.75
300.0	3.60
400.0	4.00
500.0	4.70
700.0	5.30
800.0	5.87
900.0	6.55
1700.0	8.95
1750.0	9.15
2000.0	9.95
2050.0	10.20

Catalog number: CO18C0012170

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Offshore and Onshore RIG Cables

COMMODORE® Copper Communication Cables

Low-Smoke, Zero-Halogen RG-11/U Type Coax Armored & Sheathed

ABS Type Approved, ETL Confirmed

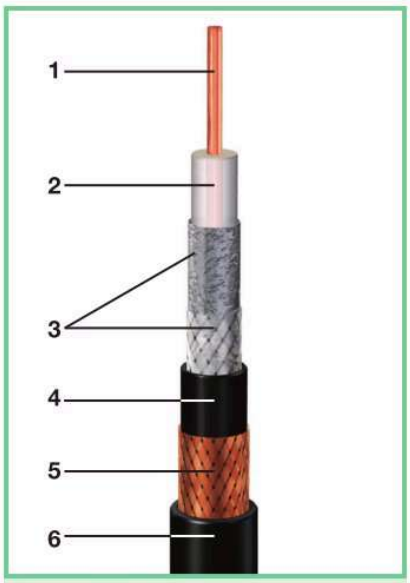
Product Construction:

1. **Conductor:**
   - 14 AWG solid bare copper: .064" nom. O.D.
2. **Insulation:**
   - Foam Polyethylene, .108" nom. wall: .281" nom. O.D.
3. **Shields:**
   - Aluminum/Polyester/Aluminum tape, 100% coverage
   - 34 AWG tinned copper braid, 95% nom. coverage
4. **Inner Sheath:**
   - Low-Smoke, Zero-Halogen Polyolefin, .045" nom. wall, Black: .405" nom. O.D.
5. **Armor:**
   - 28 AWG bronze braid, 88% min. coverage
6. **Outer Sheath:**
   - Low-Smoke, Zero-Halogen Polyolefin, .045" nom. wall, Black: .550" nom. O.D.
7. **Print:**
   - GENERAL CABLE (F) COMMODORE® LSZH ARMORED MARINE CABLE 14 AWG RG-11/U TYPE COAX IEC 60332-3-22 CAT A AAAAA* MO/YR** XXXXXXX***

     *Order Number **Date ***Footage Markings every 2 ft
8. **Cable Weight:**
   - 200 lbs/kft nom.

Features:

- Mechanically enhanced construction renders the cable suitable for installation in cable tray as an interconnect cable
- Suitable for installation in vessels' quarters area



Compliances:

- Flammability: IEC 60332-3-22 Category A
- Smoke: IEC 61034-1 & -2, MIL-DTL-24643B and NES 711
- Halogen Content: IEC 60754-1 & -2
- Toxicity: MIL-DTL-24643B and NES 713
- Acidity: IEC 60754-1 & -2 and MIL-DTL-24643B
- Armor: IEEE 1580 and IEC 60092-350

Third-Party Testing:

ETL has tested and confirmed that this product complies with the above specifications (report number 3120310CRT-001)

Offshore and Onshore RIG Cables

COMMODORE® Copper Communication Cables

Low-Smoke, Zero-Halogen RG-11/U Type Coax Armored & Sheathed

ABS Type Approved, ETL Confirmed

Electrical Characteristics:

Impedance: 75 Ω ± 5 Ω
Capacitance: 16.3 pF/ft nom.
Velocity of Propagation: 83% nom.
Conductor DCR: 2.58 Ω/kft nom.
Shield DCR: 3.70 Ω/kft nom.
Inductance: 0.097 µH/ft
Time Delay: 1.22 ns/ft
Temperature & Voltage Ratings: -30°C to +75°C/300 V Max.
Attenuation (Nom.):

FREQ. (MHz)	dB/100 FT
1.0	0.15
100.0	1.38
270.0	2.31
540.0	3.29
750.0	3.89
1000.0	4.52
2000.0	6.65
3000.0	8.10

Catalog number: CO14C0012170

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Offshore and Onshore RIG Cables

COMMODORE® Copper Communication Cables

Low-Smoke, Zero-Halogen RG-58/U Type Coax Armored & Sheathed

ABS Type Approved, ETL Confirmed

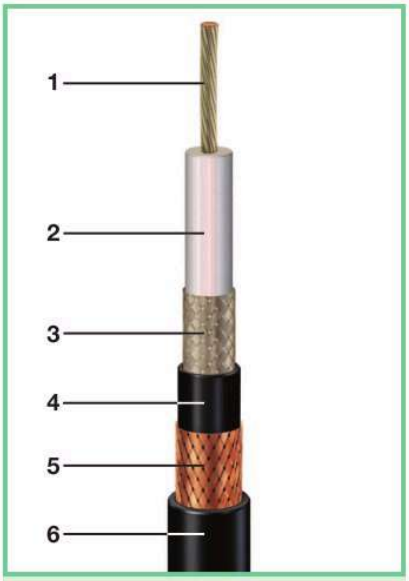
Product Construction:

1. **Conductor:**
   - 21 AWG 19/33 tinned copper: .035" nom. O.D.
2. **Insulation:**
   - Polyethylene, .040" nom. wall: .116" nom. O.D.
3. **Shield:**
   - 36 AWG tinned copper braid, 95% nom. coverage
4. **Inner Sheath:**
   - Low-Smoke, Zero-Halogen Polyolefin, .028" nom. wall, Black: .195" nom. O.D.
5. **Armor:**
   - 28 AWG bronze braid, 88% min. coverage
6. **Outer Sheath:**
   - Low-Smoke, Zero-Halogen Polyolefin, .045" nom. wall, Black: .340" nom. O.D.
7. **Print:**
   - GENERAL CABLE (F) COMMODORE® LSZH ARMORED MARINE CABLE 21 AWG RG-58/U TYPE COAX IEC 60332-3-22 CAT A AAAAA* MO/YR** XXXXXXX***

   *Order Number **Date ***Footage Markings every 2 ft
8. **Cable Weight:**
   - 100 lbs/kft nom.

Features:

- Mechanically enhanced construction renders the cable suitable for installation in cable tray as an interconnect cable
- Suitable for installation in vessels' quarters area



Compliances:

- Flammability: IEC 60332-3-22 Category A
- Smoke: IEC 61034-1 & -2, MIL-DTL-24643B and NES 711
- Halogen Content: IEC 60754-1 & -2
- Toxicity: MIL-DTL-24643B and NES 713
- Acidity: IEC 60754-1 & -2 and MIL-DTL-24643B
- Armor: IEEE 1580 and IEC 60092-350

Third-Party Testing:

ETL has tested and confirmed that this product complies with the above specifications (report number 3120310CRT-002)

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Offshore and Onshore RIG Cables

COMMODORE® Copper Communication Cables

Low-Smoke, Zero-Halogen RG-58/U Type Coax Armored & Sheathed

ABS Type Approved, ETL Confirmed

Electrical Characteristics:

Impedance: 50 Ω ± 3 Ω
Capacitance: 30.8 pF/ft nom.
Velocity of Propagation: 66% nom.
Conductor DCR: 10.8 Ω/kft nom.
Inductance: 0.075 µH/ft
Time Delay: 1.51 ns/ft
Temperature & Voltage Ratings: -30°C to +75°C/300 V Max.
Attenuation (Nom.):

FREQ. (MHz)	dB/100 FT
1	0.5
5	1.1
10	1.6
20	2.3
50	3.5
100	4.8
200	6.8
400	10.0
700	14.2
900	16.5
1000	17.7

Catalog number: CO21C0012170

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Offshore and Onshore RIG Cables

COMMODORE® Copper Communication Cables

Low-Smoke, Zero-Halogen RG-59/U Type Coax Armored & Sheathed

ABS Type Approved, ETL Confirmed

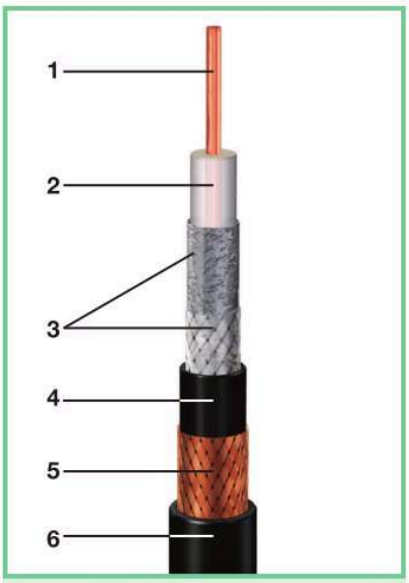
Product Construction:

1. **Conductor:**
   - 20 AWG solid bare copper: .032" nom. O.D.
2. **Insulation:**
   - Foam Polyethylene, .057" nom. wall: .145" nom. O.D.
3. **Shields:**
   - Aluminum/Polyester/Aluminum tape, 100% coverage
   - 34 AWG tinned copper braid, 95% nom. coverage
4. **Inner Sheath:**
   - Low-Smoke, Zero-Halogen Polyolefin, .032" nom. wall, Black: .246" nom. O.D.
5. **Armor:**
   - 28 AWG bronze braid, 88% min. coverage
6. **Outer Sheath:**
   - Low-Smoke, Zero-Halogen Polyolefin, .048" nom. wall, Black: .395" nom. O.D.
7. **Print:**
   - GENERAL CABLE (F) COMMODORE® LSZH ARMORED MARINE CABLE 20 AWG RG-59/U TYPE COAX IEC 60332-3-22 CAT A AAAAA* MO/YR** XXXXXXX***

   *Order Number **Date ***Footage Markings every 2 ft
8. **Cable Weight**
   - 119 lbs/kft nom.

Features:

- Mechanically enhanced construction renders the cable suitable for installation in cable tray as an interconnect cable
- Suitable for installation in vessels' quarters area



Compliances:

- Flammability: IEC 60332-3-22 Category A
- Smoke: IEC 61034-1 & -2, MIL-DTL-24643B and NES 711
- Halogen Content: IEC 60754-1 & -2
- Toxicity: MIL-DTL-24643B and NES 713
- Acidity: IEC 60754-1 & -2 and MIL-DTL-24643B
- Armor: IEEE 1580 and IEC 60092-350

Third-Party Testing:

ETL has tested and confirmed that this product complies with the above specifications (report number 3116259CRT-001)

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Offshore and Onshore RIG Cables

COMMODORE® Copper Communication Cables

Low-Smoke, Zero-Halogen RG-59/U Type Coax Armored & Sheathed

ABS Type Approved, ETL Confirmed

Electrical Characteristics:

Impedance: 75 Ω ± 5 Ω
Capacitance: 16.3 pF/ft nom.
Velocity of Propagation: 83% nom.
Conductor DCR: 10.0 Ω/kft nom.
Shield DCR: 3.8 Ω/kft nom.
Inductance: 0.097 µH/ft
Time Delay: 1.22 ns/ft
Temperature & Voltage Ratings: -30°C to +75°C/300 V Max.
Attenuation (Nom.):

FREQ. (MHz)	dB/100 FT
100.0	2.33
135.0	2.70
143.0	2.77
180.0	3.10
270.0	3.80
360.0	4.42
540.0	5.47
720.0	6.36
750.0	6.50
1000.0	7.60
1500.0	9.30
2000.0	10.90
2500.0	12.30
3000.0	13.40

Catalog number: CO20C0012170

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Offshore and Onshore RIG Cables

COMMODORE® Copper Communication Cables

Low-Smoke, Zero-Halogen RG-213/U Type Coax Armored & Sheathed

ABS Type Approved, ETL Confirmed

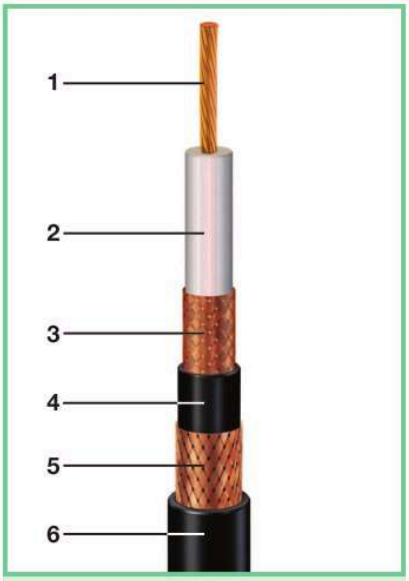
Product Construction:

1. **Conductor:**
   - 13 AWG 7/.0296 bare copper: .088" nom. O.D.
2. **Insulation:**
   - Polyethylene, .098" nom. wall: .285" nom. O.D.
3. **Shield:**
   - 33 AWG bare copper braid, 95% nom. coverage
4. **Inner Sheath:**
   - Low-Smoke, Zero-Halogen Polyolefin, .043" nom. wall, Black: .405" nom. O.D.
5. **Armor:**
   - 28 AWG bronze braid, 88% min. coverage
6. **Outer Sheath:**
   - Low-Smoke, Zero-Halogen Polyolefin, 0.045" nom. wall, Black: 0.549" nom. O.D.
7. **Print:**
   - GENERAL CABLE (F) COMMODORE® LSZH ARMORED MARINE CABLE 13 AWG RG-213/U TYPE COAX IEC 60332-3-22 CAT A AAAAA* MO/YR** XXXXXXX***

   *Order Number **Date ***Footage Markings every 2 ft
8. **Cable Weight:**
   - 230 lbs/kft nom.

Features:

- Mechanically enhanced construction renders the cable suitable for installation in cable tray as an interconnect cable
- Suitable for installation in vessels' quarters area



Compliances:

- Flammability: IEC 60332-3-22 Category A
- Smoke: IEC 61034-1 & -2, MIL-DTL-24643B and NES 711
- Halogen Content: IEC 60754-1 & -2
- Toxicity: MIL-DTL-24643B and NES 713
- Acidity: IEC 60754-1 & -2 and MIL-DTL-24643B
- Armor: IEEE 1580 and IEC 60092-350

Third-Party Testing:

ETL has tested and confirmed that this product complies with the above specifications (report number 3120310CRT-002)

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Offshore and Onshore RIG Cables

COMMODORE® Copper Communication Cables

Low-Smoke, Zero-Halogen RG-213/U Type Coax Armored & Sheathed

ABS Type Approved, ETL Confirmed

Electrical Characteristics:

Impedance: 50 Ω ± 3 Ω
Capacitance: 30.8 pF/ft nom.
Velocity of Propagation: 66% nom.
Conductor DCR: 1.74 Ω/kft nom.
Shield DCR: 1.20 Ω/kft nom.
Inductance: 0.075 µH/ft
Time Delay: 1.51 ns/ft
Temperature & Voltage Ratings: -30°C to +75°C/300 V Max.
Attenuation (Nom.):

FREQ. (MHz)	dB/100 FT
10.0	0.66
50.0	1.20
100.0	2.30
200.0	3.20
400.0	4.60
1000.0	9.00

Catalog number: CO13C0012170

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INS-0167-R0515

Offshore and Onshore RIG Cables

COMMODORE® Copper Communication Cables

Low-Smoke, Zero-Halogen Fieldbus Cable One Pair, Overall Shielded Armored & Sheathed

ABS Type Approved, ETL Confirmed

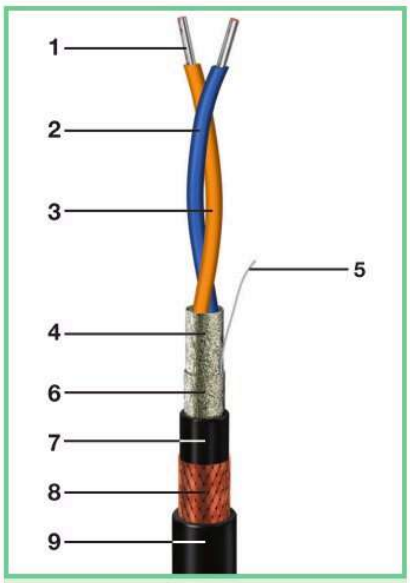
Product Construction:

1. **Conductor:**
   - 18 AWG 7/26 tinned copper: .046" nom. O.D.
2. **Insulation:**
   - Foam Polyethylene: .114" nom. O.D.
3. **Pair:**
   - Two insulated conductors twisted together
   - Color Code: P1: Blue, Orange
4. **Inner Shield:**
   - Aluminum/Polyester tape with 25% overlap 100% coverage (aluminum side out)
5. **Drain:**
   - 18 AWG 16/30 spiral-wrapped tinned copper
6. **Overall Shield:**
   - Aluminum/Polyester tape with 25% overlap 100% coverage (aluminum side in)
7. **Inner Sheath:**
   - Flame-Retardant, Low-Smoke, Zero-Halogen Polyolefin — .040" nom. wall, Black: .310" nom. O.D.
8. **Armor:**
   - 28 AWG bronze braid, 88% min. coverage
9. **Outer Sheath:**
   - Flame-Retardant, Low-Smoke, Zero-Halogen Polyolefin, .045" nom. wall, Black: .470" nom. O.D.
10. **Print:**
    - GENERAL CABLE (F) COMMODORE® LSZH ARMORED MARINE CABLE 1 PR 18 AWG 100 OHM FIELDBUS IEC 60332-3-22 CAT A AAAAA* MO/YR** XXXXXXX***

      *Order Number **Date ***Footage Markings every 2 ft
11. **Cable Weight:**
    - 144 lbs/kft nom.

Features:

- Mechanically enhanced construction renders the cable suitable for installation in cable tray as an interconnect cable
- Suitable for installation in vessels' quarters area



Compliances:

- Flammability: IEC 60332-3-22 Category A
- Smoke: IEC 61034-1 & -2, MIL-DTL-24643B and NES 711
- Halogen Content: IEC 60754-1 & -2
- Toxicity: MIL-DTL-24643B and NES 713
- Acidity: IEC 60754-1 & -2 and MIL-DTL-24643B
- Armor: IEEE 1580 and IEC 60092-350
- System Application: IEC 61158-2 Section 12.8.2

Third-Party Testing:

ETL has tested and confirmed that this product complies with the above specifications (report number 3116259CRT-007)

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Offshore and Onshore RIG Cables

COMMODORE® Copper Communication Cables

Low-Smoke, Zero-Halogen Fieldbus Cable
One Pair, Overall Shielded
Armored & Sheathed
ABS Type Approved, ETL Confirmed

Electrical Characteristics
Conductor DCR: 6.5 Ω/kft nom.
Mutual Capacitance: 13.0 pF/ft nom.
Impedance: 100 ± 20 Ω
Temperature & Voltage Rating: -30°C to +75°C/300 V Max.
Pull Tensions: 1250 N

Catalog number: EO18P0015337

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Offshore and Onshore RIG Cables

COMMODORE® Copper Communication Cables

Low-Smoke, Zero-Halogen Fieldbus Cable Two Pair Individually/Overall Shielded Armored & Sheathed

ABS Type Approved, ETL Confirmed

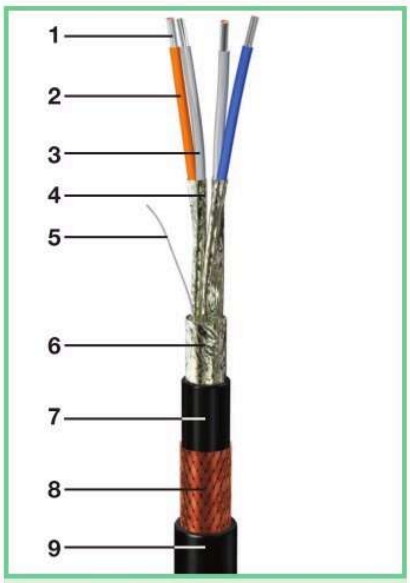
Product Construction:

1. **Conductor:**
   - 18 AWG 7/26 tinned copper: .046" nom. O.D.
2. **Insulation:**
   - Foam Polyethylene: .114" nom. O.D.
3. **Pairs:**
   - Two insulated conductors twisted together
   - Color Code: P1: White, Blue P2: White, Orange
4. **Individually Shielded Pairs:**
   - Aluminum/Polyester tape with 25% overlap 100% coverage (aluminum side out)
5. **Drain:**
   - 18 AWG 16/30 spiral-wrapped tinned copper
6. **Overall Shield:**
   - Aluminum/Polyester tape with 25% overlap 100% coverage (aluminum side in)
7. **Inner Sheath:**
   - Flame-Retardant, Low-Smoke, Zero-Halogen Polyolefin — .045" nom. wall, Black: .540" nom. O.D.
8. **Armor:**
   - 28 AWG bronze braid, 88% min. coverage
9. **Outer Sheath:**
   - Flame-Retardant, Low-Smoke, Zero-Halogen Polyolefin, .045" nom. wall, Black: .690" nom. O.D.
10. **Print:**
    - GENERAL CABLE (F) COMMODORE® LSZH ARMORED MARINE CABLE 2 PR 18 AWG 100 OHM FIELDBUS IEC 60332-3-22 CAT A AAAAA* MO/YR** XXXXXXX***

      *Order Number **Date ***Footage Markings every 2 ft
11. **Cable Weight**
    - 248 lbs/kft nom.

Features:

- Mechanically enhanced construction renders the cable suitable for installation in cable tray as an interconnect cable
- Suitable for installation in vessels' quarters area



Compliances:

- Flammability: IEC 60332-3-22 Category A
- Smoke: IEC 61034-1 & -2, MIL-DTL-24643B and NES 711
- Halogen Content: IEC 60754-1 & -2
- Toxicity: MIL-DTL-24643B and NES 713
- Acidity: IEC 60754-1 & -2 and MIL-DTL-24643B
- Armor: IEEE 1580 and IEC 60092-350
- System Application: IEC 61158-2 Section 12.8.2

Third-Party Testing:

ETL has tested and confirmed that this product complies with the above specifications (report number 3116259CRT-007)

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Offshore and Onshore RIG Cables

COMMODORE® Copper Communication Cables

Low-Smoke, Zero-Halogen Fieldbus Cable Two Pair Individually/Overall Shielded Armored & Sheathed

ABS Type Approved, ETL Confirmed

Electrical Characteristics

Conductor DCR: 6.5 Ω/kft nom.
Mutual Capacitance: 13.0 pF/ft nom.
Impedance: 100 ± 20 Ω
Temperature & Voltage Rating: -30°C to +75°C/300 V Max.
Pull Tension: 2570 N

Catalog number: EO18P0025337

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Offshore and Onshore RIG Cables

COMMODORE® Copper Communication Cables

Low-Smoke, Zero-Halogen Fieldbus Cable Five Pair, Individually/Overall Shielded Armored & Sheathed

ABS Type Approved, ETL Confirmed

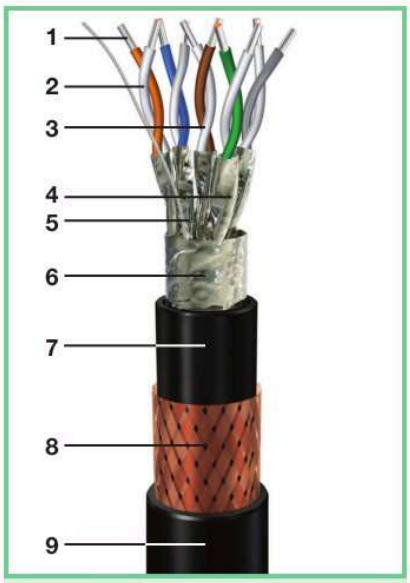
Product Construction:

1. **Conductor:**
   - 18 AWG 7/26 tinned copper: .046" nom. O.D.
2. **Insulation:**
   - Foam Polyethylene: .114" nom. O.D.
3. **Pairs:**
   - Two insulated conductors twisted together
   - Color Code: P1: White, Blue; P2: White, Orange; P3: White, Green; P4: White, Brown; P5: White, Gray
4. **Individually Shielded Pairs:**
   - Aluminum/Polyester tape with 25% overlap 100% coverage (aluminum side out)
5. **Drain:**
   - 18 AWG 16/30 spiral-wrapped tinned copper
6. **Overall Shield:**
   - Aluminum/Polyester tape with 25% overlap 100% coverage (aluminum side in)
7. **Inner Sheath:**
   - Flame-Retardant, Low-Smoke, Zero-Halogen Polyolefin — .045" nom. wall, Black: .655" nom. O.D.
8. **Armor:**
   - 28 AWG bronze braid, 88% min. coverage
9. **Outer Sheath:**
   - Flame-Retardant, Low-Smoke, Zero-Halogen Polyolefin, .045" nom. wall, Black: .800" nom. O.D.
10. **Print:**
    - GENERAL CABLE (F) COMMODORE® LSZH ARMORED MARINE CABLE 5 PR 18 AWG 100 OHM FIELDBUS IEC 60332-3-22 CAT A AAAAA* MO/YR** XXXXXXX***

      *Order Number **Date ***Footage Markings every 2 ft
11. **Cable Weight:**
    - 340 lbs/kft nom.

Features:

- Mechanically enhanced construction renders the cable suitable for installation in cable tray as an interconnect cable
- Suitable for installation in vessels' quarters area



Compliances:

- Flammability: IEC 60332-3-22 Category A
- Smoke: IEC 61034-1 & -2, MIL-DTL-24643B and NES 711
- Halogen Content: IEC 60754-1 & -2
- Toxicity: MIL-DTL-24643B and NES 713
- Acidity: IEC 60754-1 & -2 and MIL-DTL-24643B
- Armor: IEEE 1580 and IEC 60092-350
- System Application: IEC 61158-2 Section 12.8.2

Third-Party Testing:

ETL has tested and confirmed that this product complies with the above specifications (report number 3116259CRT-007)

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Offshore and Onshore RIG Cables

COMMODORE® Copper Communication Cables

Low-Smoke, Zero-Halogen Fieldbus Cable Five Pair, Individually/Overall Shielded Armored & Sheathed

ABS Type Approved, ETL Confirmed

Electrical Characteristics

Conductor DCR: 6.5 Ω/kft nom.
Mutual Capacitance: 13.0 pF/ft nom.
Impedance: 100 ± 20 Ω
Temperature & Voltage Rating: -30°C to +75°C/300 V Max.
Pull Tension: 4000 N

Catalog number: EO18P0055337

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Offshore and Onshore RIG Cables

COMMODORE® Copper Communication Cables

Low-Smoke, Zero-Halogen 150 Ω Profibus Cable One Pair, Overall Shielded Armored & Sheathed

ABS Type Approved, ETL Confirmed

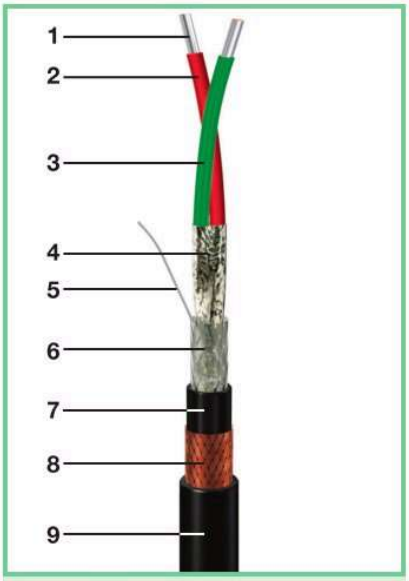
Product Construction:

1. **Conductor:**
   - 22 AWG solid tinned copper: .025" nom. O.D.
2. **Insulation:**
   - Foam Polyethylene, .040" nom. wall: .106" nom. O.D.
3. **Pair:**
   - Two insulated conductors twisted together
   - Color Code: C1: Red C2: Green
4. **Inner Shield:**
   - Aluminum/Polyester tape with 25% overlap 100% coverage (aluminum side out)
5. **Drain Wire:**
   - 22 AWG solid tinned copper spirally applied
6. **Overall Shield:**
   - 34 AWG tinned copper braid, 90% min. coverage
7. **Inner Sheath:**
   - Low-Smoke, Zero-Halogen Polyolefin — .035" nom. wall, Black: .315" nom. O.D.
8. **Armor:**
   - 28 AWG bronze braid, 88% min. coverage
9. **Outer Sheath:**
   - Low-Smoke, Zero-Halogen Polyolefin, .045" nom. wall, Black: .470" nom. O.D.
10. **Print:**
    - GENERAL CABLE (F) COMMODORE® LSZH ARMORED MARINE CABLE 1 PR 22 AWG 150 OHM PROFIBUS IEC 60332-3-22 CAT A AAAAA* MO/YR** XXXXXXX***

      *Order Number **Date ***Footage Markings every 2 ft
11. **Cable Weight:**
    - 150 lbs/kft nom.

Features:

- Mechanically enhanced construction renders the cable suitable for installation in cable tray as an interconnect cable
- Suitable for installation in vessels' quarters area



Compliances:

- Flammability: IEC 60332-3-22 Category A
- Smoke: IEC 61034-1 & -2, MIL-DTL-24643B and NES 711
- Halogen Content: IEC 60754-1 & -2
- Toxicity: MIL-DTL-24643B and NES 713
- Acidity: IEC 60754-1 & -2 and MIL-DTL-24643B
- Armor: IEEE 1580 and IEC 60092-350

Third-Party Testing:

ETL has tested and confirmed that this product complies with the above specifications (report number 3116259CRT-006)

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Offshore and Onshore RIG Cables

COMMODORE® Copper Communication Cables

Low-Smoke, Zero-Halogen 150 Ω Profibus Cable One Pair, Overall Shielded Armored & Sheathed

ABS Type Approved, ETL Confirmed

Electrical Characteristics

Conductor DCR: 16.5 Ω/kft nom.
Capacitance: 8.8 pF/ft nom.
Impedance: 150 ± 15 Ω
Temperature & Voltage Ratings: -30°C to +75°C/300 V Max.
Velocity of Propagation: 78% nom.
Attenuation (Nom.):

FREQ. (MHz)	dB/100 FT
0.2	0.27
4.0	0.67
16.0	1.37
100.0	3.75
300.0	6.52

Catalog number: EO22P0011203

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Offshore and Onshore RIG Cables

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Offshore and Onshore RIG Cables

COMMODORE® Lite™ Fiber Optic Communication Cables

Low-Smoke, Zero-Halogen Lite-Duty Breakout Cable Unarmored, Thermoplastic, 2-24 Fibers

ABS Type Approval (RQS)

Product Construction:

1. **Central Strength Member:**
   - Epoxy glass rod
2. **Optical Fiber Cable Component (OFCC):**
   Fiber:
   - 2-24 fibers (see Fiber Selection Guide on page 107)
   - Color Code: White–numbered "1-ONE," "2-TWO," "3-THREE," etc.
   - Buffer: polyester elastomer 900µm ± 50µm

   Strength Member:
   - Aramid yarn longitudinally applied

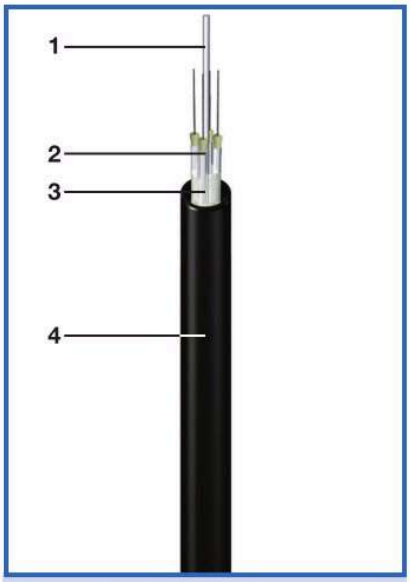
   Jacket:
   - Low-Smoke thermoplastic Polyolefin: .078" (2.0 mm) nom. diameter
3. **Binder Tape:**
   - Mylar tape
4. **Outer Sheath:**
   - Low-Smoke, Zero-Halogen (LSZH), low-toxicity, thermoplastic Polyolefin – Black

Applications:

- Offshore platforms, ships, mobile oil rigs, FPSOs, land rigs, onshore drilling

Features:

- Breakout-style cable
- Temperature: -40°C to +70°C
- Gigabit Ethernet compliant
- LSZH, thermoplastic, UV-resistant sheath to insure overall maximum flexibility, oil and chemical resistance
- Standards-compliant, cost-effective solution



Compliances:

Fiber:
- ANSI/TIA/EIA 568 B.3
- GR-409
- Temp. Cycling…FOTP-3
- Low and High Temp. Bend…FOTP-31
- Cable External Freezing…FOTP-98
- Cyclic Flexing…FOTP-104
- Compressive Loading…FOTP-41
- Cable Twist…FOTP-85

Flame/Safety Test:
- Flame…OFNR, UL 1666, IEEE 383 Pending
- Halogen Content…IEC 60754-1 & -2
- Smoke Density…IEC 61034-1 & -2
- Acidity…IEC 60754-2

Third-Party Testing:
- MET Labs has tested and confirmed that this product complies with the mechanical test in the above specification (report number F026746-GEN rev1)
- ETL has tested and confirmed that this product complies with the flame test in the above specification (report number 3174223CRT-001)

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Offshore and Onshore RIG Cables

COMMODORE® Lite™ Fiber Optic Communication Cables

Low-Smoke, Zero-Halogen Lite-Duty Breakout Cable Unarmored, Thermoplastic, 2-24 Fibers

ABS Type Approval (RQS)

CATALOG NUMBER*	FIBER COUNT	NOM. OUTER SHEATH DIAMETER		NOM. OUTER SHEATH THICKNESS		MAXIMUM WEIGHT		MINIMUM BEND RADIUS		MAXIMUM TENSILE LOAD	
		INCHES	mm	INCHES	mm	LBS/ 1000 FT	kg/km	INSTALLATION INCHES/cm	IN-SERVICE INCHES/cm	INSTALLATION LBS/N	IN-SERVICE LBS/N
XX0021C1Z-TPL	2	0.284	7.20	0.045	1.14	36	54	4.3/10.8	2.8/7.2	200/600	50/225
XX0041C1Z-TPL	4	0.284	7.20	0.045	1.14	36	54	4.3/10.8	2.8/7.2	200/600	50/225
XX0061C1Z-TPL	6	0.330	8.30	0.045	1.14	61	91	5.0/12.5	3.3/8.3	200/600	50/225
XX0081C1Z-TPL	8	0.379	9.60	0.045	1.14	69	102	5.7/14.4	3.8/9.6	200/600	50/225
XX0101C1Z-TPL	10	0.428	10.90	0.045	1.14	90	134	6.4/16.4	4.3/10.9	600/2700	150/675
XX0121C1Z-TPL	12	0.478	12.10	0.045	1.14	105	156	7.2/18.2	4.8/12.1	600/2700	150/675
XX0181C1Z-TPL	18	0.501	12.70	0.050	1.27	120	178	7.5/19.1	5.0/12.7	600/2700	150/675
XX0241C1Z-TPL	24	0.571	14.50	0.050	1.27	138	205	8.6/21.8	5.7/14.5	600/2700	150/675

* XX denotes fiber type. See Fiber Selection Guide.

Fiber Selection Guide

FIBER TYPE	AP FIBER TYPE SINGLEMODE	CG FIBER TYPE MULTIMODE 62.5/125	BI FIBER TYPE MULTIMODE 50/125
FIBER CHARACTERISTICS			
Type	Matched Clad	Graded Index	Graded Index
Mode Field Diameter	9.2 ± .4 @ 1310nm	N/A	N/A
Core Diameter	8.3µm nominal	62.5 ± 3µm	50.0 ± 2.5µm
Cladding Diameter	125 ± .7µm	125 ± 2µm	125 ± 2µm
Coating Diameter	242 ± 5µm	242 ± 5µm	242 ± 5µm
Core Non-Circularity	N/A	≤5%	≤5%
Coating Cladding Conc.	<12µm	<12µm	<12µm
Cladding Non-Circularity	≤0.7%	≤1.0%	≤1.0%
Core-Clad Concentricity	≤0.5µm	≤1.5µm	≤1.5µm
ATTENUATION dB/km Max			
850nm	N/A	3.50	3.00
1300nm	N/A	1.00	1.00
1310nm	1.00	N/A	N/A
1550nm	1.00	N/A	N/A
BANDWIDTH MHz • km			
850nm	N/A	220	700
1300nm	N/A	500	500
Dispersion	≤18.0 ps/nm – km @ 1550	N/A	N/A
Proof Test	> or = 100 kpsi	> or = 100 kpsi	> or = 100 kpsi

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Offshore and Onshore RIG Cables

COMMODORE® Lite™ Fiber Optic Communication Cables

Low-Smoke, Zero-Halogen Lite-Duty Breakout Cable Armored & Sheathed, Thermoplastic, 2-24 Fibers

ABS Type Approval (RQS)

Product Construction:

1. **Central Strength Member:**
   - Epoxy glass rod
2. **Optical Fiber Cable Component (OFCC):**
   Fiber:
   - 2-24 fibers (see Fiber Selection Guide)
   - Color Code: White–numbered "1-ONE," "2-TWO," "3-THREE," etc.
   - Buffer: polyester elastomer 900µm ± 50µm

   Strength Member:
   - Aramid yarn longitudinally applied

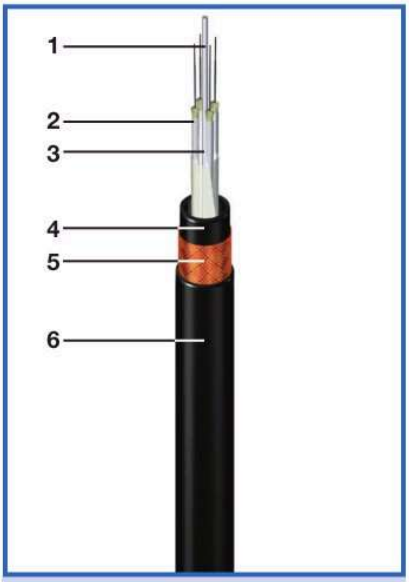
   Jacket:
   - Low-Smoke thermoplastic Polyolefin: .078" (2.0 mm) nom. diameter
3. **Binder Tape:**
   - Mylar tape
4. **Inner Sheath:**
   - Low-Smoke, Zero-Halogen (LSZH), low-toxicity, thermoplastic Polyolefin – Black
5. **Bronze Armor:**
   - Bronze braid, 88% minimum coverage
6. **Outer Sheath:**
   - Low-Smoke, Zero-Halogen (LSZH), low-toxicity, thermoplastic Polyolefin – Black

Applications:

- Offshore platforms, ships, mobile oil rigs, FPSOs, land rigs, onshore drilling

Features:

- Breakout-style cable
- Temperature: -40°C to +70°C
- Gigabit Ethernet compliant
- Braided bronze armor for increased mechanical protection
- LSZH, thermoplastic, UV-resistant sheath to insure overall maximum flexibility, oil and chemical resistance
- Mechanically enhanced construction renders the cable suitable for installation in cable tray as an interconnect cable
- Suitable for installation in vessels' quarters area
- Standards-compliant, cost-effective solution



Compliances:

Fiber:
- ANSI/TIA/EIA 568 B.3
- GR-409
- Temp. Cycling…FOTP-3
- Low and High Temp. Bend…FOTP-31
- Cable External Freezing…FOTP-98
- Cyclic Flexing…FOTP-104
- Compressive Loading…FOTP-41
- Cable Twist…FOTP-85

Flame/Safety Test:
- Flame…OFCR, UL 1666, IEEE 383 Pending
- Halogen Content…IEC 60754-1 & -2
- Smoke Density…IEC 61034-1 & -2
- Acidity…IEC 60754-2

Third-Party Testing:
- MET Labs has tested and confirmed that this product complies with the mechanical test in the above specification (report number F026746-GEN rev1)
- ETL has tested and confirmed that this product complies with the flame test in the above specification (report number 3174223CRT-001)

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Offshore and Onshore RIG Cables

COMMODORE® Lite™ Fiber Optic Communication Cables

Low-Smoke, Zero-Halogen Lite-Duty Breakout Cable Armored & Sheathed, Thermoplastic, 2-24 Fibers

ABS Type Approval (RQS)

CATALOG NUMBER*	FIBER COUNT	NOM. OUTER SHEATH DIAMETER		NOM. OUTER SHEATH THICKNESS		MAXIMUM WEIGHT		MINIMUM BEND RADIUS		MAXIMUM TENSILE LOAD	
		INCHES	mm	INCHES	mm	LBS/ 1000 FT	kg/km	INSTALLATION INCHES/cm	IN-SERVICE INCHES/cm	INSTALLATION LBS/N	IN-SERVICE LBS/N
XX0021C1Z-ATPL	2	0.434	11.00	0.045	1.14	137	204	6.5/16.5	4.3/11.0	200/600	50/225
XX0041C1Z-ATPL	4	0.434	11.00	0.045	1.14	137	204	6.5/16.5	4.3/11.0	200/600	50/225
XX0061C1Z-ATPL	6	0.480	12.20	0.045	1.14	190	282	7.2/18.3	4.8/12.2	200/600	50/225
XX0081C1Z-ATPL	8	0.529	13.40	0.045	1.14	214	318	7.9/20.1	5.3/13.4	200/600	50/225
XX0101C1Z-ATPL	10	0.578	14.70	0.045	1.14	250	372	8.7/22.1	5.8/14.7	600/2700	150/675
XX0121C1Z-ATPL	12	0.628	15.90	0.045	1.14	279	416	9.4/23.9	6.3/15.9	600/2700	150/675
XX0181C1Z-ATPL	18	0.661	16.80	0.050	1.27	309	460	9.9/25.2	6.6/16.8	600/2700	150/675
XX0241C1Z-ATPL	24	0.731	18.60	0.050	1.27	341	507	11.0/27.9	7.3/18.6	600/2700	150/675

* XX denotes fiber type. See Fiber Selection Guide.

Fiber Selection Guide

FIBER TYPE	AP FIBER TYPE SINGLEMODE	CG FIBER TYPE MULTIMODE 62.5/125	BI FIBER TYPE MULTIMODE 50/125
FIBER CHARACTERISTICS			
Type	Matched Clad	Graded Index	Graded Index
Mode Field Diameter	9.2 ± .4 @ 1310nm	N/A	N/A
Core Diameter	8.3µm nominal	62.5 ± 3µm	50.0 ± 2.5µm
Cladding Diameter	125 ± .7µm	125 ± 2µm	125 ± 2µm
Coating Diameter	242 ± 5µm	242 ± 5µm	242 ± 5µm
Core Non-Circularity	N/A	≤5%	≤5%
Coating Cladding Conc.	<12µm	<12µm	<12µm
Cladding Non-Circularity	≤0.7%	≤1.0%	≤1.0%
Core-Clad Concentricity	≤0.5µm	≤1.5µm	≤1.5µm
ATTENUATION dB/km Max			
850nm	N/A	3.50	3.00
1300nm	N/A	1.00	1.00
1310nm	1.00	N/A	N/A
1550nm	1.00	N/A	N/A
BANDWIDTH MHz • km			
850nm	N/A	220	700
1300nm	N/A	500	500
Dispersion	≤18.0 ps/nm – km @ 1550	N/A	N/A
Proof Test	> or = 100 kpsi	> or = 100 kpsi	> or = 100 kpsi

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Offshore and Onshore RIG Cables

COMMODORE® Lite™ Fiber Optic Communication Cables

Low-Smoke, Zero-Halogen Lite-Duty Loose Tube Cable Unarmored, Thermoplastic, 2-48 Fibers

ABS Type Approval (RQS)

Product Construction:

1. **Central Strength Member:**
   - Epoxy glass rod
2. **Loose Tube Dry Filled:**
   Fiber:
   - 2-48 fibers (see Fiber Selection Guide)
   - Color Code: TIA/EIA 598

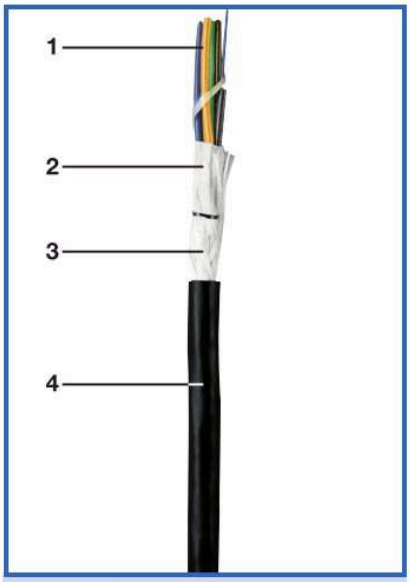
   Jacket:
   - Low-Smoke thermoplastic Polymer
3. **Binder Tape:**
   - Water-swellable tape
4. **Outer Sheath:**
   - Low-Smoke, Zero-Halogen (LSZH), low-toxicity, thermoplastic Polyolefin – Black

Applications:

- Offshore platforms, ships, mobile oil rigs, FPSOs, land rigs, onshore drilling

Features:

- Loose tube cable
- Temperature: -40°C to +70°C
- Gigabit Ethernet compliant
- LSZH, thermoplastic, UV-resistant sheath to insure overall maximum flexibility, oil and chemical resistance
- Standards-compliant, cost-effective solution



Compliances:

Fiber:

- ANSI/TIA/EIA 568 B.3
- ICEA S-104-691
- Temp. Cycling…FOTP-3
- Low and High Temp. Bend…FOTP-31
- Cable External Freezing…FOTP-98
- Cyclic Flexing…FOTP-104
- Compressive Loading…FOTP-41
- Cable Twist…FOTP-85

Flame/Safety Test:

- Flame…OFNR, UL 1666, IEEE 383 Pending

Third-Party Testing:

- ETL has tested and confirmed that this product complies with the flame test in the above specification (report number 3174223CRT-001)

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Offshore and Onshore RIG Cables

COMMODORE® Lite™ Fiber Optic Communication Cables

Low-Smoke, Zero-Halogen Lite-Duty Loose Tube Cable Unarmored, Thermoplastic, 2-48 Fibers

ABS Type Approval (RQS)

CATALOG NUMBER*	FIBER COUNT	NOM. OUTER SHEATH DIAMETER		NOM. OUTER SHEATH THICKNESS		MAXIMUM WEIGHT		MINIMUM BEND RADIUS		MAXIMUM TENSILE LOAD	
		INCHES	mm	INCHES	mm	LBS/ 1000 FT	kg/km	INSTALLATION INCHES/cm	IN-SERVICE INCHES/cm	INSTALLATION LBS/N	IN-SERVICE LBS/N
XX0024M1Z-TPL	2	0.360	9	0.060	1.52	59	89	7.2/18.2	3.6/9.4	600/2670	200/890
XX0044M1Z-TPL	4	0.360	9	0.060	1.52	59	89	7.2/18.2	3.6/9.4	600/2670	200/890
XX0064M1Z-TPL	6	0.360	9	0.060	1.52	59	89	7.2/18.2	3.6/9.4	600/2670	200/890
XX0084M1Z-TPL	8	0.360	9	0.060	1.52	59	89	7.2/18.2	3.6/9.4	600/2670	200/890
XX0104M1Z-TPL	10	0.360	9	0.060	1.52	59	89	7.2/18.2	3.6/9.4	600/2670	200/890
XX0124M1Z-TPL	12	0.360	9	0.060	1.52	59	89	7.2/18.2	3.6/9.4	600/2670	200/890
XX0184M1Z-TPL	18	0.360	9	0.060	1.52	59	89	7.2/18.2	3.6/9.4	600/2670	200/890
XX0244M1Z-TPL	24	0.360	9	0.060	1.52	59	89	7.2/18.2	3.6/9.4	600/2670	200/890
XX0364M1Z-TPL	36	0.380	10	0.060	1.52	66	98	7.6/19.3	3.8/9.7	600/2670	200/890
XX0484M1Z-TPL	48	0.410	10	0.060	1.52	74	110	8.2/20.8	4.1/10.4	600/2670	200/890

* XX denotes fiber type. See Fiber Selection Guide.

Fiber Selection Guide

FIBER TYPE	AQ FIBER TYPE SINGLEMODE	CG FIBER TYPE MULTIMODE 62.5/125	BI FIBER TYPE MULTIMODE 50/125
FIBER CHARACTERISTICS			
Type	Matched Clad	Graded Index	Graded Index
Mode Field Diameter	9.2 ± .4 @ 1310nm	N/A	N/A
Core Diameter	8.3µm nominal	62.5 ± 3µm	50.0 ± 2.5µm
Cladding Diameter	125 ± .7µm	125 ± 2µm	125 ± 2µm
Coating Diameter	242 ± 5µm	242 ± 5µm	242 ± 5µm
Core Non-Circularity	N/A	≤5%	≤5%
Coating Cladding Conc.	<12µm	<12µm	<12µm
Cladding Non-Circularity	≤0.7%	≤1.0%	≤1.0%
Core-Clad Concentricity	≤0.5µm	≤1.5µm	≤1.5µm
ATTENUATION dB/km Max			
850nm	N/A	3.50	3.00
1300nm	N/A	1.00	1.00
1310nm	0.40	N/A	N/A
1550nm	0.30	N/A	N/A
BANDWIDTH MHz • km			
850nm	N/A	220	700
1300nm	N/A	500	500
Dispersion	≤18.0 ps/nm – km @ 1550	N/A	N/A
Proof Test	> or = 100 kpsi	> or = 100 kpsi	> or = 100 kpsi

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COMMODORE® Lite™ Fiber Optic Communication Cables

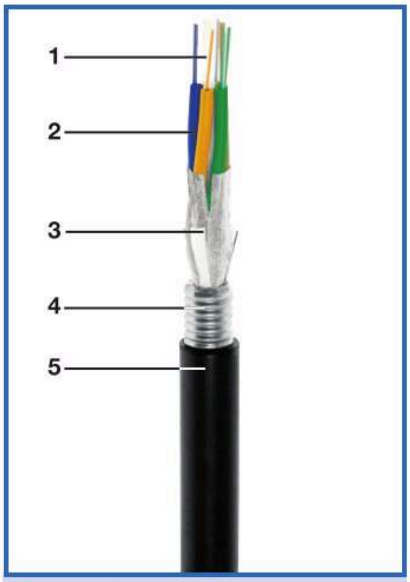
Low-Smoke, Zero-Halogen Lite-Duty Loose Tube Cable Armored & Sheathed, Thermoplastic, 2-48 Fibers

ABS Type Approval (RQS)

Product Construction:

1. **Central Strength Member:**
   - Epoxy glass rod
2. **Loose Tube Dry Filled:**
   Fiber:
   - 2-48 fibers (see Fiber Selection Guide)
   - Color Code: TIA/EIA 598

   Jacket:
   - Low-Smoke thermoplastic Polymer
3. **Binder Tape:**
   - Water-swellable tape
4. **Steel Armor:**
   - 0.006" corrugated steel tape
5. **Outer Sheath:**
   - Low-Smoke, Zero-Halogen (LSZH), low-toxicity, thermoplastic Polyolefin – Black



Applications:

- Offshore platforms, ships, mobile oil rigs, FPSOs, land rigs, onshore drilling

Features:

- Loose tube cable
- Temperature: -40°C to +70°C
- Gigabit Ethernet compliant
- Steel armor for increased mechanical protection
- LSZH, thermoplastic, UV-resistant sheath to insure overall maximum flexibility, oil and chemical resistance
- Mechanically enhanced construction renders the cable suitable for installation in cable tray as an interconnect cable
- Suitable for installation in vessels' quarters area
- Standards-compliant, cost-effective solution

Compliances:

Fiber:

- ANSI/TIA/EIA 568 B.3
- ICEA S-104-696
- Temp. Cycling…FOTP-3
- Low and High Temp. Bend…FOTP-31
- Cable External Freezing…FOTP-98
- Cyclic Flexing…FOTP-104
- Compressive Loading…FOTP-41
- Cable Twist…FOTP-85

Flame/Safety Test:

- Flame…OFNR, UL 1666, IEEE 383 Pending

Third-Party Testing:

- ETL has tested and confirmed that this product complies with the flame test in the above specification (report number 3174223CRT-001)

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COMMODORE® Lite™ Fiber Optic Communication Cables

Low-Smoke, Zero-Halogen Lite-Duty Loose Tube Cable Armored & Sheathed, Thermoplastic, 2-48 Fibers

ABS Type Approval (RQS)

CATALOG NUMBER*	FIBER COUNT	NOM. OUTER SHEATH DIAMETER		NOM. OUTER SHEATH THICKNESS		MAXIMUM WEIGHT		MINIMUM BEND RADIUS		MAXIMUM TENSILE LOAD	
		INCHES	mm	INCHES	mm	LBS/ 1000 FT	kg/km	INSTALLATION INCHES/cm	IN-SERVICE INCHES/cm	INSTALLATION LBS/N	IN-SERVICE LBS/N
XX0024M1Z-ATPL	2	0.450	11.00	0.060	1.52	102	152	9.0/22.0	4.5/11.0	600/2700	150/675
XX0044M1Z-ATPL	4	0.450	11.00	0.060	1.52	102	152	9.0/22.0	4.5/11.0	600/2700	150/675
XX0064M1Z-ATPL	6	0.450	11.00	0.060	1.52	102	152	9.0/22.0	4.5/11.0	600/2700	150/675
XX0084M1Z-ATPL	8	0.450	11.00	0.060	1.52	102	152	9.0/22.0	4.5/11.0	600/2700	150/675
XX0104M1Z-ATPL	10	0.450	11.00	0.060	1.52	102	152	9.0/22.0	4.5/11.0	600/2700	150/675
XX0124M1Z-ATPL	12	0.450	11.00	0.060	1.52	102	152	9.0/22.0	4.5/11.0	600/2700	150/675
XX0184M1Z-ATPL	18	0.450	11.00	0.060	1.52	102	152	9.0/22.0	4.5/11.0	600/2700	150/675
XX0244M1Z-ATPL	24	0.450	11.00	0.060	1.52	102	152	9.0/22.0	4.5/11.0	600/2700	150/675
XX0364M1Z-ATPL	36	0.470	12.00	0.060	1.52	115	171	9.0/24.0	4.7/12.0	600/2700	150/675
XX0484M1Z-ATPL	48	0.540	13.00	0.060	1.52	120	179	11.0/26.0	5.4/13.0	600/2700	150/675

* XX denotes fiber type. See Fiber Selection Guide.

Fiber Selection Guide

FIBER TYPE	AQ FIBER TYPE SINGLEMODE	CG FIBER TYPE MULTIMODE 62.5/125	BI FIBER TYPE MULTIMODE 50/125
FIBER CHARACTERISTICS			
Type	Matched Clad	Graded Index	Graded Index
Mode Field Diameter	9.2 ± .4 @ 1310nm	N/A	N/A
Core Diameter	8.3µm nominal	62.5 ± 3µm	50.0 ± 2.5µm
Cladding Diameter	125 ± .7µm	125 ± 2µm	125 ± 2µm
Coating Diameter	242 ± 5µm	242 ± 5µm	242 ± 5µm
Core Non-Circularity	N/A	≤5%	≤5%
Coating Cladding Conc.	<12µm	<12µm	<12µm
Cladding Non-Circularity	≤0.7%	≤1.0%	≤1.0%
Core-Clad Concentricity	≤0.5µm	≤1.5µm	≤1.5µm
ATTENUATION dB/km Max			
850nm	N/A	3.50	3.00
1300nm	N/A	1.00	1.00
1310nm	0.40	N/A	N/A
1550nm	0.30	N/A	N/A
BANDWIDTH MHz • km			
850nm	N/A	220	700
1300nm	N/A	500	500
Dispersion	≤18.0 ps/nm – km @ 1550	N/A	N/A
Proof Test	> or = 100 kpsi	> or = 100 kpsi	> or = 100 kpsi

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COMMODORE® Fiber Optic Communication Cables

Low-Smoke, Zero-Halogen Heavy-Duty Breakout Cable Unarmored, Thermoplastic, 2-48 Fibers

ABS Type Approval (RQS)

Product Construction:

1. **Central Strength Member:**
   - Epoxy glass rod
2. **Optical Fiber Cable Component (OFCC):**
   Fiber:
   - 2-48 fibers (see Fiber Selection Guide on page 115)
   - Color Code: White–numbered "1-ONE," "2-TWO," "3-THREE," etc.
   - Buffer: polyester elastomer 900µm ± 50µm

   Strength Member:
   - Aramid yarn longitudinally applied

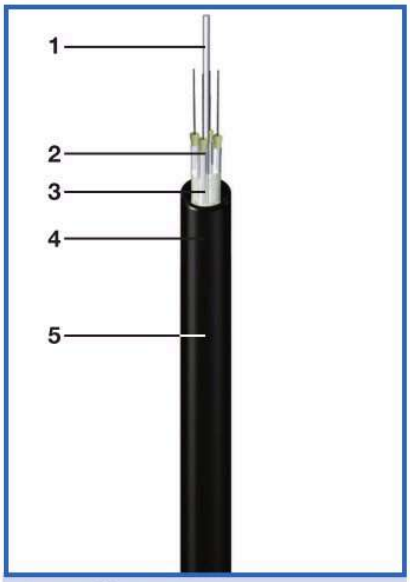
   Jacket:
   - Low-Smoke thermoplastic Polyolefin: .078" (2.0 mm) nom. diameter
3. **Binder Tape:**
   - Helically applied water-swellable SAP
4. **Aramid Yarn:**
   - Contra-helically applied and wrapped with .001" polyester binder tape
5. **Outer Sheath:**
   - Low-Smoke, Zero-Halogen (LSZH), low-toxicity, thermoplastic Polyolefin – Black

Applications:

- On offshore platforms, ships, mobile oil rigs, FPSOs, land rigs, onshore drilling

Features:

- Breakout style cable
- Temperature: -40°C to +70°C
- Gigabit Ethernet compliant
- LSZH thermoplastic UV-resistant sheath to insure overall maximum flexibility, oil and chemical resistance



Compliances:

Fiber:

- Temp. Cycling..... IEC 60794-1-2-F1
- Tensile Strength ....IEC 60794-1-2-E1A
- Crush..... IEC 60794-1-2-E3
- Impact..... IEC 60794-1-2-E4
- Repeated Bending... IEC 60794-1-2-E6
- Torsion..... IEC 60794-1-2-E7
- Kink..... IEC 60794-1-2-E10
- Cable Bend ..... IEC 60794-1-2-E11
- Cold Bend..... IEC 60794-1-2-E11

Flame/Safety Test:

- Flame ..... IEC 60332-3-22 Cat. A
- Halogen Content.....IEC 60754-1 & -2
- Smoke Density.....IEC 61034-1 & -2
- Acidity.....IEC 60754-2

Third-Party Testing:

ETL has tested and confirmed that this product complies with the above specifications (report number 3118124CRT-001)

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COMMODORE® Fiber Optic Communication Cables

Low-Smoke, Zero-Halogen Heavy-Duty Breakout Cable Unarmored, Thermoplastic, 2-48 Fibers

ABS Type Approval (RQS)

CATALOG NUMBER*	FIBER COUNT	NOM. OUTER SHEATH DIAMETER		NOM. OUTER SHEATH THICKNESS		MAXIMUM WEIGHT		MINIMUM BEND RADIUS		MAXIMUM TENSILE LOAD	
		INCHES	mm	INCHES	mm	LBS/ 1000 FT	kg/km	INSTALLATION INCHES/cm	IN-SERVICE INCHES/cm	INSTALLATION LBS/N	IN-SERVICE LBS/N
XX0021C1Z-TP	2	0.300	7.62	0.050	1.270	41	61	4.8/12.2	2.4/6.1	200/900	50/225
XX0041C1Z-TP	4	0.300	7.62	0.050	1.270	44	66	4.8/12.2	2.4/6.1	200/900	50/225
XX0061C1Z-TP	6	0.355	9.02	0.050	1.270	59	88	5.7/14.4	2.8/7.2	200/900	50/225
XX0081C1Z-TP	8	0.405	10.28	0.050	1.270	85	127	6.5/16.5	3.2/8.2	600/2700	150/675
XX0101C1Z-TP	10	0.435	11.05	0.050	1.270	100	148	7.0/17.7	3.5/8.8	600/2700	150/675
XX0121C1Z-TP	12	0.445	11.30	0.060	1.520	102	152	7.2/18.1	3.6/9.0	600/2700	150/675
XX0161C1Z-TP	16	0.515	13.60	0.060	1.520	115	171	8.2/20.9	4.1/10.5	600/2700	150/675
XX0181C1Z-TP	18	0.540	13.72	0.060	1.520	119	177	8.6/21.9	4.3/11.0	600/2700	150/675
XX0241C1Z-TP	24	0.620	15.75	0.060	1.520	150	284	9.9/25.2	5.0/12.6	600/2700	150/675
XX0361C1Z-TP	36	0.708	17.98	0.060	1.520	200	298	11.3/28.8	5.7/14.4	600/2700	150/675
XX0481C1Z-TP	48	0.809	20.55	0.060	1.520	260	387	12.9/32.9	6.5/16.4	600/2700	150/675

* XX Denotes fiber type. See Fiber Selection Guide.

Fiber Selection Guide

FIBER TYPE	AP FIBER TYPE SINGLEMODE	CG FIBER TYPE MULTIMODE 62.5/125	BI FIBER TYPE MULTIMODE 50/125
FIBER CHARACTERISTICS			
Type	Matched Clad	Graded Index	Graded Index
Mode Field Diameter	9.2 ± .4 @ 1310nm	N/A	N/A
Core Diameter	8.3µm nominal	62.5 ± 3µm	50.0 ± 2.5µm
Cladding Diameter	125 ± .7µm	125 ± 2µm	125 ± 2µm
Coating Diameter	242 ± 5µm	242 ± 5µm	242 ± 5µm
Core Non-circularity	N/A	≤5%	≤5%
Coating Cladding Conc.	<12µm	<12µm	<12µm
Cladding Non-circularity	≤0.7%	≤1.0%	≤1.0%
Core-clad Concentricity	≤0.5µm	≤1.5µm	≤1.5µm
ATTENUATION dB/km Max			
850nm	N/A	3.50	3.00
1300nm	N/A	1.00	1.00
1310nm	1.00	N/A	N/A
1550nm	1.00	N/A	N/A
BANDWIDTH MHz • km			
850nm	N/A	220	700
1300nm	N/A	500	500
Dispersion	≤18.0 ps/nm – km @ 1550	N/A	N/A
Proof Test	> or = 100 kpsi	> or = 100 kpsi	> or = 100 kpsi

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COMMODORE® Fiber Optic Communication Cables

Low-Smoke, Zero-Halogen Heavy-Duty Breakout Cable Armored & Sheathed, Thermoplastic, 2-48 Fibers

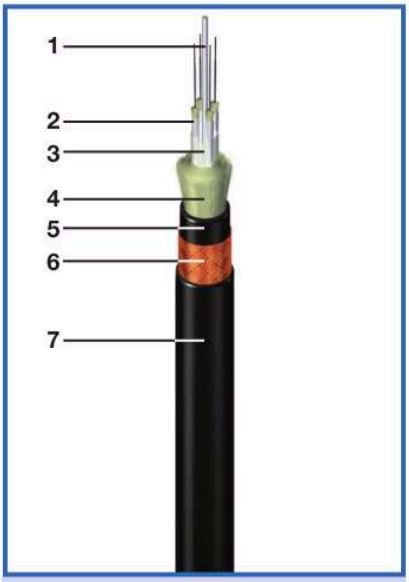
ABS Type Approval (RQS)

Product Construction:

1. **Central Strength Member:**
   - Epoxy glass rod
2. **Optical Fiber Cable Component (OFCC):**
   Fiber:
   - 2-48 fibers (see Fiber Selection Guide)
   - Color Code: White–numbered "1-ONE," "2-TWO," "3-THREE," etc.
   - Buffer: polyester elastomer 900µm ± 50µm

   Strength Member:
   - Aramid yarn longitudinally applied

   Jacket:
   - Low-Smoke thermoplastic Polyolefin: .078" (2.0 mm) nom. diameter
3. **Binder Tape:**
   - Helically applied water-swellable SAP
4. **Aramid Yarn:**
   - Contra-helically applied and wrapped with .001" polyester binder tape
5. **Inner Sheath:**
   - Low-Smoke, Zero-Halogen (LSZH), low-toxicity, thermoplastic Polyolefin – Black or White
6. **Bronze Armor:**
   - Bronze braid, 88% minimum coverage
7. **Outer Sheath:**
   - Low-Smoke, Zero-Halogen (LSZH), low-toxicity, thermoplastic Polyolefin – Black



Applications:

- On offshore platforms, ships, mobile oil rigs, FPSOs, land rigs, onshore drilling

Features:

- Breakout style cable
- Temperature: -40°C to +70°C
- Gigabit Ethernet compliant
- Braided bronze armor for increased mechanical protection
- LSZH thermoplastic UV-resistant sheath to insure overall maximum flexibility, oil and chemical resistance
- Mechanically enhanced construction renders the cable suitable for installation in cable tray as an interconnect cable
- Suitable for installation in vessels' quarters area

Compliances:

Fiber:

- Temp. Cycling..... IEC 60794-1-2-F1
- Tensile Strength ....IEC 60794-1-2-E1A
- Crush..... IEC 60794-1-2-E3
- Impact ..... IEC 60794-1-2-E4
- Repeated Bending ... IEC 60794-1-2-E6
- Torsion..... IEC 60794-1-2-E7
- Kink ..... IEC 60794-1-2-E10
- Cable Bend ..... IEC 60794-1-2-E11
- Cold Bend..... IEC 60794-1-2-E11

Flame/Safety Test:

- Flame ..... IEC 60332-3-22 Cat. A
- Halogen Content.....IEC 60754-1 & -2
- Smoke Density.....IEC 61034-1 & -2
- Acidity.....IEC 60754-2

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COMMODORE® Fiber Optic Communication Cables

Low-Smoke, Zero-Halogen Heavy-Duty Breakout Cable Armored & Sheathed, Thermoplastic, 2-48 Fibers

ABS Type Approval (RQS)

CATALOG NUMBER*	FIBER COUNT	NOM. INNER SHEATH DIAMETER		NOM. OUTER SHEATH DIAMETER		MAXIMUM WEIGHT		MINIMUM BEND RADIUS		MAXIMUM TENSILE LOAD	
		INCHES	mm	INCHES	mm	LBS/ 1000 FT	kg/km	INSTALLATION INCHES/cm	IN-SERVICE INCHES/cm	INSTALLATION LBS/N	IN-SERVICE LBS/N
XX0021C1Z-ATP	2	0.320	8.13	0.490	12.45	172	256	7.3/18.5	3.6/9.2	200/900	50/225
XX0041C1Z-ATP	4	0.320	8.13	0.490	12.45	172	256	7.3/18.5	3.6/9.2	200/900	50/225
XX0061C1Z-ATP	6	0.355	9.02	0.510	12.95	197	293	8.2/20.7	4.1/10.4	200/900	50/225
XX0081C1Z-ATP	8	0.405	10.29	0.560	14.22	228	340	9.0/22.8	4.5/11.4	600/2700	150/675
XX0101C1Z-ATP	10	0.435	11.05	0.590	15.00	246	366	9.4/24.0	4.7/12.0	600/2700	150/675
XX0121C1Z-ATP	12	0.445	11.30	0.620	15.75	264	393	9.9/25.2	5.0/12.7	600/2700	150/675
XX0161C1Z-ATP	16	0.515	13.08	0.690	17.53	292	435	11.0/28.0	5.5/14.0	600/2700	150/675
XX0181C1Z-ATP	18	0.540	13.72	0.715	18.16	302	449	11.4/29.1	5.7/14.5	600/2700	150/675
XX0241C1Z-ATP	24	0.620	15.75	0.795	20.20	390	580	12.7/32.3	6.4/16.3	600/2700	150/675
XX0361C1Z-ATP	36	0.708	17.98	0.923	23.44	397	591	14.8/37.5	7.4/18.8	600/2700	150/675
XX0481C1Z-ATP	48	0.809	20.55	1.024	26.01	516	768	16.4/41.6	8.2/20.8	600/2700	150/675

* XX Denotes fiber type. See Fiber Selection Guide.

Fiber Selection Guide

FIBER TYPE	AP FIBER TYPE SINGLEMODE	CG FIBER TYPE MULTIMODE 62.5/125	BI FIBER TYPE MULTIMODE 50/125
FIBER CHARACTERISTICS			
Type	Matched Clad	Graded Index	Graded Index
Mode Field Diameter	9.2 ± .4 @ 1310nm	N/A	N/A
Core Diameter	8.3µm nominal	62.5 ± 3µm	50.0 ± 2.5µm
Cladding Diameter	125 ± .7µm	125 ± 2µm	125 ± 2µm
Coating Diameter	242 ± 5µm	242 ± 5µm	242 ± 5µm
Core Non-circularity	N/A	≤5%	≤5%
Coating Cladding Conc.	<12µm	<12µm	<12µm
Cladding Non-circularity	≤0.7%	≤1.0%	≤1.0%
Core-clad Concentricity	≤0.5µm	≤1.5µm	≤1.5µm
ATTENUATION dB/km Max			
850nm	N/A	3.50	3.00
1300nm	N/A	1.00	1.00
1310nm	1.00	N/A	N/A
1550nm	1.00	N/A	N/A
BANDWIDTH MHz • km			
850nm	N/A	220	700
1300nm	N/A	500	500
Dispersion	≤18.0 ps/nm – km @ 1550	N/A	N/A
Proof Test	> or = 100 kpsi	> or = 100 kpsi	> or = 100 kpsi

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Offshore and Onshore RIG Cables

COMMODORE® Fiber Optic Communication Cables

Low-Smoke, Zero-Halogen Heavy-Duty Breakout Cable Unarmored, Thermoset, 2-48 Fibers

ABS Type Approval (RQS)

Product Construction:

1. **Central Strength Member:**
   - Epoxy glass rod
2. **Optical Fiber Cable Component (OFCC):**
   Fiber:
   - 2-48 fibers (see Fiber Selection Guide)
   - Color Code: White–numbered "1-ONE," "2-TWO," "3-THREE," etc.
   - Buffer: polyester elastomer 900µm ± 50µm

   Strength Member:
   - Aramid yarn longitudinally applied

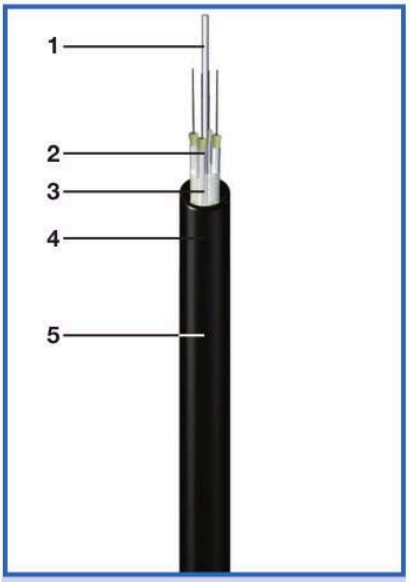
   Jacket:
   - Low-Smoke thermoplastic Polyolefin: .078" (2.0 mm) nom. diameter
3. **Binder Tape:**
   - Helically applied water-swellable SAP
4. **Aramid Yarn:**
   - Contra-helically applied and wrapped with .001" polyester binder tape
5. **Outer Sheath:**
   - Low-Smoke, Zero-Halogen (LSZH), low-toxicity, thermoset Polyolefin – Black

Applications:

- On offshore platforms, ships, mobile oil rigs, FPSOs, land rigs, onshore drilling

Features:

- Breakout style cable
- Temperature: -40°C to +70°C
- Gigabit Ethernet compliant
- LSZH thermoset UV-resistant sheath to insure overall maximum flexibility, oil and chemical resistance



Compliances:

Fiber:

- Temp. Cycling..... IEC 60794-1-2-F1
- Tensile Strength ....IEC 60794-1-2-E1A
- Crush..... IEC 60794-1-2-E3
- Impact..... IEC 60794-1-2-E4
- Repeated Bending... IEC 60794-1-2-E6
- Torsion..... IEC 60794-1-2-E7
- Kink..... IEC 60794-1-2-E10
- Cable Bend ..... IEC 60794-1-2-E11
- Cold Bend..... IEC 60794-1-2-E11

Flame/Safety Test:

- Flame ..... IEC 60332-3-22 Cat. A
- Halogen Content.....IEC 60754-1 & -2
- Smoke Density.....IEC 61034-1 & -2
- Acidity.....IEC 60754-2

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Low-Smoke, Zero-Halogen Heavy-Duty Breakout Cable Unarmored, Thermoset, 2-48 Fibers

ABS Type Approval (RQS)

CATALOG NUMBER*	FIBER COUNT	NOM. OUTER SHEATH DIAMETER		NOM. OUTER SHEATH THICKNESS		MAXIMUM WEIGHT		MINIMUM BEND RADIUS		MAXIMUM TENSILE LOAD	
		INCHES	mm	INCHES	mm	LBS/ 1000 FT	kg/km	INSTALLATION INCHES/cm	IN-SERVICE INCHES/cm	INSTALLATION LBS/N	IN-SERVICE LBS/N
XX0021C1Z-TSET	2	0.300	7.62	0.050	1.270	41	61	4.8/12.2	2.4/6.1	200/900	50/225
XX0041C1Z-TSET	4	0.300	7.62	0.050	1.270	44	66	4.8/12.2	2.4/6.1	200/900	50/225
XX0061C1Z-TSET	6	0.355	9.02	0.050	1.270	59	88	5.7/14.4	2.8/7.2	200/900	50/225
XX0081C1Z-TSET	8	0.405	10.28	0.050	1.270	85	127	6.5/16.5	3.2/8.2	600/2700	150/675
XX0101C1Z-TSET	10	0.435	11.05	0.050	1.270	100	148	7.0/17.7	3.5/8.8	600/2700	150/675
XX0121C1Z-TSET	12	0.445	11.30	0.060	1.520	102	152	7.2/18.1	3.6/9.0	600/2700	150/675
XX0161C1Z-TSET	16	0.515	13.60	0.060	1.520	115	171	8.2/20.9	4.1/10.5	600/2700	150/675
XX0181C1Z-TSET	18	0.540	13.72	0.060	1.520	119	177	8.6/21.9	4.3/11.0	600/2700	150/675
XX0241C1Z-TSET	24	0.620	15.57	0.060	1.520	191	284	9.9/25.2	5.0/12.6	600/2700	150/675
XX0361C1Z-TSET	36	0.708	17.98	0.060	1.520	200	298	11.3/28.8	5.7/14.4	600/2700	150/675
XX0481C1Z-TSET	48	0.809	20.55	0.060	1.520	260	387	12.9/32.9	6.5/16.4	600/2700	150/675

* XX Denotes fiber type. See Fiber Selection Guide.

Fiber Selection Guide

FIBER TYPE	AP FIBER TYPE SINGLEMODE	CG FIBER TYPE MULTIMODE 62.5/125	BI FIBER TYPE MULTIMODE 50/125
FIBER CHARACTERISTICS			
Type	Matched Clad	Graded Index	Graded Index
Mode Field Diameter	9.2 ± .4 @ 1310nm	N/A	N/A
Core Diameter	8.3µm nominal	62.5 ± 3µm	50.0 ± 2.5µm
Cladding Diameter	125 ± .7µm	125 ± 2µm	125 ± 2µm
Coating Diameter	245 ± 5µm	245 ± 5µm	245 ± 5µm
Core Non-circularity	N/A	≤5%	≤5%
Coating Cladding Conc.	<12µm	<12µm	<12µm
Cladding Non-circularity	≤0.7%	≤1.0%	≤1.0%
Core-clad Concentricity	≤0.5µm	≤1.5µm	≤1.5µm
ATTENUATION dB/km Max			
850nm	N/A	4.50	4.50
1300nm	N/A	2.00	2.00
1310nm	2.00	N/A	N/A
1550nm	2.00	N/A	N/A
BANDWIDTH MHz • km			
850nm	N/A	220	700
1300nm	N/A	500	500
Dispersion	≤18.0 ps/nm – km @ 1550	N/A	N/A
Proof Test	> or = 100 kpsi	> or = 100 kpsi	> or = 100 kpsi

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Low-Smoke, Zero-Halogen Heavy-Duty Breakout Cable Armored & Sheathed, Thermoset, 2-48 Fibers

ABS Type Approval (RQS)

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1. **Central Strength Member:**
   - Epoxy glass rod
2. **Optical Fiber Cable Component (OFCC):**
   Fiber:
   - 2-48 fibers (see Fiber Selection Guide)
   - Color Code: White–numbered "1-ONE," "2-TWO," "3-THREE," etc.
   - Buffer: polyester elastomer 900µm ± 50µm

   Strength Member:
   - Aramid yarn longitudinally applied

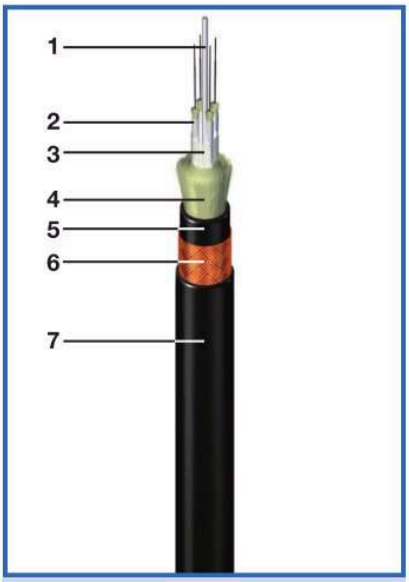
   Jacket:
   - Low-Smoke thermoplastic Polyolefin: .078" (2.0 mm) nom. diameter
3. **Binder Tape:**
   - Helically applied water-swellable SAP
4. **Aramid Yarn:**
   - Contra-helically applied and wrapped with .001" polyester binder tape
5. **Inner Sheath:**
   - Low-Smoke, Zero-Halogen (LSZH), low-toxicity, thermoplastic Polyolefin – Black or White
6. **Bronze Armor:**
   - Bronze braid, 88% minimum coverage
7. **Outer Sheath:**
   - Low-Smoke, Zero-Halogen (LSZH), low-toxicity, thermoset Polyolefin – Black

Applications:

- On offshore platforms, ships, mobile oil rigs, FPSOs, land rigs, onshore drilling

Features:

- Breakout style cable
- Temperature: -40°C to +70°C
- Gigabit Ethernet compliant
- Braided bronze armor for increased mechanical protection
- LSZH thermoset UV-resistant sheath to insure overall maximum flexibility, oil and chemical resistance
- Mechanically enhanced construction renders the cable suitable for installation in cable tray as an interconnect cable
- Suitable for installation in vessels' quarters area



Compliances:

Fiber:

- Temp. Cycling..... IEC 60794-1-2-F1
- Tensile Strength ....IEC 60794-1-2-E1A
- Crush..... IEC 60794-1-2-E3
- Impact ..... IEC 60794-1-2-E4
- Repeated Bending ... IEC 60794-1-2-E6
- Torsion..... IEC 60794-1-2-E7
- Kink ..... IEC 60794-1-2-E10
- Cable Bend ..... IEC 60794-1-2-E11
- Cold Bend..... IEC 60794-1-2-E11

Flame/Safety Test:

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ABS Type Approval (RQS)

CATALOG NUMBER*	FIBER COUNT	NOM. INNER SHEATH DIAMETER		NOM. OUTER SHEATH DIAMETER		MAXIMUM WEIGHT		MINIMUM BEND RADIUS		MAXIMUM TENSILE LOAD	
		INCHES	mm	INCHES	mm	LBS/ 1000 FT	kg/km	INSTALLATION INCHES/cm	IN-SERVICE INCHES/cm	INSTALLATION LBS/N	IN-SERVICE LBS/N
XX0021C1Z-ATSET	2	0.320	8.13	0.490	12.45	172	256	7.3/18.5	3.6/9.2	200/900	50/225
XX0041C1Z-ATSET	4	0.320	8.13	0.490	12.45	172	256	7.3/18.5	3.6/9.2	200/900	50/225
XX0061C1Z-ATSET	6	0.355	9.02	0.510	12.95	197	293	8.2/20.7	4.1/10.4	200/900	50/225
XX0081C1Z-ATSET	8	0.405	10.29	0.560	14.22	228	340	9.0/22.8	4.5/11.4	600/2700	150/675
XX0101C1Z-ATSET	10	0.435	11.05	0.590	15.00	246	366	9.4/24.0	4.7/12.0	600/2700	150/675
XX0121C1Z-ATSET	12	0.445	11.30	0.620	15.75	264	393	9.9/25.2	5.0/12.7	600/2700	150/675
XX0161C1Z-ATSET	16	0.515	13.08	0.690	17.53	292	435	11.0/28.0	5.5/14.0	600/2700	150/675
XX0181C1Z-ATSET	18	0.540	13.72	0.715	18.16	302	449	11.4/29.1	5.7/14.5	600/2700	150/675
XX0241C1Z-ATSET	24	0.620	15.75	0.795	20.20	390	580	12.7/32.3	6.4/16.3	600/2700	150/675
XX0361C1Z-ATSET	36	0.708	17.98	0.923	23.44	397	591	14.8/37.5	7.4/18.8	600/2700	150/675
XX0481C1Z-ATSET	48	0.809	20.55	1.024	26.01	516	768	16.4/41.6	8.2/20.8	600/2700	150/675

* XX Denotes fiber type. See Fiber Selection Guide.

Fiber Selection Guide

FIBER TYPE	AP FIBER TYPE SINGLEMODE	CG FIBER TYPE MULTIMODE 62.5/125	BI FIBER TYPE MULTIMODE 50/125
FIBER CHARACTERISTICS			
Type	Matched Clad	Graded Index	Graded Index
Mode Field Diameter	9.2 ± .4 @ 1310nm	N/A	N/A
Core Diameter	8.3µm nominal	62.5 ± 3µm	50.0 ± 2.5µm
Cladding Diameter	125 ± .7µm	125 ± 2µm	125 ± 2µm
Coating Diameter	245 ± 5µm	245 ± 5µm	245 ± 5µm
Core Non-circularity	N/A	≤5%	≤5%
Coating Cladding Conc.	<12µm	<12µm	<12µm
Cladding Non-circularity	≤0.7%	≤1.0%	≤1.0%
Core-clad Concentricity	≤0.5µm	≤1.5µm	≤1.5µm
ATTENUATION dB/km Max			
850nm	N/A	4.50	4.50
1300nm	N/A	2.00	2.00
1310nm	2.00	N/A	N/A
1550nm	2.00	N/A	N/A
BANDWIDTH MHz • km			
850nm	N/A	220	700
1300nm	N/A	500	500
Dispersion	≤18.0 ps/nm – km @ 1550	N/A	N/A
Proof Test	> or = 100 kpsi	> or = 100 kpsi	> or = 100 kpsi

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Offshore and Onshore RIG Cables

COMMODORE® Fiber Optic Communication Cables

Mud Oil-Resistant Heavy-Duty Breakout Cable Unarmored, 2-48 Fibers

ABS Type Approval (RQS)

Product Construction:

1. **Central Strength Member:**
   - Epoxy glass rod
2. **Optical Fiber Cable Component (OFCC):**
   Fiber:
   - 2-48 fibers (see Fiber Selection Guide)
   - Color Code: White–numbered "1-ONE," "2-TWO," "3-THREE," etc.
   - Buffer: polyester elastomer 900µm ± 50µm

   Strength Member:
   - Aramid yarn longitudinally applied

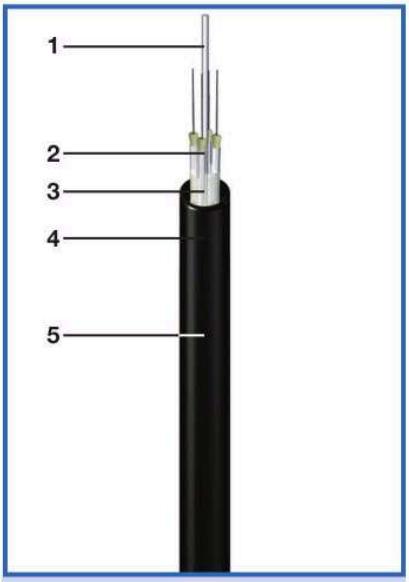
   Jacket:
   - Low-Smoke thermoplastic Polyolefin: .078" (2.0 mm) nom. diameter
3. **Binder Tape:**
   - Helically applied water-swellable SAP
4. **Aramid Yarn:**
   - Contra-helically applied and wrapped with .001" polyester binder tape
5. **Outer Sheath:**
   - Black Irradiated Cross-linked Chlorosulfonated Polyethylene

Applications:

- On offshore platforms, ships, mobile oil rigs, FPSOs, land rigs, onshore drilling

Features:

- Breakout style cable
- Temperature: -40°C to +70°C
- Gigabit Ethernet compliant
- Meets NEK 606 Mud Oil-Resistant requirements when tested with ester-based muds



Compliances:

Fiber:

- Temp. Cycling..... IEC 60794-1-2-F1
- Tensile Strength ....IEC 60794-1-2-E1A
- Crush..... IEC 60794-1-2-E3
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- Repeated Bending... IEC 60794-1-2-E6
- Torsion..... IEC 60794-1-2-E7
- Kink..... IEC 60794-1-2-E10
- Cable Bend ..... IEC 60794-1-2-E11
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Flame:

- IEC 60332-3-22 Cat. A

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CATALOG NUMBER*	FIBER COUNT	NOM. OUTER SHEATH DIAMETER		NOM. OUTER SHEATH THICKNESS		MAXIMUM WEIGHT		MINIMUM BEND RADIUS		MAXIMUM TENSILE LOAD	
		INCHES	mm	INCHES	mm	LBS/ 1000 FT	kg/km	INSTALLATION INCHES/cm	IN-SERVICE INCHES/cm	INSTALLATION LBS/N	IN-SERVICE LBS/N
XX0021C1Z-MOR	2	0.300	7.62	0.050	1.270	37	55	4.8/12.2	2.4/6.1	200/900	50/225
XX0041C1Z-MOR	4	0.300	7.62	0.050	1.270	40	59	4.8/12.2	2.4/6.1	200/900	50/225
XX0061C1Z-MOR	6	0.355	9.02	0.050	1.270	55	82	5.7/14.4	2.8/7.2	200/900	50/225
XX0081C1Z-MOR	8	0.405	10.28	0.050	1.270	80	119	6.5/16.5	3.2/8.2	600/2700	150/675
XX0101C1Z-MOR	10	0.435	11.05	0.050	1.270	95	142	7.0/17.7	3.5/8.8	600/2700	150/675
XX0121C1Z-MOR	12	0.445	11.30	0.060	1.520	95	142	7.2/18.1	3.6/9.0	600/2700	150/675
XX0161C1Z-MOR	16	0.515	13.60	0.060	1.520	107	160	8.2/20.9	4.1/10.5	600/2700	150/675
XX0181C1Z-MOR	18	0.540	13.72	0.060	1.520	110	163	8.6/21.9	4.3/11.0	600/2700	150/675
XX0241C1Z-MOR	24	0.620	15.75	0.060	1.520	180	267	9.9/25.2	5.0/12.6	600/2700	150/675
XX0361C1Z-MOR	36	0.708	17.98	0.060	1.520	200	298	11.3/28.8	5.7/14.4	600/2700	150/675
XX0481C1Z-MOR	48	0.809	20.55	0.060	1.520	260	387	12.9/32.9	6.5/16.4	600/2700	150/675

* XX Denotes fiber type. See Fiber Selection Guide.

Fiber Selection Guide

FIBER TYPE	AP FIBER TYPE SINGLEMODE	CG FIBER TYPE MULTIMODE 62.5/125	BI FIBER TYPE MULTIMODE 50/125
FIBER CHARACTERISTICS			
Type	Matched Clad	Graded Index	Graded Index
Mode Field Diameter	9.2 ± .4 @ 1310nm	N/A	N/A
Core Diameter	8.3µm nominal	62.5 ± 3µm	50.0 ± 2.5µm
Cladding Diameter	125 ± .7µm	125 ± 2µm	125 ± 2µm
Coating Diameter	242 ± 5µm	242 ± 5µm	242 ± 5µm
Core Non-circularity	N/A	≤5%	≤5%
Coating Cladding Conc.	<12µm	<12µm	<12µm
Cladding Non-circularity	≤0.7%	≤1.0%	≤1.0%
Core-clad Concentricity	≤0.5µm	≤1.5µm	≤1.5µm
ATTENUATION dB/km Max			
850nm	N/A	4.50	4.50
1300nm	N/A	2.00	2.00
1310nm	2.00	N/A	N/A
1550nm	2.00	N/A	N/A
BANDWIDTH MHz • km			
850nm	N/A	220	700
1300nm	N/A	500	500
Dispersion	≤18.0 ps/nm – km @ 1550	N/A	N/A
Proof Test	> or = 100 kpsi	> or = 100 kpsi	> or = 100 kpsi

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   - Buffer: polyester elastomer 900µm ± 50µm

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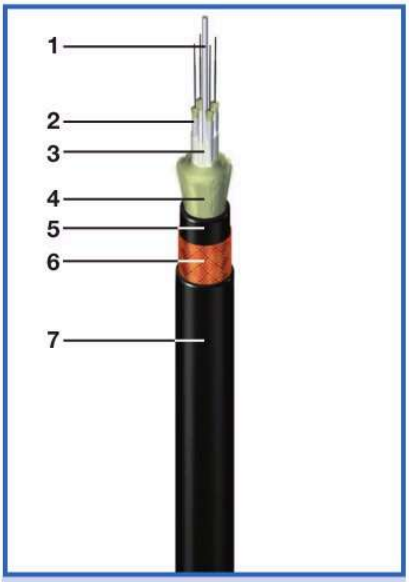
   - Aramid yarn longitudinally applied

   Jacket:
   - Low-Smoke thermoplastic Polyolefin: .078" (2.0 mm) nom. diameter
3. **Binder Tape:**
   - Helically applied water-swellable SAP
4. **Aramid Yarn:**
   - Contra-helically applied and wrapped with .001" polyester binder tape
5. **Inner Sheath:**
   - Low-Smoke, Zero-Halogen (LSZH), low-toxicity, thermoplastic Polyolefin – Black or White
6. **Bronze Armor:**
   - Bronze braid, 88% minimum coverage
7. **Outer Sheath:**
   - Black Irradiated Cross-linked Chlorosulfonated Polyethylene



Applications:

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- Braided bronze armor for increased mechanical protection
- Meets NEK 606 Mud Oil-Resistant requirements when tested with ester-based muds
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		INCHES	mm	INCHES	mm	LBS/ 1000 FT	kg/km	INSTALLATION INCHES/cm	IN-SERVICE INCHES/cm	INSTALLATION LBS/N	IN-SERVICE LBS/N
XX0021C1Z-AMOR	2	0.320	8.13	0.490	12.45	162	241	7.3/18.5	3.6/9.2	200/900	50/225
XX0041C1Z-AMOR	4	0.320	8.13	0.490	12.45	162	241	7.3/18.5	3.6/9.2	200/900	50/225
XX0061C1Z-AMOR	6	0.355	9.02	0.510	12.95	185	275	8.2/20.7	4.1/10.4	200/900	50/225
XX0081C1Z-AMOR	8	0.405	10.29	0.560	14.22	215	320	9.0/22.8	4.5/11.4	600/2700	150/675
XX0101C1Z-AMOR	10	0.435	11.05	0.590	15.00	232	345	9.4/24.0	4.7/12.0	600/2700	150/675
XX0121C1Z-AMOR	12	0.445	11.30	0.620	15.75	245	365	9.9/25.2	5.0/12.7	600/2700	150/675
XX0161C1Z-AMOR	16	0.515	13.08	0.690	17.53	272	405	11.0/28.0	5.5/14.0	600/2700	150/675
XX0181C1Z-AMOR	18	0.540	13.72	0.715	18.16	280	417	11.4/29.1	5.7/14.5	600/2700	150/675
XX0241C1Z-AMOR	24	0.620	15.75	0.795	20.20	365	545	12.7/32.3	6.4/16.3	600/2700	150/675
XX0361C1Z-AMOR	36	0.708	17.98	0.923	23.44	397	591	14.8/37.5	7.4/18.8	600/2700	150/675
XX0481C1Z-AMOR	48	0.809	20.55	1.024	26.01	516	768	16.4/41.6	8.2/20.8	600/2700	150/675

* XX Denotes fiber type. See Fiber Selection Guide.

Fiber Selection Guide

FIBER TYPE	AP FIBER TYPE SINGLEMODE	CG FIBER TYPE MULTIMODE 62.5/125	BI FIBER TYPE MULTIMODE 50/125
FIBER CHARACTERISTICS			
Type	Matched Clad	Graded Index	Graded Index
Mode Field Diameter	9.2 ± .4 @ 1310nm	N/A	N/A
Core Diameter	8.3µm nominal	62.5 ± 3µm	50.0 ± 2.5µm
Cladding Diameter	125 ± .7µm	125 ± 2µm	125 ± 2µm
Coating Diameter	242 ± 5µm	242 ± 5µm	242 ± 5µm
Core Non-circularity	N/A	≤5%	≤5%
Coating Cladding Conc.	<12µm	<12µm	<12µm
Cladding Non-circularity	≤0.7%	≤1.0%	≤1.0%
Core-clad Concentricity	≤0.5µm	≤1.5µm	≤1.5µm
ATTENUATION dB/km Max			
850nm	N/A	4.50	4.50
1300nm	N/A	2.00	2.00
1310nm	2.00	N/A	N/A
1550nm	2.00	N/A	N/A
BANDWIDTH MHz • km			
850nm	N/A	220	700
1300nm	N/A	500	500
Dispersion	≤18.0 ps/nm – km @ 1550	N/A	N/A
Proof Test	> or = 100 kpsi	> or = 100 kpsi	> or = 100 kpsi

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Offshore and Onshore RIG Cables

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MOR® Polyrad® Standard Conductor Chart

APPROX. AREA (CMIL)	APPROX. SIZE (AWG)	COND. STRAND	TYPE OF STRANDING	DIAMETER (IN.)	MUTUAL CAPACITANCE (pF/FT) *	DC RESISTANCE @ 20°C (Ω/kFT)	AC IMPEDANCE @ 60Hz (Ω/kFT)	INDUCTANCE (µH/FT)	WEIGHT (LBS/kFT)
1900	18	19/30	CONCENTRIC	0.048	27.3	5.46	6.22	0.46	6
2601	16	19/29	CONCENTRIC	0.054	29.1	4.27	4.82	0.45	8
3831	14	19/27	CONCENTRIC	0.067	32.8	2.70	3.05	0.44	12
6088	12	19/25	CONCENTRIC	0.086	37.7	1.70	1.92	0.42	20
10910	10	27/24	BUNCHED	0.120	46.0	1.00	1.10	0.40	34
14950	8	37/24	CONCENTRIC	0.140	40.0	0.63	0.70	0.39	51
24640	6	61/24	CONCENTRIC	0.181	46.5	0.39	0.57	0.37	83
36760	5	91/24	ROPE	0.242	54.8	0.28	0.33	0.35	119
42420	4	105/24	ROPE	0.262	57.1	0.25	0.28	0.34	138
50500	3	126/24	ROPE	0.285	59.6	0.21	0.23	0.34	167
60600	2	140/24	ROPE	0.307	61.9	0.16	0.20	0.33	190
90900	1	224/24	ROPE	0.380	62.3	0.12	0.14	0.32	302
111100	1/0	273/24	ROPE	0.437	66.8	0.09	0.11	0.31	366
131300	2/0	323/24	ROPE	0.458	68.3	0.08	0.10	0.31	420
181800	3/0	456/24	ROPE	0.549	74.2	0.06	0.07	0.30	594
222200	4/0	551/24	ROPE	0.611	77.7	0.05	0.06	0.29	721
262600	-	646/24	ROPE	0.652	74.3	0.04	0.05	0.28	871
313100	-	777/24	ROPE	0.720	77.6	0.03	0.05	0.28	1049
373700	-	925/24	ROPE	0.795	80.9	0.03	0.04	0.27	1256
444400	-	1110/24	ROPE	0.855	83.2	0.02	0.04	0.27	1506
535300	-	1332/24	ROPE	0.925	87.9	0.02	0.04	0.26	1729
646400	-	1591/24	ROPE	1.035	96.2	0.02	0.03	0.25	2123
777700	-	1924/24	ROPE	1.120	102.6	0.01	0.03	0.25	2591
11111000	-	2745/24	ROPE	1.328	117.7	0.01	0.03	0.24	3400

* Based on 600 V/1000 V insulation thickness
Conversion factors:
µH/FT x 3.281 = µH/m
Ω/kFT x 3.281 = Ω/km

MV-RIG® Standard Conductor Chart

APPROXIMATE AREA		APPROX. SIZE (AWG/kcmil)	COND. STRAND	NOMINAL DIAMETER		NET WEIGHT	
kcmil	mm^2			INCHES	mm	LBS/1000 FT	kg/km
24.4	12.4	6	61/.0201	0.185	4.7	82	147
42.0	21.3	4	105/.0201	0.262	6.7	132	197
61.6	31.2	2	154/.0201	0.315	8.0	204	304
89.6	45.4	1	224/.0201	0.375	9.5	282	420
112.0	56.8	1/0	280/.0201	0.435	11.0	365	544
131.6	66.7	2/0	329/.0201	0.465	11.8	416	620
182.4	92.4	3/0	456/.0201	0.535	13.6	577	860
220.4	111.7	4/0	551/.0201	0.600	15.2	687	1023
258.4	130.9	262	646/.0201	0.650	16.5	816	1216
310.8	157.5	313	777/.0201	0.680	17.3	982	1463
370.0	187.5	373	925/.0201	0.745	18.9	1174	1749
444.0	225.0	444	1110/.0201	0.815	20.7	1397	2081
532.8	270.0	535	1332/.0201	0.890	22.6	1674	2494
643.6	326.1	646	1609/.0201	0.975	24.8	2051	3056
769.6	390.0	777	1924/.0201	1.070	27.2	2528	3767

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Standard Color Code Chart – IEEE 1580 Table 22

CONDUCTOR NUMBER	BASE COLOR	TRACER COLOR	TRACER COLOR
1	Black	-	-
2	White	-	-
3	Red	-	-
4	Green	-	-
5	Orange	-	-
6	Blue	-	-
7	White	Black	-
8	Red	Black	-
9	Green	Black	-
10	Orange	Black	-
11	Blue	Black	-
12	Black	White	-
13	Red	White	-
14	Green	White	-
15	Blue	White	-
16	Black	Red	-
17	White	Red	-
18	Orange	Red	-
19	Blue	Red	-
20	Red	Green	-
21	Orange	Green	-
22	Black	White	Red
23	White	Black	Red
24	Red	Black	White
25	Green	Black	White
26	Orange	Black	White
27	Blue	Black	White
28	Black	Red	Green
29	White	Red	Green
30	Red	Black	Green
31	Green	Black	Orange
32	Orange	Black	Green
33	Blue	White	Orange
34	Black	White	Orange
35	White	Red	Orange
36	Orange	White	Blue
37	White	Red	Blue
38	Black	White	Green
39	White	Black	Green
40	Red	White	Green
41	Green	White	Blue
42	Orange	Red	Green
43	Blue	Red	Green
44	Black	White	Blue
45	White	Black	Blue
46	Red	White	Blue

CONDUCTOR NUMBER	BASE COLOR	TRACER COLOR	TRACER COLOR
47	Green	Orange	Red
48	Orange	Red	Blue
49	Blue	Red	Orange
50	Black	Orange	Red
51	White	Black	Orange
52	Red	Orange	Black
53	Green	Red	Blue
54	Orange	Black	Blue
55	Blue	Black	Orange
56	Black	Orange	Green
57	White	Orange	Green
58	Red	Orange	Green
59	Green	Black	Blue
60	Orange	Green	Blue
61	Blue	Green	Orange
62	Black	Red	Blue
63	White	Orange	Blue
64	Red	Black	Blue
65	Green	Orange	Blue
66	Orange	White	Red
67	Blue	White	Red
68	Black	Green	Blue
69	White	Green	Blue
70	Red	Green	Blue
71	Green	White	Red
72	Orange	Red	Black
73	Blue	Red	Black
74	Black	Orange	Blue
75	Red	Orange	Blue
76	Green	Red	Black
77	Orange	White	Green
78	Blue	White	Green
79	Red	White	Orange
80	Green	White	Orange
81	Blue	Black	Green
82	Orange	White	-
83	Green	Red	-
84	Black	Green	-
85	White	Green	-
86	Blue	Green	-
87	Black	Orange	-
88	White	Orange	-
89	Red	Orange	-
90	Green	Orange	-
91	Blue	Orange	-
92	Black	Blue	-

Note #1: Pair Color Code: Black and white with each conductor printed alpha-numerically for easy identification.
Note #2: Triad Color Code: Black, white and red with each conductor printed alpha-numerically for easy identification.
Note #3: Power Color Code: All black with printed numbers.

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Offshore and Onshore RIG Cables

Technical Information

Ampacity – 95°C

45°C Ambient – Single Banked

AWG/kcmil	mm²	CIRCULAR MILS	1/C	2/C	3/C
20	0.6	1022	11	9	8
18	1.0	1624	15	13	11
16	1.2	2583	22	18	15
14	2.1	4110	35	30	24
12	3.3	6530	44	38	30
10	5.3	10400	56	47	39
8	8.4	16500	70	62	50
6	13.3	26300	92	82	67
5	16.8	33100	104	96	78
4	21.1	41700	123	105	87
3	26.7	52600	140	126	103
2	33.6	66400	162	143	116
1	42.4	83700	180	162	137
1/0	53.5	106000	217	191	157
2/0	67.4	133000	251	232	180
3/0	85.0	168000	289	255	209
4/0	107.2	212000	337	295	242
262	133.1	262000	392	345	283
313	158.7	313100	439	378	309
373	189.4	373700	507	440	361
444	225.2	444400	567	486	396
535	271.3	535300	638	546	448
646	327.6	646400	693	603	492
777	394.2	777700	750	674	552
1111	563.1	1111000	972	814	658

Notes: (1) The above current-carrying capacities are for marine istallations with cables arranged in a single bank per hanger and are 85% of the IEEE calculated values (See Note 2). Double banking of distribution-type cables should be avoided. For those instances where cable must be double banked, the current-carrying capacities in the above table should be multiplied by 0.8.

(2) The current carrying capacities of these cables are based on cables installed in free air, i.e., at least one cable diameter spacing between adjacent cables. See IEEE Publication No. 835, 1994 Edition.

(3) If ambient temperatures differ from 45°C, the values shown above should be multiplied by the following factors:
40°C - 1.04 50°C - .95 60°C - .85 70°C - .74

When the number of conductors in a cable exceeds 3, the maximum current-carrying capacity of each conductor is to be reduced according the the following table:

NUMBER OF CONDUCTORS	% OF 3 CONDUCTOR AMPACITY VALUES
4 through 6	80
7 through 9	70
10 through 20	50
21 through 30	45
31 through 40	40
41 through 60	35
61 and up	30

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Offshore and Onshore RIG Cables

Technical Information

Ampacity – 100°C

45°C Ambient – Single Banked

AWG/kcmil	mm²	CIRCULAR MILS	1/C	2/C	3/C
20	0.6	1022	12	10	9
18	1.0	1624	16	14	12
16	1.2	2583	23	19	16
14	2.1	4110	37	31	25
12	3.3	6530	45	40	31
10	5.3	10400	58	49	41
8	8.4	16500	72	64	52
6	13.3	26300	96	85	70
5	16.8	33100	109	101	82
4	21.1	41700	128	110	92
3	26.7	52600	146	132	108
2	33.6	66400	169	149	122
1	42.4	83700	194	174	143
1/0	53.5	106000	227	199	164
2/0	67.4	133000	262	242	188
3/0	85.0	168000	300	265	218
4/0	107.2	212000	351	307	252
262	133.1	262000	407	358	294
313	158.7	313100	455	391	321
373	189.4	373700	526	456	375
444	225.2	444400	588	504	411
535	271.3	535300	662	566	465
646	327.6	646400	715	625	510
777	394.2	777700	830	699	573
1111	563.1	1111000	1003	844	693

Notes: (1) The above current-carrying capacities are for marine istallations with cables arranged in a single bank per hanger and are 85% of the IEEE calculated values (See Note 2). Double banking of distribution-type cables should be avoided. For those instances where cable must be double banked, the current-carrying capacities in the above table should be multiplied by 0.8.

(2) The current carrying capacities of these cables are based on cables installed in free air, i.e., at least one cable diameter spacing between adjacent cables. See IEEE Publication No. 835, 1994 Edition.

(3) If ambient temperatures differ from 45°C, the values shown above should be multiplied by the following factors:
40°C - 1.04 50°C - .95 60°C - .85 70°C - .74

When the number of conductors in a cable exceeds 3, the maximum current-carrying capacity of each conductor is to be reduced according the the following table:

NUMBER OF CONDUCTORS	% OF 3 CONDUCTOR AMPACITY VALUES
4 through 6	80
7 through 9	70
10 through 20	50
21 through 30	45
31 through 40	40
41 through 60	35
61 and up	30

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Offshore and Onshore RIG Cables

Technical Information

Ampacity – 110°C

45°C Ambient – Single Banked

AWG/kcmil	mm²	CIRCULAR MILS	1/C	2/C	3/C
20	0.6	1022	13	11	10
18	1.0	1624	17	15	13
16	1.2	2583	25	20	17
14	2.1	4110	40	33	27
12	3.3	6530	48	43	33
10	5.3	10400	62	52	44
8	8.4	16500	77	69	56
6	13.3	26300	103	91	75
5	16.8	33100	117	109	88
4	21.1	41700	137	118	99
3	26.7	52600	156	141	116
2	33.6	66400	181	160	131
1	42.4	83700	208	186	153
1/0	53.5	106000	243	213	176
2/0	67.4	133000	281	259	201
3/0	85.0	168000	321	284	233
4/0	107.2	212000	376	329	270
262	133.1	262000	426	378	310
313	158.7	313100	491	420	345
373	189.4	373700	563	497	406
444	225.2	444400	630	556	454
535	271.3	535300	709	625	511
646	327.6	646400	766	649	525
777	394.2	777700	889	784	640
1111	563.1	1111000	1006	-	-

Notes: (1) The above current-carrying capacities are for marine istallations with cables arranged in a single bank per hanger and are 85% of the IEEE calculated values (See Note 2). Double banking of distribution-type cables should be avoided. For those instances where cable must be double banked, the current-carrying capacities in the above table should be multiplied by 0.8.

(2) The current carrying capacities of these cables are based on cables installed in free air, i.e., at least one cable diameter spacing between adjacent cables. See IEEE Publication No. 835, 1994 Edition.

(3) If ambient temperatures differ from 45°C, the values shown above should be multiplied by the following factors:
40°C - 1.04 50°C - .95 60°C - .85 70°C - .74

When the number of conductors in a cable exceeds 3, the maximum current-carrying capacity of each conductor is to be reduced according the the following table:

NUMBER OF CONDUCTORS	% OF 3 CONDUCTOR AMPACITY VALUES
4 through 6	80
7 through 9	70
10 through 20	50
21 through 30	45
31 through 40	40
41 through 60	35
61 and up	30

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Technical Information

Ampacity – 125°C

45°C Ambient – Single Banked

AWG/kcmil	mm²	CIRCULAR MILS	1/C	2/C	3/C
16	1.2	2583	25	22	18
14	2.1	4110	39	33	28
12	3.3	6530	49	44	37
10	5.3	10400	68	64	49
8	8.4	16500	90	77	63
6	13.3	26300	126	111	91
5	16.8	33100	153	147	120
4	21.1	41700	158	153	126
3	26.7	52600	195	180	148
2	33.6	66400	217	196	161
1	42.4	83700	281	245	202
1/0	53.5	106000	319	278	229
2/0	67.4	133000	354	309	254
3/0	85.0	168000	437	382	313
4/0	107.2	212000	495	432	354
262	133.1	262000	559	481	395
313	158.7	313100	617	539	442
373	189.4	373700	692	599	492
444	225.2	444400	772	669	549
535	271.3	535300	871	741	608
646	327.6	646400	979	-	-
777	394.2	777700	1101	-	-
1111	563.1	1111000	1374	-	-

Notes: (1) The above current-carrying capacities are for marine istallations with cables arranged in a single bank per hanger and are 85% of the IEEE calculated values (See Note 2). Double banking of distribution-type cables should be avoided. For those instances where cable must be double banked, the current-carrying capacities in the above table should be multiplied by 0.8.

(2) The current carrying capacities of these cables are based on cables installed in free air, i.e., at least one cable diameter spacing between adjacent cables. See IEEE Publication No. 835, 1994 Edition.

(3) If ambient temperatures differ from 45°C, the values shown above should be multiplied by the following factors:
40°C - 1.04 50°C - .95 60°C - .85 70°C - .74

When the number of conductors in a cable exceeds 3, the maximum current-carrying capacity of each conductor is to be reduced according the the following table:

NUMBER OF CONDUCTORS	% OF 3 CONDUCTOR AMPACITY VALUES
4 through 6	80
7 through 9	70
10 through 20	50
21 through 30	45
31 through 40	40
41 through 60	35
61 and up	30

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- Canadian Standards Association International (CSA)
- Det Norske Veritas (DNV)*
- Intertek Testing Services (ETL)*
- Lloyd's Register of Shipping (LR)*
- Transport Canada Marine Safety
- Underwriters Laboratories Inc. (UL)

* IEEE 1580 Type P MOR® Polyrad® XT-125.

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Offshore and Onshore RIG Cables

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The table below has been created to simplify the selection of the appropriate minimum bend radius based on the application and applicable standards. Since there are no industry standards addressing the selection and installation of cables for use on land-based rigs, General Cable recommends adherence to NEC requirements.

Minimum Bend Radius for MOR® Polyrad® XT-125 Cables

Application[1]	Domestic / International	Applicable Standard(s)	Conductors	Rated Voltage	Shielding	Cable Types	Overall Cable Diameter (D)	Min. Bend Radius
Fixed or Floating Offshore Facilities	Domestic / International	IEEE 1580, API-RP14F, NEC	Single	600 V	Nonshielded	All	All	5 x D
				2 kV				8 x D
			Multi-Conductor	600 V or 2 kV	Nonshielded	TC or TC-ER	≤ 1" (25.4mm)	4 x D
							> 1" (25.4mm) to 2" (50.8mm)	5 x D
							> 2" (50.8mm)	6 x D
						MC	All	7 x D
					Shielded	All	All	12 x D
						TC or TC-ER		12 x D
						MC		12 x D / 7 x D[1]
Shipboard	Domestic	IEEE 1580, IEEE 45	All	All	All	Armored	All	8 x D
						Unarmored		6 x D
	International	IEC 60092-352	All	All	All	Armored	All	6 x D
						Unarmored	≤ 1" (25.4mm)	4 x D
							> 1" (25.4mm)	6 x D

[1] For land-based drilling rig applications, follow NEC requirements.

Minimum Bending Radius in Accordance with National Electric Code

Voltage	Conductors	Shielding	Cable Types	Minimum Bending Radius as a Multiple of Conductor/Assembly Diameter		
600 V	Single	Nonshielded	All	5X		
601 - 2001 V			All	6X		
600 V or 2000 V	Multi-Conductor or Multiplexed	Nonshielded	TC or TC-ER	1 in. (25 mm) or less	Over 1 in. to 2 in. (>25 mm to 50 mm)	Over 2 in. (>50 mm)
				4X	5X	6X
			MC	7X		
		Shielded	All	12X		
			TC or TC-ER	12X		
			MC	12X/7X[1]		

[1] 12 times the diameter of an individual shielded conductor or 7 times the overall cable diameter, whichever is greater.

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- UL Type ITC-HL/PLTC ABS CWCMC – **CCW®**
- Arctic-Armor Grade Automation – **CCW®**
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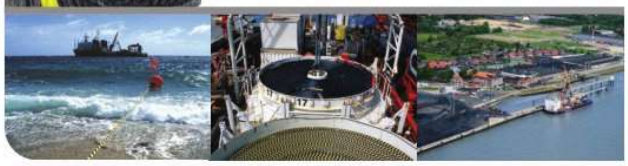

Upstream Onshore Cable – Land Rig and Well Solutions

- IEEE 1580 Type P – **MOR® Polyrad®**
- UL Type MC-HL – **CCW®**
- UL Type ITC-HL/PLTC – **CCW®**
- Arctic-Armor Grade Automation – **CCW®**
- IEEE 1018 ESP – **X-Tract®**
- Data Comm. & Industrial Automation – **COMMODORE®**
- Application-Specific Cable Assemblies

Midstream & Downstream Cable – LNG, Refining and Petrochemical Solutions

- UL Type MC-HL – **CCW®**
- UL Type ITC-HL/PLTC – **CCW®**
- UL Type MC – **Duralox®**
- TECK90/HVTECK
- UL Type TC-ER – **VNTC®, FREP®, ARCTIC-FLEX®**
- UL Type MV-105 – **Uniblend®, UniShield®**
- IEC 60502 – **ARMIGRON®, ERVYLEC®**
- IEC ANZ – **PDIC®**

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Products:
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ENTERPRISE & COMMUNICATIONS

Markets:
Commercial/Residential Buildings, Data Centers, Education, Finance, Federal/Government, Healthcare, AV, Manufacturing

Products:
Datacom Cable, Fiber Optic Cable, Electronics Cable, Telecommunications Cable

INDUSTRIAL

Markets:
Petrochemical, Food & Beverage, Automation, Water/Wastewater, Power Generation, Pulp & Paper

Products:
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MILITARY

Markets:
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Products:
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MINING

Markets:
Surface, Underground

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Markets:
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Products:
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OIL, GAS & PETROCHEMICAL

Markets:
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Products:
Offshore Cable, Subsea Cable, Onshore Cable

TELCO

Markets:
Independent Telephone Operating Companies (ITOCs), Regional Bell Operating Companies (RBOCs)

Products:
Air Core Cable, Filled Core Cable, Wire Products, Central Office Cable

TRANSPORTATION

Markets:
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