General Cable

Marine Cables

exZhellentMAR GENFIREMAR

FOREWORD

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. With more than 11,000 employees and $6 billion in revenues, we are one of the largest wire and cable manufacturers in the world.

Our company serves customers through a global network of 38 manufacturing facilities in our core operating regions and has worldwide sales representation and distribution. We are dedicated to the production of high-quality aluminium, copper and fibre 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, sales and customer service. This combination enables us to better serve our customers 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 or locally.

Visit our Website at www.generalcable.com

General Cable | ONE COMPANY CONNECTING THE WORLD

SYMBOLS

FLAME RETARDANT SINGLE WIRE
IEC 60332-1-2

FLAME RETARDANT BUNCHED
WIRES – IEC 60332-3 (categories A or C)

HALOGEN FREE - IEC 60754-1

LOW ACIDITY AND CORROSIVITY OF EVOLVED
GASES - IEC 60754-2

LOW SMOKE EMISSION - IEC 61034-2

FIRE RESISTANT - IEC 60331

INCREASED FLEXIBILITY

SECTORFLEX

ELECTRO-MAGNETIC INTERFERENCE PROTECTION

WORK AT VERY LOW TEMPERATURE -40 °C

MECHANICAL RESISTANCE

HEAVY DUTY

REDUCED BENDING RADIUS

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INTRODUCTION

MARINE CABLES

In this catalogue General Cable presents its series of shipboard power, control and instrumentation cables for fixed installations on vessels.

The safety of people and equipment is a priority consideration in the design and construction of Exzhellent® and Genfire® cables. They are made from halogen free compounds with a low-acidity, low-corrosive gases and low opacity of fumes evolved during combustion, in accordance with the corresponding IEC standards. They therefore allow for a quick and safe evacuation in the event of fire.

The cables are designed to comply with the strictest non-fire propagation standards and prevent the generation of secondary sources of fire even in circumstances of high cable concentration in unfavourable conditions.

Genfire® cables are fire resistant designs that feature not only the above properties, but are also capable to continue providing service even when directly affected by fire. Their use in safety services enables the systems to continue working even in situations of fire.

Reinforced cables feature copper braiding that provides good mechanical protection and may also be used in specific applications such as shielding.

Exzhellent® and Genfire® cables may be used in extreme climates, principally because of their resistance to very low temperatures.

This catalogue also includes specific designs for energy cables used in circuits with variable frequency drives (VFD).

The cables described in this catalogue have been designed in accordance with the following standards and specifications.

TECHNICAL SPECIFICATIONS & STANDARDS

IEC 60092-350
Electrical installations in ships.

IEC 60092-352
Choice and installation of electrical cables.

IEC 60092-353
Single and multicore non-radial field power cables with extruded solid insulation for rated voltages 1 kV and 3 kV.

IEC 60092-354
Single and three-core power cables with extruded solid insulation for rated voltages 6 kV up to 30 kV.

IEC 60092-360
Insulating and sheathing materials for shipboard and offshore units. Power, control, instrumentation and telecommunication cables.

IEC 60092-376
Cables for control and instrumentation circuits 150/250 V.

IEC 60228
Conductors of insulated cables.

IEC 60331-1
Circuit integrity – Test method for a temperature of at least 830 °C for cables rated up to 0.6/1 kV and with an overall diameter exceeding 20 mm.

IEC 60331-2
Circuit integrity – Test method for a temperature of at least 830 °C for cables rated up to 0.6/1 kV and with an overall diameter not exceeding 20 mm.

IEC 60331-21
Circuit integrity – Procedures and requirements for cables up to and including 0.6/1 kV.

IEC 60332-3-22 cat. A
Tests on bunched electric cables under fire conditions, fire retardant.

IEC 60754-1
Determination of the amount of halogen acid gas.

IEC 60754-2
Determination of degree of acidity and corrosivity of gases.

IEC 61034-2
Measurement of smoke density.

APPROVALS

Cables featured in this catalogue are covered with "Type Approvals" from main classification societies:

ABS

BUREAU VERITAS

DET NORSKE VERITAS

LLOYD'S REGISTER

PRODUCT CLASSIFICATION

Depending on their use, the cables are distributed into the following groups:

LOW VOLTAGE POWER CABLES (IEC 60092-353)

- Power cables suitable for operation at up to and including 0.6/1 kV.
- Constructions up to and including 4 cores. Coloured core identification.
- Non armoured and armoured with copper wire braid.
- Available designs with fire resistance (circuit integrity).
- Available designs for variable frequency drives (VFD).

MEDIUM VOLTAGE CABLES (IEC 60092-354)

- Cables for power distribution in voltages of 3.6/6 to 18/30 kV.
- Armoured with copper wire braid.
- Available designs for variable frequency drives (VFD).

CONTROL CABLES (IEC 60092-353 and IEC 60092-376)

- Available from 2 to 37 cores. Identification by numbering.
- Armoured with copper wire braid.
- Available designs with fire resistance (circuit integrity).

INTRUMENTATION CABLES (IEC 60092-376)

- Multiunit (pairs or triples), with rated voltage 150/250 V.
- Cores identified by colours and numbered tape in each unit.
- Two pair cable without individual screen has a star/quad composition.
- Individual and/or overall screening of units using copper or aluminium/polyester tape and drain wire.
- Cable screening using copper wire braid.

CONSTRUCTION

On the basis of the above-mentioned IEC standards, and reviewing the construction of the cables, we have:

CONDUCTOR

Annealed copper in accordance with IEC 60092-350:

Standard offer for low voltage cables are with class 5 flexible conductors

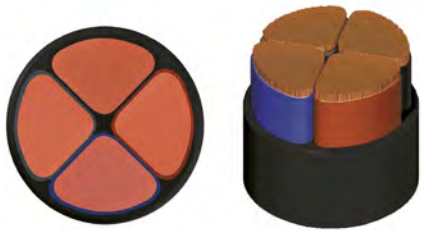
Class 2 conductors (rigid) for low voltage cables may be offered on request.

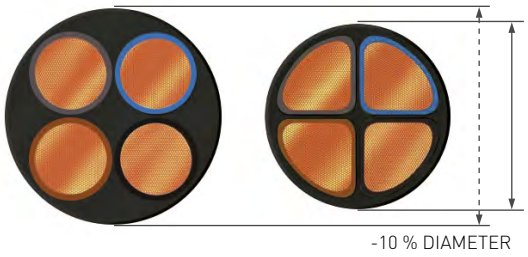
Standard offer for medium voltage cables are with class 2 rigid conductors

Tin plated conductors for greater protection of connections against oxidation or corrosion may be offered on request.

Conductors with a 50 mm^2 and above are made with Sectorflex® technology.

SECTORFLEX®





- More flexible, more manageable
- More compact, smaller diameter, lighter weight
- More cable per coil
- Same section and transport capacity as circular section
- Use of conventional terminals

See the following table for cross-sections and standard compositions:

CROSS SECTIONAL AREA

Cable type	Voltage (kV)	Area of conductor (mm^2)	IEC Standard
Power Low Voltage	1	1.5 ÷ 300	60092-353
	3	10 ÷ 300	
Instrumentation	250 V	0.5 ÷ 2.5	60092-376
Medium Voltage Power	6	10 ÷ 630	60092-354
	10	16 ÷ 630	
	15	25 ÷ 630	
	20	35 ÷ 630	
	30	50 ÷ 630	

The cross section area for the earth continuity conductors complies with the following table:

	Arrangement of earth conductor	Cross section Q of associated current carrying conductor (one phase or pole) mm^2	Minimum cross-section of earth conductor
1	i) Insulated earth conductor in cable for fixed installation. ii) Copper braid of cable for fixed installation. iii) Separate, insulated earth conductor for fixed installation in pipes in dry accommodation spaces, when carried in the same pipe as the supply cable. iV) Separate, insulated earth conductor when installed inside enclosures or behind covers or panels, including earth conductor for hinged doors.	Q ≤ 16	Q
		Q ≤ 16	50 % of the current-carrying conductor, but not less than 16 mm^2
2	Uninsulated earth conductor in cable for fixed installation, armour or copper braid and in metal-to-metal contact with this.	Q ≤ 2.5	1 mm^2
		2.5 < Q ≤ 6	1.5 mm^2
		Q > 6	Not permitted
3	Separately installed earth conductor for fixed installation other than specified in iii) and iV).	Q < 2.5	Same as current-carrying conductor subject to min. 1.5 mm^2 for stranded earthing connection or 2.5 mm^2 for unstranded earthing connection.
		2.5 < Q ≤ 120	50 % of the current-carrying conductor, but not less than 4 mm^2.
		Q > 120	70 mm^2
4	Insulated earth conductor in flexible cable.	Q ≤ 16	Same as current-carrying conductor.
		Q > 16	50 % of the current-carrying conductor, but minimum 16 mm^2.

NUMBER OF CORES

Cable type	Number of cores	Standard
Low Voltage Power	1 to 5 cores	IEC 60092-353
Control cables	2, 4, 7, 12, 19, 27, 37 cores	IEC 60092-376
Instrumentation	1, 2*, 4, 7, 10, 14, 19, 24, 30, 37 pairs or triples	IEC 60092-376
Medium Voltage Power	1 or 3 cores	IEC 60092-354

(*) Two pair cable is a star-quad composition, cores are diametrically opposed to make the pairs.

INSULATION MATERIALS

Insulation materials are specified to standard IEC 60092-360. The ones used in the current catalogue are:

XLPE (cross-linked polyethylene). Cross-linked compound without heat distortion and with excellent electrical and mechanical properties.

EPR (ethylene propylene rubber). A cross-linked elastomer, it has almost no distortion due to the action of heat. It provides greater flexibility to the cable. Especially suitable if the sheath has to be a cross-linked compound.

HEPR (hard grade ethylene propylene rubber). Improved EPR compound bringing better performance both in mechanical and electrical properties. This material provides insulation thicknesses equivalent to the XLPE ones.

		Maximum rated conductor temperature (°C)	
Type of insulating compound	Abbreviated designation	Normal operation	Short-circuit
Cross-linked polyethylene	XLPE	90	250
Ethylene-propylene rubber or similar (EPM or EPDM) Halogen free	EPR	90	250
High modulus of hard grade halogen-free ethylene propylene rubber	HEPR	90	250

SHEATHING MATERIALS

The sheath of the cables protects the set of cores from the mechanical or environmental aggressions they may withstand. Mechanical aggressions are mainly abrasions from the dragging of the cables and tears at angles of the tubes and occur during the installation, while the environment aggressions (heat, presence of oils or aggressive agents) will affect the cable throughout its working life.

Halogen-free thermoplastic compound SHF 1.
Thermoplastic polyolefin halogen-free compound that releases neither toxic nor corrosive gases in the event of fire. Weak resistance to oils and fuels.

Type of sheathing compound	Abbreviated designation
Compound based on polyolefins – Halogen-free	SHF 1

ARMOURING

The armour provides mechanical protection to the cable.

The armour performs a dual function as it behaves as armour but also as a screen, when necessary and possible.

Type	Materials
BRAID	Annealed copper

Tin plated braid for greater protection of connections against oxidation or corrosion may be offered on request.

SCREENING

In low voltage cables, the screens are the elements which provide the cable protection against electromagnetic fields. This is an element especially suitable for cables for instrumentation, control and transmission of signals due to their sensitivity to radiation which can distort the signal transmitted by the cable. To protect the cable from electromagnetic perturbations it is necessary to screen the group of conductors (protection from external disturbance) or each one of the pairs or triples (electromagnetic fields from other elements of the same cable).

According to the standard, screens can be either braid or laminated polyester tape.
In all designs of 2, 3 and 4 cores, the screen cross-section has been defined according to the criteria set in standard IEC 60092-352 Table 2, so it can be used as an earthing conductor.

In armoured cables, the use of copper wire braid armour, when properly earthed, allows to use it as a overall screen.

Type	Materials
BRAID	Annealed copper
TAPE	Cu or Al / Polyester

Tin plated braid for greater protection of connections against oxidation or corrosion may be offered on request.

ELECTROMAGNETIC COMPATIBILITY (EMC)

When General Cable products are installed in accordance with IEC 60533, they fulfil the requirements for Electro-Magnetic Compatibility.

FIRE PERFORMANCE OF CABLES

All cables or insulated wiring shall meet the requirements for flame spread as given in: IEC 60332-1-2 and IEC 60332-3-22.

NOTE: It cannot be assumed that, because a cable or an insulated wire meets the requirements of IEC 60332-1, a bunch of similar cables or insulated wires will behave in a similar manner. The flame spread performance of bunched cables is assessed by the requirements of IEC 60332-3-22. This performance requirement (i.e. for cables mounted vertically in a touching formation) has been chosen to best reflect the installation conditions generally observed on board ships. Experience has shown that the test for the flame spread of cables installed vertically is adequate for horizontal installations, all other parameters being generally the same.

For systems required to maintain electrical circuit integrity under fire conditions, e.g. for fire alarm, fire detection, fire extinguishing services, remote stopping and similar control circuits, the cables shall meet the requirements of IEC 60331-21. Requirements for smoke emission and acid gas evolution shall be considered, and where applicable the cables evaluated in accordance with the following test methods, cables shall meet the requirements specified in the individual product standard: IEC 61034-2Part 2; IEC 60754-1Part 1 and IEC 60754-2 Part 2.

FLAME RETARDANT (IEC 60332-1-2)

A 1 kW flame in contact with the cable sheath for a time established in the standard should not spread. The cable will prevent a fire caused by a minor incident or by an external heat source with which it comes into accidental contact.

FLAME RETARDANT (IEC 60332-3-22)

An already developed fire may affect a wiring system and become more serious if the system is oriented vertically, thus allowing the circulation of air and the creation of a chimney effect. When the decomposition temperature of the organic materials is reached, exothermic combustion of these materials occurs and the fire spreads. The compounds used in Exzhellent® and Genfire® cable sheaths are designed to hinder exothermic reaction. To simulate this situation, the test involves the application of powered air and a 20-kW gas burner to a bundle of cables vertically arranged. In these conditions, the burner directly burns the cables during 40 minutes. After extinguishing the burner and the cables stop burning, the burnt length of the cable must not exceed 2.5 metres. The prescribed standard applicable in the ship industry is IEC 60332, part. 3-22, cat A. Category A prescribes the maximum volume of inflammable material (seven litres per metre).

FIRE RESISTANCE (IEC 60331)

IEC 60331 defines the test conditions applied to a cable that must remain in service in safety circuits even when directly affected by a fire and when its organic materials are decomposing.

In the test, the cable is subject to the action of a burner at a minimum flame temperature of 830 °C for a period of 90 minutes, during and at the end of which the cable must keep the circuit integrity.

HALOGEN-FREE AND LOW SMOKE EMISSION CABLES

Cables subject to fire, depending on the materials of which they are made, may release gases that are toxic for people's health. Their corrosivity may also hinder the proper operation and preservation of the electronic and IT components in the vicinity. Opaque smoke that prevents a view of the escape routes from the affected sites may also develop.

To minimise these effects, General Cable has developed the Exzhellent® series cables that eliminate harmful emissions of halogenated and toxic gases (IEC 60754-1 and 60754-2), substantially reduce opaque smoke and thus facilitate the evacuation of people (IEC 61034-2).

IEC 60332-3-22 (cat. A)

IEC 60331-1

IEC 60754

IEC 61034

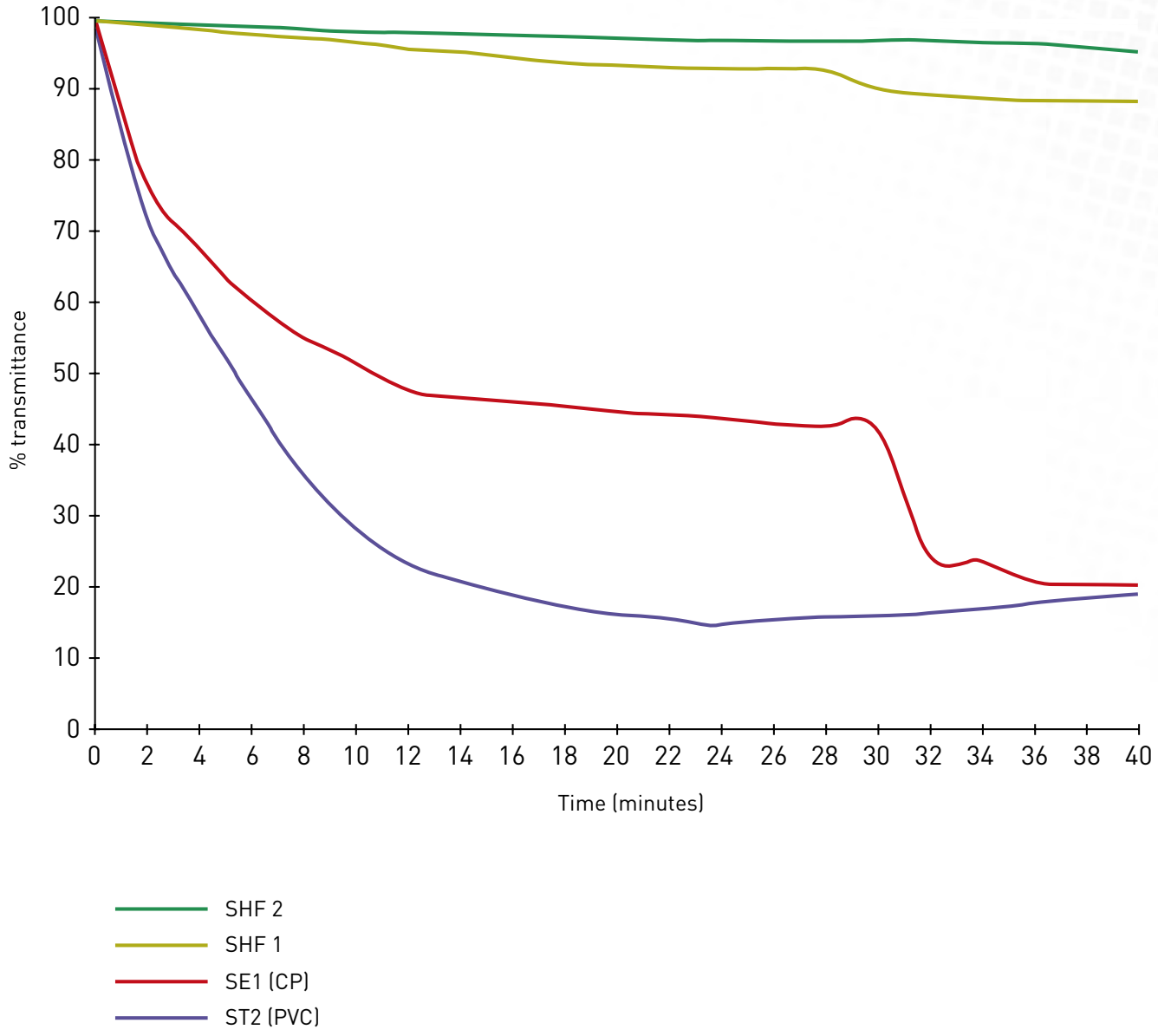
SHEATHING MATERIALS

			Halogen-free Thermoplastic
Sheathing material	**Standards**	**Units**	**SHF 1**
Index oxigen limit	ASTM D-2863	%	35
Temperature index	ASTM-D-2863	ºC	280
Halogen content	IEC 60754-1	%	<0.5
Corrosivity index	IEC 60754-2	pH	>4.3
Smoke density	IEC 61034-2	%	>60

MATERIAL MECHANICAL CHARACTERISTICS

			Halogen-free Thermoplastic
Sheathing material	**Standards**	**Units**	**SHF 1**
Unaged Tensile Strength	IEC 60092-360	N/mm^2	9.0
Unaged Elongation at Break		%	120
Ageing in air over	IEC 60092-360		7 d. @ 100 ºC
Minimum Low Temp. Operation	IEC 60811		-40 ºC

SMOKE EMISSION CHARACTERISTICS



General Cable

TECHNICAL INFORMATION

CABLE DESIGNATION

Cable designation is based in the letter code described in the tables below:

Materials	Insulation	Inner covering	Armour / Shield	Outer Sheath	Additional characteristics
Mica tape	-M				
Cross-linked polyethylene (XLPE)	R				
Ethylene-propylene rubber (EPR) / High modulus EPR (HEPR)	D				
Radial field	H				
Bare copper wire braid			C4		
Bronze wire braid			Zb		
Unit screening			(i) Individual (c) Overall		
Thermoplastic polyolefin SHF 1		Dt		Dt	
Variable frequency drives					-VFD

The cable designation also includes the number and size of cores (NxS), substituting the symbol "x" by the symbol "G" when an earth core is included. In two, three or four core cables armoured power, the NxS/E terminology is used to illustrate the cables in which the copper wire braid armour can be employed as the earth conductor. In this case, the cross sectional area of the braid (E) is equal or greater than 50 % of the phase conductors cross-section.

CURRENT RATINGS

General Cable recommends ratings according to Table A.4 of IEC 60092-352, based on conductor temperature of 90 ºC and ambient temperature of 45 ºC. As an alternative, it is possible to use the current ratings included in standard IEC 61892-4 or in the regulations of classification societies.

The procedure for cable selection employs rating factors to adjust the current carrying capacities for different ambient temperatures, for the mutual heating effects of grouping with other cables, methods of installation and short circuit time duty. Guidance on the use of these methods are given in IEC 60092-352.

These carrying current capacities in continuous service must be adjusted for ambient temperature other than 45 ºC according the following table:

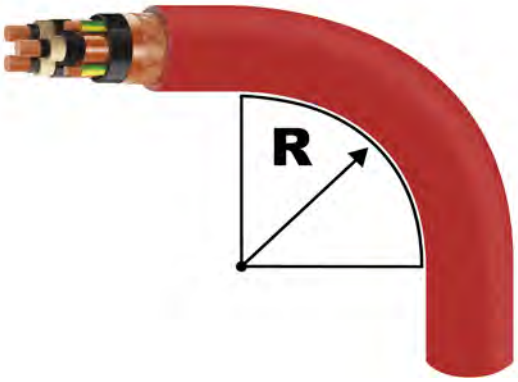
	Ambient air temperature (ºC)									
Maximum rated conductor temperature (ºC)	35	40	45	50	55	60	65	70	75	80
90	1.10	1.05	1.00	0.94	0.88	0.82	0.74	0.67	0.58	0.47

TOLERANCE OF CABLE OVERALL DIAMETER

	Tolerance (mm)			
Overall diameter (mm)	Low voltage		Medium voltage	
<20	-0.5	+1.0	-0.5	+1.0
20 - 29.9	-0.5	+1.5	-0.5	+2.0
30 - 39.9	-0.75	+2.0	-0.75	+2.5
40 - 49.9	-0.75	+2.5	-0.75	+3.0
50 - 59.9	-0.75	+3.0	-0.75	+3.5
60 - 69.9	-1.0	+3.5	-1.0	+4.0
70 - 79.9	-1.0	+4.0	-1.0	+5.0
>79.9	-1.0	+4,5	-1.0	+5.5

MINIMUM BENDING RADIUS (IEC 60092-352)

R: minimum bending radius; a lower radius does not guarantee cable integrity as it may have suffered potential damage that shortens its useful life.



The minimum handling & installation temperature for all type of cables (Low Voltage and Medium Voltage) is -15 ºC. General Cable recommends a minimum cable temperature of 0 ºC for an easier and safer handling & installation.
Prior to performing the installation, if the cables have been stored outdoors at temperatures below 0 ºC, the cables should be tempered indoors for a minimum of 24 hours at a temperature equal or above 0 ºC, in order to assure that the inner layers of the cable are not below 0 ºC.

The internal bending radius for the installation of cables shall be as recommended to the type of cable chosen and shall not be less than the values given in the following table:

UP TO AND INCLUDING 1.8/3 kV

Insulation	Covering	Nominal overall diameter (D)	Minimum bending radius during and after installation
Thermoplastic or Cross-linked Circular copper conductors	Unbraided	<25 mm	4 D [1]
		>25 mm	6 D
	Metal braid screened or armoured	Any	6 D
	Composite polyester/metal tape screened units or overall tape screening	Any	8 D
Flexible sector-shaped copper conductor	Any	Any	6 D [2]

[1] 6D for circuit integrity cables

[2] Enhanced values compared to IEC 60092-352 and guaranteed by General Cable

HIGHER THAN 1.8/3 kV

	Minimum bending radius	
Cable type	During installation	After installation*
Single-core	20 D	12 D
3 core cable	15 D	9 D

*Also applicable when the bend is carefully controlled using a former or adjacent to joints and terminations.

Maximum pulling force, F = 50 x S in Newtons, where S is the addition of the cross-sectional areas of all the cable's main cores in mm^2.

CORE IDENTIFICATION

POWER CABLES UP TO 1.8/3 kV

Number of cores	Phase			Neutral	Earth
2	Brown			Blue	
2+E	Brown			Blue	Yellow/Green
3	Brown	Black	Grey		
3+E	Brown	Black	Grey		Yellow/Green
4	Brown	Black	Grey	Blue	
4+E	Brown	Black	Grey	Blue	Yellow/Green
5	Brown	Black	Grey	Blue	Black

POWER CABLES OF 3.6/6 kV AND ABOVE

3	Red	Grey	Black	

MULTI-CONDUCTOR CONTROL CABLES OF 250 V OR 0.6/1 kV

"n"	1	2	3	4	n

"n" equals the correlative conductor number

INSTRUMENTATION CABLES OF 150/250 V

Pair	n	n	
Triple	n	n	n
Two pairs overall screen	1 2 2 1		

"n" equals number of each pair or triple.
Grey sheath.
Intrinsically safe circuits: Blue sheath.
Two pair cables overall screened are laid up with diametrically opposite cores.

Other colour code and cable identification can be offered upon request.

CABLE IDENTIFICATION

All cables have the following legend marked on the sheath:

"General Cable + (cable type)+ (voltage) kV + (composition) mm^2 + PN: (article code) + (basic design standard) + LOT: (lot number) + (meter marking)"

Voltage	Cable sheath colour
Control and Instrumentation 250 V	
Low Voltage Power and Control 0.6/1 kV	
Medium Voltage Power ≥6 kV	
Intrinsically safe	

SELECTION GUIDE

GENERAL SERVICE CABLES

	Rated voltage	Type	Characteristics	Series	Page
Low Voltage Power	0.6/1 kV	RDt	Non armoured	7783	26
		RDtC4Dt	Armoured	7784	30
		RC4Dt	Armoured	7596	34
Medium Voltage Power	3.6/6 kV	RHDtC4Dt	Armoured	7785	38
	6/10 kV			7786	38
	8.7/15 kV			7787	38
	12/20 kV			7788	38
	18/30 kV			7791	38
Control	0.6/1 kV	RDt	Non armoured	2655	42
		RDtC4Dt	Armoured	2656	44
		RC4Dt	Armoured	2501	46
	150/250 V	RDt	Non armoured	2657	48
		RC4Dt	Armoured and screened	2659	50
		RDtC4Dt	Armoured and screened	2660	52
		RO2Dt	Screened	2658	54
Instrumentation	150/250 V	RO2Dt	Screened	4098	56
		RO1Dt	Screened	4099	58
		RC4Dt	Armoured and screened	4100	60
		RDtC4Dt	Armoured and screened	4101	62
		RO1C4Dt	Armoured and screened	4102	64
		RO1DtC4Dt	Armoured and screened	4104	66
Switchboard and Earthing wire	0.6/1 kV	UX	Unsheathed	7503 7504	68

FIRE RESISTANT CABLES FOR SAFETY CIRCUITS (IEC 60331)

	Rated voltage	Type	Characteristics	Series	Page
Low Voltage Power	0.6/1 kV	RDt-M	Non armoured	7789	70
		RDtC4Dt-M	Armoured	7790	74
Control	0.6/1 kV	RDt-M	Non armoured	2661	78
	150/250 V	RC4Dt-M	Armoured and screened	2663	80
Instrumentation	150/250 V	RC4Dt-M	Screened	4046 4103	82
		RO1C4Dt-M	Armoured and screened	4043 4113	84

CABLES FOR SYSTEMS WITH VARIABLE FREQUENCY DRIVES (VFD)

	Rated voltage	Type	Characteristics	Series	Page
Low Voltage Power	0.6/1 kV	RO2C4Dt-VFD	Armoured and screened	7792	86
		RO2C4DtZbDt-VFD	Armoured and screened	7793	88
Medium Voltage Power	3.6/6 kV	DHDtO2C4Dt-VFD	Armoured and screened	7867	90
	6/10 kV			7868	90

CABLE DATASHEETS

General Cable

EXZHELLENT® MAR

RDt Non Armoured Low Voltage Power 0.6/1 kV

STANDARDS:

CONSTRUCTION: IEC 60092-350 / IEC 60092-353 / IEC 60092-360
FIRE PERFORMANCE: IEC 60754-1 / IEC 60754-2 / IEC 61034-2
IEC 60332-1-2 / IEC 60332-3-22

CONSTRUCTION:

1. **CONDUCTOR:**
Copper class 5 to IEC 60228.

2. **INSULATION:**
Halogen-free cross linked polyethylene (XLPE). IEC 60092-360.
Core identification: see page 21.

3. **INNER COVERING:**
Halogen-free thermoplastic polyolefin (optional in big cross sections).

4. **OUTER SHEATH:**
Halogen-free thermoplastic polyolefin (SHF 1). IEC 60092-360.

APPLICATIONS:

Flexible cables for marine applications with special performance of flame spread and low emision of smoke and fumes.
Maximum rated conductor temperature in normal operation: 90 °C.
Minimum handling & laying temperature: -15 °C.
Minimum working temperature: -40 °C.

PHYSICAL & ELECTRICAL CHARACTERISTICS:

General Cable Code	Cross section (mm²)	Outer diameter [1] (mm)	Weight[1] (kg/km)	Bending radius [1] (mm)	Current rating Air 45°C [2] (A)	Voltage drop cos μ = 0.8 (V/A·km)	Inductance (mH/km)
7783105	1x1	4.7	35	20	-	34.60	0.455
7783106	1x1,5	4.9	40	20	20	23.64	0.430
7783107	1x2,5	5.3	50	25	28	14.23	0.395
7783108	1x4	5.9	65	25	37	8.865	0.365
7783109	1x6	6.4	85	30	47	5.942	0.342
7783110	1x10	7.4	125	30	65	3.477	0.314
7783111	1x16	8.4	180	35	87	2.234	0.295
7783112	1x25	10.2	275	45	117	1.473	0.290
7783113	1x35	11.3	365	45	147	1.069	0.277
7783114	1x50	13.1	510	55	180	0.771	0.272
7783115	1x70	15.4	715	65	233	0.567	0.265
7783116	1x95	17.0	920	70	285	0.448	0.257
7783117	1x120	19.2	1,170	80	333	0.367	0.253
7783118	1x150	21.2	1,450	85	386	0.311	0.254
7783119	1x185	23.1	1,740	95	444	0.270	0.253
7783120	1x240	26.4	2,310	160	528	0.222	0.248
7783121	1x300	30.0	2,890	180	612	0.193	0.243
7783205	2x1	7.3	60	30	-	34.57	0.349
7783206	2x1,5	7.8	70	35	23	23.61	0.331
7783207	2x2,5	8.8	105	35	31	14.20	0.307
7783208	2x4	9.9	150	40	43	8.839	0.287
7783209	2x6	11.0	215	45	55	5.919	0.272
7783210	2x10	13.1	330	55	75	3.458	0.256
7783211	2x16	15.3	480	65	100	2.218	0.245
7783212	2x25	18.8	725	75	130	1.458	0.246
7783213	2x35	21.2	970	85	161	1.057	0.239
7783214	2x50	23.5	1,335	95	196	0.766	0.250
7783215	2x70	25.1	1,645	150	251	0.556	0.232
7783216	2x95	27.8	2,110	170	306	0.438	0.227
7783217	2x120	31.3	2,675	190	357	0.358	0.226
7783218	2x150	34.6	3,315	210	412	0.302	0.228
7783219	2x185	38.0	4,005	230	472	0.262	0.229
7783220	2x240	43.5	5,315	265	558	0.215	0.226

[1] Dimensional values subject to variation depending on manufacturing tolerances.

[2] Current ratings according to IEC 60092-352 Annex A Table A.4, Method E (Multicore cable). or F (Single core cable; three conductors trefoil).

EXZHELLENT® MAR

RDt Non Armoured Low Voltage Power
0.6/1 kV

PHYSICAL & ELECTRICAL CHARACTERISTICS:

General Cable Code	Cross section (mm^2)	Outer diameter [1] (mm)	Weight (kg/km) [1]	Bending radius [1] (mm)	Current rating Air 45ºC [2] (A)	Voltage drop cos μ = 0.8 (V/A·km)	Inductance (mH/km)
7783305	3x1	7.7	75	35	-	34.57	0.349
7783305*	2x1+1	7.7	75	35	-	34.57	0.349
7783306	3x1.5	8.3	90	35	20	23.61	0.331
7783306*	2x1.5+1.5	8.3	90	35	23	23.61	0.331
7783307	3x2.5	9.4	130	40	28	14.20	0.307
7783307*	2x2.5+2.5	9.4	130	40	31	14.20	0.307
7783308	3x4	10.5	170	45	37	8.839	0.287
7783308*	2x4+4	10.5	170	45	43	8.839	0.287
7783309	3x6	11.9	275	50	47	5.919	0.272
7783309*	2x6+6	11.9	275	50	55	5.919	0.272
7783310	3x10	14.0	415	60	65	3.458	0.256
7783310*	2x10+10	14.0	415	60	75	3.458	0.256
7783311	3x16	16.3	610	65	87	2.218	0.245
7783311*	2x16+16	16.3	610	65	100	2.218	0.245
7783312	3x25	20.1	930	80	110	1.458	0.246
7783313	3x35	22.7	1,255	95	137	1.057	0.239
7783314	3x50	25.3	1,595	155	167	0.759	0.235
7783315	3x70	29.4	2,205	180	214	0.556	0.232
7783316	3x95	32.6	2,840	195	259	0.438	0.227
7783317	3x120	36.9	3,625	225	301	0.358	0.226
7783318	3x150	40.6	4,475	245	347	0.302	0.228
7783319	3x185	44.5	5,410	270	397	0.262	0.229
7783320	3x240	51.0	7,185	310	468	0.215	0.226
7783321	3x300	58.1	9,015	350	540	0.186	0.223
7783405	4x1	8.4	90	35	-	34.57	0.349
7783405*	3x1+1	8.4	90	35	-	34.57	0.349
7783406	4x1.5	9.2	115	40	20	23.61	0.331
7783406*	3x1.5+1.5	9.2	115	40	20	23.61	0.331
7783407	4x2.5	10.2	165	45	28	14.20	0.307

* These codes contain "Green/Yellow" earthing conductor. Please state the construction under "CROSS SECTION" column when ordering this type of cable.

[1] Dimensional values subject to variation depending on manufacturing tolerances.

[2] Current ratings according to IEC 60092-352 Annex A Table A.4, Method E (Multicore cable).

PHYSICAL & ELECTRICAL CHARACTERISTICS:

General Cable Code	Cross section (mm^2)	Outer diameter [1] (mm)	Weight [1] (kg/km)	Bending radius [1] (mm)	Current rating Air 45ºC [2] (A)	Voltage drop cos μ = 0.8 (V/A·km)	Inductance (mH/km)
7783407*	3x2.5+2.5	10.2	165	45	28	14.20	0.307
7783408	4x4	11.7	235	50	37	8.839	0.287
7783408*	3x4+4	11.7	235	50	37	8.839	0.287
7783409	4x6	13.0	335	55	47	5.919	0.272
7783409*	3x6+6	13.0	335	55	47	5.919	0.272
7783410	4x10	15.5	530	65	65	3.458	0.256
7783410*	3x10+10	15.5	530	65	65	3.458	0.256
7783411	4x16	18.2	780	75	87	2.218	0.245
7783411*	3x16+16	18.2	780	75	87	2.218	0.245
7783412	4x25	22.4	1,185	90	110	1.458	0.246
7783413	4x35	25.2	1,605	155	137	1.057	0.239
7783414	4x50	27.7	2,115	170	167	0.759	0.235
7783415	4x70	32.2	2,965	195	214	0.556	0.232
7783416	4x95	35.9	3,845	220	259	0.438	0.227
7783417	4x120	40.5	4,890	245	301	0.358	0.226
7783418	4x150	45.1	6,085	270	347	0.302	0.228
7783419	4x185	49.4	7,350	300	397	0.262	0.229
7783420	4x240	56.6	9,765	340	468	0.215	0.226
7783421	4x300	64.4	12,275	390	540	0.186	0.223
7783505*	4x1+1	9.4	130	40	-	34.57	0.349
7783506*	4x1.5+1.5	10.1	155	40	20	23.61	0.331
7783507*	4x2.5+2.5	11.2	215	45	28	14.20	0.307
7783508*	4x4+4	12.9	305	55	37	8.839	0.287
7783509*	4x6+6	14.6	420	60	47	5.919	0.272
7783510*	4x10+10	17.2	650	70	65	3.458	0.256
7783511*	4x16+16	20.1	960	80	87	2.218	0.245
7783512*	4x25+25	25.0	1,480	100	110	1.458	0.246
7783513*	4x35+35	28.2	2,005	170	137	1.057	0.239
7783514*	4x50+50	32.9	2,805	200	167	0.759	0.236

* These codes contain "Green/Yellow" earthing conductor. Please state the construction under "CROSS SECTION" column when ordering this type of cable.

[1] Dimensional values subject to variation depending on manufacturing tolerances.

[2] Current ratings according to IEC 60092-352 Annex A Table A.4, Method E (Multicore cable).

EXZHELLENT® MAR

RDtC4Dt Armoured Low Voltage Power 0.6/1 kV

STANDARDS:

CONSTRUCTION: IEC 60092-350 / IEC 60092-353 / IEC 60092-360
FIRE PERFORMANCE: IEC 60754-1 / IEC 60754-2 / IEC 61034-2
IEC 60332-1-2 / IEC 60332-3-22

CONSTRUCTION:

1. **CONDUCTOR:**
Copper class 5 to IEC 60228.

2. **INSULATION:**
Halogen-free cross linked polyethylene (XLPE). IEC 60092-360.
Core identification: see page 21.

3. **INNER COVERING:**
Halogen-free thermoplastic polyolefin.

4. **ARMOUR:**
Copper wire braid.

5. **OUTER SHEATH:**
Halogen-free thermoplastic polyolefin (SHF 1). IEC 60092-360.

APPLICATIONS:

Flexible armoured cables for installation in marine applications with special performances on flame spread and low emision of smoke and fumes.

Maximum rated conductor temperature in normal operation: 90 °C.
Minimum handling & laying temperature: -15 °C.
Minimum working temperature: -40 °C.

PHYSICAL & ELECTRICAL CHARACTERISTICS:

General Cable Code	Cross section (mm²)	Diameter under armour (mm)	Outer diameter[1] (mm)	Weight[1] (kg/km)	Bending radius[1] (mm)	Current rating Air 45°C[2] (A)	Inductive Reactance (0hm/km)	Capacitance (µF/km)
7784105	1x1	4.7	7.5	90	30	-	34.63	0.549
7784106	1x1.5	4.9	7.7	95	35	20	23.67	0.520
7784107	1x2.5	5.3	8.1	110	35	28	14.26	0.480
7784108	1x4	5.9	8.7	135	35	37	8.890	0.443
7784109	1x6	6.4	9.2	160	40	47	5.966	0.414
7784110	1x10	7.4	10.4	215	45	65	3.500	0.383
7784111	1x16	8.4	11.4	280	45	87	2.254	0.356
7784112	1x25	10.0	13.2	390	55	117	1.490	0.341
7784113	1x35	11.1	14.3	495	60	147	1.085	0.325
7784114	1x50	12.7	16.5	695	70	180	0.786	0.318
7784115	1x70	14.8	18.8	930	75	233	0.580	0.305
7784116	1x95	16.4	20.4	1,150	85	285	0.460	0.293
7784117	1x120	18.4	22.6	1,430	90	333	0.378	0.286
7784118	1x150	20.2	24.6	1,735	100	386	0.321	0.284
7784119	1x185	22.1	26.5	2,050	160	444	0.279	0.280
7784120	1x240	25.2	29.8	2,700	180	528	0.230	0.272
7784121	1x300	28.6	33.4	3,290	200	612	0.200	0.265
7784205	2x1	7.3	10.3	150	45	-	34.57	0.349
7784206	2x1.5	7.8	10.8	165	45	23	23.61	0.331
7784207	2x2.5	8.6	11.6	200	50	31	14.20	0.307
7784208	2x4	9.7	12.9	240	55	43	8.839	0.287
7784209	2x6	10.8	14.0	340	60	55	5.919	0.272
7784210	2x10	12.7	16.5	515	70	75	3.458	0.256
7784211	2x16	14.7	18.7	690	75	100	2.218	0.245
7784212	2x25	18.0	22.2	980	90	130	1.458	0.246
7784213	2x35	20.2	24.6	1,260	100	161	1.057	0.239
7784214	2x50	20.0	24.6	1,455	150	196	0.759	0.235
7784215	2x70	23.5	28.3	1,965	170	251	0.556	0.232
7784216	2x95	26.4	31.4	2,495	190	306	0.438	0.227
7784217	2x120	29.7	35.5	3,210	215	357	0.358	0.226
7784218	2x150	32.8	38.8	3,900	235	412	0.302	0.228
7784219	2x185	36.2	42.6	4,690	255	472	0.262	0.229
7784220	2x240	41.3	48.1	6,095	290	558	0.215	0.226

[1] Dimensional values subject to variation depending on manufacturing tolerances.

[2] Current ratings according to IEC 60092-352 Annex A Table A.4, Method E (Multicore cable). or F (Single core cable; three conductors trefoil).

EXZHELLENT® MAR

RDtC4Dt Armoured Low Voltage Power
0.6/1 kV

PHYSICAL & ELECTRICAL CHARACTERISTICS:

General Cable Code	Cross section (mm²)	Diameter under armour (mm)	Outer diameter[1] (mm)	Weight[1] (kg/km)	Bending radius[1] (mm)	Current rating Air 45°C[2] (A)	Inductive Reactance (0hm/km)	Capacitance (µF/km)
7784305	3x1	7.7	10.7	170	45	-	34.57	0.349
7784305*	2x1+1	7.7	10.7	170	45	-	34.57	0.349
7784306	3x1.5	8.3	11.3	190	45	20	23.61	0.331
7784306*	2x1.5+1.5	8.3	11.3	190	45	23	23.61	0.331
7784307	3x2.5	9.2	12.2	230	50	28	14.20	0.307
7784307*	2x2.5+2.5	9.2	12.2	230	50	31	14.20	0.307
7784308	3x4	10.3	13.5	290	55	37	8.839	0.287
7784308*	2x4+4	10.3	13.5	290	55	43	8.839	0.287
7784309	3x6	11.5	14.7	400	60	47	5.919	0.272
7784309*	2x6+6	11.5	14.7	400	60	55	5.919	0.272
7784310	3x10	13.6	17.4	610	70	65	3.458	0.256
7784310*	2x10+10	13.6	17.4	610	70	75	3.458	0.256
7784311	3x16	15.7	19.7	835	80	87	2.218	0.245
7784311*	2x16+16	15.7	19.7	835	80	100	2.218	0.245
7784312	3x25	19.3	23.5	1,200	95	110	1.458	0.246
7784313	3x35	21.7	26.1	1,570	160	137	1.057	0.239
7784314	3x50	23.7	28.5	1,920	175	167	0.759	0.235
7784315	3x70	28.2	33.2	2,630	200	214	0.556	0.232
7784316	3x95	31.2	36.4	3,310	220	259	0.438	0.227
7784317	3x120	35.1	41.1	4,250	250	301	0.358	0.226
7784318	3x150	39.2	45.4	5,220	275	347	0.302	0.228
7784319	3x185	42.8	49.4	6,225	300	397	0.262	0.229
7784320	3x240	49.3	56.3	8,170	340	468	0.215	0.226
7784321	3x300	55.9	63.3	10,130	380	540	0.186	0.223
7784405	4x1	8.4	11.4	190	50	-	34.57	0.349
7784405*	3x1+1	8.4	11.4	190	50	-	34.57	0.349
7784406	4x1.5	9.0	12.0	215	50	20	23.61	0.331
7784406*	3x1.5+1.5	9.0	12.0	215	50	20	23.61	0.331
7784407	4x2.5	10.0	13.2	295	55	28	14.20	0.307

* These codes contain "Green/Yellow" earthing conductor. Please state the construction under "CROSS SECTION" column when ordering this type of cable.

[1] Dimensional values subject to variation depending on manufacturing tolerances.

[2] Current ratings according to IEC 60092-352 Annex A Table A.4, Method E (Multicore cable). or F (Single core cable; three conductors trefoil).

General Cable Code	Cross section (mm²)	Diameter under armour (mm)	Outer diameter[1] (mm)	Weight[1] (kg/km)	Bending radius[1] (mm)	Current rating Air 45°C[2] (A)	Inductive Reactance (0hm/km)	Capacitance (µF/km)
7784407*	3x2.5+2.5	10.0	13.2	295	55	20	14.20	0.307
7784408	4x4	11.0	14.2	350	60	37	8.244	0.304
7784408*	3x4+4	11.0	14.2	350	60	37	8.244	0.304
7784409	4x6	12.6	16.4	515	195	47	5.919	0.272
7784409*	3x6+6	12.6	16.4	515	195	47	5.919	0.272
7784410	4x10	14.9	18.9	745	80	65	3.458	0.256
7784410*	3x10+10	14.9	18.9	745	80	65	3.458	0.256
7784411	4x16	17.4	21.6	1,025	90	87	2.218	0.245
7784411*	3x16+16	17.4	21.6	1,025	90	87	2.218	0.245
7784412	4x25	21.4	25.8	1,485	155	110	1.458	0.246
7784413	4x35	24.0	28.6	1,945	175	137	1.057	0.239
7784414	4x50	26.1	31.1	2,485	190	167	0.759	0.235
7784415	4x70	31.1	36.3	3,420	220	214	0.556	0.232
7784416	4x95	34.4	40.4	4,435	245	259	0.438	0.227
7784417	4x120	39.2	45.4	5,590	275	301	0.358	0.226
7784418	4x150	43.3	49.9	6,850	300	347	0.302	0.228
7784419	4x185	47.3	54.3	8,185	330	397	0.262	0.229
7784420	4x240	54.4	62.0	10,790	375	468	0.215	0.226
7784421	4x300	61.9	69.9	13,415	420	540	0.186	0.223
7784505	4x1+1	9.2	12.2	235	75	-	34.57	0.349
7784506*	4x1.5+1.5	9.9	13.1	275	80	20	23.61	0.331
7784507*	4x2.5+2.5	11.0	14.2	345	60	28	14.20	0.307
7784508*	4x4+4	12.5	16.3	485	65	37	8.839	0.287
7784509*	4x6+6	14.0	17.8	610	75	47	5.919	0.272
7784510*	4x10+10	16.6	20.6	885	85	65	3.458	0.256
7784511*	4x16+16	19.3	23.5	1,235	95	87	2.218	0.245
7784512*	4x25+25	23.8	28.4	1,815	170	110	1.458	0.246
7784513*	4x35+35	26.8	31.6	2,380	190	137	1.057	0.239
7784514*	4x50+50	31.5	36.7	3,280	220	167	0.759	0.236

* These codes contain "Green/Yellow" earthing conductor. Please state the construction under "CROSS SECTION" column when ordering this type of cable.

[1] Dimensional values subject to variation depending on manufacturing tolerances.

[2] Current ratings according to IEC 60092-352 Annex A Table A.4, Method E (Multicore cable).

EXZHELLENT® MAR

RC4Dt Armoured Low Voltage Power 0.6/1 kV

STANDARDS:

CONSTRUCTION: IEC 60092-350 / IEC 60092-353 / IEC 60092-360
FIRE PERFORMANCE: IEC 60754-1 / IEC 60754-2 / IEC 61034-2
IEC 60332-1-2 / IEC 60332-3-22

CONSTRUCTION:

1. **CONDUCTOR:**
Copper class 5 to IEC 60228.

2. **INSULATION:**
Halogen-free cross linked polyethylene (XLPE). IEC 60092-360.
Core identification: see page 21.

3. **ARMOUR:**
Copper wire braid.

4. **OUTER SHEATH:**
Halogen-free thermoplastic polyolefin (SHF 1). IEC 60092-360.

APPLICATIONS:

Flexible armoured cables for installation in marine applications with special performances on flame spread and low emision of smoke and fumes.

Maximum rated conductor temperature in normal operation: 90 °C.
Minimum handling & laying temperature: -15 °C.
Minimum working temperature: -40 °C.

PHYSICAL & ELECTRICAL CHARACTERISTICS:

General Cable Code	Cross section (mm²)	Diameter under armour (mm)	Outer diameter[1] (mm)	Weight[1] (kg/km)	Bending radius[1] (mm)	Current rating Air 45°C[2] (A)	Voltage drop cos μ = 0.8 (V/A·km)	Inductance (mH/km)
7596105	1x1	2.8	5.7	52	35	-	34.62	0.496
7596106	1x1.5	3.0	6.0	60	36	20	23.65	0.469
7596107	1x2.5	3.5	6.4	72	39	28	14.24	0.431
7596108	1x4	4.0	6.9	91	42	37	8.876	0.398
7596109	1x6	4.5	7.5	115	45	47	5.952	0.372
7596110	1x10	5.5	8.4	160	51	65	3.486	0.341
7596111	1x16	6.5	9.6	225	58	87	2.243	0.323
7596112	1x25	8.1	11.3	325	91	117	1.479	0.309
7596113	1x35	9.2	12.6	425	105	147	1.076	0.298
7596114	1x50	11.1	14.4	585	120	180	0.777	0.291
7596115	1x70	13.2	17.1	830	140	233	0.574	0.286
7596116	1x95	14.8	18.9	1,055	115	285	0.455	0.278
7596117	1x120	16.8	21.1	1,320	170	333	0.373	0.272
7596118	1x150	18.6	22.9	1,605	185	386	0.316	0.269
7596119	1x185	20.7	25.2	1,940	205	444	0.275	0.270
7596120	1x240	23.6	28.3	2,510	170	528	0.228	0.264
7596121	1x300	27.2	32.1	3,110	195	612	0.197	0.257
7596205	2x1	5.6	8.7	105	53	-	34.57	0.349
7596206	2x1.5	6.1	9.2	120	56	23	23.61	0.331
7596207	2x2.5	7.0	10.3	160	62	31	14.20	0.307
7596208	2x4	8.2	11.5	205	92	43	8.839	0.287
7596209	2x6	9.3	13.2	290	110	55	5.919	0.272
7596210	2x10	11.2	15.3	410	125	75	3.458	0.256
7596211	2x16	13.2	17.3	555	140	100	2.218	0.245
7596212	2x25	16.5	20.8	800	170	130	1.458	0.246
7596213	2x35	18.7	23.2	1,030	190	161	1.057	0.239
7596214	2x50	22.0	26.7	1,280	215	196	0.759	0.236
7596215	2x70	21.7	26.9	1,665	215	251	0.556	0.232
7596216	2x95	24.3	29.6	2,105	240	306	0.438	0.228
7596217	2x120	27.7	33.6	2,710	270	357	0.358	0.226
7596218	2x150	30.7	37.0	3,325	300	412	0.302	0.228
7596219	2x185	33.8	40.3	3,990	325	472	0.262	0.229
7596220	2x240	38.9	45.8	5,190	370	558	0.215	0.226

[1] Dimensional values subject to variation depending on manufacturing tolerances.

[2] Current ratings according to IEC 60092-352 Annex A Table A.4, Method E (Multicore cable). or F (Single core cable; three conductors trefoil).

EXZHELLENT® MAR

RC4Dt Armoured Low Voltage Power
0.6/1 kV

PHYSICAL & ELECTRICAL CHARACTERISTICS:

General Cable Code	Cross section (mm²)	Diameter under armour (mm)	Outer diameter[1] (mm)	Weight[1] (kg/km)	Bending radius[1] (mm)	Current rating Air 45°C[2] (A)	Voltage drop cos μ = 0.8 (V/A·km)	Inductance (mH/km)
7596305	3x1	6.0	9.4	125	57	-	34.57	0.349
7596305*	2x1+1	6.0	9.4	125	57	-	34.57	0.349
7596306	3x1,5	6.6	9.9	145	60	20	23.61	0.331
7596306*	2x1,5+1,5	6.6	9.9	145	60	23	23.61	0.331
7596307	3x2,5	7.5	10.8	180	65	28	14.20	0.307
7596307*	2x2.5+2.5	7.5	10.8	180	65	31	14.20	0.307
7596308	3x4	8.8	12.7	270	77	37	8.839	0.287
7596308*	2x4+4	8.8	12.7	270	77	43	8.839	0.287
7596309	3x6	10.0	13.9	340	84	47	5.919	0.272
7596309*	2x6+6	10.0	13.9	340	84	55	5.919	0.272
7596310	3x10	12.0	16.1	490	97	65	3.458	0.256
7596310*	2x10+10	12.0	16.1	490	97	75	3.458	0.256
7596311	3x16	14.2	18.3	710	110	87	2.218	0.245
7596311*	2x16+16	14.2	18.3	710	110	100	2.218	0.245
7596312	3x25	17.7	22.2	1,100	135	110	1.458	0.246
7596313	3x35	20.3	25.0	1,365	200	137	1.057	0.239
7596314	3x50	21.6	26.5	1,725	160	167	0.759	0.236
7596315	3x70	25.8	30.9	2,355	190	214	0.556	0.232
7596316	3x95	28.8	34.1	2,995	205	259	0.438	0.228
7596317	3x120	32.8	38.5	3,785	235	301	0.358	0.226
7596318	3x150	36.4	42.9	4,770	345	347	0.302	0.228
7596319	3x185	40.1	47.0	5,760	380	397	0.262	0.229
7596320	3x240	46.2	53.5	7,510	430	468	0.215	0.226
7596321	3x300	52.9	60.6	9,415	485	540	0.186	0.223
7596405	4x1	6.7	10.0	145	61	-	34.57	0.349
7596405*	3x1+1	6.7	10.0	145	61	-	34.57	0.349
7596406	4x1,5	7.3	10.7	190	64	20	23.61	0.331
7596406*	3x1.5+1.5	7.3	10.7	190	64	20	23.61	0.331
7596407	4x2,5	8.4	12.3	245	99	28	14.20	0.307

* These codes contain "Green/Yellow" earthing conductor. Please state the construction under "CROSS SECTION" column when ordering this type of cable.

[1] Dimensional values subject to variation depending on manufacturing tolerances.

[2] Current ratings according to IEC 60092-352 Annex A Table A.4, Method E (Multicore cable).

PHYSICAL & ELECTRICAL CHARACTERISTICS:

General Cable Code	Cross section (mm²)	Diameter under armour (mm)	Outer diameter[1] (mm)	Weight[1] (kg/km)	Bending radius[1] (mm)	Current rating Air 45°C[2] (A)	Voltage drop cos μ = 0.8 (V/A·km)	Inductance (mH/km)
7596407*	3x2.5+2.5	8.4	12.3	245	99	28	14.20	0.307
7596408	4x4	9.8	13.7	320	110	37	8.839	0.287
7596408*	3x4+4	9.8	13.7	320	110	37	8.839	0.287
7596409	4x6	11.1	15.2	415	125	47	5.919	0.272
7596409*	3x6+6	11.1	15.2	415	125	47	5.919	0.272
7596410	4x10	13.4	17.5	595	145	65	3.458	0.256
7596410*	3x10+10	13.4	17.5	595	145	65	3.458	0.256
7596411	4x16	15.8	20.1	845	165	87	2.218	0.245
7596411*	3x16+16	15.8	20.1	845	165	87	2.218	0.245
7596412	4x25	19.8	24.3	1,270	195	110	1.458	0.246
7596413	4x35	22.5	27.2	1,675	220	137	1.057	0.239
7596414	4x50	24.0	29.1	2,220	235	167	0.759	0.236
7596415	4x70	28.6	33.9	3,040	275	214	0.556	0.232
7596416	4x95	32.0	38.1	3,990	305	259	0.438	0.228
7596417	4x120	36.5	43.0	5,035	345	301	0.358	0.226
7596418	4x150	40.4	47.3	6,200	380	347	0.302	0.228
7596419	4x185	44.6	51.9	7,495	420	397	0.262	0.229
7596420	4x240	51.4	59.1	9,795	475	468	0.215	0.226
7596421	4x300	58.8	66.9	12,290	540	540	0.186	0.223
7596505*	4x1+1	7.7	11.0	175	66	-	34.57	0.349
7596506*	4x1.5+1.5	8.3	12.2	235	74	20	23.61	0.331
7596507*	4x2.5+2.5	9.5	13.4	295	81	28	14.20	0.307
7596508*	4x4+4	10.9	15.0	390	91	37	8.839	0.287
7596509*	4x6+6	12.4	16.5	505	100	47	5.919	0.272
7596510*	4x10+10	15.0	19.3	740	120	65	3.458	0.256
7596511*	4x16+16	17.7	22.2	1,050	135	87	2.218	0.245
7596512*	4x25+25	22.2	26.9	1,545	165	110	1.458	0.246
7596513*	4x35+35	25.2	30.1	2,050	185	137	1.057	0.239
7596514*	4x50+50	29.6	34.9	2,830	210	167	0.759	0.236

* These codes contain "Green/Yellow" earthing conductor. Please state the construction under "CROSS SECTION" column when ordering this type of cable.

[1] Dimensional values subject to variation depending on manufacturing tolerances.

[2] Current ratings according to IEC 60092-352 Annex A Table A.4, Method E (Multicore cable).

EXZHELLENT® MAR

RHDtC4Dt Armoured Medium Voltage Power
3.6/6 kV - 6/10 kV - 8.7/15 kV - 12/20 kV - 18/30 kV

STANDARDS:

CONSTRUCTION: IEC 60092-350 / IEC 60092-353 / IEC 60092-360
FIRE PERFORMANCE: IEC 60754-1 / IEC 60754-2 / IEC 61034-2
IEC 60332-1-2 / IEC 60332-3-22

CONSTRUCTION:

1. **CONDUCTOR:**
Copper class 2 to IEC 60228.

2. **INNER SEMICONDUCTOR**

3. **INSULATION:**
Halogen-free cross linked polyethylene (XLPE). IEC 60092-360.

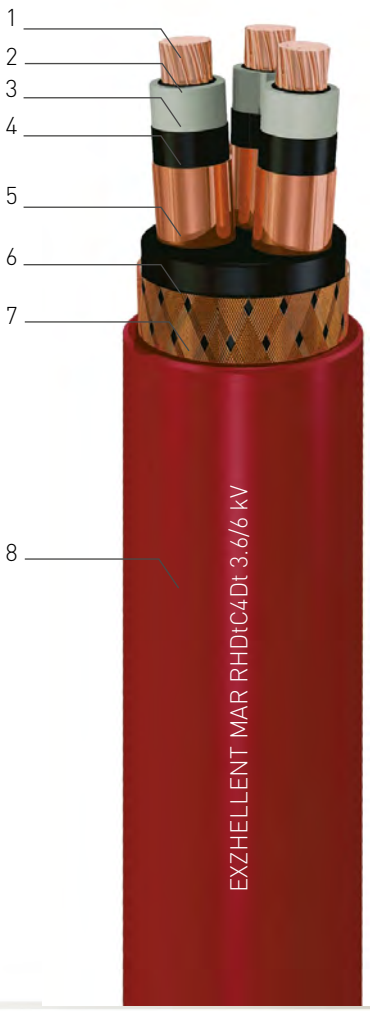
4. **OUTER SEMICONDUCTOR:**
Core identification: see page 21.

5. **METALLIC SCREEN:**
Copper tape

6. **INNER COVERING:**
Halogen-free thermoplastic polyolefin.

7. **ARMOUR:**
Copper wire braid.

8. **OUTER SHEATH:**
Halogen-free thermoplastic polyolefin.



APPLICATIONS:

Copper braid armoured high voltage cables for installation in marine applications with enhanced performances on flame spread and low emision of smoke and fumes.

Maximum rated conductor temperature in normal operation: 90 °C.
Minimum handling & laying temperature: -15 °C.
Minimum working temperature: -40 °C.

PHYSICAL & ELECTRICAL CHARACTERISTICS:

3.6/6 kV

General Cable Code	Cross section (mm²)	Diameter under screen[1] (mm)	Diameter under armour[1] (mm)	Outer diameter[1] (mm)	Weight[1] (kg/km)	Current rating Air 45°C[2] (A)	Inductive Reactance (Ohm/km)	Capacitance (µF/km)
7785114	1x50	15.3	17.9	22.3	1,005	171	0.127	0.289
7785115	1x70	16.7	19.3	23.7	1,235	221	0.119	0.325
7785116	1x95	18.4	21.0	25.6	1,540	270	0.113	0.369
7785117	1x120	20.1	22.7	27.3	1,820	316	0.109	0.412
7785118	1x150	21.4	24.0	28.8	2,115	366	0.105	0.447
7785119	1x185	23.0	25.6	30.4	2,510	421	0.102	0.488
7785120	1x240	25.5	28.1	33.1	3,135	501	0.098	0.528
7785121	1x300	28.6	31.2	36.4	3,855	581	0.097	0.558
7785312	3x25	13.1	31.8	37.6	2,360	104	0.118	0.231
7785313	3x35	14.1	34.3	40.7	2,875	130	0.112	0.258
7785314	3x50	15.3	37.0	43.2	3,395	158	0.105	0.289
7785315	3x70	16.7	40.4	47.0	4,265	203	0.099	0.325
7785316	3x95	18.4	44.2	51.0	5,295	246	0.095	0.369
7785317	3x120	20.1	48.1	55.1	6,340	285	0.091	0.412
7785318	3x150	21.4	51.4	58.8	7,405	329	0.088	0.447

6/10 KV

General Cable Code	Cross section (mm²)	Diameter under screen[1] (mm)	Diameter under armour[1] (mm)	Outer diameter[1] (mm)	Weight[1] (kg/km)	Current rating Air 45°C[2] (A)	Inductive Reactance (Ohm/km)	Capacitance (µF/km)
7786112	1x25	14.9	17.5	21.7	795	111	0.147	0.183
7786113	1x35	15.9	18.5	22.9	935	139	0.14	0.204
7786114	1x50	17.1	19.7	24.1	1,095	171	0.132	0.227
7786115	1x70	18.5	21.1	25.7	1,345	221	0.124	0.254
7786116	1x95	20.2	22.8	27.4	1,640	270	0.118	0.287
7786117	1x120	21.9	24.5	29.3	1,940	316	0.113	0.318
7786118	1x150	23.2	25.8	30.8	2,240	366	0.109	0.344
7786119	1x185	24.8	27.4	32.4	2,635	421	0.106	0.374
7786120	1x240	27.1	29.7	34.9	3,260	501	0.101	0.418
7786121	1x300	29.8	32.4	37.8	3,960	581	0.099	0.47
7786312	3x25	14.9	36.0	42.2	2,770	104	0.126	0.183
7786313	3x35	15.9	38.6	45.0	3,275	130	0.119	0.204
7786314	3x50	17.1	41.3	47.9	3,860	158	0.112	0.227
7786315	3x70	18.5	44.4	51.2	4,710	203	0.106	0.254
7786316	3x95	20.2	48.7	55.9	5,860	246	0.101	0.287
7786317	3x120	21.9	52.4	59.8	6,910	285	0.097	0.318
7786318	3x150	23.2	55.4	63.0	7,945	329	0.093	0.344

[1] Dimensional values subject to variation depending on manufacturing tolerances.

[2] Current ratings according to IEC 60092-352 Annex A Table A.4, Method E (Multicore cable) or F (Single core cable).
Current ratings 5 % lower than the tabulated values (Note 2 of point A.1 of IEC 60092-352).

EXZHELLENT® MAR

RHDtC4Dt Armoured Medium Voltage Power
3.6/6 kV - 6/10 kV - 8.7/15 kV - 12/20 kV - 18/30 kV

PHYSICAL & ELECTRICAL CHARACTERISTICS:

8.7/15 kV

General Cable Code	Cross section (mm²)	Diameter under screen[1] (mm)	Diameter under armour[1] (mm)	Outer diameter[1] (mm)	Weight[1] (kg/km)	Current rating Air 45ºC[2] (A)	Inductive Reactance (0hm/km)	Capacitance (µF/km)
7787112	1x25	17.1	19.7	24.1	915	111	0.154	0.151
7787113	1x35	18.1	20.7	25.3	1,060	139	0.146	0.167
7787114	1x50	19.3	21.9	26.5	1,220	171	0.138	0.184
7787115	1x70	20.7	23.3	28.1	1,475	221	0.13	0.205
7787116	1x95	22.4	25.0	29.8	1,780	270	0.123	0.23
7787117	1x120	24.1	26.7	31.7	2,085	316	0.118	0.254
7787118	1x150	25.4	28.0	33.0	2,380	366	0.114	0.273
7787119	1x185	27.0	29.6	34.8	2,795	421	0.11	0.296
7787120	1x240	29.3	31.9	37.7	3,515	501	0.106	0.33
7787121	1x300	32.0	34.6	40.8	4,255	581	0.104	0.369
7787312	3x25	17.1	41.2	47.8	3,320	104	0.135	0.151
7787313	3x35	18.1	43.5	50.3	3,820	130	0.128	0.167
7787314	3x50	19.3	46.2	53.2	4,440	158	0.12	0.184
7787315	3x70	20.7	49.8	57.0	5,380	203	0.113	0.205
7787316	3x95	22.4	53.6	61.2	6,520	246	0.107	0.23
7787317	3x120	24.1	57.3	65.1	7,610	285	0.103	0.254
7787318	3x150	25.4	60.4	68.4	8,680	329	0.099	0.273

12/20 kV

General Cable Code	Cross section (mm²)	Diameter under screen[1] (mm)	Diameter under armour[1] (mm)	Outer diameter[1] (mm)	Weight[1] (kg/km)	Current rating Air 45ºC[2] (A)	Inductive Reactance (0hm/km)	Capacitance (µF/km)
7788113	1x35	20.1	22.7	27.3	1,165	139	0.151	0.145
7788114	1x50	21.3	23.9	28.7	1,350	171	0.143	0.16
7788115	1x70	22.7	25.3	30.1	1,595	221	0.134	0.177
7788116	1x95	24.4	27.0	32.0	1,920	270	0.127	0.198
7788117	1x120	26.1	28.7	33.9	2,230	316	0.122	0.217
7788118	1x150	27.4	30.0	35.2	2,530	366	0.118	0.233
7788119	1x185	29.0	31.6	37.4	3,040	421	0.115	0.253
7788120	1x240	31.3	33.9	39.9	3,685	501	0.11	0.28
7788121	1x300	34.0	36.8	43.0	4,430	581	0.107	0.312
7788313	3x35	20.1	48.4	55.6	4,430	130	0.134	0.145
7788314	3x50	21.3	51.1	58.5	5,080	158	0.127	0.16
7788315	3x70	22.7	54.3	61.9	5,995	203	0.119	0.177
7788316	3x95	24.4	58.1	65.9	7,165	246	0.113	0.198

[1] Dimensional values subject to variation depending on manufacturing tolerances.

[2] Current ratings according to IEC 60092-352 Annex A Table A.4, Method E (Multicore cable) or F (Single core cable).
Current ratings 5 % lower than the tabulated values (Note 2 of point A.1 of IEC 60092-352).

PHYSICAL & ELECTRICAL CHARACTERISTICS:

12/20 kV

General Cable Code	Cross section (mm²)	Diameter under screen[1] (mm)	Diameter under armour[1] (mm)	Outer diameter[1] (mm)	Weight[1] (kg/km)	Current rating Air 45°C[2] (A)	Inductive Reactance (0hm/km)	Capacitance (µF/km)
7788317	3x120	26.1	61.8	70.0	8,355	285	0.108	0.217
7788318	3x150	27.4	65.3	73.7	9,470	329	0.104	0.233

18/30 kV

General Cable Code	Cross section (mm²)	Diameter under screen[1] (mm)	Diameter under armour[1] (mm)	Outer diameter[1] (mm)	Weight[1] (kg/km)	Current rating Air 45°C[2] (A)	Inductive Reactance (0hm/km)	Capacitance (µF/km)
7791114	1x50	26.3	28.9	34.3	1,705	171	0.154	0.125
7791115	1x70	27.7	30.3	36.1	2,050	221	0.146	0.137
7791116	1x95	29.4	32.0	38.0	2,395	270	0.138	0.152
7791117	1x120	31.1	33.7	39.9	2,730	316	0.133	0.166
7791118	1x150	32.4	35.2	41.4	3,060	366	0.128	0.177
7791119	1x185	34.0	36.8	43.2	3,510	421	0.124	0.19
7791120	1x240	36.3	39.1	45.7	4,185	501	0.118	0.209
7791121	1x300	39.0	42.0	48.8	4,965	581	0.115	0.232
7791314	3x50	26.3	62.8	71.2	6,800	171	0.14	0.125
7791315	3x70	27.7	65.9	74.5	7,800	221	0.131	0.137
7791316	3x95	29.4	70.0	79.0	9,120	270	0.125	0.152
7791317	3x120	31.1	73.9	83.1	10,380	316	0.119	0.166
7791318	3x150	32.4	76.9	86.3	11,560	366	0.115	0.177

[1] Dimensional values subject to variation depending on manufacturing tolerances.

[2] Current ratings according to IEC 60092-352 Annex A Table A.4, Method E (Multicore cable) or F (Single core cable).
Current ratings 5 % lower than the tabulated values (Note 2 of point A.1 of IEC 60092-352).

EXZHELLENT® MAR

RDt Non Armoured Control
0.6/1 kV

STANDARDS:

CONSTRUCTION: IEC 60092-350 / IEC 60092-353 / IEC 60092-360
FIRE PERFORMANCE: IEC 60754-1 / IEC 60754-2 / IEC 61034-2
IEC 60332-1-2 / IEC 60332-3-22

CONSTRUCTION:

1. **CONDUCTOR:**
Copper class 5 to IEC 60228.

2. **INSULATION:**
Halogen-free cross linked polyethylene (XLPE). IEC 60092-360.
Core identification: see page 21.

3. **INNER COVERING:**
Halogen-free thermoplastic polyolefin (optional in big cross sections).

4. **OUTER SHEATH:**
Halogen-free thermoplastic polyolefin (SHF 1).

APPLICATIONS:

Low voltage control cables for marine applications. With special fire performance such as halogen-free, fire retardancy, and low emission of smoke and fumes.

Minimum handling & laying temperature: -15 ºC.
Minimum working temperature: -40 ºC.

PHYSICAL & ELECTRICAL CHARACTERISTICS:

General Cable Code	Cross section (mm^2)	Outer diameter[1] (mm)	Weight[1] (kg/km)	Bending radius[1] (mm)
2655055	5x1	9.5	125	40
2655056	5x1.5	10.2	155	45
2655057	5x2.5	11.3	220	45
2655075	7x1	10.3	155	45
2655076	7x1.5	11.0	190	45
2655077	7x2.5	12.5	270	50
2655125	12x1	13.5	245	55
2655126	12x1.5	14.8	320	60
2655127	12x2.5	16.5	440	70
2655195	19x1	16.0	360	65
2655196	19x1.5	17.5	465	70
2655197	19x2.5	19.6	650	80
2655245	24x1	18.8	460	75
2655246	24x1.5	20.5	595	85
2655247	24x2.5	23.2	845	95
2655275	27x1	19.2	495	80
2655276	27x1.5	21.0	640	85
2655277	27x2.5	23.8	915	95
2655375	37x1	21.7	645	90
2655376	37x1.5	23.6	840	95
2655377	37x2.5	26.7	1,205	160

[1] Dimensional values subject to variation depending on manufacturing tolerances.

EXZHELLENT® MAR

RDtC4Dt Armoured Control
0.6/1 kV

STANDARDS:

CONSTRUCTION: IEC 60092-350 / IEC 60092-353 / IEC 60092-360
FIRE PERFORMANCE: IEC 60754-1 / IEC 60754-2 / IEC 61034-2
IEC 60332-1-2 / IEC 60332-3-22

CONSTRUCTION:

1. **CONDUCTOR:**
Copper class 2.

2. **INSULATION:**
Halogen-free cross linked polyethylene (XLPE). IEC 60092-360.

3. **INNER COVERING:**
Halogen-free thermoplastic polyolefin (SHF1). IEC 60092-360.

4. **ARMOUR:**
Copper wire braid.

5. **OUTER SHEATH:**
Halogen-free thermoplastic polyolefin (SHF 1). IEC 60092-360.

APPLICATIONS:

Low voltage control cables for marine applications. With special fire performance such as halogen-free, fire retardancy, and low emission of smoke and fumes.

Minimum handling & laying temperature: -15 ºC.
Minimum working temperature: -40 ºC.

PHYSICAL & ELECTRICAL CHARACTERISTICS:

General Cable Code	Cross section (mm^2)	Diameter under armour [1] (mm)	Outer diameter[1] (mm)	Weight[1] (kg/km)	Bending radius[1] (mm)
2656055	5x1	9.2	12.2	220	75
2656056	5x1.5	9.9	13.1	255	80
2656057	5x2.5	11.1	14.3	350	60
2656075	7x1	10.1	13.3	275	55
2656076	7x1.5	10.8	14.0	320	60
2656077	7x2.5	12.1	15.9	445	65
2656125	12x1	13.1	16.9	435	70
2656126	12x1.5	14.2	18.2	520	75
2656127	12x2.5	15.9	19.9	665	120
2656195	19x1	15.4	19.4	580	80
2656196	19x1.5	16.7	20.9	700	85
2656197	19x2.5	18.8	23.0	915	140
2656245	24x1	18.0	22.2	715	135
2656246	24x1.5	19.5	23.9	875	145
2656247	24x2.5	22.0	26.6	1,160	160
2656275	27x1	18.4	22.6	755	140
2656276	27x1.5	20.0	24.4	920	150
2656277	27x2.5	22.6	27.2	1,230	165
2656375	37x1	20.7	25.1	935	150
2656376	37x1.5	22.4	27.0	1,155	165
2656377	37x2.5	25.3	30.1	1,560	185

[1] Dimensional values subject to variation depending on manufacturing tolerances.

EXZHELLENT® MAR

RC4Dt Armoured Control
0.6/1 kV

STANDARDS:

CONSTRUCTION: IEC 60092-350 / IEC 60092-353 / IEC 60092-360
FIRE PERFORMANCE: IEC 60754-1 / IEC 60754-2 / IEC 61034-2
IEC 60332-1-2 / IEC 60332-3-22

CONSTRUCTION:

1. **CONDUCTOR:**
Copper class 5 to IEC 60228.

2. **INSULATION:**
Halogen-free cross linked polyethylene (XLPE). IEC 60032-360.
Core identification: see page 21.

3. **ARMOUR:**
Copper wire braid.

4. **OUTER SHEATH:**
Halogen-free thermoplastic polyolefin (SHF 1). IEC 60092-360.

APPLICATIONS:

Low voltage armoured control cables for marine applications. With special fire performance such as halogen-free, fire retardancy, and low emission of smoke and fumes.

Minimum handling & laying temperature: -15 ºC.
Minimum working temperature: -40 ºC.

PHYSICAL & ELECTRICAL CHARACTERISTICS:

General Cable Code	Cross section (mm^2)	Diameter under armour[1] (mm)	Outer diameter[1] (mm)	Weight[1] (kg/km)	Bending radius[1] (mm)
2501055	5x1	7.7	10.8	165	87
2501056	5x1.5	8.3	11.4	200	69
2501057	5x2.5	9.5	12.8	255	105
2501066	6x1.5	9.2	12.5	235	105
2501067	6x2.5	10.5	13.8	305	115
2501075	7x1	8.4	11.5	195	93
2501076	7x1.5	9.2	12.5	245	100
2501077	7x2.5	10.4	13.7	315	110
2501087	8x2.5	12.6	16.5	450	135
2501096	9x1.5	12.1	16.0	370	130
2501125	12x1	11.5	15.4	340	125
2501126	12x1.5	12.5	16.4	410	135
2501127	12x2.5	14.3	18.4	545	150
2501166	16x1.5	14.0	18.1	505	145
2501195	19x1	13.8	17.9	470	145
2501196	19x1.5	15.0	19.1	575	155
2501197	19x2.5	17.2	21.5	780	175
2501245	24x1	16.4	20.7	580	170
2501246	24x1.5	17.9	22.2	720	180
2501247	24x2.5	20.4	24.9	980	200
2501275	27x1	16.8	21.1	625	170
2501276	27x1.5	18.3	22.6	770	185
2501277	27x2.5	20.9	25.4	1,055	205
2501375	37x1	19.0	23.5	795	190
2501376	37x1.5	20.8	25.3	990	205
2501377	37x2.5	23.7	28.6	1,380	230

[1] Dimensional values subject to variation depending on manufacturing tolerances.

EXZHELLENT® MAR

RDt Non Armoured Control
150/250 V

STANDARDS:

CONSTRUCTION: IEC 60092-350 / IEC 60092-360 / IEC 60092-376
FIRE PERFORMANCE: IEC 60754-1 / IEC 60754-2 / IEC 61034-2
IEC 60332-1-2 / IEC 60332-3-22

CONSTRUCTION:

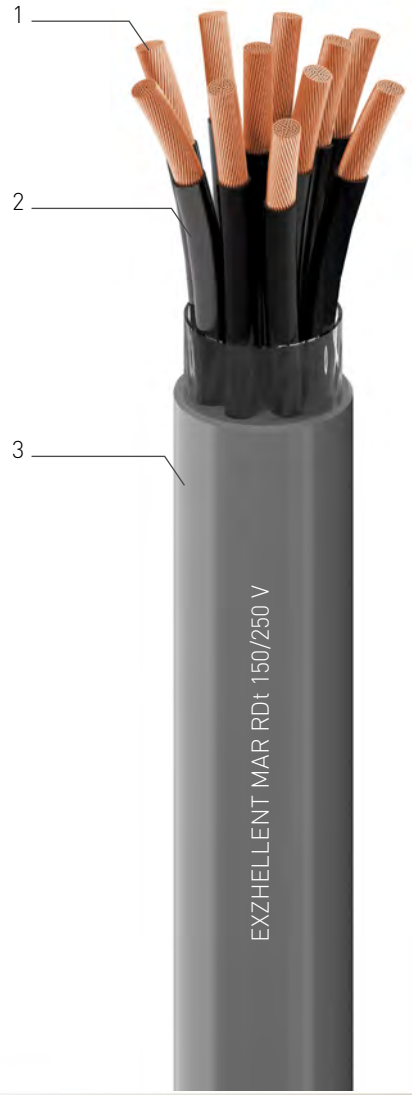
1. **CONDUCTOR:**
Copper class 5 to IEC 60228.

2. **INSULATION:**
Halogen-free cross linked polyethylene (XLPE). IEC 60092-360.
Core identification: see page 21.

3. **OUTER SHEATH:**
Halogen-free thermoplastic polyolefin (SHF 1). IEC 60092-360.

APPLICATIONS:

Flexible multicore cables for installation in marine applications with special performance of flame spread and low emision of smoke and fumes.
Minimum handling & laying temperature: -15 ºC.
Minimum working temperature: -40 ºC.



PHYSICAL & ELECTRICAL CHARACTERISTICS:

General Cable Code	Cross section (mm^2)	Outer diameter[1] (mm)	Weight[1] (kg/km)	Bending radius[1] (mm)
2657024	2x0.75	6.2	60	25
2657026	2x1.5	7.3	70	30
2657034	3x0.75	6.6	65	30
2657036	3x1.5	7.7	100	35
2657044	4x0.75	7.1	80	30
2657046	4x1.5	8.6	125	35
2657074	7x0.75	8.5	115	35
2657076	7x1.5	10.3	190	45
2657124	12x0.75	11.1	185	45
2657126	12x1.5	13.5	305	55
2657194	19x0.75	13.2	270	55
2657196	19x1.5	16.0	450	65
2657244	24x0.75	15.4	345	65
2657246	24x1.5	18.8	570	75
2657274	27x0.75	15.8	370	65
2657276	27x1.5	19.2	625	80
2657374	37x0.75	17.7	490	75
2657376	37x1.5	21.7	825	90

[1] Dimensional values subject to variation depending on manufacturing tolerances.

EXZHELLENT® MAR

RC4Dt Armoured and Screened Control 150/250 V

STANDARDS:

CONSTRUCTION: IEC 60092-350 / IEC 60092-360 / IEC 60092-376
FIRE PERFORMANCE: IEC 60754-1 / IEC 60754-2 / IEC 61034-2
IEC 60332-1-2 / IEC 60332-3-22

CONSTRUCTION:

1. **CONDUCTOR:**
   Copper class 5 to IEC 60228.

2. **INSULATION:**
   Halogen-free cross linked polyethylene (XLPE). IEC 60092-360.
   Core identification: see page 21.

3. **SCREEN/ARMOUR:**
   Copper wire braid.

4. **OUTER SHEATH:**
   Halogen-free thermoplastic polyolefin (SHF 1). IEC 60092-360.

APPLICATIONS:

Flexible armoured, multicore cables for installation in marine applications with special performances on flame spread and low emision of smoke and fumes.

Minimum handling & laying temperature: -15 ºC.
Minimum working temperature: -40 ºC.

PHYSICAL & ELECTRICAL CHARACTERISTICS:

General Cable Code	Cross section (mm^2)	Diameter under armour [1] (mm)	Outer diameter [1] (mm)	Weight [1] (kg/km)	Bending radius [1] (mm)
2659024	2x0.75	4.4	7.2	75	30
2659026	2x1.5	5.7	8.7	110	70
2659034	3x0.75	4.9	7.7	90	35
2659036	3x1.5	6.2	9.2	130	40
2659044	4x0.75	5.3	8.1	105	35
2659046	4x1.5	6.7	9.7	150	40
2659074	7x0.75	6.5	9.5	150	40
2659076	7x1.5	8.4	11.6	225	50
2659124	12x0.75	8.9	12.1	225	50
2659126	12x1.5	11.4	15.2	375	65
2659194	19x0.75	10.8	14.8	355	60
2659196	19x1.5	13.8	17.6	520	70
2659244	24x0.75	13.0	17.0	445	70
2659246	24x1.5	16.3	20.5	655	85
2659274	27x0.75	13.1	17.1	460	70
2659276	27x1.5	16.9	21.1	715	85
2659374	37x0.75	15.0	19.2	590	80
2659376	37x1.5	19.1	23.5	915	95

[1] Dimensional values subject to variation depending on manufacturing tolerances.

EXZHELLENT® MAR

RDtC4Dt Armoured Control
150/250 V

STANDARDS:

CONSTRUCTION: IEC 60092-350 / IEC 60092-360 / IEC 60092-376
FIRE PERFORMANCE: IEC 60754-1 / IEC 60754-2 / IEC 61034-2
IEC 60332-1-2 / IEC 60332-3-22

CONSTRUCTION:

1. **CONDUCTOR:**
Copper class 5 to IEC 60228.

2. **INSULATION:**
Halogen-free cross linked polyethylene (XLPE). IEC 60092-360.
Core identification: see page 21.

3. **INNER COVERING:**
Halogen-free thermoplastic polyolefin.

4. **ARMOUR:**
Copper wire braid.

5. **OUTER SHEATH:**
Halogen-free thermoplastic polyolefin (SHF 1). IEC 60092-360.

APPLICATIONS:

Low voltage armoured control cables for marine applications. With special fire performance such as halogen-free, fire retardancy, and low emission of smoke and fumes.

Minimum handling & laying temperature: -15 ºC.
Minimum working temperature: -40 ºC.

PHYSICAL & ELECTRICAL CHARACTERISTICS:

General Cable Code	Cross section (mm²)	Diameter under armour[1] (mm)	Outer diameter[1] (mm)	Weight[1] (kg/km)	Bending radius[1] (mm)
2660024	2x0.75	6.2	9.0	130	40
2660026	2x1.5	7.4	10.4	170	85
2660034	3x0.75	6.5	9.3	140	40
2660036	3x1.5	7.8	10.8	190	45
2660044	4x0.75	7.1	10.1	160	40
2660046	4x1.5	8.5	11.5	215	50
2660074	7x0.75	8.4	11.4	210	50
2660076	7x1.5	10.2	13.4	300	55
2660124	12x0.75	10.8	14.0	305	60
2660126	12x1.5	13.3	17.1	485	70
2660194	19x0.75	12.7	16.5	445	70
2660196	19x1.5	15.7	19.7	650	80
2660244	24x0.75	14.7	18.7	545	75
2660246	24x1.5	18.3	22.5	805	90
2660274	27x0.75	15.0	19.0	575	80
2660276	27x1.5	18.7	22.9	860	95
2660374	37x0.75	16.8	21.0	715	85
2660376	37x1.5	21.0	25.5	1,075	155

[1] Dimensional values subject to variation depending on manufacturing tolerances.

EXZHELLENT® MAR

RO2Dt Screened Control
150/250 V

STANDARDS:

CONSTRUCTION: IEC 60092-350 / IEC 60092-360 / IEC 60092-376
FIRE PERFORMANCE: IEC 60754-1 / IEC 60754-2 / IEC 61034-2
IEC 60332-1-2 / IEC 60332-3-22

CONSTRUCTION:

1. **CONDUCTOR:**
Copper class 5 to IEC 60228.

2. **INSULATION:**
Halogen-free cross linked polyethylene (XLPE). IEC 60092-360.
Core identification: see page 21.

3. **SCREEN:**
Aluminium/polyester tape with drain wire.

4. **OUTER SHEATH:**
Halogen-free thermoplastic polyolefin (SHF 1). IEC 60092-360.

APPLICATIONS:

Flexible overall screened multicore cables for installation in marine applications with special performances on flame spread and low emision of smoke and fumes.

Minimum handling & laying temperature: -15 ºC.
Minimum working temperature: -40 ºC.

PHYSICAL & ELECTRICAL CHARACTERISTICS:

General Cable Code	Cross section (mm^2)	Outer diameter[1] (mm)	Weight[1] (kg/km)	Bending radius[1] (mm)
2658024	2x0.75	6.4	65	30
2658026	2x1.5	7.6	95	30
2658034	3x0.75	6.8	75	55
2658036	3x1.5	8.0	110	65
2658044	4x0.75	7.3	85	60
2658046	4x1.5	9.0	135	75
2658074	7x0.75	8.5	120	70
2658076	7x1.5	10.5	190	85
2658124	12x0.75	11.2	190	90
2658126	12x1.5	13.8	305	115
2658194	19x0.75	13.2	270	105
2658196	19x1.5	16.4	440	135
2658244	24x0.75	15.4	340	125
2658246	24x1.5	19.2	555	155
2658274	27x0.75	15.8	370	130
2658276	27x1.5	19.6	605	160
2658374	37x0.75	17.7	480	145
2658376	37x1.5	22.1	795	180

[1] Dimensional values subject to variation depending on manufacturing tolerances.

EXZHELLENT® MAR

RO2Dt Overall Screened Instrumentation 150/250 V

STANDARDS:

CONSTRUCTION: IEC 60092-350 / IEC 60092-360 / IEC 60092-376
FIRE PERFORMANCE: IEC 60754-1 / IEC 60754-2 / IEC 61034-2
IEC 60332-1-2 / IEC 60332-3-22

CONSTRUCTION:

1. **CONDUCTOR:**
   Copper class 5 to IEC 60228.

2. **INSULATION:**
   Halogen-free cross linked polyethylene (XLPE). IEC 60092-360.
   Core identification: see page 21.

3. **SCREEN:**
   Aluminium/polyester tape with drain wire.

4. **OUTER SHEATH:**
   Halogen-free thermoplastic polyolefin (SHF 1). IEC 60092-360.

APPLICATIONS:

Flexible overall screened multipair cables for installation in marine applications with special performances on flame spread and low emision of smoke and fumes.

Minimum handling & laying temperature: -15 ºC.

Minimum working temperature: -40 ºC.

PHYSICAL & ELECTRICAL CHARACTERISTICS:

PAIRS

General Cable Code	Cross section (mm²)	Outer diameter[1] (mm)	Weight[1] (kg/km)	Bending radius[1] (mm)	Mutual Capacitance (µF/km)	Inductance (mH/km)
4098014	1x2x0.75	6.4	65	30	0.086	0.635
4098016	1x2x1.5	7.6	95	30	0.095	0.612
4098024	2x2x0.75	7.3	85	30	0.056	0.635
4098026	2x2x1.5	9.0	135	40	0.060	0.612
4098034	3x2x0.75	9.7	130	60	0.060	0.635
4098036	3x2x1.5	11.9	205	75	0.063	0.612
4098044	4x2x0.75	10.5	150	45	0.060	0.635
4098046	4x2x1.5	13.0	240	55	0.063	0.612
4098074	7x2x0.75	13.2	240	55	0.060	0.635
4098076	7x2x1.5	16.4	385	70	0.063	0.612
4098124	12x2x0.75	16.4	375	135	0.060	0.635
4098126	12x2x1.5	20.6	620	165	0.063	0.612
4098194	19x2x0.75	20.1	570	80	0.060	0.635
4098196	19x2x1.5	21.3	675	130	0.063	0.612
4098244	24x2x0.75	22.4	710	90	0.060	0.635
4098246	24x2x1.5	28.2	1,175	230	0.063	0.612
4098274	27x2x0.75	23.3	780	95	0.060	0.635
4098276	27x2x1.5	29.3	1,295	235	0.063	0.612
4098374	37x2x0.75	25.8	1,020	155	0.060	0.635
4098376	37x2x1.5	32.7	1,720	265	0.063	0.612

[1] Dimensional values subject to variation depending on manufacturing tolerances.

EXZHELLENT® MAR

RO1Dt Individually Screened Instrumentation 150/250 V

STANDARDS:

CONSTRUCTION: IEC 60092-350 / IEC 60092-360 / IEC 60092-376
FIRE PERFORMANCE: IEC 60754-1 / IEC 60754-2 / IEC 61034-2
IEC 60332-1-2 / IEC 60332-3-22

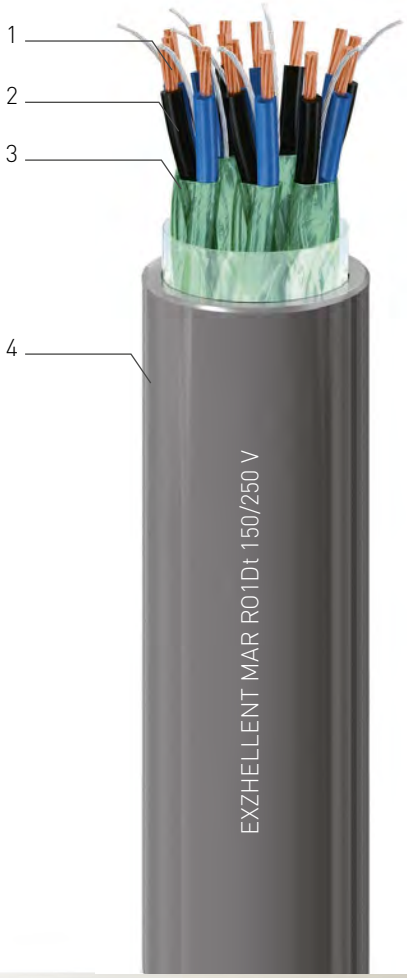
CONSTRUCTION:

1. **CONDUCTOR:**
Copper class 5 to IEC 60228.

2. **INSULATION:**
Halogen-free cross linked polyethylene (XLPE). IEC 60092-360.

3. **INDIVIDUAL SCREEN:**
Aluminium/polyester tape with copper drain wire and non metallic tape.
Core identification: see page 21.

4. **OUTER SHEATH:**
Halogen-free thermoplastic polyolefin (SHF 1). IEC 60092-360.



APPLICATIONS:

Flexible individually screened multipair cables for installation in marine applications with special performances on flame spread and low emision of smoke and fumes.

Minimum handling & laying temperature: -15 ºC.
Minimum working temperature: -40 ºC.

PHYSICAL & ELECTRICAL CHARACTERISTICS:

PAIRS

General Cable Code	Cross section (mm^2)	Outer diameter[1] (mm)	Weight[1] (kg/km)	Bending radius[1] (mm)	Mutual Capacitance (µF/km)	Inductance (mH/km)
4099024	1x2x0.75	10.4	145	45	0.086	0.635
4099026	1x2x1.5	12.7	220	55	0.095	0.612
4099034	2x2x0.75	11.0	160	45	0.086	0.635
4099036	2x2x1.5	13.5	235	55	0.095	0.612
4099044	3x2x0.75	12.2	195	50	0.086	0.635
4099046	3x2x1.5	14.8	295	60	0.095	0.612
4099074	4x2x0.75	14.6	300	60	0.086	0.635
4099076	4x2x1.5	18.2	480	75	0.095	0.612
4099124	7x2x0.75	19.6	510	80	0.086	0.635
4099126	7x2x1.5	24.5	810	100	0.095	0.612
4099194	12x2x0.75	23.4	760	95	0.086	0.635
4099196	12x2x1.5	29.2	1,210	175	0.095	0.612
4099244	19x2x0.75	27.7	985	170	0.086	0.635
4099246	19x2x1.5	34.5	1,565	210	0.095	0.612
4099274	24x2x0.75	28.3	1,075	170	0.086	0.635
4099276	24x2x1.5	35.3	1,715	215	0.095	0.612
4099374	27x2x0.75	31.9	1,420	195	0.086	0.635
4099376	27x2x1.5	40.0	2,290	240	0.095	0.612

[1] Dimensional values subject to variation depending on manufacturing tolerances.

EXZHELLENT® MAR

RC4Dt Armoured and Screened Instrumentation 150/250 V

STANDARDS:

CONSTRUCTION: IEC 60092-350 / IEC 60092-360 / IEC 60092-376
FIRE PERFORMANCE: IEC 60754-1 / IEC 60754-2 / IEC 61034-2
IEC 60332-1-2 / IEC 60332-3-22

CONSTRUCTION:

1. **CONDUCTOR:**
Copper class 5 to IEC 60228.

2. **INSULATION:**
Halogen-free cross linked polyethylene (XLPE). IEC 60092-360.
Core identification: see page 21.

3. **SCREEN/ARMOUR:**
Copper wire braid.

4. **OUTER SHEATH:**
Halogen-free thermoplastic polyolefin (SHF 1). IEC 60092-360.

APPLICATIONS:

Flexible armoured multipair cables for installation in marine applications with special performances on flame spread and low emision of smoke and fumes.
Minimum handling & laying temperature: -15 ºC.
Minimum working temperature: -40 ºC.

PHYSICAL & ELECTRICAL CHARACTERISTICS:

PAIRS

General Cable Code	Cross section (mm²)	Diameter under armour[1] (mm)	Outer diameter[1] (mm)	Weight[1] (kg/km)	Bending radius[1] (mm)	Mutual Capacitance (µF/km)	Inductance (mH/km)
4100014	1x2x0.75	4.5	7.3	80	45	0.086	0.635
4100016	1x2x1.5	5.7	8.7	115	55	0.095	0.612
4100024	2x2x0.75	5.4	8.2	110	50	0.056	0.635
4100026	2x2x1.5	6.9	9.9	155	60	0.060	0.612
4100034	3x2x0.75	7.5	10.7	160	65	0.060	0.635
4100036	3x2x1.5	9.5	12.7	225	80	0.063	0.612
4100044	4x2x0.75	8.3	11.5	185	70	0.060	0.635
4100046	4x2x1.5	10.6	14.4	305	90	0.063	0.612
4100074	7x2x0.75	10.8	14.6	310	90	0.060	0.635
4100076	7x2x1.5	13.8	17.8	460	110	0.063	0.612
4100124	12x2x0.75	13.7	17.7	450	110	0.060	0.635
4100126	12x2x1.5	17.6	22	700	135	0.063	0.612
4100194	19x2x0.75	17.1	21.3	645	130	0.060	0.635
4100196	19x2x1.5	21.9	27.0	1,015	160	0.063	0.612
4100244	24x2x0.75	19.2	24.0	795	145	0.060	0.635
4100246	24x2x1.5	24.6	30.0	1,250	180	0.063	0.612
4100274	27x2x0.75	20.0	25.0	860	150	0.060	0.635
4100276	27x2x1.5	25.7	31.0	1,370	185	0.063	0.612
4100374	37x2x0.75	22.4	27.0	1,100	165	0.060	0.635
4100376	37x2x1.5	28.7	35.0	1,860	210	0.063	0.612

[1] Dimensional values subject to variation depending on manufacturing tolerances.

EXZHELLENT® MAR

RDtC4Dt Armoured and Screened Instrumentation 150/250 V

STANDARDS:

CONSTRUCTION: IEC 60092-350 / IEC 60092-360 / IEC 60092-376
FIRE PERFORMANCE: IEC 60754-1 / IEC 60754-2 / IEC 61034-2
IEC 60332-1-2 / IEC 60332-3-22

CONSTRUCTION:

1. **CONDUCTOR:**
Copper class 5 to IEC 60228.

2. **INSULATION:**
Halogen-free cross linked polyethylene (XLPE). IEC 60092-360.
Core identification: see page 21.

3. **INNER COVERING:**
Halogen-free thermoplastic polyolefin.

4. **SCREEN/ARMOUR:**
Copper wire braid.

5. **OUTER SHEATH:**
Halogen-free thermoplastic polyolefin (SHF 1). IEC 60092-360.

APPLICATIONS:

Flexible armoured multipair cables for installation in marine applications with special performances on flame spread and low emision of smoke and fumes.
Minimum handling & laying temperature: -15 ºC.
Minimum working temperature: -40 ºC.

PHYSICAL & ELECTRICAL CHARACTERISTICS:

PAIRS

General Cable Code	Cross section (mm^2)	Diameter under armour[1] (mm)	Outer diameter[1] (mm)	Weight[1] (kg/km)	Bending radius[1] (mm)	Mutual Capacitance (µF/km)	Inductance (mH/km)
4101014	1x2x0.75	6.9	9.8	150	59	0.076	0.672
4101016	1x2x1.5	7.7	10.8	190	65	0.095	0.612
4101024	1x4x0.75	7.9	11.0	180	66	0.051	0.672
4101026	1x4x1.5	8.9	12.0	230	72	0.060	0.612
4101034	3x2x0.75	9.9	13.2	240	80	0.056	0.672
4101036	3x2x1.5	11.3	14.6	310	88	0.063	0.612
4101044	4x2x0.75	10.8	14.2	280	85	0.056	0.672
4101046	4x2x1.5	12.4	16.3	405	98	0.063	0.612
4101074	7x2x0.75	13.6	17.5	435	110	0.056	0.672
4101076	7x2x1.5	15.6	19.7	595	120	0.063	0.612
4101124	12x2x0.75	16.8	20.9	620	130	0.056	0.672
4101126	12x2x1.5	19.4	23.9	880	145	0.063	0.612
4101194	19x2x0.75	20.5	24.8	865	150	0.056	0.672
4101196	19x2x1.5	23.7	28.4	1,250	175	0.063	0.612
4101244	24x2x0.75	22.8	27.5	1,055	170	0.056	0.672
4101246	24x2x1.5	26.8	31.9	1,560	195	0.063	0.612
4101274	27x2x0.75	23.7	28.4	1,140	175	0.056	0.672
4101276	27x2x1.5	27.9	33.0	1,695	200	0.063	0.612
4101374	37x2x0.75	26.3	31.2	1,425	190	0.056	0.672
4101376	37x2x1.5	30.9	36.8	2,245	225	0.063	0.612

[1] Dimensional values subject to variation depending on manufacturing tolerances.

EXZHELLENT® MAR

RO1C4Dt Armoured and Individually Screened Instrumentation 150/250 V

STANDARDS:

CONSTRUCTION: IEC 60092-350 / IEC 60092-360 / IEC 60092-376
FIRE PERFORMANCE: IEC 60754-1 / IEC 60754-2 / IEC 61034-2
IEC 60332-1-2 / IEC 60332-3-22

CONSTRUCTION:

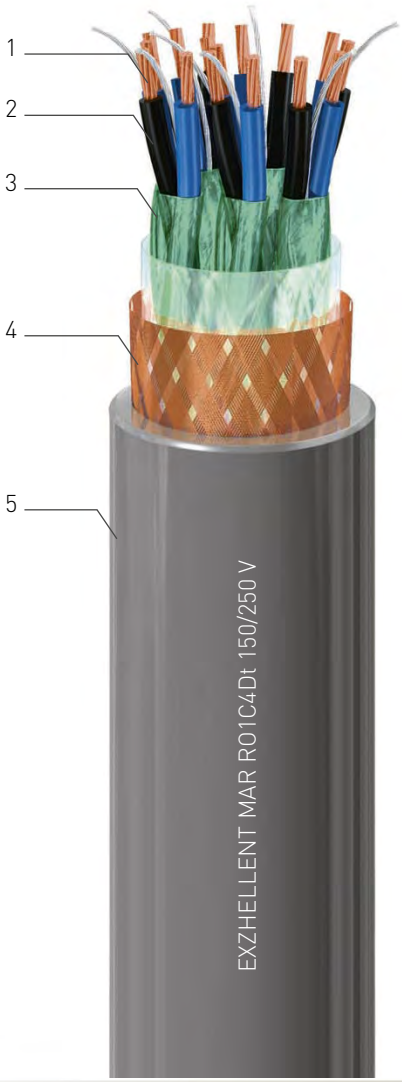
1. **CONDUCTOR:**
Copper class 5 to IEC 60228.

2. **INSULATION:**
Halogen-free cross linked polyethylene (XLPE). IEC 60092-360.

3. **INDIVIDUAL SCREEN:**
Aluminium/polyester tape with copper drain wire.
Core identification: see page 21.

4. **ARMOUR:**
Copper wire braid.

5. **OUTER SHEATH:**
Halogen-free thermoplastic polyolefin (SHF 1). IEC 60092-360.



APPLICATIONS:

Flexible armoured individually sreened multipair cables for installation in marine applications with special performances on flame spread and low emision of smoke and fumes.

Minimum handling & laying temperature: -15 ºC.
Minimum working temperature: -40 ºC.

PHYSICAL & ELECTRICAL CHARACTERISTICS:

PAIRS

General Cable Code	Cross section (mm²)	Diameter under armour[1] (mm)	Outer diameter[1] (mm)	Weight[1] (kg/km)	Bending radius[1] (mm)	Mutual Capacitance (µF/km)	Inductance (mH/km)
4102014	1x2x0.75	4.6	7.4	90	45	0.086	0.635
4102016	1x2x1.5	5.8	8.8	125	75	0.095	0.612
4102024	2x2x0.75	8.4	11.6	185	70	0.086	0.635
4102026	2x2x1.5	10.5	14.3	295	90	0.095	0.612
4102034	3x2x0.75	9.0	12.2	200	75	0.086	0.635
4102036	3x2x1.5	11.3	15.1	320	95	0.095	0.612
4102044	4x2x0.75	10.1	13.3	240	80	0.086	0.635
4102046	4x2x1.5	12.6	16.4	380	100	0.095	0.612
4102074	7x2x0.75	12.4	16.2	390	100	0.086	0.635
4102076	7x2x1.5	15.6	19.6	565	120	0.095	0.612
4102124	12x2x0.75	17.1	21.3	610	130	0.086	0.635
4102126	12x2x1.5	21.5	26.0	910	160	0.095	0.612
4102194	19x2x0.75	20.6	25.0	860	150	0.086	0.635
4102196	19x2x1.5	26.0	31.0	1,305	185	0.095	0.612
4102244	24x2x0.75	24.5	29.0	1,070	175	0.086	0.635
4102246	24x2x1.5	30.9	36.0	1,645	290	0.095	0.612
4102274	27x2x0.75	25.1	30.0	1,240	180	0.086	0.635
4102276	27x2x1.5	31.7	37.0	1,790	225	0.095	0.612
4102374	37x2x0.75	28.5	34.0	1,515	205	0.086	0.635
4102376	37x2x1.5	36.2	42.0	2,525	340	0.095	0.612

[1] Dimensional values subject to variation depending on manufacturing tolerances.

EXZHELLENT® MAR

RO1DtC4Dt Armoured and Individually Screened Instrumentation 150/250 V

STANDARDS:

CONSTRUCTION: IEC 60092-350 / IEC 60092-360 / IEC 60092-376
FIRE PERFORMANCE: IEC 60754-1 / IEC 60754-2 / IEC 61034-2
IEC 60332-1-2 / IEC 60332-3-22

CONSTRUCTION:

1. **CONDUCTOR:**
Copper class 5 to IEC 60228.

2. **INSULATION:**
Halogen-free cross linked polyethylene (XLPE). IEC 60092-360.
Core identification: see page 21.

3. **INDIVIDUAL SCREEN:**
Aluminium/polyester tape with copper drain wire.
Core identification: see page 21.

4. **INNER COVERING:**
Halogen-free thermoplastic polyolefin.

5. **ARMOUR:**
Copper wire braid.

6. **OUTER SHEATH:**
Halogen-free thermoplastic polyolefin (SHF 1). IEC 60092-360.

APPLICATIONS:

Flexible armoured multipair cables for installation in marine applications with special performances on flame spread and low emision of smoke and fumes.
Minimum handling & laying temperature: -15 ºC.
Minimum working temperature: -40 ºC.

PHYSICAL & ELECTRICAL CHARACTERISTICS:

General Cable Code	Cross section (mm²)	Diameter under armour[1] (mm)	Outer diameter[1] (mm)	Weight[1] (kg/km)	Bending radius[1] (mm)	Mutual Capacitance (µF/km)	Inductance (mH/km)
4104014	1x2x0.75	6.6	9.4	150	60	0.086	0.635
4104016	1x2x1.5	7.8	10.8	200	90	0.095	0.612
4104024	2x2x0.75	10.2	13.4	265	80	0.086	0.635
4104026	2x2x1.5	12.3	16.1	395	100	0.095	0.612
4104034	3x2x0.75	10.8	14.0	280	85	0.086	0.635
4104036	3x2x1.5	13.1	16.9	425	105	0.095	0.612
4104044	4x2x0.75	11.9	15.1	330	90	0.086	0.635
4104046	4x2x1.5	14.5	18.3	500	110	0.095	0.612
4104074	7x2x0.75	14.2	18.0	505	110	0.086	0.635
4104076	7x2x1.5	17.4	21.4	715	130	0.095	0.612
4104124	12x2x0.75	18.9	23.1	775	140	0.086	0.635
4104126	12x2x1.5	23.3	27.9	1,140	170	0.095	0.612
4104194	19x2x0.75	22.4	26.8	1,075	165	0.086	0.635
4104196	19x2x1.5	27.8	32.6	1,600	200	0.095	0.612
4104244	24x2x0.75	26.3	30.9	1,340	185	0.086	0.635
4104246	24x2x1.5	33.1	38.3	2,060	310	0.095	0.612
4104274	27x2x0.75	26.9	31.7	1,520	190	0.086	0.635
4104276	27x2x1.5	33.9	39.1	2,220	235	0.095	0.612
4104374	37x2x0.75	30.3	35.3	1,845	215	0.086	0.635
4104376	37x2x1.5	38.4	44.4	2,985	355	0.095	0.612

[1] Dimensional values subject to variation depending on manufacturing tolerances.

EXZHELLENT® MAR

UX Switchboard & Earthing Wire
0.6/1 kV

STANDARDS:

CONSTRUCTION: IEC 60092-350 / IEC 60092-353 / IEC 60092-360
FIRE PERFORMANCE: IEC 60754-1 / IEC 60754-2 / IEC 61034-2
IEC 60332-1-2 / IEC 60332-3-22

CONSTRUCTION:

1. **CONDUCTOR:**
Tinned Copper class 5 to IEC 60228.

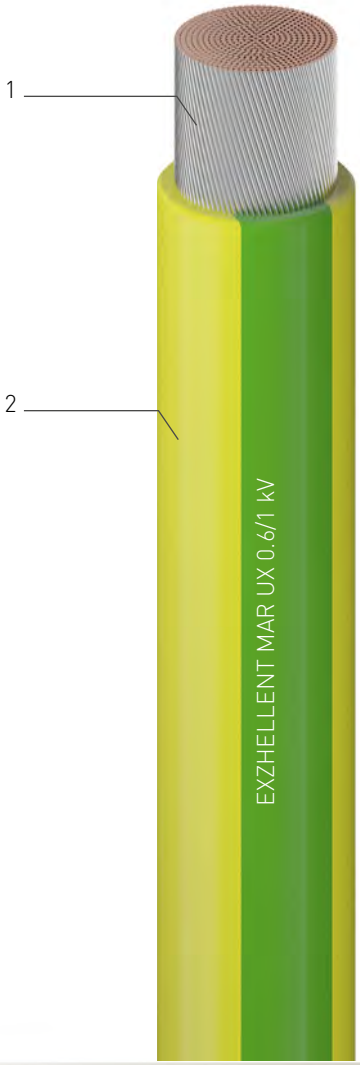
2. **INSULATION:**
Halogen-free cross-linked compound, type HF90. IEC 60092-360.
Core identification: Green-Yellow, for earthing wire.

APPLICATIONS:

Flexible switchoboard and earthing wire for installation in marine applications with special performances on flame spread and low emision of smoke and fumes.

Maximum rated conductor temperature in normal operation: 90 °C.
Minimum handling & laying temperature: -15 °C.
Minimum working temperature: -40 °C.

SWITCHBOARD WIRE COLORS:



PHYSICAL & ELECTRICAL CHARACTERISTICS:

PACKAGING IN DRUMS

General Cable Code	Cross section (mm^2)	Outer diameter[1] (mm)	Weight[1] (kg/km)	Bending radius[1] (mm)	Current rating Air 45°C[2] (A)	Voltage drop cos μ = 0.8 (V/A·km)
7503106	1x1.5	2.9	20	12	20	24.30
7503107	1x2.5	3.4	30	14	28	14.60
7503108	1x4	3.8	44	16	37	9.08
7503109	1x6	4.5	63	18	47	6.080
7503110	1x10	5.4	105	22	65	3.530
7503111	1x16	6.3	155	26	87	2.270
7503112	1x25	8.0	245	32	117	1.660
7503113	1x35	9.1	335	37	147	1.070
7503114	1x50	10.8	475	43	180	0.770
7503115	1x70	12.7	670	51	233	0.564
7503116	1x95	14.2	860	57	285	0.444
7503117	1x120	16.4	1,105	66	333	0.362
7503118	1x150	18.3	1,390	74	386	0.306
7503119	1x185	20.2	1,685	81	444	0.264
7503120	1x240	23.6	2,230	95	528	0.217
7503121	1x300	26.1	2,800	160	612	0.187

PACKAGING IN REELS

General Cable Code	Cross section (mm^2)	Available lengths
7504106	1x1.5	100 or 200 m
7504107	1x2.5	100 or 200 m

[1] Dimensional values subject to variation depending on manufacturing tolerances.

[2] Current ratings according to IEC 60092-352 Annex A Table A.4, Method E (Multicore cable) or F (Single core cable).

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GENFIRE® MAR

RDt-M Fire Resistant Non Armoured Low Voltage Power 0.6/1 kV

STANDARDS:

CONSTRUCTION: IEC 60092-350 / IEC 60092-353 / IEC 60092-360
FIRE PERFORMANCE: IEC 60754-1 / IEC 60754-2 / IEC 61034-2
IEC 60331-1 and 2 / IEC 60332-1-2 / IEC 60332-3-22

CONSTRUCTION:

1. **CONDUCTOR:**
Copper, class 2 up to 1 mm^2 and class 5 from 1.5 mm^2 to IEC 60228.

2. **MICA TAPE**

3. **INSULATION:**
Halogen-free cross linked polyethylene (XLPE). IEC 60092-360.
Core identification: see page 21.

4. **INNER COVERING:**
Halogen-free thermoplastic polyolefin (optional for big cross sections).

5. **OUTER SHEATH:**
Halogen-free thermoplastic polyolefin (SHF 1). IEC 60092-360.

APPLICATIONS:

Cables for installation in marine applications with special performances on flame spread, fire resistance and low emision of smoke and fumes.

Maximum rated conductor temperature in normal operation: 90 °C.
Minimum handling & laying temperature: -15 °C.
Minimum working temperature: -40 °C.

PHYSICAL & ELECTRICAL CHARACTERISTICS:

General Cable Code	Cross section (mm^2)	Outer diameter[1] (mm)	Weight[1] (kg/km)	Bending radius[1] (mm)	Current rating Air 45°C[2] (A)	Voltage drop cos μ = 0.8 (V/A·km)	Inductance (mH/km)
7789105	1x1	5.4	40	25	-	32.14	0.484
7789106	1x1.5	5.6	45	25	20	23.65	0.455
7789107	1x2.5	5.9	60	25	28	13.24	0.436
7789108	1x4	6.5	75	30	37	8.872	0.386
7789109	1x6	7.1	95	30	47	5.948	0.361
7789110	1x10	8.0	140	35	65	3.483	0.331
7789111	1x16	9.2	200	40	87	2.240	0.314
7789112	1x25	10.9	290	45	117	1.477	0.302
7789113	1x35	12.2	390	50	147	1.074	0.292
7789114	1x50	13.8	530	55	180	0.774	0.283
7789115	1x70	16.1	745	65	233	0.570	0.274
7789116	1x95	17.7	945	75	285	0.450	0.265
7789117	1x120	19.9	1,200	80	333	0.370	0.261
7789118	1x150	21.9	1,485	90	386	0.313	0.261
7789119	1x185	24.0	1,790	100	444	0.272	0.260
7789120	1x240	27.8	2,380	170	528	0.226	0.258
7789121	1x300	31.2	2,955	190	612	0.195	0.251
7789205	2x1	8.8	105	35	-	32.11	0.399
7789206	2x1.5	9.3	120	40	23	23.62	0.373
7789207	2x2.5	10.2	150	45	31	14.21	0.344
7789208	2x4	11.2	195	45	43	8.850	0.319
7789209	2x6	12.5	255	50	55	5.929	0.300
7789210	2x10	14.4	370	60	75	3.466	0.279
7789211	2x16	16.6	525	70	100	2.224	0.265
7789212	2x25	20.1	785	80	130	1.464	0.262
7789213	2x35	22.5	1,040	90	161	1.061	0.253
7789214	2x50	23.0	1,270	95	196	0.764	0.251
7789215	2x70	26.5	1,730	160	251	0.560	0.245
7789216	2x95	29.2	2,205	175	306	0.442	0.239
7789217	2x120	32.7	2,790	200	357	0.362	0.236
7789218	2x150	36.2	3,455	220	412	0.305	0.237
7789219	2x185	39.4	4,140	240	472	0.265	0.238
7789220	2x240	44.9	5,470	270	558	0.218	0.233

[1] Dimensional values subject to variation depending on manufacturing tolerances.

[2] Current ratings according to IEC 60092-352 Annex A Table A.4, Method E (Multicore cable) or F (Single core cable).

GENFIRE® MAR

RDt-M Fire Resistant Non Armoured Low Voltage Power
0.6/1 kV

PHYSICAL & ELECTRICAL CHARACTERISTICS:

General Cable Code	Cross section (mm^2)	Outer diameter[1] (mm)	Weight[1] (kg/km)	Bending radius[1] (mm)	Current rating Air 45ºC[2] (A)	Voltage drop cos μ = 0.8 (V/A·km)	Inductance (mH/km)
7789305	3x1	9.5	125	40	-	32.11	0.399
7789305*	2x1+1	9.5	125	40	-	32.11	0.399
7789306	3x1.5	9.9	140	40	20	23.62	0.373
7789306*	2x1.5+1.5	9.9	140	40	23	23.62	0.373
7789307	3x2.5	10.8	180	45	28	14.21	0.344
7789307*	2x2.5+2.5	10.8	180	45	31	14.21	0.344
7789308	3x4	12.1	240	50	37	8.850	0.319
7789308*	2x4+4	12.1	240	50	43	8.850	0.319
7789309	3x6	13.3	310	55	47	5.929	0.300
7789309*	2x6+6	13.3	310	55	55	5.929	0.300
7789310	3x10	15.6	470	65	65	3.466	0.279
7789310*	2x10+10	15.6	470	65	75	3.466	0.279
7789311	3x16	17.7	665	75	87	2.224	0.265
7789311*	2x16+16	17.7	665	75	100	2.224	0.265
7789312	3x25	21.7	1,005	90	110	1.464	0.262
7789313	3x35	24.3	1,340	100	137	1.061	0.253
7789314	3x50	27.0	1,685	165	167	0.764	0.251
7789315	3x70	31.1	2,305	190	214	0.560	0.245
7789316	3x95	34.5	2,970	210	259	0.442	0.239
7789317	3x120	38.6	3,750	235	301	0.362	0.236
7789318	3x150	42.7	4,650	260	347	0.305	0.237
7789319	3x185	46.5	5,575	280	397	0.265	0.238
7789320	3x240	53.7	7,395	325	468	0.219	0.237
7789321	3x300	60.0	9,230	360	540	0.188	0.230
7789405	4x1	10.4	145	45	-	32.11	0.399
7789405*	3x1+1	10.4	145	45	-	32.11	0.399
7789406	4x1.5	10.8	160	45	20	23.62	0.373
7789406*	3x1.5+1.5	10.8	160	45	20	23.62	0.373
7789407	4x2.5	11.8	210	50	28	14.21	0.344

* These codes contain "Green/Yellow" earthing conductor. Please state the construction under "CROSS SECTION" column when ordering this type of cable.
[1] Dimensional values subject to variation depending on manufacturing tolerances.
[2] Current ratings according to IEC 60092-352 Annex A Table A.4, Method E (Multicore cable) or F (Single core cable).

PHYSICAL & ELECTRICAL CHARACTERISTICS:

General Cable Code	Cross section (mm²)	Outer diameter[1] (mm)	Weight[1] (kg/km)	Bending radius[1] (mm)	Current rating Air 45°C[2] (A)	Voltage drop cos μ = 0.8 (V/A·km)	Inductance (mH/km)
7789407*	3x2.5+2.5	11.8	210	50	28	14.21	0.344
7789408	4x4	13.3	290	55	37	8.850	0.319
7789408*	3x4+4	13.3	290	55	37	8.850	0.319
7789409	4x6	14.6	380	60	47	5.929	0.300
7789409*	3x6+6	14.6	380	60	47	5.929	0.300
7789410	4x10	17.1	585	70	65	3.466	0.279
7789410*	3x10+10	17.1	585	70	65	3.466	0.279
7789411	4x16	19.8	845	80	87	2.224	0.265
7789411*	3x16+16	19.8	845	80	87	2.224	0.265
7789412	4x25	24.2	1,280	100	110	1.464	0.262
7789413	4x35	27.0	1,710	165	137	1.061	0.253
7789414	4x50	29.6	2,235	180	167	0.764	0.251
7789415	4x70	34.6	3,110	210	214	0.560	0.245
7789416	4x95	38.1	3,980	230	259	0.442	0.239
7789417	4x120	42.8	5,055	260	301	0.362	0.236
7789418	4x150	47.2	6,235	285	347	0.305	0.237
7789419	4x185	51.5	7,510	310	397	0.265	0.238
7789420	4x240	58.9	9,960	355	468	0.218	0.233
7789421	4x300	66.8	12,470	405	540	0.188	0.230
7789505*	4x1+1	11.4	175	50	-	32.11	0.399
7789506*	4x1.5+1.5	11.9	200	50	20	23.62	0.373
7789507*	4x2.5+2.5	13.2	270	55	28	14.21	0.344
7789508*	4x4+4	14.7	360	60	37	8.850	0.319
7789509*	4x6+6	16.4	480	65	47	5.929	0.300
7789510*	4x10+10	19.1	730	80	65	3.466	0.279
7789511*	4x16+16	22.1	1,055	90	87	2.224	0.265
7789512*	4x25+25	26.8	1,580	165	110	1.464	0.262
7789513*	4x35+35	30.1	2,130	185	137	1.061	0.253
7789514*	4x50+50	35.3	2,990	215	167	0.764	0.252

* These codes contain "Green/Yellow" earthing conductor. Please state the construction under "CROSS SECTION" column when ordering this type of cable.

[1] Dimensional values subject to variation depending on manufacturing tolerances.

[2] Current ratings according to IEC 60092-352 Annex A Table A.4, Method F (Single core cable).

GENFIRE® MAR

RDtC4Dt-M Fire Resistant Armoured Low Voltage Power 0.6/1 kV

STANDARDS:

CONSTRUCTION: IEC 60092-350 / IEC 60092-353/ IEC 60092-360
FIRE PERFORMANCE: IEC 60754-1 / IEC 60754-2 / IEC 61034-2
IEC 60331-1 and 2 / IEC 60332-1-2 / IEC 60332-3-22

CONSTRUCTION:

1. **CONDUCTOR:**
   Copper, class 2 up to 1 mm^2 and class 5 from 1.5 mm^2 to IEC 60228.

2. **MICA TAPE**

3. **INSULATION:**
   Halogen-free cross linked polyethylene (XLPE). IEC 60092-360.
   Core identification: see page 21.

4. **INNER COVERING:**
   Halogen-free thermoplastic polyolefin.

5. **ARMOUR:**
   Copper wire braid.

6. **OUTER SHEATH:**
   Halogen-free thermoplastic polyolefin (SHF 1). IEC 60092-360.

APPLICATIONS:

Armoured cables for installation in marine applications with special performances on flame spread, fire resistance and low emision of smoke and fumes.

Maximum rated conductor temperature in normal operation: 90 °C.
Minimum handling & laying temperature: -15 °C.
Minimum working temperature: -40 °C.

PHYSICAL & ELECTRICAL CHARACTERISTICS:

General Cable Code	Cross section (mm^2)	Diameter under armour[1] (mm)	Outer diameter[1] (mm)	Weight[1] (kg/km)	Bending radius[1] (mm)	Current rating Air 45°C[2] (A)	Voltage drop cos μ = 0.8 (V/A·km)	Inductance (mH/km)
7790105	1x1	5.4	8.2	105	35	-	32.17	0.568
7790106	1x1.5	5.6	8.4	110	35	20	23.67	0.537
7790107	1x2.5	6.0	8.8	125	35	28	14.26	0.495
7790108	1x4	6.5	9.3	150	40	37	8.895	0.458
7790109	1x6	7.1	10.1	180	40	47	5.972	0.432
7790110	1x10	8.0	11.0	235	45	65	3.504	0.395
7790111	1x16	9.0	12.0	300	50	87	2.258	0.367
7790112	1x25	10.7	13.9	415	55	117	1.493	0.351
7790113	1x35	11.8	15.0	520	60	147	1.088	0.334
7790114	1x50	13.4	17.2	725	70	180	0.789	0.327
7790115	1x70	15.5	19.5	965	80	233	0.582	0.312
7790116	1x95	17.1	21.1	1,190	85	285	0.462	0.300
7790117	1x120	19.1	23.3	1,470	95	333	0.380	0.292
7790118	1x150	20.9	25.3	1,780	155	386	0.322	0.289
7790119	1x185	22.8	27.2	2,100	165	444	0.280	0.285
7790120	1x240	26.4	31.0	2,735	190	528	0.233	0.280
7790121	1x300	29.8	34.6	3,370	210	612	0.202	0.272
7790205	2x1	8.8	11.8	205	50	-	32.11	0.399
7790206	2x1.5	9.1	12.1	220	50	23	23.62	0.373
7790207	2x2.5	10.0	13.2	270	55	31	14.21	0.344
7790208	2x4	11.0	14.2	325	60	43	8.850	0.319
7790209	2x6	12.1	15.3	390	125	55	5.929	0.300
7790210	2x10	14.0	17.8	570	75	75	3.466	0.279
7790211	2x16	16.0	20.0	755	80	100	2.224	0.265
7790212	2x25	19.3	23.5	1,055	95	130	1.464	0.262
7790213	2x35	21.5	25.9	1,340	160	161	1.061	0.253
7790214	2x50	21.4	26.0	1,550	160	196	0.764	0.251
7790215	2x70	24.9	29.9	2,085	180	251	0.560	0.245
7790216	2x95	27.8	33.0	2,630	200	306	0.442	0.239
7790217	2x120	31.1	36.9	3,345	225	357	0.362	0.236
7790218	2x150	34.2	40.4	4,065	245	412	0.305	0.237
7790219	2x185	37.6	44.0	4,850	265	472	0.265	0.238
7790220	2x240	42.7	49.5	6,275	300	558	0.218	0.233

[1] Dimensional values subject to variation depending on manufacturing tolerances.

[2] Current ratings according to IEC 60092-352 Annex A Table A.4, Method E (Multicore cable) or F (Single core cable).

GENFIRE® MAR

RDtC4Dt-M Fire Resistant Armoured Low Voltage Power
0.6/1 kV

PHYSICAL & ELECTRICAL CHARACTERISTICS:

General Cable Code	Cross section (mm^2)	Diameter under armour[1] (mm)	Outer diameter[1] (mm)	Weight[1] (kg/km)	Bending radius[1] (mm)	Current rating Air 45°C[2] (A)	Voltage drop cos μ = 0.8 (V/A·km)	Inductance (mH/km)
7790305	3x1	9.3	12.3	205	50	-	32.11	0.399
7790305*	2x1+1	9.3	12.3	205	50	-	32.11	0.399
7790306	3x1.5	9.7	12.7	220	55	20	23.62	0.373
7790306*	2x1.5+1.5	9.7	12.7	220	55	23	23.62	0.373
7790307	3x2.5	10.6	13.8	285	55	28	14.21	0.344
7790307*	2x2.5+2.5	10.6	13.8	285	55	31	14.21	0.344
7790308	3x4	11.7	14.9	370	60	37	8.850	0.319
7790308*	2x4+4	11.7	14.9	370	60	43	8.850	0.319
7790309	3x6	12.9	16.7	500	70	47	5.929	0.300
7790309*	2x6+6	12.9	16.7	500	70	55	5.929	0.300
7790310	3x10	15.0	19.0	690	80	65	3.466	0.279
7790310*	2x10+10	15.0	19.0	690	80	75	3.466	0.279
7790311	3x16	17.1	21.1	905	85	87	2.224	0.265
7790311*	2x16+16	17.1	21.1	905	85	100	2.224	0.265
7790312	3x25	20.7	25.1	1,300	205	110	1.464	0.262
7790313	3x35	23.1	27.7	1,665	170	137	1.061	0.253
7790314	3x50	25.4	30.2	2,030	185	167	0.764	0.251
7790315	3x70	29.9	34.9	2,755	210	214	0.560	0.245
7790316	3x95	32.9	38.7	3,555	235	259	0.442	0.239
7790317	3x120	36.8	42.8	4,405	260	301	0.362	0.236
7790318	3x150	40.9	47.3	5,415	285	347	0.305	0.237
7790319	3x185	44.5	51.3	6,435	310	397	0.265	0.238
7790320	3x240	51.0	58.2	8,405	350	468	0.218	0.233
7790321	3x300	57.2	64.8	10,355	390	540	0.188	0.228
7790405	4x1	10.2	13.4	245	80	-	32.11	0.399
7790405*	3x1+1	10.2	13.4	245	80	-	32.11	0.399
7790406	4x1.5	10.6	13.8	285	55	20	23.62	0.373
7790406*	3x1.5+1.5	10.6	13.8	285	55	20	23.62	0.373
7790407	4x2.5	11.6	14.8	335	60	28	14.21	0.344

* These codes contain "Green/Yellow" earthing conductor. Please state the construction under "CROSS SECTION" column when ordering this type of cable.

[1] Dimensional values subject to variation depending on manufacturing tolerances.

[2] Current ratings according to IEC 60092-352 Annex A Table A.4, Method E (Multicore cable) or F (Single core cable).

PHYSICAL & ELECTRICAL CHARACTERISTICS:

General Cable Code	Cross section (mm^2)	Diameter under armour[1] (mm)	Outer diameter[1] (mm)	Weight[1] (kg/km)	Bending radius[1] (mm)	Current rating Air 45°C[2] (A)	Voltage drop cos μ = 0.8 (V/A·km)	Inductance (mH/km)
7790407*	3x2.5+2.5	11.6	14.8	335	60	28	14.21	0.344
7790408	4x4	12.9	16.7	475	70	37	8.850	0.319
7790408*	3x4+4	12.9	16.7	475	70	37	8.850	0.319
7790409	4x6	14.2	18.0	585	75	47	5.929	0.300
7790409*	3x6+6	14.2	18.0	585	75	47	5.929	0.300
7790410	4x10	16.5	20.5	820	85	65	3.466	0.279
7790410*	3x10+10	16.5	20.5	820	85	65	3.466	0.279
7790411	4x16	19.0	23.2	1,110	95	87	2.224	0.265
7790411*	3x16+16	19.0	23.2	1,110	95	87	2.224	0.265
7790412	4x25	23.0	27.4	1,585	165	110	1.464	0.262
7790413	4x35	25.6	30.4	2,065	185	137	1.061	0.253
7790414	4x50	28.4	33.4	2,665	200	167	0.764	0.251
7790415	4x70	33.0	38.4	3,610	230	214	0.560	0.245
7790416	4x95	36.3	42.3	4,625	255	259	0.442	0.239
7790417	4x120	41.0	47.4	5,825	285	301	0.362	0.236
7790418	4x150	45.2	52.0	7,105	315	347	0.305	0.237
7790419	4x185	49.5	56.7	8,515	340	397	0.265	0.238
7790420	4x240	56.3	63.9	11,075	385	468	0.218	0.233
7790421	4x300	63.8	71.8	13,730	435	540	0.188	0.230
7790505	4x1+1	11.2	14.4	305	60	9	32.11	0.399
7790506	4x1.5+1.5	11.7	14.9	335	60	20	23.62	0.373
7790507	4x2.5+2.5	12.8	16.6	450	70	28	14.21	0.344
7790508	4x4+4	14.3	18.1	560	75	37	8.850	0.319
7790509	4x6+6	15.8	19.8	705	80	47	5.929	0.300
7790510	4x10+10	18.3	22.5	990	135	65	3.466	0.279
7790511	4x16+16	21.1	25.5	1,350	155	87	2.224	0.265
7790512	4x25+25	25.6	30.2	1,940	185	110	1.464	0.262
7790513	4x35+35	28.5	33.5	2,530	205	137	1.061	0.253
7790514	4x50+50	33.5	38.7	3,455	235	167	0.763	0.249

* These codes contain "Green/Yellow" earthing conductor. Please state the construction under "CROSS SECTION" column when ordering this type of cable.

[1] Dimensional values subject to variation depending on manufacturing tolerances.

[2] Current ratings according to IEC 60092-352 Annex A Table A.4, Method E (Multicore cable) or F (Single core cable).

GENFIRE® MAR

RDt-M Fire Resistant Non Armoured Control 0.6/1 kV

STANDARDS:

CONSTRUCTION: IEC 60092-350 / IEC 60092-353 / IEC 60092-360
FIRE PERFORMANCE: IEC 60754-1 / IEC 60754-2 / IEC 61034-2
IEC 60331-1 and 2 / IEC 60332-3-22

CONSTRUCTION:

1. **CONDUCTOR:**
Copper, class 5 to IEC 60228.

2. **MICA TAPE**

3. **INSULATION:**
Halogen-free cross linked polyethylene (XLPE). IEC 60092-360.
Core identification: see page 21.

4. **OUTER SHEATH:**
Halogen-free thermoplastic polyolefin (SHF 1). IEC 60092-360.

APPLICATIONS:

Low voltage fire-resistant control cables for integrity circuits in marine applications. With special fire performance such as halogen-free, fire retardancy, and low emission of smoke and fumes.

Minimum handling & laying temperature: -15 ºC.

Minimum working temperature: -40 ºC.

PHYSICAL & ELECTRICAL CHARACTERISTICS:

General Cable Code	Cross section (mm^2)	Outer diameter[1] (mm)	Weight[1] (kg/km)	Bending radius[1] (mm)
2661075	7x1	12.4	215	50
2661076	7x1.5	13.2	250	55
2661077	7x2.5	14.4	330	60
2661125	12x1	16.8	355	70
2661126	12x1.5	17.5	400	70
2661127	12x2.5	19.5	550	80
2661195	19x1	19.9	510	80
2661196	19x1.5	20.8	580	85
2661197	19x2.5	23.1	800	95
2661245	24x1	23.4	655	95
2661246	24x1.5	24.7	765	100
2661247	24x2.5	27.4	1,045	165
2661275	27x1	23.9	700	100
2661276	27x1.5	25.2	815	155
2661277	27x2.5	28.0	1,125	170
2661375	37x1	27.0	910	165
2661376	37x1.5	28.4	1,065	175
2661377	37x2.5	31.6	1,475	190

[1] Dimensional values subject to variation depending on manufacturing tolerances.

GENFIRE® MAR

RC4Dt-M Fire Resistant Armoured and Screened Control 150/250 V

STANDARDS:

CONSTRUCTION: IEC 60092-350 / IEC 60092-360 / IEC 60092-376
FIRE PERFORMANCE: IEC 60754-1 / IEC 60754-2 / IEC 61034-2
IEC 60331-1 and 2 / IEC 60332-1-2 / IEC 60332-3-22

CONSTRUCTION:

1. **CONDUCTOR:**
   Copper, class 5 to IEC 60228.

2. **MICA TAPE**

3. **INSULATION:**
   Halogen-free cross linked polyethylene (XLPE). IEC 60092-360.
   Core identification: see page 21.

4. **ARMOUR/SCREEN:**
   Copper wire braid.

5. **OUTER SHEATH:**
   Halogen-free thermoplastic polyolefin (SHF 1). IEC 60092-360.

APPLICATIONS:

Sreened multicore cables for installation in marine applications with special performances on flame spread, fire resistance and low emision of smoke and fumes.

Minimum handling & laying temperature: -15 ºC.
Minimum working temperature: -40 ºC.

PHYSICAL & ELECTRICAL CHARACTERISTICS:

General Cable Code	Cross section (mm²)	Diameter under armour[1] (mm)	Outer diameter[1] (mm)	Weight[1] (kg/km)	Bending radius[1] (mm)
2663024	2x0.75	5.1	8.1	90	50
2663026	2x1.5	6.2	9.2	120	55
2663034	3x0.75	5.5	8.5	105	55
2663036	3x1.5	6.7	9.7	140	60
2663044	4x0.75	6.1	9.1	125	55
2663046	4x1.5	7.5	10.7	170	65
2663074	7x0.75	7.6	10.8	175	65
2663076	7x1.5	9.4	12.6	245	80
2663124	12x0.75	10.4	14.2	300	85
2663126	12x1.5	12.8	16.8	425	105
2663194	19x0.75	12.5	16.5	415	100
2663196	19x1.5	15.4	19.6	595	120
2663244	24x0.75	14.9	19.1	510	115
2663246	24x1.5	18.4	22.8	740	140
2663274	27x0.75	15.3	19.5	550	120
2663276	27x1.5	18.9	23.3	800	140
2663374	37x0.75	17.4	21.8	700	130
2663376	37x1.5	21.4	26.0	1,030	160

[1] Dimensional values subject to variation depending on manufacturing tolerances.

GENFIRE® MAR

RC4Dt-M Fire Resistant Armoured and Screened Instrumentation 150/250 V

STANDARDS:

CONSTRUCTION: IEC 60092-350 / IEC 60092-360 / IEC 60092-376
FIRE PERFORMANCE: IEC 60754-1 / IEC 60754-2 / IEC 61034-2
IEC 60331-1 and 2 / IEC 60332-1-2 / IEC 60332-3-22

CONSTRUCTION:

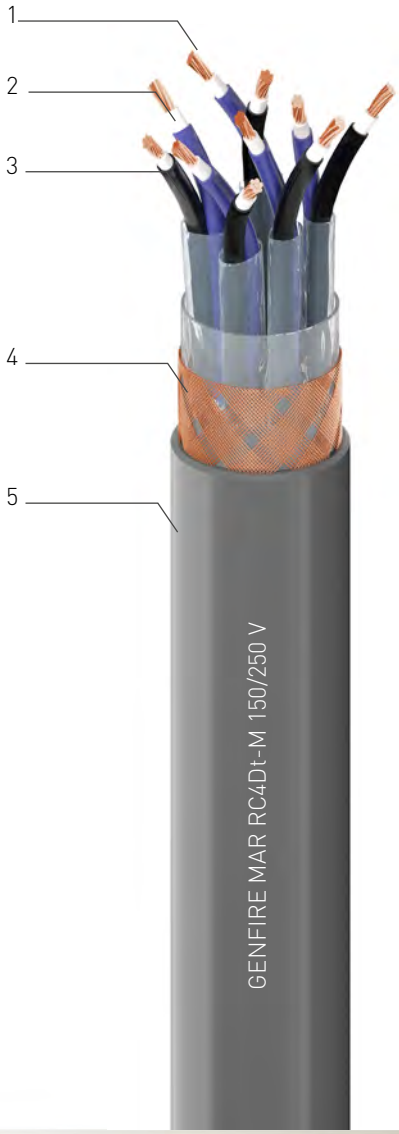
1. **CONDUCTOR:**
Copper, class 2 up to 1 mm^2 and class 5 from 1.5 mm^2 to IEC 60228.

2. **MICA TAPE**

3. **INSULATION:**
Halogen-free cross linked polyethylene (XLPE). IEC 60092-360.
Core identification: see page 21.

4. **ARMOUR/SCREEN:**
Copper wire braid.

5. **OUTER SHEATH:**
Halogen-free thermoplastic polyolefin (SHF 1). IEC 60092-360.



APPLICATIONS

Overall sreened multipair cables for installation in marine applications with special performances on flame spread, fire resistance and low emision of smoke and fumes.

Minimum handling & laying temperature: -15 ºC.

Minimum working temperature: -40 ºC.

PHYSICAL & ELECTRICAL CHARACTERISTICS:

PAIRS

General Cable Code	Cross section (mm^2)	Diameter under armour [1] (mm)	Outer diameter [1] (mm)	Weight [1] (kg/km)	Bending radius [1] (mm)	Voltage drop cos μ = 0.8 (V/A·km)	Inductance (mH/km)
4046014	1x2x0.75	5.6	8.6	105	55	0.065	0.721
4103016	1x2x1.5	6.4	9.4	125	60	0.079	0.658
4046024	2x2x0.75	6.7	9.9	145	60	0.046	0.721
4103026	2x2x1.5	7.7	11.5	210	70	0.053	0.658
4046034	3x2x0.75	9.3	12.5	195	75	0.052	0.721
4103036	3x2x1.5	10.6	14.4	285	90	0.058	0.658
4046044	4x2x0.75	10.4	14.2	265	85	0.052	0.721
4103046	4x2x1.5	11.6	15.6	355	95	0.057	0.665
4046074	7x2x0.75	13.6	17.6	395	105	0.052	0.721
4103076	7x2x1.5	15.5	19.7	520	120	0.058	0.658
4046124	12x2x0.75	17.3	21.5	580	130	0.052	0.721
4103126	12x2x1.5	19.7	24.3	790	150	0.058	0.658
4046194	19x2x0.75	21.5	26.1	835	160	0.052	0.721
4103196	19x2x1.5	24.5	29.5	1,155	180	0.058	0.658
4046244	24x2x0.75	24.2	29.0	1,015	175	0.052	0.721
4103246	24x2x1.5	27.6	33.4	1,495	200	0.058	0.658
4046274	27x2x0.75	25.2	30.2	1,120	185	0.052	0.721
4103276	27x2x1.5	28.8	34.6	1,630	210	0.058	0.658
4046374	37x2x0.75	28.2	33.4	1,425	200	0.052	0.721
4103376	37x2x1.5	32.2	38.4	2,105	230	0.058	0.658

[1] Dimensional values subject to variation depending on manufacturing tolerances.

GENFIREMAR

GENFIRE® MAR

RO1C4Dt-M Fire Resistant Armoured and Individually Screened Instrumentation 150/250 V

STANDARDS:

CONSTRUCTION: IEC 60092-350 / IEC 60092-360 / IEC 60092-376
FIRE PERFORMANCE: IEC 60754-1 / IEC 60754-2 / IEC 61034-2
IEC 60332-1-2 / IEC 60332-3-22

CONSTRUCTION:

1. **CONDUCTOR:**
   Copper class 2 up to 1 mm2 and class 5 from 1.5 mm2 to IEC 60228.

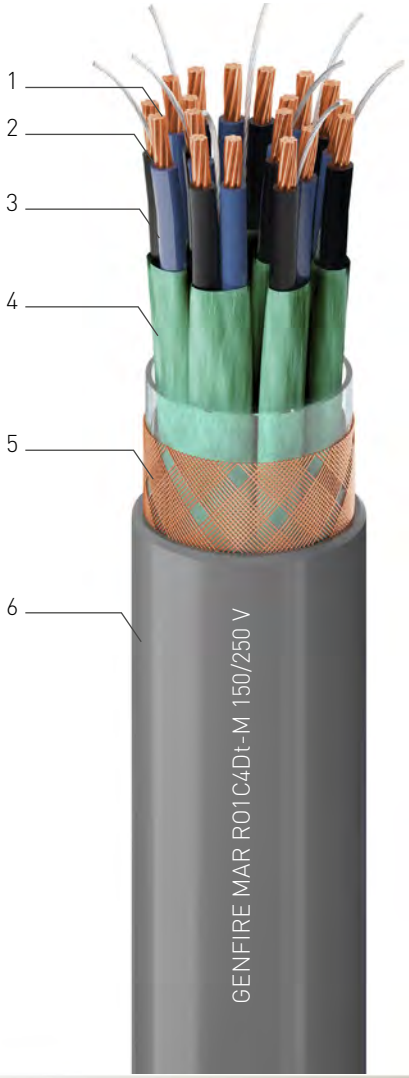
2. **MICA TAPE**

3. **INSULATION:**
   Halogen-free cross linked polyethylene (XLPE). IEC 60092-360.

4. **INDIVIDUAL SCREEN:**
   Aluminium/polyester tape with copper drain wire.
   Core identification: see page 21.

5. **ARMOUR:**
   Copper wire braid.

6. **OUTER SHEATH:**
   Halogen-free thermoplastic polyolefin (SHF 1). IEC 60092-360.



APPLICATIONS:

Flexible armoured individually sreened multipair cables for installation in marine applications with special performances on flame spread, fire resistant and low emision of smoke and fumes.

Minimum handling & laying temperature: -15 ºC.
Minimum working temperature: -40 ºC.

PHYSICAL & ELECTRICAL CHARACTERISTICS:

PAIRS

General Cable Code	Cross section (mm²)	Diameter under armour [1] (mm)	Outer diameter [1] (mm)	Weight [1] (kg/km)	Bending radius [1] (mm)	Voltage drop cos μ = 0.8 (V/A·km)	Inductance (mH/km)
4113016	1x2x1.5	6.6	9.7	140	78	0.078	0.6618
4043014	1x2x0.75	6.0	9.1	120	55	0.064	0.7256
4043015	1x2x1	6.4	9.5	130	57	0.071	0.6887
4043024	2x2x0.75	10.4	13.8	240	83	0.064	0.7256
4043025	2x2x1	11.2	14.5	270	87	0.071	0.6887
4113026	2x2x1.5	11.8	15.7	340	95	0.078	0.6618
4043034	3x2x0.75	11.2	14.5	245	88	0.064	0.7256
4043035	3x2x1	12.0	15.9	325	96	0.071	0.6887
4113036	3x2x1.5	12.7	16.8	360	105	0.078	0.6618
4043044	4x2x0.75	12.5	16.5	335	99	0.064	0.7256
4043045	4x2x1	13.4	17.3	385	105	0.071	0.6887
4113046	4x2x1.5	14.2	18.3	430	110	0.078	0.6618
4043074	7x2x0.75	15.5	19.6	485	120	0.064	0.7256
4043075	7x2x1	16.6	20.7	565	125	0.071	0.6887
4113076	7x2x1.5	17.5	21.8	635	135	0.078	0.6618
4043124	12x2x0.75	21.3	25.8	760	210	0.064	0.7256
4043125	12x2x1	22.8	27.3	895	220	0.071	0.6887
4113126	12x2x1.5	24.2	29.1	1,025	175	0.078	0.6618
4043194	19x2x0.75	25.8	30.4	1,075	185	0.064	0.7256
4043195	19x2x1	27.6	32.5	1,300	195	0.071	0.6887
4113196	19x2x1.5	29.2	34.5	1,475	210	0.078	0.6618
4043244	24x2x0.75	30.7	35.8	1,355	215	0.064	0.7256
4043245	24x2x1	32.8	38.1	1,635	230	0.071	0.6887
4113246	24x2x1.5	34.7	40.4	1,855	325	0.078	0.6618
4043274	27x2x0.75	31.4	36.6	1,470	220	0.064	0.7256
4043275	27x2x1	33.6	38.9	1,775	235	0.071	0.6887
4113276	27x2x1.5	35.6	41.7	2,115	255	0.078	0.6618
4043375	37x2x1	38.2	44.3	2,350	270	0.071	0.6887
4113376	37x2x1.5	41.9	48.4	2,990	390	0.082	0.6489

[1] Dimensional values subject to variation depending on manufacturing tolerances.

EXZHELLENT® MAR

RO2C4Dt-VFD Variable Frequency Drives Screened Low Voltage Power 0.6/1 kV

STANDARDS:

CONSTRUCTION: IEC 60092-350 / IEC 60092-353 / IEC 60092-360
FIRE PERFORMANCE: IEC 60754-1 / IEC 60754-2 / IEC 61034-2
IEC 60332-1-2 / IEC 60332-3-22

CONSTRUCTION:

1. **CONDUCTOR:**
Copper class 5 to IEC 60228.

2. **INSULATION:**
Halogen-free cross linked polyethylene (XLPE). IEC 60092-360.
Core identification: see page 21.

3. **THREE DISTRIBUTED EARTHING CORES:**
Copper class 5 to IEC 60228.
Halogen-free cross-linked polyethylene (XLPE). IEC 60092-360.

4. **SCREEN:**
Copper/polyester tape plus copper wire braid.
VFD compliant with IEEE 1580.

5. **OUTER SHEATH:**
Halogen-free thermoplastic polyolefin (SHF 1). IEC 60092-360.

APPLICATIONS:

Low voltage power cables for variable frequency drives (VFD) in marine applications. With special fire performance such as halogen-free, fire retardancy, and low emission of smoke and fumes.

Maximum rated conductor temperature in normal operation: 90 °C.
Minimum handling & laying temperature: -15 °C.
Minimum working temperature: -40 °C.

PHYSICAL & ELECTRICAL CHARACTERISTICS:

General Cable Code	Cross section (mm²)	Diameter under armour (mm)	Outer diameter[1] (mm)	Weight[1] (kg/km)	Bending radius[1] (mm)	Current rating Air 45°C[2] (A)	Voltage drop cos μ = 0.8 (V/A·km)	Inductance (mH/km)
7792314	3x50/3x10	27.6	32.7	2,285	200	167	0.759	0.235
7792315	3x70/3x16	31.8	37.2	3,115	225	214	0.556	0.232
7792316	3x95/3x16	35.2	41.0	3,830	250	259	0.438	0.227
7792317	3x120/3x25	39.2	45.0	4,835	270	301	0.358	0.226
7792318	3x150/3x25	42.2	48.6	5,800	295	347	0.302	0.228
7792319	3x185/3x35	45.4	52.2	7,030	315	397	0.262	0.229
7792320	3x240/3x50	52.6	59.8	9,260	360	468	0.215	0.226
7792321	3x300/3x50	60.3	68.1	11,290	410	540	0.186	0.223

[1] Dimensional values subject to variation depending on manufacturing tolerances.

[2] Current ratings according to IEC 60092-352 Annex A Table A.4. Method E (Multicore cable).

EXZHELLENT® MAR

RO2C4DtZbDt-VFD Variable Frequency Drives Armoured and Screened Low Voltage Power 0.6/1 kV

STANDARDS:

CONSTRUCTION: IEC 60092-350 / IEC 60092-353 / IEC 60092-360
FIRE PERFORMANCE: IEC 60754-1 / IEC 60754-2 / IEC 61034-2
IEC 60332-1-2 / IEC 60332-3-22

CONSTRUCTION:

1. **CONDUCTOR:**
Copper class 5 to IEC 60228.

2. **INSULATION:**
Halogen-free cross linked polyethylene (XLPE). IEC 60092-360.
Core identification: see page 21.

3. **THREE DISTRIBUTED EARTHING CORES:**
Copper class 5 to IEC 60228.
Halogen-free cross-linked polyethylene (XLPE). IEC 60092-360.

4. **SCREEN:**
Copper/polyester tape plus copper wire braid.
VFD compliant with IEEE 1580.

5. **INNER COVERING:**
Halogen-free thermoplastic polyolefin.

6. **ARMOUR:**
Bronze wire braid.

7. **OUTER SHEATH:**
Halogen-free thermoplastic polyolefin (SHF 1). IEC 60092-360.

APPLICATIONS:

Low voltage power cables for variable frequency drives (VFD) in marine applications. With special fire performance such as halogen-free, fire retardancy, and low emission of smoke and fumes.

Maximum rated conductor temperature in normal operation: 90 °C.
Minimum handling & laying temperature: -15 °C.
Minimum working temperature: -40 °C.

General Cable Code	Cross section (mm^2)	Diameter under screen[1] (mm)	Diameter under armour[1] (mm)	Outer diameter[1] (mm)	Weight[1] (kg/km)	Bending radius[1] (mm)	Current rating Air 45°C[2] (A)	Voltage drop cos μ = 0.8 (V/A·km)	Inductance (mH/km)
7793314	3x50/3x10	27.6	31.3	36.5	2,750	295	167	0.759	0.235
7793315	3x70/3x16	31.8	35.4	41.4	3,735	335	214	0.556	0.232
7793316	3x95/3x16	35.2	39.2	45.6	4,550	365	259	0.438	0.227
7793317	3x120/3x25	39.3	43.3	49.7	5,630	400	301	0.358	0.226
7793318	3x150/3x25	42.2	46.6	53.4	6,680	430	347	0.302	0.228
7793319	3x185/3x35	45.4	49.8	56.8	7,940	455	397	0.262	0.229
7793320	3x240/3x50	52.6	57.4	65.0	10,395	520	468	0.215	0.226
7793321	3x300/3x50	60.5	68.3	76.5	13,175	615	540	0.186	0.223

[1] Dimensional values subject to variation depending on manufacturing tolerances.

[2] Current ratings according to IEC 60092-352 Annex A Table A.4, Method E (Multicore cable).

EXZHELLENT® MAR

DHDtO2C4Dt-VFD Variable Frequency Drives Screened Medium Voltage Power 3.6/6 kV - 6/10 kV

STANDARDS:

CONSTRUCTION: IEC 60092-350 / IEC 60092-354 / IEC 60092-360
FIRE PERFORMANCE: IEC 60754-1 / IEC 60754-2 / IEC 61034-2
IEC 60332-1-2 / IEC 60332-3-22

CONSTRUCTION:

1. **CONDUCTOR:**
Copper class 5 to IEC 60228.

2. **INNER SEMICONDUCTOR**

3. **INSULATION:**
High modulus ethylene-propylene rubber (HEPR). IEC 60092-360.

4. **OUTER SEMICONDUCTOR:**
Core identification: see page 21.

5. **METALLIC SCREEN: OVER INSULATION:**
Copper tape.

6. **THREE DISTRIBUTED EARTHING CORES:**
Copper class 5 to IEC 60228.
Ethylene-propylene rubber (EPR). IEC 60092-360.

7. **INNER COVERING:**
Halogen-free thermoplastic polyolefin (SHF 1). IEC 60092-360.

8. **SCREEN:**
Copper/polyyester tape plus wire braid. VFD performance.

9. **OUTER SHEATH:**
Halogen-free thermoplastic polyolefin (SHF 1). IEC 60092-360.

APPLICATIONS:

Medium voltage power cables for variable frequency drives (VFD) in marine applications. With special fire performance such as halogen-free, fire retardancy, and low emission of smoke and fumes.

Maximum rated conductor temperature in normal operation: 90 °C.
Minimum handling & laying temperature: -15 ºC.
Minimum working temperature: -40 ºC.

PHYSICAL & ELECTRICAL CHARACTERISTICS:

3.6/6 kV

General Cable Code	Cross section (mm²)	Diameter over insulation [1] (mm)	Diameter under screen [1] (mm)	Outer diameter [1] (mm)	Weight [1] (kg/km)	Current rating Air 45°C [2] (A)	Inductance (mH/km)	Capacitance (µF/km)
7867314	3x50+3x10	15.3	37.3	43.5	3,685	158	0.118	0.327
7867315	3x70+3x16	16.9	41.0	47.6	4,635	203	0.112	0.375
7867316	3x95+3x16	18.6	44.8	51.6	5,620	246	0.105	0.425
7867317	3x120+3x25	20.3	49.0	56.0	6,915	285	0.099	0.473
7867318	3x150+3x25	21.6	52.0	59.4	7,850	329	0.095	0.512
7867319	3x185+3x50	23.2	55.6	63.2	9,410	377	0.091	0.558
7867320	3x240+3x50	25.6	61.0	69.0	11,905	444	0.088	0.601

6/10 kV

General Cable Code	Cross section (mm²)	Diameter over insulation [1] (mm)	Diameter under screen [1] (mm)	Outer diameter [1] (mm)	Weight [1] (kg/km)	Current rating Air 45°C [2] (A)	Inductance (mH/km)	Capacitance (µF/km)
7868314	3x50+3x10	17.1	41.4	48.0	4,090	158	0.112	0.257
7868315	3x70+3x16	18.7	45.1	51.9	5,045	203	0.106	0.292
7868316	3x95+3x16	20.4	49.3	56.5	6,140	246	0.101	0.329
7868317	3x120+3x25	22.1	53.0	60.4	7,410	285	0.097	0.365
7868318	3x150+3x25	23.4	56.0	63.6	8,345	329	0.093	0.394
7868319	3x185+3x50	25.0	59.6	67.4	9,930	377	0.089	0.428
7868320	3x240+3x50	27.2	64.6	72.8	12,200	444	0.087	0.475

[1] Dimensional values subject to variation depending on manufacturing tolerances.

[2] Current ratings according to IEC 60092-352 Annex A Table A.4, Method E (Multicore cable).
Current ratings 5 % lower than the tabulated values (Note 2 of point A.1 of IEC 60092-352).

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