

Shipboard Cables



WILSON CABLES PRIVATE LIMITED

New And Old Cable Colour System

International Cable Colour System

For the purpose of standardizing technical requirements, the European Committee for Electrotechnical Standardization (CENELEC) countries (including Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Luxembourg, Malta, Netherlands, Norway, Portugal, Slovakia, Spain, Sweden, Switzerland and United Kingdom) have adopted the following colour code :

Systems	Phase (or Line)			Neutral	Earth
1 - phase system	Brown			Blue	Green/Yellow
3 - phase system	L1	L2	L3	Blue	Green/Yellow
	Brown	Black	Grey		

Change to Cable Colour Code / Sequence

Cable Type	Old Cable Colour Code / Sequence	New Cable Colour Code / Sequence
Single - core	Red or Black	Brown or Blue
Two - core	Red, Black	Brown, Blue
Three - core	Red, Yellow, Blue	Brown, Black, Grey
Four - core	Red, Yellow, Blue, Black	Brown, Black, Grey, Blue
Five - core	Red, Yellow, Blue, Black, Green/Yellow	Brown, Black, Grey, Blue, Green/Yellow

Note : Customers shall specify their requirements of the cable colour code at the time of order.



Contents

	Page
Contents	1
Our Company	2~3
Construction of Shipboard Cables	4
Manufacturing Facilities & Warehouse	5
Test Facilities	6
Test Methods	7
Product Group, Product Construction & Additional Features Codes	8
MC-210 PVC Sheathed Shipboard Power Cables	9
MC-210Q / MC-210C PVC Sheathed Shipboard Braided Power Cables	10
MC-210Q (SST) / MC-210C (SST) PVC Sheathed Shipboard Braided Power Cables	11
MC-200 LSOH Sheathed Shipboard Power Cables	12
MC-200Q / MC-200C LSOH Sheathed Shipboard Braided Power Cables	13
MC-200Q (SST) / MC-200C (SST) LSOH Sheathed Shipboard Braided Power Cables	14
FR-200-M Fire Resistant Shipboard Power Cables	15
FR-200Q-M / FR-200C-M Fire Resistant Shipboard Braided Power Cables	16
FR-200Q-M (SST) / FR-200C-M (SST) Fire Resistant Shipboard Braided Power Cables	17
Technical Information - Shipboard Power Cables	18
Introduction of Shipboard Instrumentation Cables	19
Technical Information	20
MIC-210 PVC Sheathed Shipboard Instrumentation Cables	21
MIC-210C / MIC-210Q PVC Sheathed Shipboard Braided Instrumentation Cables	22
MIC-210C (SST) / MIC-210Q (SST) PVC Sheathed Shipboard Braided Instrumentation Cables	23
MIP-210 PVC Sheathed Shipboard Instrumentation Cables	24
MIP-210C / MIP-210Q PVC Sheathed Shipboard Braided Instrumentation Cables	25
MIP-210C (SST) / MIP-210Q (SST) PVC Sheathed Shipboard Braided Instrumentation Cables	26
MIM-210 PVC Sheathed Shipboard Instrumentation Cables	27
MIM-210C / MIM-210Q PVC Sheathed Shipboard Braided Instrumentation Cables	28
MIM-210C (SST) / MIM-210Q (SST) PVC Sheathed Shipboard Braided Instrumentation Cables	29
MIC-200 LSOH Sheathed Shipboard Instrumentation Cables	30
MIC-200C / MIC-200Q LSOH Sheathed Shipboard Braided Instrumentation Cables	31
MIC-200C (SST) / MIC-200Q (SST) LSOH Sheathed Shipboard Braided Instrumentation Cables	32
MIP-200 LSOH Sheathed Shipboard Instrumentation Cables	33
MIP-200C / MIP-200Q LSOH Sheathed Shipboard Braided Instrumentation Cables	34
MIP-200C (SST) / MIP-200Q (SST) LSOH Sheathed Shipboard Braided Instrumentation Cables	35
MIM-200 LSOH Sheathed Shipboard Instrumentation Cables	36
MIM-200C / MIM-200Q LSOH Sheathed Shipboard Braided Instrumentation Cables	37
MIM-200C (SST) / MIM-200Q (SST) LSOH Sheathed Shipboard Braided Instrumentation Cables	38
FRIC-200-M Fire Resistant Shipboard Instrumentation Cables	39
FRIC-200C-M / FRIC-200Q-M Fire Resistant Shipboard Braided Instrumentation Cables	40
FRIC-200C-M (SST) / FRIC-200Q-M (SST) Fire Resistant Shipboard Braided Instrumentation Cables	41
FRIP-200-M Fire Resistant Shipboard Instrumentation Cables	42
FRIP-200C-M / FRIP-200Q-M Fire Resistant Shipboard Braided Instrumentation Cables	43
FRIP-200C-M (SST) / FRIP-200Q-M (SST) Fire Resistant Shipboard Braided Instrumentation Cables	44
FRIM-200-M Fire Resistant Shipboard Instrumentation Cables	45
FRIM-200C-M / FRIM-200Q-M Fire Resistant Shipboard Braided Instrumentation Cables	46
FRIM-200C-M (SST) / FRIM-200Q-M (SST) Fire Resistant Shipboard Braided Instrumentation Cables	47
Notes	48

Our Company

WILSON CABLES

enjoys a track record of 41 years in power and special cables manufacture in Singapore and have successfully introduced Shipboard Cables range since 1993. Shipboard Cables manufactured in Singapore facility are sold under the brand name of “ **WILSON CABLES** ”.

State of the art braiding and pairing machinery, used by a well trained workforce that understands the demands of the Shipbuilding Industry support this operation. International Certification is provided by Class Approval agencies namely American Bureau of Shipping (ABS), Lloyd's Register (LR), Det Norske Veritas (DNV), Bureau Veritas (BV), Class NK Nippon Kaiji Kyokai (NKK) and more recently Germanischer Lloyd (GL).

Recognition has come out of hard work and perseverance and **WILSON CABLES** is proud to have been the chosen brand for major shipyard customers in Singapore, the ASEAN and the Middle East market all these years.

A highly dedicated team of professionals and staff have built up this credibility over the years. Appropriate level of knowledge, customer commitment, quality output, economic pricing and prompt delivery have endeared us to the Marine Industry & Oil and Gas Industry as a reliable supplier of **WILSON CABLES**.



WILSON CABLES shares the Singapore Inspiration to be a Regional player and spread its wings to reach out to overseas markets armed with ISO 9002 quality system recognition for the manufacture of cables in 1992 (a first among cable companies in Singapore). The quality system was upgraded to ISO 9001 : 2008 in year 2009.

WILSON CABLES have successfully built up an export market. Shipyards in China, Hong Kong, Malaysia, Thailand, Indonesia, India, Myanmar, Vietnam, Sri Lanka and the United Arab Emirates have been using **WILSON CABLES**. We have shown great resilience in handling stringent export requirements and intense competition in catering to this demand.

Shipbuilding Industry is full of challenges set by Class Societies, International Ship Registries and Ship Owners. **WILSON CABLES** is proud to be associated with this ongoing development with the introduction of Low Smoke Halogen Free Fire Resistant Shipboard Cables. To the enthusiastic team at **Wilson Cables Private Limited**, it is a passion to succeed amidst intense competition.

The range of **WILSON CABLES** cover :

Cables For Power Supply And General Purposes

- PVC Insulated Cables 450/750 V to SS 358-3 or BS EN 50525-2-31 or IEC 60227-3
- LSOH Insulated Cables or FRT-3S 450/750 V or 600/1000 V to BS 7211
- PVC Insulated Unarmoured / Armoured PVC Sheathed Power Cables 600/1000 V to IEC 60502-1
- XLPE Insulated Unarmoured / Armoured PVC Sheathed Power Cables 600/1000 V to IEC 60502-1 / BS 5467
- XLPE Insulated Unarmoured / Armoured LSOH Sheathed Power Cables 600/1000 V to IEC 60502-1 / BS 6724
- Variable Speed Drive Unarmoured / Armoured Cables 600/1000 V to IEC 60502-1
- PVC Insulated Flexible Cords 300/500 V to BS EN 50525-2-11 / SS 358-5 / IEC 60227-5
- PVC Insulated Flexible Cables 450/750 V to BS EN 50525-2-31 (70 °C), 600/1000 V to BS 6231 (105 °C)
- PVC Insulated PVC Sheathed Flexible Cables 600/1000 V to IEC 60502-1
- Wilson Flex Multi-Core PVC Insulated Unscreened / Screened Flexible Cables 300/500 V to BS EN 50525-2-11
- PE Insulated Unarmoured / Armoured Instrumentation Cables 300/500 V to BS EN 50288-7
- PVC Insulated Unarmoured / Armoured Instrumentation Cables 300/500 V to BS EN 50288-7

Fire Resistant Cables

Flame Retardant LSOH Sheathed Fire Resistant Cables complying to the following standards where applicable :

- | | | |
|--------------------------|---|--|
| a. IEC 60331-21 | - | Fire Alone Test |
| b. BS 6387 / SS 299-1 | - | Fire Resistance Characteristics Tests Cat. C, W, Z |
| c. IEC 60332-1 | - | Flame Retardant Test |
| d. IEC 60332-3-22 Cat. A | - | Flame Retardant Tests Cat. A |
| e. IEC 60754-1 | - | Halogen Content Test |
| f. IEC 60754-2 | - | Corrosivity Test |
| g. IEC 61034-1&2 | - | Smoke Density Test |
| h. ASTM D 2863 | - | Oxygen Index Test |

- FR-3S, 450/750 V or 600/1000 V to BS 7211
- FR-3S Twin Twisted, 450/750 V or 600/1000 V to BS 7211
- FR-100, 300/500 V to BS 6387 / SS 299-1
- FR-200 & FR-200A, 600/1000 V to IEC 60502-1 And BS 7846 or BS 6724
- FRIC-300 & FRIC-300A, 300/500 V to BS EN 50288-7
- FRIM-300 & FRIM-300A, 300/500 V to BS EN 50288-7

Shipboard Cables

There are three types of Shipboard Power and Instrumentation Cables :

Flame Retardant PVC Sheathed Shipboard Power And Instrumentation Cables

- MC-210, MC-210Q & MC-210C, 600/1000 V to IEC 60092-353
- MIC-210, MIC-210Q & MIC-210C, 150/250 V to IEC 60092-376
- MIP-210, MIP-210Q & MIP-210C, 150/250 V to IEC 60092-376
- MIM-210, MIM-210Q & MIM-210C, 150/250 V to IEC 60092-376

Flame Retardant LSOH Sheathed Shipboard Power And Instrumentation Cables

- MC-200, MC-200Q & MC-200C, 600/1000 V to IEC 60092-353
- MIC-200, MIC-200Q & MIC-200C, 150/250 V to IEC 60092-376
- MIP-200, MIP-200Q & MIP-200C, 150/250 V to IEC 60092-376
- MIM-200, MIM-200Q & MIM-200C, 150/250 V to IEC 60092-376

Flame Retardant LSOH Sheathed Fire Resistant Shipboard Power And Instrumentation Cables

- FR-200-M, FR-200Q-M & FR-200C-M, 600/1000 V to IEC 60092-353
- FRIC-200-M, FRIC-200Q-M & FRIC-200C-M, 150/250 V to IEC 60092-376
- FRIP-200-M, FRIP-200Q-M & FRIP-200C-M, 150/250 V to IEC 60092-376
- FRIM-200-M, FRIM-200Q-M & FRIM-200C-M, 150/250 V to IEC 60092-376

Cables For Oil And Gas Industry

Flame Retardant Reduced Toxicity (FRRT) Cables to IEC 60332-3-22 Cat. A And IEC 60754-1 (HCL < 17%)

- FRT-3S, 600/1000 V to BS 7211
- FRT-211Q, FRT-211C, 600/1000 V to IEC 60502-1
- FRT-211A, 600/1000 V to IEC 60502-1
- FRT-411A, 600/1000 V to IEC 60502-1
- VSD-211, VSD-211A, 600/1000 V to IEC 60502-1
- IC-111, IP-111, IC-111A, IP-111A & IC-111Q, 300/500 V to BS EN 50288-7
- IC-411, IP-411, IM-411, IC-411A, IP-411A & IM-411A, 300/500 V to BS EN 50288-7
- IC-211, IP-211, IC-211A & IP-211A, 300/500 V to BS EN 50288-7

Flame Retardant LSOH Sheathed Cables to IEC 60332-3-22 Cat. A, IEC 60754-1&2 And IEC 61034-1&2

- FRT-200Q, FRT-200C, 600/1000 V to IEC 60502-1
- FRT-200A, 600/1000 V to IEC 60502-1
- VSD-200, VSD-200A, 600/1000 V to IEC 60502-1
- IC-200, IP-200, IC-200A & IP-200A, 300/500 V to BS EN 50288-7

The list that keeps pace with Customers' need and our adaptability to the dynamic needs of the market.

We welcome you to visit our website at <http://www.wilson-cables.com>.

All your requirements can be sent to Marketing Department.

By Phone : +65 68617888

By Fax : +65 68617871

By Email : exports@wilson-cables.com.sg / sales.sg@wilson-cables.com.sg

By Visiting us : at 142 Gul Circle, Jurong Industrial Estate, Singapore 629602

WILSON CABLES is your reliable source of quality cables. We are here to serve all your cable needs.

Construction of Shipboard Cables



MC-200C Cable

8 7 6a 3 2 1



FR-200C-M Cable



MIM-200C (SST) Cable

8 7 6b 6a 5a 5b 3 1



FRIP-200C-M Cable

4a 4b 2

- | | |
|-----------------------|--|
| 1. Conductor | 5b. Drain Wire |
| 2. Fire Barrier | 6a. Extruded Inner Sheath or Extruded Inner Covering |
| 3. Insulation | 6b. Lapped Inner Covering |
| 4a. Individual Screen | 7. Wire Braid |
| 4b. Drain Wire | 8. Outer Sheath |
| 5a. Collective Screen | |

Manufacturing Facilities & Warehouse



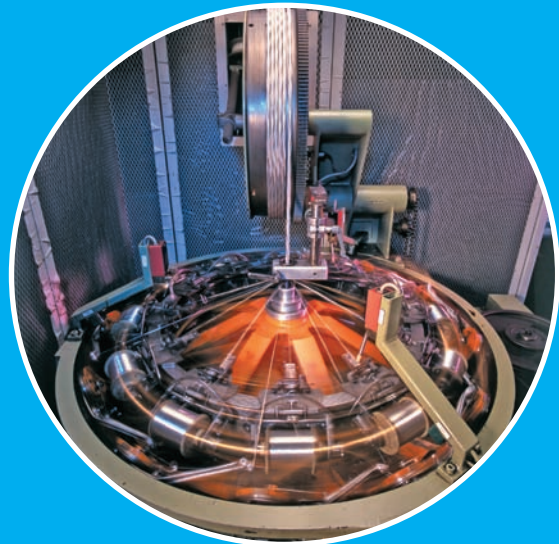
Storage



Storage Facility



Stranding Process



Braiding Process

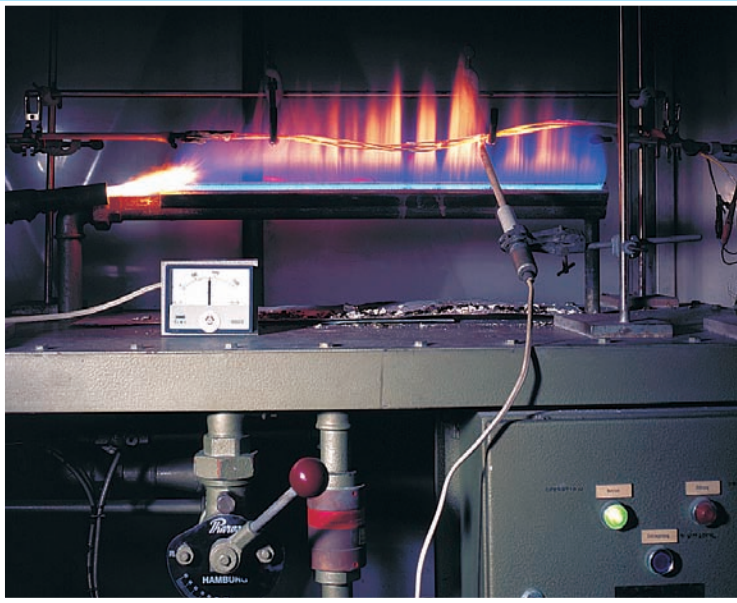


Taping Process



Extrusion Process

Test Facilities



Fire Alone Test Equipment - IEC 60331-21 & BS 6387 Cat. A, B, C



Flame Retardant Test Equipment - IEC 60332-3



Electrical Test Equipment - High Voltage Test



XLPE Hot Set Test Equipment - Oven



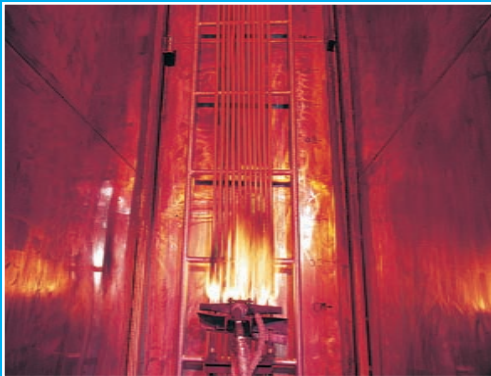
Halogen Content & Corrosivity Tests Equipment
- IEC 60754-1 & IEC 60754-2



Wall Thickness Measuring Equipment
- Profile Projector

Test Methods

1. Flame Retardant Test : IEC 60332-3-22 Cat. A



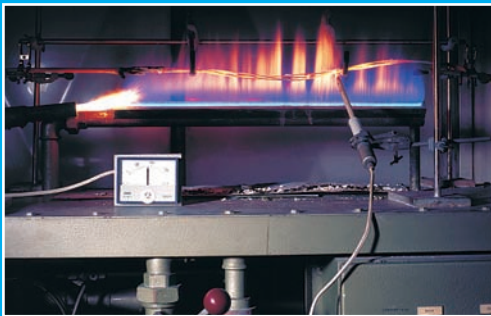
WILSON CABLES can provide Flame Retardant (Reduced Flame Propagation (RFP) and Self-Extinguished) type of cables meeting Flame Retardant test requirement to IEC 60332-3-22 Cat. A.

Flame Retardant Test (Bunch) : IEC 60332-3-22 Cat. A

A bunch of cables are installed vertically on the test ladder. A burner, as specified in the test standard, is used as ignition source. The flame is continuously applied for the test duration in the below table. Flame is cut off after the 40 minutes test duration. After flame extinction, length of charred portion is measured and should not exceed 2.5 meters from the bottom edge of the burner.

Total volume of combustion material for Cat. A is 7 Litre/m.

2. Fire Alone Test : IEC 60331-21



WILSON CABLES provides Fire Resistant Cables meeting IEC 60331-21 requirement.

Fire Alone Test : IEC 60331-21

The Fire Resistant Cable is subjected to the flame at least 750 °C continuously for a period of 90 minutes or the specified application time. Test voltage equal to the cable designated voltage is applied to the cable continuously during the entire testing. After which the flame shall be extinguished but the cable sample shall remain energised for a further 15 minutes. During the test procedure the cable shall maintain circuit integrity.

3. Halogen Content & Corrosivity Test : IEC 60754-1 & IEC 60754-2



WILSON CABLES provide LSOH type of cables with Low Smoke Halogen Free material, which comply with IEC 60754-1 & IEC 60754-2 (if applicable) requirements.

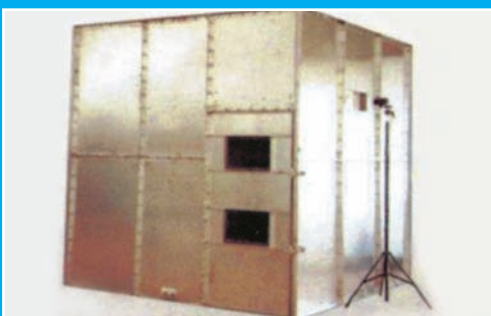
Halogen Content Test : IEC 60754-1

Determine the amount of halogen acid gas, which is evolved during the combustion of compounds based on halogenated polymers and compounds containing halogenated additives taken from cable constructions. The amount of halogen acid shall not exceed 0.5%.

Corrosivity Test : IEC 60754-2

Determine the degree of pH value and conductivity of the gases, which is evolved during the combustion of compounds taken from cable components. The weighted pH value should not be less than 4.3 and the weighted value of conductivity should not exceed 10 µS/mm.

4. Smoke Density Test : IEC 61034-1 & IEC 61034-2

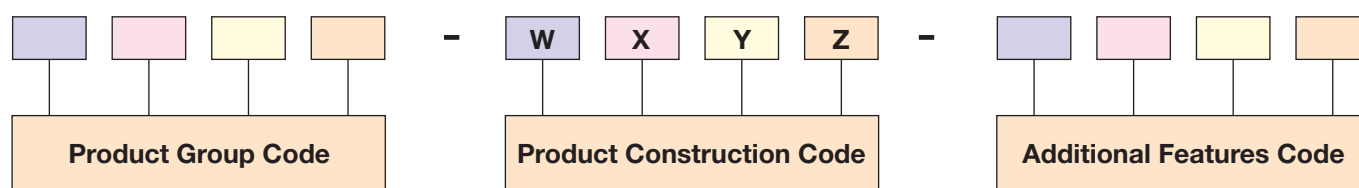


WILSON CABLES LSOH type of cables with Low Smoke Halogen Free materials release very little smoke emission during a fire, which are complying with IEC 61034-1 and IEC 61034-2 requirements, it provide one more layer of safety protection to the personnel.

Smoke Density Test : IEC 61034-1 & IEC 61034-2

Burn the cable sample(s) in a test cube of 27 m³ volume, measure the light transmittance of the smoke to determine the measurement of the smoke density. The minimum value of 60% is adopted. Generally the smoke density shall be followed the requirement specified in the cable specification.

Product Group, Product Construction & Additional Features Codes



Product Group Code

Product Group Code	Description
MC	Shipboard Power And Control Cables
FR	Fire Resistant Power And Control Cables
MIC	Single & Multi Unit Shipboard Instrumentation Cables With Collectively Screened
MIP	Multi Unit Shipboard Instrumentation Cables With Individually Taped Screened And Collectively Screened
MIM	Multi Core Shipboard Instrumentation Cables With Collectively Screened
FRIC	Single & Multi Unit Fire Resistant Instrumentation Cables With Collectively Screened
FRIP	Multi Unit Fire Resistant Instrumentation Cables With Individually Taped Screened And Collectively Screened
FRIM	Multi Core Fire Resistant Instrumentation Cables With Collectively Screened

Product Construction Code

Product Construction Code	Abbreviation	Description
W = First Digit (Insulation Material)	1	PE = Polyethylene
	2	XLPE = Crosslink Polyethylene
	3	LSOH = Low Smoke Zero Halogen
	4	PVC = Polyvinyl Chloride
X = Second Digit (Sheath Material)	0	LSOH = Low Smoke Zero Halogen
	1	PVC = Polyvinyl Chloride
	NIL	Non-Sheathed
Y = Third Digit (Product's Family)	0	Product With Basic Specification as per Standard / Brochure
	1	Product With Basic Specification as per Standard / Brochure Plus Sheaths' Oxygen Index > 30% & HCL Content < 17%, Product Complying With IEC 60332-3-22 Cat. A
	NIL	Non-Sheathed Product Without Other Family
Z = Fourth Digit (Construction)	A	Single Wire Amour
	C	Plain Copper Wire Braid
	T	Tinned Copper Wire Braid
	Q	Galvanized Round Steel Wire Braid
	S	Single Core Non-Sheathed Cable

Additional Features Code

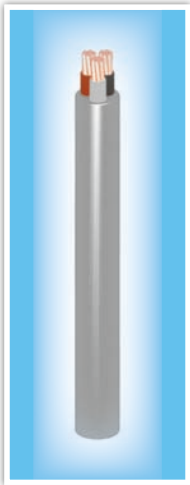
Additional Features Code	Description
C	Chemical Resistant
D	According to Customer's Requirements
H	Heat Resistant 105 °C
L	Low Temperature (< - 15 °C)
M	Shipboard Cables Complying With Flame Retardant Test to IEC 60332-3-22 Cat. A
O	Oil Resistant
R	Flame Retardant Test (Bunch) to IEC 60332-3 Cat. A, B & C
T	Anti - Termite
U	UV Resistant

MC - 210

PVC Sheathed Shipboard Power Cables

600/1000 V
90 °C

Type Approval Certificates : ABS - BV - LR - NKK - GL



CONSTRUCTION	
1. Conductor	: Annealed Stranded Circular or Shape Copper Class 2
2. Insulation	: XLPE
3. Outer Sheath	: Flame Retardant PVC

CORE IDENTIFICATION	
1 C - Natural	
2 C - Brown & Blue	
3 C - Brown, Black & Grey	
4 C - Brown, Black, Grey & Blue	
5 C & Above - Numbers printed on the cores	
Sheath Colour	: Grey
	: Black - On request

PRODUCT TECHNICAL	
Application :	This cable is suitable for use in fixed installations for power supply in commercial ship where flame retardant properties are required.
Applicable Standard	: IEC 60092-353
Rated Voltage	: 600 / 1000 V
Temperature Range	: - 15 °C to 90 °C

PRODUCT PERFORMANCE	
Flame Retardant Test	: IEC 60332 - 1
	: IEC 60332-3-22 Cat. A

No. of Core & Nominal Area of Conductor	MC-210		No. of Core & Nominal Area of Conductor	MC-210		No. of Core & Nominal Area of Conductor	MC-210	
	Approx. O.D.	Approx. Weight		Approx. O.D.	Approx. Weight		Approx. O.D.	Approx. Weight
No. X mm ²	mm	Kg/Km	No. X mm ²	mm	Kg/Km	No. X mm ²	mm	Kg/Km
1 X 1.0 rm	5.3	42	3 X 4 rm	11.7	230	5 X 1.0 rm	10.2	142
1 X 1.5 rm	5.4	50	3 X 6 rm	13.0	305	6 X 1.0 rm	11.3	162
1 X 2.5 rm	5.8	63	3 X 10 rm	15.6	406	7 X 1.0 rm	11.3	175
1 X 4 rm	6.4	83	3 X 16 rm	17.8	620	8 X 1.0 rm	11.8	205
1 X 6 rm	6.9	106	3 X 25 cm	20.8	922	10 X 1.0 rm	13.2	244
1 X 10 rm	8.0	150	3 X 25 sm	18.7	900	12 X 1.0 rm	14.1	275
1 X 16 rm	9.2	210	3 X 35 cm	23.5	1227	16 X 1.0 rm	16.0	340
1 X 25 cm	10.5	315	3 X 35 sm	20.9	1205	19 X 1.0 rm	17.2	394
1 X 35 cm	11.9	415	3 X 50 cm	26.8	1626	24 X 1.0 rm	19.2	480
1 X 50 cm	13.6	540	3 X 50 sm	23.8	1590	27 X 1.0 rm	20.0	525
1 X 70 cm	15.6	770	3 X 70 sm	27.3	2250	37 X 1.0 rm	23.2	700
1 X 95 cm	17.6	1020	3 X 95 sm	29.8	3080	5 X 1.5 rm	11.0	180
1 X 120 cm	19.6	1270	3 X 120 sm	35.0	3870	6 X 1.5 rm	12.2	205
1 X 150 cm	21.8	1540	3 X 150 sm	38.3	4660	7 X 1.5 rm	12.2	220
1 X 185 cm	23.8	1920	3 X 185 sm	43.5	5687	8 X 1.5 rm	13.0	255
1 X 240 rm	27.8	2500	3 X 240 sm	49.5	7394	10 X 1.5 rm	14.1	310
1 X 300 rm	30.8	3190	3 X 300 sm	51.9	9105	12 X 1.5 rm	15.6	365
2 X 1.0 rm	8.1	90	4 X 1.0 rm	9.3	120	16 X 1.5 rm	17.5	440
2 X 1.5 rm	8.8	105	4 X 1.5 rm	10.4	150	19 X 1.5 rm	18.9	505
2 X 2.5 rm	10.1	135	4 X 2.5 rm	11.4	195	24 X 1.5 rm	21.1	615
2 X 4 rm	11.0	185	4 X 4 rm	13.0	280	27 X 1.5 rm	22.0	675
2 X 6 rm	12.4	245	4 X 6 rm	13.4	380	37 X 1.5 rm	25.0	900
2 X 10 rm	14.2	370	4 X 10 rm	17.2	575	5 X 2.5 rm	12.5	235
2 X 16 rm	16.8	435	4 X 16 rm	19.8	810	6 X 2.5 rm	13.7	270
2 X 25 cm	19.4	670	4 X 25 cm	23.1	1196	7 X 2.5 rm	13.7	295
2 X 25 sm	16.4	620	4 X 25 sm	21.4	1170	8 X 2.5 rm	14.0	340
2 X 35 cm	22.1	885	4 X 35 cm	26.1	1596	10 X 2.5 rm	15.8	415
2 X 35 sm	17.4	820	4 X 35 sm	23.6	1560	12 X 2.5 rm	17.0	480
2 X 50 cm	24.9	1153	4 X 50 cm	29.7	2116	16 X 2.5 rm	19.5	595
2 X 50 sm	20.1	1075	4 X 50 sm	27.0	2080	19 X 2.5 rm	20.8	685
2 X 70 cm	28.4	1596	4 X 70 sm	31.8	2920	24 X 2.5 rm	23.9	845
2 X 70 sm	23.3	1510	4 X 95 sm	36.0	3980	27 X 2.5 rm	24.6	930
2 X 95 sm	25.4	2100	4 X 120 sm	39.8	4905	37 X 2.5 rm	28.2	1250
2 X 120 sm	29.0	2640	4 X 150 sm	45.0	6007	5 X 4 rm	14.1	335
3 X 1.0 rm	8.6	100	4 X 185 sm	50.0	7530	6 X 4 rm	15.1	390
3 X 1.5 rm	9.2	125	4 X 240 sm	60.0	9805	7 X 4 rm	15.1	435
3 X 2.5 rm	10.4	165	4 X 300 sm	65.0	12090			

rm : Stranded Circular Non-Compacted

cm : Stranded Circular Compacted

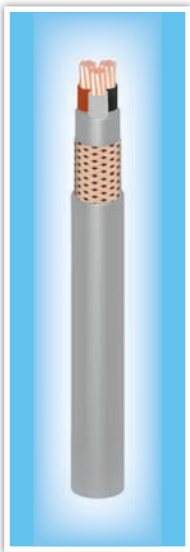
sm : Stranded Shaped

MC - 210Q / MC - 210C

PVC Sheathed Shipboard Braided Power Cables

600/1000 V
90 °C

Type Approval Certificates : ABS - BV - LR - NKK - GL - DNV



CONSTRUCTION	
1. Conductor	: Annealed Stranded Circular or Shape Copper Class 2
2. Insulation	: XLPE
3. Inner Sheath	: Extruded PVC
4. Wire Braid	: Annealed Copper Wires (C) Galvanized Steel Wires (Q)
5. Outer Sheath	: Flame Retardant PVC

CORE IDENTIFICATION	
1 C	- Natural
2 C	- Brown & Blue
3 C	- Brown, Black & Grey
4 C	- Brown, Black, Grey & Blue
5 C & Above	- Numbers printed on the cores
Sheath Colour	: Grey
	: Black - On request

PRODUCT TECHNICAL	
Application :	This cable is suitable for use in fixed installations for power supply in commercial ship where flame retardant properties are required.
Applicable Standard	: IEC 60092-353
Rated Voltage	: 600 / 1000 V
Temperature Range	: - 15 °C to 90 °C

PRODUCT PERFORMANCE	
Flame Retardant Test	: IEC 60332 - 1 : IEC 60332-3-22 Cat. A

No. of Core & Nominal Area of Conductor	Approx. O.D.	Approx. Weight		No. of Core & Nominal Area of Conductor	Approx. O.D.	Approx. Weight		No. of Core & Nominal Area of Conductor	Approx. O.D.	Approx. Weight	
		MC-210Q	MC-210C			MC-210Q	MC-210C			MC-210Q	MC-210C
No. X mm ²	mm	Kg/Km	Kg/Km	No. X mm ²	mm	Kg/Km	Kg/Km	No. X mm ²	mm	Kg/Km	Kg/Km
1 X 10 rm	11.5	-	260	3 X 6 rm	16.8	510	524	10 X 1.0 rm	16.8	440	453
1 X 16 rm	12.7	-	352	3 X 10 rm	19.2	710	726	12 X 1.0 rm	18.0	500	515
1 X 25 cm	14.5	-	480	3 X 16 rm	21.4	900	918	16 X 1.0 rm	19.8	585	600
1 X 35 cm	15.8	-	620	3 X 25 cm	25.4	1302	1342	19 X 1.0 rm	21.0	670	687
1 X 50 cm	17.2	-	775	3 X 25 sm	23.9	1220	1240	24 X 1.0 rm	23.0	790	809
1 X 70 cm	19.1	-	1030	3 X 35 cm	27.6	1673	1720	27 X 1.0 rm	24.0	840	860
1 X 95 cm	20.3	-	1325	3 X 35 sm	25.1	1570	1591	37 X 1.0 rm	27.0	1080	1103
1 X 120 cm	22.8	-	1610	3 X 50 cm	30.7	2177	2211	5 X 1.5 rm	14.5	345	356
1 X 150 cm	24.8	-	1920	3 X 50 sm	27.9	2000	2024	6 X 1.5 rm	16.0	395	407
1 X 185 cm	27.2	-	2350	3 X 70 sm	32.1	2800	2833	7 X 1.5 rm	16.0	415	427
1 X 240 rm	31.6	-	2850	3 X 95 sm	36.0	3780	3820	8 X 1.5 rm	16.8	475	488
1 X 300 rm	34.7	-	3490	3 X 120 sm	40.3	4680	4743	10 X 1.5 rm	18.2	545	560
2 X 1.0 rm	11.3	205	212	3 X 150 sm	43.9	5460	5510	12 X 1.5 rm	19.2	610	626
2 X 1.5 rm	11.9	240	249	4 X 1.0 rm	12.7	255	263	16 X 1.5 rm	21.3	720	737
2 X 2.5 rm	13.0	280	290	4 X 1.5 rm	13.6	300	311	19 X 1.5 rm	22.6	820	840
2 X 4 rm	14.2	350	361	4 X 2.5 rm	14.5	370	382	24 X 1.5 rm	25.0	970	991
2 X 6 rm	16.0	440	452	4 X 4 rm	16.6	460	473	27 X 1.5 rm	26.0	1030	1052
2 X 10 rm	18.0	580	595	4 X 6 rm	18.6	600	615	37 X 1.5 rm	29.2	1330	1355
2 X 16 rm	20.2	710	726	4 X 10 rm	20.6	840	856	5 X 2.5 rm	16.1	410	420
2 X 25 cm	24.0	1026	1046	4 X 16 rm	23.2	1130	1150	6 X 2.5 rm	17.3	460	471
2 X 25 sm	20.2	900	916	4 X 25 cm	26.6	1634	1656	7 X 2.5 rm	17.3	490	501
2 X 35 cm	26.0	1294	1331	4 X 25 sm	25.4	1540	1560	8 X 2.5 rm	18.3	560	572
2 X 35 sm	22.3	1120	1138	4 X 35 cm	30.3	2101	2127	10 X 2.5 rm	19.9	670	684
2 X 50 cm	29.8	1638	1681	4 X 35 sm	28.0	1980	2004	12 X 2.5 rm	21.2	750	765
2 X 50 sm	24.8	1430	1450	4 X 50 cm	34.5	2742	2771	16 X 2.5 rm	23.2	910	930
2 X 70 cm	34.2	2207	2258	4 X 50 sm	31.0	2600	2630	19 X 2.5 rm	25.0	1040	1061
2 X 70 sm	27.8	1940	1962	4 X 70 sm	36.0	3540	3600	24 X 2.5 rm	27.4	1240	1264
2 X 95 sm	30.4	2580	2610	4 X 95 sm	40.2	4750	4790	27 X 2.5 rm	28.3	1340	1360
2 X 120 sm	34.0	3300	3340	5 X 1.0 rm	13.6	300	310	37 X 2.5 rm	32.2	1750	1778
3 X 1.0 rm	11.8	225	235	6 X 1.0 rm	14.5	325	336	5 X 4 rm	17.8	545	557
3 X 1.5 rm	12.7	260	268	7 X 1.0 rm	14.5	345	356	6 X 4 rm	19.3	630	643
3 X 2.5 rm	13.6	320	330	8 X 1.0 rm	15.8	390	402	7 X 4 rm	19.3	660	673
3 X 4 rm	14.8	400	412								

rm : Stranded Circular Non-Compacted

cm : Stranded Circular Compacted

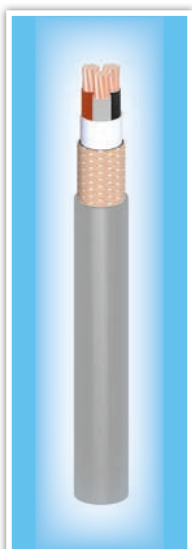
sm : Stranded Shaped

MC - 210Q (SST) * / MC - 210C (SST) *

PVC Sheathed Shipboard Braided Power Cables

600/1000 V
90 °C

Type Approval Certificates : ABS - BV - LR - NKK - GL - DNV



CONSTRUCTION	
1. Conductor	: Annealed Stranded Circular or Shape Copper Class 2
2. Insulation	: XLPE
3. Inner Covering	: Lapped With Suitable Tape(s)
4. Wire Braid	: Annealed Copper Wires (C) Galvanized Steel Wires (Q)
5. Outer Sheath	: Flame Retardant PVC

CORE IDENTIFICATION	
1 C - Natural	
2 C - Brown & Blue	
3 C - Brown, Black & Grey	
4 C - Brown, Black, Grey & Blue	
5 C & Above - Numbers printed on the cores	
Sheath Colour	: Grey
	: Black - On request

PRODUCT TECHNICAL	
Application :	This cable is suitable for use in fixed installations for power supply in commercial ship where flame retardant properties are required.
Applicable Standard	: IEC 60092-353
Rated Voltage	: 600 / 1000 V
Temperature Range	: - 15 °C to 90 °C

PRODUCT PERFORMANCE	
Flame Retardant Test	: IEC 60332 - 1 : IEC 60332-3-22 Cat. A

No. of Core & Nominal Area of Conductor	Approx. O.D.	Approx. Weight		No. of Core & Nominal Area of Conductor	Approx. O.D.	Approx. Weight		No. of Core & Nominal Area of Conductor	Approx. O.D.	Approx. Weight	
		MC-210Q	MC-210C			MC-210Q	MC-210C			MC-210Q	MC-210C
No. X mm ²	mm	Kg/Km	Kg/Km	No. X mm ²	mm	Kg/Km	Kg/Km	No. X mm ²	mm	Kg/Km	Kg/Km
1 X 10 rm	10.0	-	182	3 X 6 rm	14.5	350	360	10 X 1.0 rm	15.3	308	317
1 X 16 rm	11.2	-	247	3 X 10 rm	16.8	503	515	12 X 1.0 rm	16.4	349	360
1 X 25 cm	12.5	-	355	3 X 16 rm	19.1	703	717	16 X 1.0 rm	18.1	441	453
1 X 35 cm	14.2	-	455	3 X 25 cm	22.9	1173	1192	19 X 1.0 rm	19.4	497	511
1 X 50 cm	15.7	-	620	3 X 25 sm	20.5	983	997	24 X 1.0 rm	21.5	603	618
1 X 70 cm	17.7	-	842	3 X 35 cm	25.3	1523	1544	27 X 1.0 rm	22.6	734	751
1 X 95 cm	19.8	-	1099	3 X 35 sm	22.8	1290	1306	37 X 1.0 rm	25.2	853	871
1 X 120 cm	21.4	-	1350	3 X 50 cm	28.3	1987	2010	5 X 1.5 rm	12.9	213	218
1 X 150 cm	23.4	-	1636	3 X 50 sm	25.5	1780	1800	6 X 1.5 rm	14.0	267	276
1 X 185 cm	25.7	-	2004	3 X 70 sm	29.3	2465	2490	7 X 1.5 rm	14.0	286	295
1 X 240 rm	30.2	-	2594	3 X 95 sm	32.8	3280	3310	8 X 1.5 rm	15.2	325	335
1 X 300 rm	32.9	-	3189	3 X 120 sm	37.3	4185	4220	10 X 1.5 rm	16.6	381	391
2 X 1.0 rm	9.1	108	112	3 X 150 sm	42.4	5060	5102	12 X 1.5 rm	17.6	443	455
2 X 1.5 rm	9.7	127	131	4 X 1.0 rm	10.6	150	154	16 X 1.5 rm	19.8	551	564
2 X 2.5 rm	10.5	152	157	4 X 1.5 rm	11.3	181	186	19 X 1.5 rm	21.0	635	649
2 X 4 rm	11.9	201	206	4 X 2.5 rm	12.3	232	237	24 X 1.5 rm	23.0	776	792
2 X 6 rm	14.0	253	258	4 X 4 rm	14.0	338	347	27 X 1.5 rm	24.2	924	943
2 X 10 rm	16.4	388	398	4 X 6 rm	15.8	436	447	37 X 1.5 rm	27.5	1100	1119
2 X 16 rm	18.6	533	545	4 X 10 rm	18.3	629	641	5 X 2.5 rm	14.4	270	275
2 X 25 cm	21.4	866	883	4 X 16 rm	20.5	896	911	6 X 2.5 rm	15.6	347	357
2 X 25 sm	18.2	718	730	4 X 25 cm	25.1	1489	1510	7 X 2.5 rm	15.6	375	385
2 X 35 cm	24.0	1117	1137	4 X 25 sm	23.3	1269	1286	8 X 2.5 rm	16.7	412	423
2 X 35 sm	20.8	918	931	4 X 35 cm	28.2	1945	1968	10 X 2.5 rm	18.2	495	507
2 X 50 cm	26.6	1444	1466	4 X 35 sm	25.9	1675	1694	12 X 2.5 rm	19.4	574	587
2 X 50 sm	23.5	1254	1270	4 X 50 cm	32.6	2548	2574	16 X 2.5 rm	21.6	726	741
2 X 70 cm	31.0	1982	2008	4 X 50 sm	29.1	2328	2350	19 X 2.5 rm	23.1	831	847
2 X 70 sm	26.7	1714	1731	4 X 70 sm	35.0	3293	3330	24 X 2.5 rm	25.6	1032	1050
2 X 95 sm	29.4	2280	2300	4 X 95 sm	38.6	4402	4440	27 X 2.5 rm	26.8	1240	1262
2 X 120 sm	33.2	3030	3060	5 X 1.0 rm	12.2	172	177	37 X 2.5 rm	30.5	1481	1503
3 X 1.0 rm	9.6	128	132	6 X 1.0 rm	13.0	200	206	5 X 4 rm	16.1	400	411
3 X 1.5 rm	10.3	151	155	7 X 1.0 rm	13.0	214	219	6 X 4 rm	17.6	464	476
3 X 2.5 rm	11.1	188	193	8 X 1.0 rm	14.3	237	243	7 X 4 rm	17.6	507	519
3 X 4 rm	12.6	252	258								

rm : Stranded Circular Non-Compacted

cm : Stranded Circular Compacted

sm : Stranded Shaped

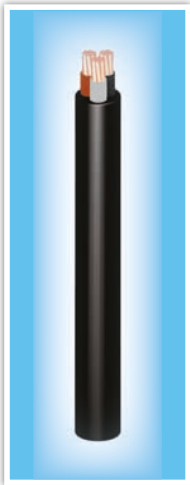
Note : * SST = Cables with lapped inner covering and a single sheath design.

MC - 200

LSOH Sheathed Shipboard Power Cables

600/1000 V
90 °C

Type Approval Certificates : ABS - BV - LR - NKK



CONSTRUCTION	
1. Conductor	: Annealed Stranded Circular or Shape Copper Class 2
2. Insulation	: XLPE
3. Outer Sheath	: Flame Retardant LSOH, SHF 1

CORE IDENTIFICATION	
1 C -	Natural
2 C -	Brown & Blue
3 C -	Brown, Black & Grey
4 C -	Brown, Black, Grey & Blue
5 C & Above -	Numbers printed on the cores
Sheath Colour	: Black
	: Grey - On request

PRODUCT TECHNICAL	
Application :	This cable is suitable for use in fixed installations for power supply in commercial ship where flame retardant and low smoke halogen free properties are required.
Applicable Standard	: IEC 60092-353
Rated Voltage	: 600 / 1000 V
Temperature Range	: - 15 °C to 90 °C

PRODUCT PERFORMANCE	
Flame Retardant Test	: IEC 60332 - 1
	: IEC 60332-3-22 Cat. A
Halogen Content Test	: IEC 60754 - 1 & 2
Smoke Density Test	: IEC 61034 - 1 & 2

No. of Core & Nominal Area of Conductor	MC-200		No. of Core & Nominal Area of Conductor	MC-200		No. of Core & Nominal Area of Conductor	MC-200	
	Approx. O.D.	Approx. Weight		Approx. O.D.	Approx. Weight		Approx. O.D.	Approx. Weight
No. X mm ²	mm	Kg/Km	No. X mm ²	mm	Kg/Km	No. X mm ²	mm	Kg/Km
1 X 1.0 rm	5.3	42	3 X 4 rm	11.7	235	5 X 1.0 rm	10.2	150
1 X 1.5 rm	5.4	50	3 X 6 rm	13.0	318	6 X 1.0 rm	11.3	170
1 X 2.5 rm	5.8	63	3 X 10 rm	15.6	475	7 X 1.0 rm	11.3	184
1 X 4 rm	6.4	83	3 X 16 rm	17.8	650	8 X 1.0 rm	11.8	205
1 X 6 rm	6.9	106	3 X 25 cm	20.8	922	10 X 1.0 rm	13.2	250
1 X 10 rm	8.2	150	3 X 25 sm	18.7	915	12 X 1.0 rm	14.1	290
1 X 16 rm	9.2	210	3 X 35 cm	23.5	1227	16 X 1.0 rm	16.0	360
1 X 25 cm	10.5	320	3 X 35 sm	20.9	1220	19 X 1.0 rm	17.2	410
1 X 35 cm	11.9	415	3 X 50 cm	26.8	1626	24 X 1.0 rm	19.2	510
1 X 50 cm	13.6	550	3 X 50 sm	23.8	1610	27 X 1.0 rm	20.0	560
1 X 70 cm	15.6	775	3 X 70 sm	27.3	2280	37 X 1.0 rm	23.2	745
1 X 95 cm	17.6	1040	3 X 95 sm	29.8	3100	5 X 1.5 rm	11.0	185
1 X 120 cm	19.6	1300	3 X 120 sm	35.0	3895	6 X 1.5 rm	12.2	210
1 X 150 cm	21.8	1580	3 X 150 sm	38.3	4670	7 X 1.5 rm	12.2	235
1 X 185 cm	23.8	1960	3 X 185 sm	43.5	5687	8 X 1.5 rm	13.0	270
1 X 240 rm	27.8	2560	3 X 240 sm	49.5	7394	10 X 1.5 rm	14.1	320
1 X 300 rm	30.8	3210	3 X 300 sm	51.9	9105	12 X 1.5 rm	15.6	380
2 X 1.0 rm	8.1	90	4 X 1.0 rm	9.3	130	16 X 1.5 rm	17.5	465
2 X 1.5 rm	8.8	107	4 X 1.5 rm	10.4	155	19 X 1.5 rm	18.9	545
2 X 2.5 rm	10.1	146	4 X 2.5 rm	11.4	200	24 X 1.5 rm	21.1	660
2 X 4 rm	11.0	195	4 X 4 rm	13.0	290	27 X 1.5 rm	22.0	730
2 X 6 rm	12.4	254	4 X 6 rm	13.4	390	37 X 1.5 rm	25.0	990
2 X 10 rm	14.2	378	4 X 10 rm	17.2	590	5 X 2.5 rm	12.5	250
2 X 16 rm	16.8	455	4 X 16 rm	19.8	840	6 X 2.5 rm	13.7	300
2 X 25 cm	19.4	670	4 X 25 cm	23.1	1196	7 X 2.5 rm	13.7	330
2 X 25 sm	16.4	630	4 X 25 sm	21.4	1170	8 X 2.5 rm	14.0	375
2 X 35 cm	22.1	885	4 X 35 cm	26.1	1596	10 X 2.5 rm	15.8	455
2 X 35 sm	17.4	840	4 X 35 sm	23.6	1560	12 X 2.5 rm	17.0	525
2 X 50 cm	24.9	1153	4 X 50 cm	29.7	2116	16 X 2.5 rm	19.5	680
2 X 50 sm	20.1	1090	4 X 50 sm	27.0	2080	19 X 2.5 rm	20.8	750
2 X 70 cm	28.4	1596	4 X 70 sm	31.8	2940	24 X 2.5 rm	23.9	950
2 X 70 sm	23.3	1520	4 X 95 sm	36.0	4000	27 X 2.5 rm	24.6	1050
2 X 95 sm	25.4	2100	4 X 120 sm	39.8	4905	37 X 2.5 rm	28.2	1400
2 X 120 sm	29.0	2660	4 X 150 sm	45.0	6007	5 X 4 rm	14.1	345
3 X 1.0 rm	8.6	105	4 X 185 sm	50.0	7530	6 X 4 rm	15.1	420
3 X 1.5 rm	9.2	125	4 X 240 sm	60.0	9805	7 X 4 rm	15.1	450
3 X 2.5 rm	10.4	170	4 X 300 sm	65.0	12090			

rm : Stranded Circular Non-Compacted

cm : Stranded Circular Compacted

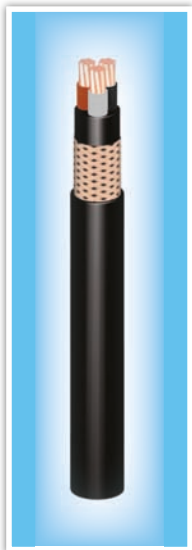
sm : Stranded Shaped

MC - 200Q / MC - 200C

LSOH Sheathed Shipboard Braided Power Cables

600/1000 V
90 °C

Type Approval Certificates : ABS - BV - LR - NKK



CONSTRUCTION	
1. Conductor	: Annealed Stranded Circular or Shape Copper Class 2
2. Insulation	: XLPE
3. Inner Sheath	: Extruded LSOH
4. Wire Braid	: Annealed Copper Wires (C) Galvanized Steel Wires (Q)
5. Outer Sheath	: Flame Retardant LSOH, SHF 1

CORE IDENTIFICATION	
1 C	- Natural
2 C	- Brown & Blue
3 C	- Brown, Black & Grey
4 C	- Brown, Black, Grey & Blue
5 C & Above	- Numbers printed on the cores
Sheath Colour	: Black
	: Grey - On request

PRODUCT TECHNICAL	
Application :	This cable is suitable for use in fixed installations for power supply in commercial ship where flame retardant and low smoke halogen free properties are required.
Applicable Standard	: IEC 60092-353
Rated Voltage	: 600 / 1000 V
Temperature Range	: - 15 °C to 90 °C

PRODUCT PERFORMANCE	
Flame Retardant Test	: IEC 60332 - 1 : IEC 60332-3-22 Cat. A
Halogen Content Test	: IEC 60754 - 1 & 2
Smoke Density Test	: IEC 61034 - 1 & 2

No. of Core & Nominal Area of Conductor	Approx. O.D.	Approx. Weight		No. of Core & Nominal Area of Conductor	Approx. O.D.	Approx. Weight		No. of Core & Nominal Area of Conductor	Approx. O.D.	Approx. Weight	
		MC-200Q	MC-200C			MC-200Q	MC-200C			MC-200Q	MC-200C
No. X mm ²	mm	Kg/Km	Kg/Km	No. X mm ²	mm	Kg/Km	Kg/Km	No. X mm ²	mm	Kg/Km	Kg/Km
1 X 10 rm	11.5	-	260	3 X 6 rm	16.8	519	532	10 X 1.0 rm	16.8	449	462
1 X 16 rm	12.7	-	352	3 X 10 rm	19.2	701	716	12 X 1.0 rm	18.0	505	518
1 X 25 cm	14.5	-	480	3 X 16 rm	21.4	944	961	16 X 1.0 rm	19.8	609	633
1 X 35 cm	15.8	-	620	3 X 25 cm	25.4	1320	1340	19 X 1.0 rm	21.0	678	694
1 X 50 cm	17.2	-	775	3 X 25 sm	23.9	1251	1271	24 X 1.0 rm	23.0	822	840
1 X 70 cm	19.1	-	1030	3 X 35 cm	27.6	1695	1720	27 X 1.0 rm	24.0	892	910
1 X 95 cm	20.3	-	1325	3 X 35 sm	25.1	1597	1619	37 X 1.0 rm	27.0	1121	1143
1 X 120 cm	22.8	-	1610	3 X 50 cm	30.7	2185	2211	5 X 1.5 rm	14.5	314	320
1 X 150 cm	24.8	-	1920	3 X 50 sm	27.9	2037	2060	6 X 1.5 rm	16.0	393	405
1 X 185 cm	27.2	-	2350	3 X 70 sm	32.1	2718	2746	7 X 1.5 rm	16.0	412	423
1 X 240 rm	31.6	-	2850	3 X 95 sm	36.0	3652	3694	8 X 1.5 rm	16.8	462	474
1 X 300 rm	34.7	-	3490	3 X 120 sm	40.3	4511	4557	10 X 1.5 rm	18.2	536	549
2 X 1.0 rm	11.3	190	195	3 X 150 sm	43.9	5404	5450	12 X 1.5 rm	19.2	615	630
2 X 1.5 rm	11.9	209	215	4 X 1.0 rm	12.7	231	236	16 X 1.5 rm	21.3	737	756
2 X 2.5 rm	13.0	269	274	4 X 1.5 rm	13.6	287	293	19 X 1.5 rm	22.6	850	868
2 X 4 rm	14.2	328	335	4 X 2.5 rm	14.5	340	346	24 X 1.5 rm	25.0	1013	1033
2 X 6 rm	16.0	437	449	4 X 4 rm	16.6	508	520	27 X 1.5 rm	26.0	1112	1135
2 X 10 rm	18.0	592	605	4 X 6 rm	18.6	633	647	37 X 1.5 rm	29.2	1394	1418
2 X 16 rm	20.2	813	828	4 X 10 rm	20.6	875	891	5 X 2.5 rm	16.1	429	441
2 X 25 cm	24.0	1040	1060	4 X 16 rm	23.2	1207	1225	6 X 2.5 rm	17.3	491	504
2 X 25 sm	20.2	895	910	4 X 25 cm	26.6	1665	1688	7 X 2.5 rm	17.3	518	532
2 X 35 cm	26.0	1303	1325	4 X 25 sm	25.4	1508	1528	8 X 2.5 rm	18.3	576	590
2 X 35 sm	22.3	1146	1163	4 X 35 cm	30.3	2137	2163	10 X 2.5 rm	19.9	680	695
2 X 50 cm	29.8	1645	1670	4 X 35 sm	28.0	2039	2065	12 X 2.5 rm	21.2	779	795
2 X 50 sm	24.8	1465	1485	4 X 50 cm	34.5	2765	2794	16 X 2.5 rm	23.2	943	961
2 X 70 cm	34.2	2210	2240	4 X 50 sm	31.0	2611	2640	19 X 2.5 rm	25.0	1082	1101
2 X 70 sm	28.2	1950	1973	4 X 70 sm	36.0	3505	3545	24 X 2.5 rm	27.4	1337	1360
2 X 95 sm	30.4	2591	2625	4 X 95 sm	40.2	4782	4835	27 X 2.5 rm	28.3	1466	1489
2 X 120 sm	34.0	3330	3370	5 X 1.0 rm	13.6	265	271	37 X 2.5 rm	32.2	1848	1874
3 X 1.0 rm	11.8	200	205	6 X 1.0 rm	14.5	303	306	5 X 4 rm	17.8	576	589
3 X 1.5 rm	12.7	238	244	7 X 1.0 rm	14.5	313	319	6 X 4 rm	19.3	659	674
3 X 2.5 rm	13.6	298	304	8 X 1.0 rm	15.8	386	399	7 X 4 rm	19.3	674	688
3 X 4 rm	14.8	410	420								

rm : Stranded Circular Non-Compacted

cm : Stranded Circular Compacted

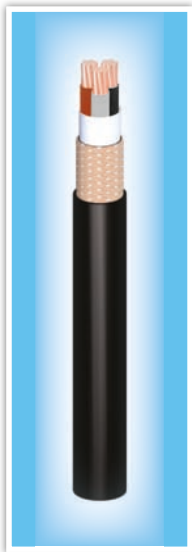
sm : Stranded Shaped

MC - 200Q (SST) * / MC - 200C (SST) *

LSOH Sheathed Shipboard Braided Power Cables

600/1000 V
90 °C

Type Approval Certificates : ABS - BV - LR - NKK



CONSTRUCTION	
1. Conductor	: Annealed Stranded Circular or Shape Copper Class 2
2. Insulation	: XLPE
3. Inner Sheath	: Lapped With Suitable Tape(s)
4. Wire Braid	: Annealed Copper Wires (C) Galvanized Steel Wires (Q)
5. Outer Sheath	: Flame Retardant LSOH, SHF 1

CORE IDENTIFICATION	
1 C - Natural	
2 C - Brown & Blue	
3 C - Brown, Black & Grey	
4 C - Brown, Black, Grey & Blue	
5 C & Above - Numbers printed on the cores	
Sheath Colour	: Black
	: Grey - On request

PRODUCT TECHNICAL	
Application :	This cable is suitable for use in fixed installations for power supply in commercial ship where flame retardant and low smoke halogen free properties are required.
Applicable Standard	: IEC 60092-353
Rated Voltage	: 600 / 1000 V
Temperature Range	: - 15 °C to 90 °C

PRODUCT PERFORMANCE	
Flame Retardant Test	: IEC 60332 - 1 : IEC 60332-3-22 Cat. A
Halogen Content Test	: IEC 60754 - 1 & 2
Smoke Density Test	: IEC 61034 - 1 & 2

No. of Core & Nominal Area of Conductor	Approx. O.D.	Approx. Weight		No. of Core & Nominal Area of Conductor	Approx. O.D.	Approx. Weight		No. of Core & Nominal Area of Conductor	Approx. O.D.	Approx. Weight	
		MC-200Q	MC-200C			MC-200Q	MC-200C			MC-200Q	MC-200C
No. X mm ²	mm	Kg/Km	Kg/Km	No. X mm ²	mm	Kg/Km	Kg/Km	No. X mm ²	mm	Kg/Km	Kg/Km
1 X 10 rm	10.0	-	190	3 X 6 rm	14.5	356	366	10 X 1.0 rm	15.3	320	330
1 X 16 rm	11.2	-	260	3 X 10 rm	16.8	530	540	12 X 1.0 rm	16.4	360	370
1 X 25 cm	12.5	-	370	3 X 6 rm	19.1	740	760	16 X 1.0 rm	18.1	460	470
1 X 35 cm	14.2	-	480	3 X 25 cm	22.9	1190	1208	19 X 1.0 rm	19.4	520	530
1 X 50 cm	15.7	-	650	3 X 25 sm	20.5	1040	1060	24 X 1.0 rm	21.5	630	640
1 X 70 cm	17.7	-	900	3 X 35 cm	25.3	1543	1564	27 X 1.0 rm	22.6	680	700
1 X 95 cm	19.8	-	1170	3 X 35 sm	22.8	1370	1390	37 X 1.0 rm	25.2	890	910
1 X 120 cm	21.4	-	1440	3 X 50 cm	28.3	1987	2010	5 X 1.5 rm	12.9	220	230
1 X 150 cm	23.4	-	1660	3 X 50 sm	25.5	1800	1820	6 X 1.5 rm	14.0	260	265
1 X 185 cm	25.7	-	2140	3 X 70 sm	29.3	2490	2510	7 X 1.5 rm	14.0	280	285
1 X 240 rm	30.2	-	2770	3 X 95 sm	32.8	3330	3350	8 X 1.5 rm	15.2	340	350
1 X 300 rm	32.9	-	3400	3 X 120 sm	37.3	4210	4250	10 X 1.5 rm	16.6	400	410
2 X 1.0 rm	9.1	110	115	3 X 150 sm	42.4	5140	5180	12 X 1.5 rm	17.6	460	480
2 X 1.5 rm	9.7	130	140	4 X 1.0 rm	10.6	160	165	16 X 1.5 rm	19.8	580	590
2 X 2.5 rm	10.5	156	160	4 X 1.5 rm	11.3	185	190	19 X 1.5 rm	21.0	660	680
2 X 4 rm	11.9	210	220	4 X 2.5 rm	12.3	240	250	24 X 1.5 rm	23.0	810	830
2 X 6 rm	14.0	270	275	4 X 4 rm	14.0	325	330	27 X 1.5 rm	24.2	880	890
2 X 10 rm	16.4	410	420	4 X 6 rm	15.8	460	470	37 X 1.5 rm	27.5	1150	1170
2 X 16 rm	18.6	560	580	4 X 10 rm	18.3	660	680	5 X 2.5 rm	14.4	280	290
2 X 25 cm	21.4	881	898	4 X 16 rm	20.5	950	970	6 X 2.5 rm	15.6	360	370
2 X 25 sm	18.2	760	770	4 X 25 cm	25.1	1508	1529	7 X 2.5 rm	15.6	390	400
2 X 35 cm	24.0	1135	1154	4 X 25 sm	23.3	1350	1370	8 X 2.5 rm	16.7	430	440
2 X 35 sm	20.8	970	990	4 X 35 cm	28.2	1968	1991	10 X 2.5 rm	18.2	520	530
2 X 50 cm	26.6	1444	1466	4 X 35 sm	25.9	1780	1800	12 X 2.5 rm	19.4	600	620
2 X 50 sm	23.5	1270	1290	4 X 50 cm	32.6	2548	2576	16 X 2.5 rm	21.6	760	780
2 X 70 cm	33.1	1982	2008	4 X 50 sm	29.1	2350	2370	19 X 2.5 rm	23.1	870	890
2 X 70 sm	26.7	1730	1750	4 X 70 sm	35.0	3310	3340	24 X 2.5 rm	25.6	1090	1100
2 X 95 sm	29.4	2300	2320	4 X 95 sm	38.6	4440	4460	27 X 2.5 rm	26.8	1180	1190
2 X 120 sm	33.2	2930	2960	5 X 1.0 rm	12.2	180	190	37 X 2.5 rm	30.5	1560	1580
3 X 1.0 rm	9.6	130	140	6 X 1.0 rm	13.0	210	220	5 X 4 rm	16.1	410	420
3 X 1.5 rm	10.3	160	165	7 X 1.0 rm	13.0	220	230	6 X 4 rm	17.6	460	480
3 X 2.5 rm	11.1	200	220	8 X 1.0 rm	14.3	250	260	7 X 4 rm	17.6	520	530
3 X 4 rm	12.6	270	275								

rm : Stranded Circular Non-Compacted

cm : Stranded Circular Compacted

sm : Stranded Shaped

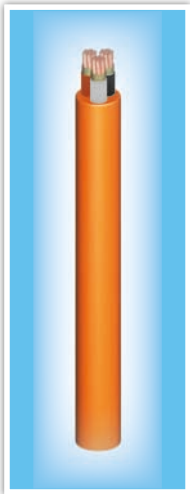
Note : * SST = Cables with lapped inner covering and a single sheath design.

FR - 200 - M

Fire Resistant Shipboard Power Cables

600/1000 V
90 °C

Type Approval Certificates : ABS, BV, LR



CONSTRUCTION	
1. Conductor	: Annealed Stranded Circular or Shape Copper Class 2
2. Fire Barrier	: Mica Tape
3. Insulation	: XLPE
4. Outer Sheath	: Flame Retardant LSOH, SHF 1

CORE IDENTIFICATION	
1 C - Natural	
2 C - Brown & Blue	
3 C - Brown, Black & Grey	
4 C - Brown, Black, Grey & Blue	
5 C & Above - Numbers printed on the cores	
Sheath Colour	: Orange

PRODUCT TECHNICAL	
Application :	This cable is suitable for use in fixed installations for power supply in commercial ship where flame retardant, low smoke halogen free and fire resistant properties are required.
Applicable Standard	: IEC 60092-353
Rated Voltage	: 600 / 1000 V
Temperature Range	: - 15 °C to 90 °C

PRODUCT PERFORMANCE	
Flame Retardant Test	: IEC 60332 - 1
	: IEC 60332-3-22 Cat. A
Halogen Content Test	: IEC 60754 - 1 & 2
Smoke Density Test	: IEC 61034 - 1 & 2
Fire Alone Test	: IEC 60331 - 21

No. of Core & Nominal Area of Conductor	FR-200-M		No. of Core & Nominal Area of Conductor	FR-200-M		No. of Core & Nominal Area of Conductor	FR-200-M	
	Approx. O.D.	Approx. Weight		Approx. O.D.	Approx. Weight		Approx. O.D.	Approx. Weight
No. X mm ²	mm	Kg/Km	No. X mm ²	mm	Kg/Km	No. X mm ²	mm	Kg/Km
1 X 1.0 rm	5.7	50	3 X 4 rm	12.4	272	5 X 1.0 rm	11.4	175
1 X 1.5 rm	5.8	58	3 X 6 rm	13.7	360	6 X 1.0 rm	12.4	210
1 X 2.5 rm	6.3	70	3 X 10 rm	16.0	515	7 X 1.0 rm	12.4	228
1 X 4 rm	6.8	92	3 X 16 rm	18.2	670	8 X 1.0 rm	13.4	250
1 X 6 rm	7.3	117	3 X 25 cm	21.6	1000	10 X 1.0 rm	15.0	300
1 X 10 rm	8.3	160	3 X 25 sm	19.8	970	12 X 1.0 rm	16.2	345
1 X 16 rm	9.5	225	3 X 35 cm	24.3	1325	16 X 1.0 rm	18.2	440
1 X 25 cm	10.8	335	3 X 35 sm	22.2	1305	19 X 1.0 rm	19.7	510
1 X 35 cm	12.3	445	3 X 50 cm	27.8	1790	24 X 1.0 rm	21.2	625
1 X 50 cm	13.8	590	3 X 50 sm	24.2	1715	27 X 1.0 rm	22.5	680
1 X 70 cm	16.2	820	3 X 70 sm	28.1	2410	37 X 1.0 rm	26.6	900
1 X 95 cm	18.1	1085	3 X 95 sm	32.0	3200	5 X 1.5 rm	12.1	216
1 X 120 cm	20.1	1350	3 X 120 sm	35.7	3950	6 X 1.5 rm	13.4	248
1 X 150 cm	22.1	1640	3 X 150 sm	40.1	4870	7 X 1.5 rm	13.4	270
1 X 185 cm	24.3	2020	3 X 185 sm	44.3	6110	8 X 1.5 rm	14.3	320
1 X 240 rm	28.8	2640	3 X 240 sm	50.0	7930	10 X 1.5 rm	15.8	380
1 X 300 rm	31.5	3266	3 X 300 sm	53.4	9800	12 X 1.5 rm	17.2	445
2 X 1.0 rm	9.0	105	4 X 1.0 rm	10.6	158	16 X 1.5 rm	19.6	560
2 X 1.5 rm	9.6	125	4 X 1.5 rm	11.1	196	19 X 1.5 rm	20.9	640
2 X 2.5 rm	10.5	162	4 X 2.5 rm	12.1	262	24 X 1.5 rm	23.6	790
2 X 4 rm	11.5	210	4 X 4 rm	13.7	335	27 X 1.5 rm	24.5	860
2 X 6 rm	12.9	270	4 X 6 rm	15.0	455	37 X 1.5 rm	28.5	1150
2 X 10 rm	14.9	395	4 X 10 rm	17.6	605	5 X 2.5 rm	13.6	280
2 X 16 rm	17.2	480	4 X 16 rm	20.3	905	6 X 2.5 rm	14.9	330
2 X 25 cm	20.0	725	4 X 25 cm	24.0	1320	7 X 2.5 rm	14.9	360
2 X 25 sm	16.8	695	4 X 25 sm	22.8	1275	8 X 2.5 rm	16.0	418
2 X 35 cm	22.5	985	4 X 35 cm	27.0	1750	10 X 2.5 rm	17.8	510
2 X 35 sm	18.4	910	4 X 35 sm	25.0	1696	12 X 2.5 rm	19.1	580
2 X 50 cm	25.7	1210	4 X 50 cm	30.8	2345	16 X 2.5 rm	21.8	750
2 X 50 sm	21.0	1204	4 X 50 sm	27.9	2243	19 X 2.5 rm	23.4	850
2 X 70 cm	30.1	1675	4 X 70 sm	33.3	3100	24 X 2.5 rm	26.4	1060
2 X 70 sm	24.5	1630	4 X 95 sm	38.5	4190	27 X 2.5 rm	27.7	1170
2 X 95 sm	27.5	2180	4 X 120 sm	43.0	5350	37 X 2.5 rm	31.9	1570
2 X 120 sm	30.1	2780	4 X 150 sm	46.4	6490	5 X 4 rm	15.0	385
3 X 1.0 rm	9.7	134	4 X 185 sm	52.8	8090	6 X 4 rm	16.6	450
3 X 1.5 rm	10.2	160	4 X 240 sm	61.4	10530	7 X 4 rm	16.6	490
3 X 2.5 rm	11.1	210	4 X 300 sm	66.4	13010			

rm : Stranded Circular Non-Compacted

cm : Stranded Circular Compacted

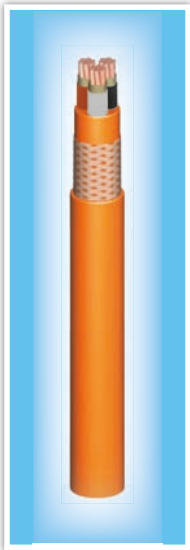
sm : Stranded Shaped

FR - 200Q - M / FR - 200C - M

Fire Resistant Shipboard Braided Power Cables

600/1000 V
90 °C

Type Approval Certificates : ABS, BV, LR



CONSTRUCTION	
1. Conductor	: Annealed Stranded Circular or Shape Copper Class 2
2. Fire Barrier	: Mica Tape
3. Insulation	: XLPE
4. Inner Sheath	: Extruded LSOH
5. Wire Braid	: Annealed Copper Wires (C) Galvanized Steel Wires (Q)
6. Outer Sheath	: Flame Retardant LSOH, SHF 1

PRODUCT TECHNICAL	
Application :	
This cable is suitable for use in fixed installations for power supply in commercial ship where flame retardant, low smoke halogen free and fire resistant properties are required.	
Applicable Standard	: IEC 60092-353
Rated Voltage	: 600 / 1000 V
Temperature Range	: - 15 °C to 90 °C

CORE IDENTIFICATION	
1 C	- Natural
2 C	- Brown & Blue
3 C	- Brown, Black & Grey
4 C	- Brown, Black, Grey & Blue
5 C & Above	- Numbers printed on the cores
Sheath Colour	: Orange

PRODUCT PERFORMANCE	
Flame Retardant Test	: IEC 60332 - 1 : IEC 60332-3-22 Cat. A
Halogen Content Test	: IEC 60754 - 1 & 2
Smoke Density Test	: IEC 61034 - 1 & 2
Fire Alone Test	: IEC 60331 - 21

No. of Core & Nominal Area of Conductor	Approx. O.D.	Approx. Weight		No. of Core & Nominal Area of Conductor	Approx. O.D.	Approx. Weight		No. of Core & Nominal Area of Conductor	Approx. O.D.	Approx. Weight	
		FR-200Q-M	FR-200C-M			FR-200Q-M	FR-200C-M			FR-200Q-M	FR-200C-M
No. X mm ²	mm	Kg/Km	Kg/Km	No. X mm ²	mm	Kg/Km	Kg/Km	No. X mm ²	mm	Kg/Km	Kg/Km
1 X 10 rm	11.9	-	270	3 X 6 rm	17.4	546	558	10 X 1.0 rm	18.5	561	575
1 X 16 rm	13.3	-	360	3 X 10 rm	19.9	730	744	12 X 1.0 rm	19.6	611	626
1 X 25 cm	14.8	-	490	3 X 16 rm	22.6	967	983	16 X 1.0 rm	21.7	724	741
1 X 35 cm	16.0	-	650	3 X 25 cm	25.8	1381	1401	19 X 1.0 rm	23.0	831	848
1 X 50 cm	18.3	-	825	3 X 25 sm	24.6	1356	1375	24 X 1.0 rm	25.3	1016	1037
1 X 70 cm	20.3	-	1085	3 X 35 cm	28.2	1772	1795	27 X 1.0 rm	26.3	1100	1121
1 X 95 cm	21.8	-	1390	3 X 35 sm	26.6	1674	1695	37 X 1.0 rm	30.0	1375	1399
1 X 120 cm	24.1	-	1690	3 X 50 cm	32.1	2269	2295	5 X 1.5 rm	16.0	394	406
1 X 150 cm	26.0	-	2015	3 X 50 sm	29.8	2126	2148	6 X 1.5 rm	17.0	453	466
1 X 185 cm	28.4	-	2470	3 X 70 sm	34.9	2914	2939	7 X 1.5 rm	17.0	478	491
1 X 240 rm	32.9	-	3195	3 X 95 sm	39.0	3927	3967	8 X 1.5 rm	18.3	549	563
1 X 300 rm	35.8	-	3795	3 X 120 sm	43.3	4755	4799	10 X 1.5 rm	19.8	655	671
2 X 1.0 rm	12.3	210	215	3 X 150 sm	46.8	5731	5781	12 X 1.5 rm	21.0	720	737
2 X 1.5 rm	12.9	233	239	4 X 1.0 rm	13.6	276	282	16 X 1.5 rm	23.1	892	910
2 X 2.5 rm	14.0	297	303	4 X 1.5 rm	14.4	318	325	19 X 1.5 rm	24.7	996	1016
2 X 4 rm	15.6	360	371	4 X 2.5 rm	16.5	413	424	24 X 1.5 rm	27.3	1259	1282
2 X 6 rm	16.6	465	477	4 X 4 rm	17.5	525	538	27 X 1.5 rm	28.2	1348	1371
2 X 10 rm	19.1	621	635	4 X 6 rm	18.9	656	669	37 X 1.5 rm	32.0	1710	1736
2 X 16 rm	21.2	868	884	4 X 10 rm	21.7	907	917	5 X 2.5 rm	17.3	484	496
2 X 25 cm	24.9	1061	1080	4 X 16 rm	24.6	1249	1268	6 X 2.5 rm	18.8	556	570
2 X 25 sm	20.6	959	975	4 X 25 cm	28.3	1743	1766	7 X 2.5 rm	18.8	591	605
2 X 35 cm	26.7	1346	1367	4 X 25 sm	27.2	1668	1690	8 X 2.5 rm	19.8	678	694
2 X 35 sm	23.2	1226	1243	4 X 35 cm	31.0	2242	2267	10 X 2.5 rm	21.7	829	847
2 X 50 cm	30.8	1694	1718	4 X 35 sm	30.1	2142	2166	12 X 2.5 rm	23.1	913	931
2 X 50 sm	25.9	1562	1582	4 X 50 cm	35.7	2884	2912	16 X 2.5 rm	25.7	1126	1146
2 X 70 cm	35.2	2290	2318	4 X 50 sm	33.9	2751	2777	19 X 2.5 rm	27.5	1277	1298
2 X 70 sm	28.3	2093	2115	4 X 70 sm	38.5	3887	3928	24 X 2.5 rm	30.3	1611	1636
2 X 95 sm	32.5	2805	2838	4 X 95 sm	43.7	5119	5166	27 X 2.5 rm	31.4	1733	1758
2 X 120 sm	35.1	3430	3465	5 X 1.0 rm	14.5	312	319	37 X 2.5 rm	36.4	2227	2256
3 X 1.0 rm	12.8	235	241	6 X 1.0 rm	16.1	382	394	5 X 4 rm	18.9	603	617
3 X 1.5 rm	13.5	275	282	7 X 1.0 rm	16.1	400	412	6 X 4 rm	20.4	696	711
3 X 2.5 rm	14.5	324	331	8 X 1.0 rm	17.0	461	474	7 X 4 rm	20.4	748	763
3 X 4 rm	16.3	447	459								

rm : Stranded Circular Non-Compacted

cm : Stranded Circular Compacted

sm : Stranded Shaped

FR - 200Q - M (SST) * / FR - 200C - M (SST) *

Fire Resistant Shipboard Braided Power Cables

600/1000 V
90 °C

Type Approval Certificates : ABS, BV, LR



CONSTRUCTION	
1. Conductor	: Annealed Stranded Circular or Shape Copper Class 2
2. Fire Barrier	: Mica Tape
3. Insulation	: XLPE
4. Inner Covering	: Lapped With Suitable Tape(s)
5. Wire Braid	: Annealed Copper Wires (C) Galvanized Steel Wires (Q)
6. Outer Sheath	: Flame Retardant LSOH, SHF 1

CORE IDENTIFICATION	
1 C	- Natural
2 C	- Brown & Blue
3 C	- Brown, Black & Grey
4 C	- Brown, Black, Grey & Blue
5 C & Above	- Numbers printed on the cores
Sheath Colour	: Orange

PRODUCT TECHNICAL	
Application :	This cable is suitable for use in fixed installations for power supply in commercial ship where flame retardant, low smoke halogen free and fire resistant properties are required.
Applicable Standard	: IEC 60092-353
Rated Voltage	: 600 / 1000 V
Temperature Range	: - 15 °C to 90 °C

PRODUCT PERFORMANCE	
Flame Retardant Test	: IEC 60332 - 1 : IEC 60332-3-22 Cat. A
Halogen Content Test	: IEC 60754 - 1 & 2
Smoke Density Test	: IEC 61034 - 1 & 2
Fire Alone Test	: IEC 60331 - 21

No. of Core & Nominal Area of Conductor	Approx. O.D.	Approx. Weight		No. of Core & Nominal Area of Conductor	Approx. O.D.	Approx. Weight		No. of Core & Nominal Area of Conductor	Approx. O.D.	Approx. Weight	
		FR-200Q-M	FR-200C-M			FR-200Q-M	FR-200C-M			FR-200Q-M	FR-200C-M
No. X mm ²	mm	Kg/Km	Kg/Km	No. X mm ²	mm	Kg/Km	Kg/Km	No. X mm ²	mm	Kg/Km	Kg/Km
1 X 10 rm	10.0	-	225	3 X 6 rm	15.7	430	445	10 X 1.0 rm	16.6	410	425
1 X 16 rm	11.4	-	290	3 X 10 rm	18.1	590	605	12 X 1.0 rm	18.0	455	470
1 X 25 cm	12.8	-	395	3 X 16 rm	20.9	845	860	16 X 1.0 rm	19.9	570	585
1 X 35 cm	14.5	-	550	3 X 25 cm	24.1	1230	1250	19 X 1.0 rm	21.3	640	655
1 X 50 cm	16.5	-	725	3 X 25 sm	22.8	1215	1230	24 X 1.0 rm	23.6	770	790
1 X 70 cm	18.5	-	970	3 X 35 cm	26.5	1600	1620	27 X 1.0 rm	24.1	830	850
1 X 95 cm	20.4	-	1260	3 X 35 sm	25.0	1530	1550	37 X 1.0 rm	28.8	1090	1105
1 X 120 cm	22.2	-	1525	3 X 50 cm	29.0	2040	2060	5 X 1.5 rm	14.2	315	325
1 X 150 cm	24.2	-	1830	3 X 50 sm	28.2	1965	1985	6 X 1.5 rm	15.4	350	360
1 X 185 cm	26.3	-	2270	3 X 70 sm	32.7	2730	2760	7 X 1.5 rm	15.4	375	385
1 X 240 rm	30.8	-	2910	3 X 95 sm	36.7	3630	3670	8 X 1.5 rm	16.6	430	440
1 X 300 rm	33.7	-	3530	3 X 120 sm	41.2	4470	4515	10 X 1.5 rm	18.2	510	525
2 X 1.0 rm	10.6	155	160	3 X 150 sm	44.8	5400	5460	12 X 1.5 rm	19.3	570	590
2 X 1.5 rm	11.2	170	175	4 X 1.0 rm	12.0	200	205	16 X 1.5 rm	21.4	760	780
2 X 2.5 rm	12.0	210	215	4 X 1.5 rm	12.6	240	245	19 X 1.5 rm	23.2	805	825
2 X 4 rm	13.7	290	300	4 X 2.5 rm	14.5	330	340	24 X 1.5 rm	25.5	975	995
2 X 6 rm	14.8	340	350	4 X 4 rm	15.5	400	415	27 X 1.5 rm	26.6	1050	1070
2 X 10 rm	17.0	470	485	4 X 6 rm	17.0	520	535	37 X 1.5 rm	30.3	1375	1400
2 X 16 rm	19.2	640	655	4 X 10 rm	19.7	740	755	5 X 2.5 rm	15.6	385	395
2 X 25 cm	22.0	925	940	4 X 16 rm	22.4	1070	1090	6 X 2.5 rm	17.2	445	460
2 X 25 sm	19.2	840	855	4 X 25 cm	26.1	1520	1540	7 X 2.5 rm	17.2	475	490
2 X 35 cm	24.6	1180	1200	4 X 25 sm	25.6	1490	1510	8 X 2.5 rm	18.2	530	540
2 X 35 sm	21.6	1085	1100	4 X 35 cm	29.3	1970	2000	10 X 2.5 rm	20.0	640	660
2 X 50 cm	27.9	1495	1520	4 X 35 sm	28.5	1960	1980	12 X 2.5 rm	21.4	725	745
2 X 50 sm	24.0	1400	1415	4 X 50 cm	34.2	2570	2600	16 X 2.5 rm	24.1	910	930
2 X 70 cm	33.2	2040	2060	4 X 50 sm	31.1	2560	2580	19 X 2.5 rm	25.8	1050	1070
2 X 70 sm	25.6	1900	1920	4 X 70 sm	35.9	3530	3570	24 X 2.5 rm	28.5	1275	1295
2 X 95 sm	28.4	2380	2400	4 X 95 sm	42.1	4670	4710	27 X 2.5 rm	29.8	1390	1410
2 X 120 sm	32.0	3120	3150	5 X 1.0 rm	12.8	225	235	37 X 2.5 rm	34.2	1840	1870
3 X 1.0 rm	11.2	170	175	6 X 1.0 rm	14.4	300	310	5 X 4 rm	17.2	510	525
3 X 1.5 rm	11.7	200	205	7 X 1.0 rm	14.4	310	320	6 X 4 rm	18.6	570	585
3 X 2.5 rm	12.8	245	250	8 X 1.0 rm	15.3	345	355	7 X 4 rm	18.6	615	630
3 X 4 rm	14.5	345	360								

rm : Stranded Circular Non-Compacted

cm : Stranded Circular Compacted

sm : Stranded Shaped

Note : * SST = Cables with lapped inner covering and a single sheath design.

Technical Information - Shipboard Power Cables

Current - Carrying Capacities For Power Cables

Max. Conductor Operating Temperature : 90 °C

Ambient Temperature : 45 °C

Nominal Area of Conductor mm ²	Number of Loaded Cores		
	1	2	3 or 4
	A	A	A
1.0	16	14	11
1.5	21	18	15
2.5	28	24	20
4	38	32	27
6	49	42	34
10	67	57	47
16	91	77	64
25	120	102	84
35	148	126	104
50	184	156	129
70	228	194	160
95	276	235	193
120	319	271	223
150	367	312	257
185	418	355	293
240	492	418	344
300	565	480	396

Note : Current - Carrying capacity ratings are according to IEC 60092 - 352

Maximum Conductor Resistances

Nominal Area of Conductor mm ²	Maximum Conductor Resistance at 20 °C Ohm / Km
0.75	26.0
1.0	18.1
1.5	12.1
2.5	7.41
4	4.61
6	3.08
10	1.83
16	1.15
25	0.727
35	0.524
50	0.387
70	0.268
95	0.193
120	0.153
150	0.124
185	0.0991
240	0.0754
300	0.0601

Current - Carrying Capacities For Control Cables

For cables with more than 4 cores, the current - carrying capacity are given by the following formula :

$$I = \frac{I_s}{\sqrt[3]{n}} \quad \begin{array}{l} I_s = \text{current - carrying capacity for single core} \\ n = \text{number of core} \end{array}$$

Number of Core	1.5 mm ²	2.5 mm ²
	A	A
5	11.5	16.0
7	10.0	14.5
12	8.5	12.0
19	7.5	10.5
24	7.0	9.5
27	6.5	9.0
37	6.0	8.0

Short Circuit Ratings

The maximum permissible short circuit rating of XLPE insulated cables can be calculated by using the following formula :

$$I = \frac{0.146 S}{\sqrt{T}} \text{ KA}$$

I = short circuit rating (KA)

S = cross-sectional area of conductor (mm²)

T = duration of short-circuit (sec)

The formula is applicable for an increase in temperature from 85 °C at the start to 250 °C at the end of the short circuit.

Correction Factor For Ambient Temperature Other Than 45 °C

Ambient Temperature (°C)	35	40	45	50	55	60	65	70	75
Correction Factor	1.12	1.06	1.00	0.94	0.87	0.79	0.71	0.61	0.50

Introduction of Shipboard Instrumentation Cables

WILSON CABLES provides PVC Sheathed Shipboard Instrumentation Cables for use in ships where flame retardant properties are required.

WILSON CABLES also manufacture LSOH Sheathed and Fire Resistant Shipboard Instrumentation Cables meeting highest safety standards for those customers having high safety consciousness.

The characteristics of these three types of cables shall meet various tests requirements where applicable. Please refer to the relevant construction, technical and performance data sheet for more details. When the LSOH Sheathed and Fire Resistant Cables are involved with a fire, they will not release aggressive halogen gases or thick black smoke. This in turn poses less dangers to the human lives provides ease access for fire fighting.

Usage of Shipboard Instrumentation Cables

Product Code	Usage of Shipboard Instrumentation Cables
MIC-210 / MIC-200 MIC-210C / MIC-200C MIC-210Q / MIC-200Q MIC-210C (SST) / MIC-200C (SST) MIC-210Q (SST) / MIC-200Q (SST) FRIC-200-M FRIC-200C-M / FRIC-200C-M (SST) FRIC-200Q-M / FRIC-200Q-M (SST)	<ul style="list-style-type: none"> Intend for use on systems where the system voltage up to 150/250 V (300 V, Max. value) a.c.. To oppose static and cross talk noises ensuring precise and flawless signals to be transmitted. Suitable for instrumentation circuits on fixed installations for marine & offshore application where flame retardant properties are required. Where mechanical protection is needed, use wire braided cables. Where fire resistant properties are needed, use fire resistant cables.
MIP-210 / MIP-200 MIP-210C / MIP-200C MIP-210Q / MIP-200Q MIP-210C (SST) / MIP-200C (SST) MIP-210Q (SST) / MIP-200Q (SST) FRIP-200-M FRIP-200C-M / FRIP-200C-M (SST) FRIP-200Q-M / FRIP-200Q-M (SST)	<ul style="list-style-type: none"> Intend for use on systems where the system voltage up to 150/250 V (300 V, Max. value) a.c.. Where noise rejection is essential. Provide optimal protection from cross talk & common mode interference. Additional electrostatic noise protection with an overall collrctive screen. Suitable for instrumentation circuits on fixed installations for marine & offshore application where flame retardant properties are required. Where mechanical protection is needed, use wire braided cables. Where fire resistant properties are needed, use fire resistant cables.
MIM-210 / MIM-200 MIM-210C / MIM-200C MIM-210Q / MIM-200Q MIM-210C (SST) / MIM-200C (SST) MIM-210Q (SST) / MIM-200Q (SST) FRIM-200-M FRIM-200C-M / FRIM-200C-M (SST) FRIM-200Q-M / FRIM-200Q-M (SST)	<ul style="list-style-type: none"> Intend for use on systems where the system voltage up to 150/250 V (300 V, Max. value) a.c.. To oppose static and cross talk noises ensuring precise and flawless signals to be transmitted. Suitable for instrumentation circuits on fixed installations for marine & offshore application where flame retardant properties are required. Where mechanical protection is needed, use wire braided cables. Where fire resistant properties are needed, use fire resistant cables

Maximum d. c. Resistance of Conductor And Drain Wire

Conductor			Drain Wire	
Nominal Area	No. & Diameter of Wire	Max. d. c. Resistance at 20 °C	Nominal Area	Max. d. c. Resistance at 20 °C
mm ²	No. / mm	Ohm / Km	mm ²	Ohm / Km
0.5	7 / 0.30	40.4	0.35	61.2
0.75	7 / 0.37	26,0	0.5	42.5
1.0	7 / 0.43	19.2	0.75	28.3
1.5	7 / 0.53	12.8	0.75	28.3

Technical Information

Minimum Bending Radius

For safety installation without damaging electrical and physical properties, the tabulated minimum bending radius must be observed.

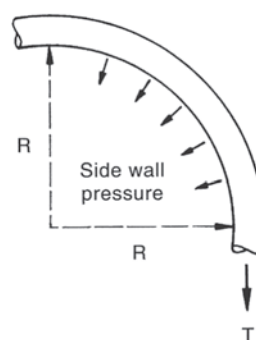
Type of Cables	Overall Diameter (mm)	Minimum Bending Radius For Cable With	
		Round Conductors	Shape Conductors
Unbraided Power Cables	≤ 25	4 D	8 D
	> 25	6 D	8 D
Braided Power Cables	Any	6 D	8 D
All Instrumentation Cables	Any	8 D	NA
All Fire Resistant Cables	Any	8 D	8 D

Note : D means the overall diameter of the cable

Side Wall Pressure to Cable

Permissible maximum side wall pressure to the cable at bending point during installation is 500 kgf / m.

$$\begin{aligned} \text{Side Wall Pressure to Cable} &= \frac{\text{Pulling Tension (kgf)}}{\text{Bending Radius (m)}} \\ &= \frac{T}{R} \end{aligned}$$



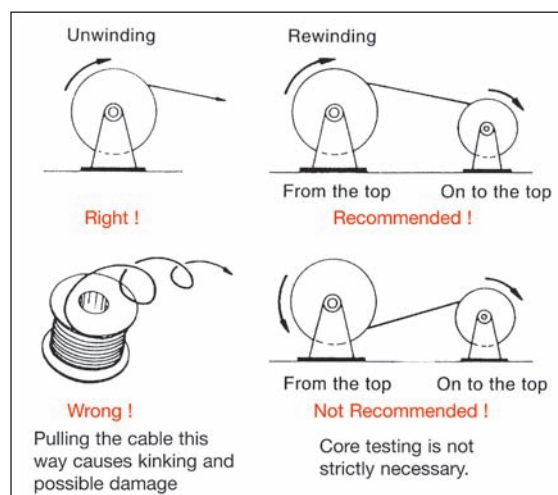
Permissible Maximum Pulling Tension (T)

Conductor	Maximum Pulling Tension (Kgf)
Copper	7 x No. of Core x Nominal Area of Conductor

Drum Handling

Handling the drum with care !
It is always recommended and a must with heavy drums -

- To lift drums with a fork-life truck or a crane when removing them from the vehicle.
- Always take care to lower the drums into an upright position on their flanges.

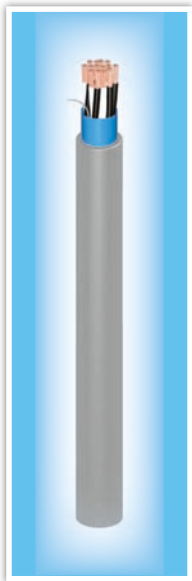


MIC - 210

PVC Sheathed Shipboard Instrumentation Cables

150/250 V
90 °C

Type Approval Certificates : ABS - BV - LR



CONSTRUCTION	
1. Conductor	: Annealed Stranded Circular Copper
2. Insulation	: XLPE
3. Collective	: Aluminium Mylar Foil With Drain Screen Wire
4. Outer Sheath	: Flame Retardant PVC

CORE IDENTIFICATION	
Each Pair	: Black and white cores with pair number printed on the cores
1 Triple	: Black , White & Red
Sheath Colour	: Grey
	: Black - On request

PRODUCT TECHNICAL	
Application :	This cable is specially designed for use in measuring, control, instrumentation and communication system on ship where flame retardant properties are required.
Applicable Standard	: IEC 60092-376
Rated Voltage	: 150 / 250 V
Temperature Range	: - 15 °C to 90 °C

PRODUCT PERFORMANCE	
Flame Retardant Test	: IEC 60332 - 1
	: IEC 60332-3-22 Cat. A

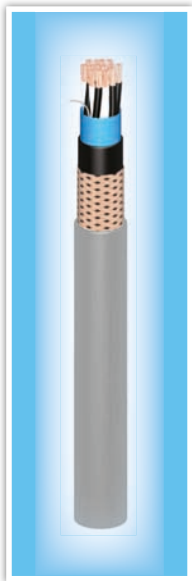
No. of Core & Nominal Area of Conductor	MIC-210		No. of Core & Nominal Area of Conductor	MIC-210		No. of Core & Nominal Area of Conductor	MIC-210	
	Approx. O.D.	Approx. Weight		Approx. O.D.	Approx. Weight		Approx. O.D.	Approx. Weight
No. X mm ²	mm	Kg/Km	No. X mm ²	mm	Kg/Km	No. X mm ²	mm	Kg/Km
1 X 2 X 0.5	6.2	60	7 X 2 X 0.75	15.2	277	19 X 2 X 1.0	26.6	794
1 X 3 X 0.5	6.5	65	8 X 2 X 0.75	16.1	314	20 X 2 X 1.0	27.2	827
1 X 4 X 0.5	7.0	76	10 X 2 X 0.75	18.1	381	24 X 2 X 1.0	29.7	977
3 X 2 X 0.5	10.1	115	12 X 2 X 0.75	19.8	450	27 X 2 X 1.0	31.4	1095
4 X 2 X 0.5	11.6	154	14 X 2 X 0.75	21.1	506	30 X 2 X 1.0	33.2	1224
6 X 2 X 0.5	13.6	198	16 X 2 X 0.75	22.3	561	1 X 2 X 1.5	8.1	104
7 X 2 X 0.5	13.6	211	19 X 2 X 0.75	24.2	657	1 X 3 X 1.5	8.7	124
8 X 2 X 0.5	14.6	241	20 X 2 X 0.75	24.8	684	1 X 4 X 1.5	9.6	155
10 X 2 X 0.5	16.2	294	24 X 2 X 0.75	27.0	807	3 X 2 X 1.5	14.0	240
12 X 2 X 0.5	17.5	331	27 X 2 X 0.75	28.4	887	4 X 2 X 1.5	15.9	298
14 X 2 X 0.5	18.9	383	30 X 2 X 0.75	30.1	993	6 X 2 X 1.5	18.6	411
16 X 2 X 0.5	20.0	424	1 X 2 X 1.0	7.2	83	7 X 2 X 1.5	18.6	450
19 X 2 X 0.5	21.5	483	1 X 3 X 1.0	7.6	95	8 X 2 X 1.5	19.5	509
20 X 2 X 0.5	22.2	516	1 X 4 X 1.0	8.2	113	10 X 2 X 1.5	21.8	629
24 X 2 X 0.5	24.0	594	3 X 2 X 1.0	12.1	176	12 X 2 X 1.5	23.9	731
27 X 2 X 0.5	25.4	667	4 X 2 X 1.0	13.9	221	14 X 2 X 1.5	25.7	844
30 X 2 X 0.5	26.9	749	6 X 2 X 1.0	16.4	304	16 X 2 X 1.5	27.3	949
1 X 2 X 0.75	6.7	72	7 X 2 X 1.0	16.4	330	19 X 2 X 1.5	29.6	1112
1 X 3 X 0.75	7.2	81	8 X 2 X 1.0	17.6	377	20 X 2 X 1.5	30.3	1160
1 X 4 X 0.75	7.7	96	10 X 2 X 1.0	20.1	470	24 X 2 X 1.5	33.0	1370
3 X 2 X 0.75	11.4	151	12 X 2 X 1.0	21.7	540	27 X 2 X 1.5	35.0	1533
4 X 2 X 0.75	12.7	186	14 X 2 X 1.0	23.1	609	30 X 2 X 1.5	36.5	1693
6 X 2 X 0.75	15.2	256	16 X 2 X 1.0	24.7	692			

MIC - 210C / MIC - 210Q

PVC Sheathed Shipboard Braided Instrumentation Cables

150/250 V
90 °C

Type Approval Certificates : ABS - BV - LR



CONSTRUCTION	
1. Conductor	: Annealed Stranded Circular Copper
2. Insulation	: XLPE
3. Collective Screen	: Aluminium Mylar Foil With Drain Wire
4. Inner Sheath	: Extruded PVC
5. Wire Braid	: Annealed Copper Wires (C) Galvanized Steel Wires (Q)
6. Outer Sheath	: Flame Retardant PVC

CORE IDENTIFICATION	
Each Pair	: Black and white cores with pair number printed on the cores
1 Triple	: Black , White & Red
Sheath Colour	: Grey
	: Black - On request

PRODUCT TECHNICAL	
Application :	This cable is specially designed for use in measuring, control, instrumentation and communication system on ship where flame retardant properties are required.
Applicable Standard	: IEC 60092-376
Rated Voltage	: 150 / 250 V
Temperature Range	: - 15 °C to 90 °C

PRODUCT PERFORMANCE	
Flame Retardant Test	: IEC 60332 - 1 : IEC 60332-3-22 Cat. A

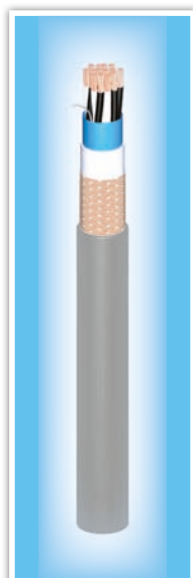
No. of Core & Nominal Area of Conductor	Approx. O.D.	Approx. Weight		No. of Core & Nominal Area of Conductor	Approx. O.D.	Approx. Weight		No. of Core & Nominal Area of Conductor	Approx. O.D.	Approx. Weight	
		MIC-210C	MIC-210Q			MIC-210C	MIC-210Q			MIC-210C	MIC-210Q
No. X mm ²	mm	Kg/Km	Kg/Km	No. X mm ²	mm	Kg/Km	Kg/Km	No. X mm ²	mm	Kg/Km	Kg/Km
1 X 2 X 0.5	8.9	134	130	7 X 2 X 0.75	18.6	500	484	19 X 2 X 1.0	30.4	1195	1168
1 X 3 X 0.5	9.2	142	137	8 X 2 X 0.75	19.7	560	544	20 X 2 X 1.0	31.2	1259	1231
1 X 4 X 0.5	9.7	158	153	10 X 2 X 0.75	21.6	647	628	24 X 2 X 1.0	33.7	1441	1411
3 X 2 X 0.5	12.8	227	220	12 X 2 X 0.75	23.6	755	735	27 X 2 X 1.0	35.6	1600	1568
4 X 2 X 0.5	14.2	271	263	14 X 2 X 0.75	24.9	832	811	30 X 2 X 1.0	37.3	1739	1706
6 X 2 X 0.5	17.0	400	386	16 X 2 X 0.75	26.1	902	879	1 X 2 X 1.5	10.7	194	188
7 X 2 X 0.5	17.0	415	401	19 X 2 X 0.75	28.0	1027	1002	1 X 3 X 1.5	11.3	218	212
8 X 2 X 0.5	18.0	458	442	20 X 2 X 0.75	28.8	1075	1050	1 X 4 X 1.5	12.2	257	251
10 X 2 X 0.5	19.7	533	516	24 X 2 X 0.75	31.0	1227	1200	3 X 2 X 1.5	17.2	438	423
12 X 2 X 0.5	21.1	597	579	27 X 2 X 0.75	32.4	1334	1305	4 X 2 X 1.5	19.3	530	513
14 X 2 X 0.5	22.5	668	648	30 X 2 X 0.75	34.0	1448	1418	6 X 2 X 1.5	22.2	694	674
16 X 2 X 0.5	23.6	720	700	1 X 2 X 1.0	9.9	167	162	7 X 2 X 1.5	22.2	733	713
19 X 2 X 0.5	25.1	802	780	1 X 3 X 1.0	10.3	182	177	8 X 2 X 1.5	23.3	812	792
20 X 2 X 0.5	26.0	855	833	1 X 4 X 1.0	10.9	206	201	10 X 2 X 1.5	25.5	956	934
24 X 2 X 0.5	27.8	962	937	3 X 2 X 1.0	15.0	316	308	12 X 2 X 1.5	27.9	1111	1086
27 X 2 X 0.5	29.2	1054	1028	4 X 2 X 1.0	17.1	418	404	14 X 2 X 1.5	29.7	1246	1220
30 X 2 X 0.5	30.6	1141	1115	6 X 2 X 1.0	20.0	554	537	16 X 2 X 1.5	31.2	1364	1337
1 X 2 X 0.75	9.4	150	146	7 X 2 X 1.0	20.0	581	564	19 X 2 X 1.5	33.7	1581	1551
1 X 3 X 0.75	9.9	164	159	8 X 2 X 1.0	21.2	643	625	20 X 2 X 1.5	34.4	1638	1607
1 X 4 X 0.75	10.4	184	179	10 X 2 X 1.0	23.8	772	752	24 X 2 X 1.5	37.3	1903	1870
3 X 2 X 0.75	14.2	280	273	12 X 2 X 1.0	25.5	874	851	27 X 2 X 1.5	39.3	2103	2067
4 X 2 X 0.75	15.9	368	355	14 X 2 X 1.0	26.9	967	943	30 X 2 X 1.5	41.2	2394	2344
6 X 2 X 0.75	18.6	479	463	16 X 2 X 1.0	28.5	1068	1043				

MIC - 210C (SST) * / MIC - 210Q (SST) *

PVC Sheathed Shipboard Braided Instrumentation Cables

150/250 V
90 °C

Type Approval Certificates : ABS - BV - LR



CONSTRUCTION	
1. Conductor	: Annealed Stranded Circular Copper
2. Insulation	: XLPE
3. Collective Screen	: Aluminium Mylar Foil With Drain Wire
4. Inner Covering	: Lapped With Suitable Tape(s)
5. Wire Braid	: Annealed Copper Wires (C) Galvanized Steel Wires (Q)
6. Outer Sheath	: Flame Retardant PVC

CORE IDENTIFICATION	
Each Pair	: Black and white cores with pair number printed on the cores
1 Triple	: Black , White & Red
Sheath Colour	: Grey
	: Black - On request

PRODUCT TECHNICAL	
Application :	This cable is specially designed for use in measuring, control, instrumentation and communication system on ship where flame retardant properties are required.
Applicable Standard	: IEC 60092-376
Rated Voltage	: 150 / 250 V
Temperature Range	: - 15 °C to 90 °C

PRODUCT PERFORMANCE	
Flame Retardant Test	: IEC 60332 - 1 : IEC 60332-3-22 Cat. A

No. of Core & Nominal Area of Conductor	Approx. O.D.	Approx. Weight		No. of Core & Nominal Area of Conductor	Approx. O.D.	Approx. Weight		No. of Core & Nominal Area of Conductor	Approx. O.D.	Approx. Weight	
		MIC-210C	MIC-210Q			MIC-210C	MIC-210Q			MIC-210C	MIC-210Q
No. X mm ²	mm	Kg/Km	Kg/Km	No. X mm ²	mm	Kg/Km	Kg/Km	No. X mm ²	mm	Kg/Km	Kg/Km
1 X 2 X 0.5	7.5	94	91	7 X 2 X 0.75	16.5	358	350	19 X 2 X 1.0	28.5	1021	996
1 X 3 X 0.5	7.8	96	93	8 X 2 X 0.75	17.8	445	430	20 X 2 X 1.0	29.1	1058	1033
1 X 4 X 0.5	8.3	115	111	10 X 2 X 0.75	19.9	532	516	24 X 2 X 1.0	31.6	1225	1198
3 X 2 X 0.5	11.6	177	172	12 X 2 X 0.75	21.5	605	587	27 X 2 X 1.0	33.1	1343	1314
4 X 2 X 0.5	12.8	208	201	14 X 2 X 0.75	23.0	685	666	30 X 2 X 1.0	35.0	1489	1458
6 X 2 X 0.5	15.1	277	269	16 X 2 X 0.75	24.2	755	734	1 X 2 X 1.5	9.5	152	147
7 X 2 X 0.5	15.1	292	284	19 X 2 X 0.75	25.9	851	829	1 X 3 X 1.5	10.1	174	169
8 X 2 X 0.5	15.9	319	311	20 X 2 X 0.75	26.7	896	873	1 X 4 X 1.5	10.8	204	198
10 X 2 X 0.5	18.0	426	412	24 X 2 X 0.75	28.9	1038	1013	3 X 2 X 1.5	15.2	311	303
12 X 2 X 0.5	19.4	482	467	27 X 2 X 0.75	30.3	1126	1100	4 X 2 X 1.5	17.7	433	419
14 X 2 X 0.5	20.6	536	519	30 X 2 X 0.75	31.9	1231	1204	6 X 2 X 1.5	20.5	574	557
16 X 2 X 0.5	21.9	597	579	1 X 2 X 1.0	8.5	124	120	7 X 2 X 1.5	20.5	613	596
19 X 2 X 0.5	23.4	670	650	1 X 3 X 1.0	8.9	137	133	8 X 2 X 1.5	21.4	675	658
20 X 2 X 0.5	23.9	692	672	1 X 4 X 1.0	9.7	163	159	10 X 2 X 1.5	23.6	808	788
24 X 2 X 0.5	25.9	800	778	3 X 2 X 1.0	13.4	242	235	12 X 2 X 1.5	25.8	934	912
27 X 2 X 0.5	27.1	868	845	4 X 2 X 1.0	15.3	300	292	14 X 2 X 1.5	27.4	1042	1019
30 X 2 X 0.5	28.7	967	943	6 X 2 X 1.0	18.3	446	432	16 X 2 X 1.5	29.1	1170	1146
1 X 2 X 0.75	8.0	109	105	7 X 2 X 1.0	18.3	473	458	19 X 2 X 1.5	31.2	1330	1303
1 X 3 X 0.75	8.5	120	116	8 X 2 X 1.0	19.3	517	501	20 X 2 X 1.5	32.1	1399	1372
1 X 4 X 0.75	9.0	138	134	10 X 2 X 1.0	21.7	624	606	24 X 2 X 1.5	34.8	1633	1603
3 X 2 X 0.75	12.6	209	202	12 X 2 X 1.0	23.4	714	694	27 X 2 X 1.5	36.6	1787	1755
4 X 2 X 0.75	14.1	258	251	14 X 2 X 1.0	25.0	807	786	30 X 2 X 1.5	38.7	2075	2031
6 X 2 X 0.75	16.5	337	329	16 X 2 X 1.0	26.4	889	867				

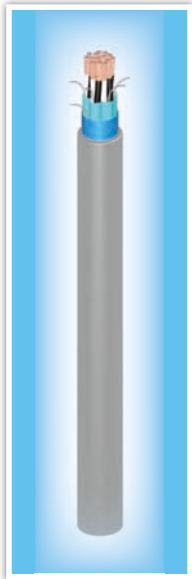
Note : * SST = Cables with lapped inner covering and a single sheath design.

MIP - 210

PVC Sheathed Shipboard Instrumentation Cables

150/250 V
90 °C

Type Approval Certificates : ABS - BV - LR



CONSTRUCTION	
1. Conductor	: Annealed Stranded Circular Copper
2. Insulation	: XLPE
3. Individual Screen	: Aluminium Mylar Foil With Drain Wire
4. Collective Screen	: Aluminium Mylar Foil With Drain Wire
5. Outer Sheath	: Flame Retardant PVC

CORE IDENTIFICATION	
Each Pair	: Black and white cores with pair number printed on the cores
1 Triple	: Black , White & Red
Sheath Colour	: Grey
	: Black - On request

PRODUCT TECHNICAL	
Application :	
This cable is specially designed for use in measuring, control, instrumentation and communication system on ship where flame retardant properties are required.	
Applicable Standard	: IEC 60092-376
Rated Voltage	: 150 / 250 V
Temperature Range	: - 15 °C to 90 °C

PRODUCT PERFORMANCE	
Flame Retardant Test	: IEC 60332 - 1
	: IEC 60332-3-22 Cat. A

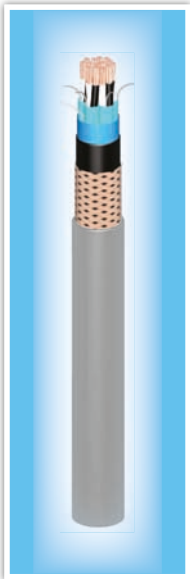
No. of Core & Nominal Area of Conductor	MIP-210		No. of Core & Nominal Area of Conductor	MIP-210		No. of Core & Nominal Area of Conductor	MIP-210	
	Approx. O.D.	Approx. Weight		Approx. O.D.	Approx. Weight		Approx. O.D.	Approx. Weight
No. X mm ²	mm	Kg/Km	No. X mm ²	mm	Kg/Km	No. X mm ²	mm	Kg/Km
2 X 2 X 0.5	10.2	108	8 X 2 X 0.75	17.4	379	19 X 2 X 1.0	27.8	999
3 X 2 X 0.5	10.9	139	10 X 2 X 0.75	19.3	463	20 X 2 X 1.0	28.4	1043
4 X 2 X 0.5	11.9	167	12 X 2 X 0.75	20.9	541	24 X 2 X 1.0	31.0	1235
6 X 2 X 0.5	14.1	229	14 X 2 X 0.75	22.3	613	27 X 2 X 1.0	32.6	1366
7 X 2 X 0.5	14.1	250	16 X 2 X 0.75	23.8	697	30 X 2 X 1.0	34.6	1543
8 X 2 X 0.5	15.3	287	19 X 2 X 0.75	25.6	802	2 X 2 X 1.5	14.1	211
10 X 2 X 0.5	16.9	350	20 X 2 X 0.75	26.4	852	3 X 2 X 1.5	15.0	271
12 X 2 X 0.5	18.4	409	24 X 2 X 0.75	28.8	1007	4 X 2 X 1.5	16.7	343
14 X 2 X 0.5	19.6	462	27 X 2 X 0.75	30.3	1111	6 X 2 X 1.5	20.1	488
16 X 2 X 0.5	20.7	514	30 X 2 X 0.75	32.0	1241	7 X 2 X 1.5	20.1	539
19 X 2 X 0.5	22.5	603	2 X 2 X 1.0	12.3	164	8 X 2 X 1.5	20.9	596
20 X 2 X 0.5	23.0	629	3 X 2 X 1.0	13.1	209	10 X 2 X 1.5	23.1	730
24 X 2 X 0.5	25.1	744	4 X 2 X 1.0	14.6	264	12 X 2 X 1.5	25.3	872
27 X 2 X 0.5	26.4	820	6 X 2 X 1.0	17.5	374	14 X 2 X 1.5	27.0	992
30 X 2 X 0.5	27.9	919	7 X 2 X 1.0	17.5	412	16 X 2 X 1.5	28.8	1127
2 X 2 X 0.75	11.5	140	8 X 2 X 1.0	18.7	459	19 X 2 X 1.5	31.0	1304
3 X 2 X 0.75	12.2	175	10 X 2 X 1.0	20.7	562	20 X 2 X 1.5	31.9	1381
4 X 2 X 0.75	13.3	212	12 X 2 X 1.0	22.5	659	24 X 2 X 1.5	34.7	1635
6 X 2 X 0.75	16.1	302	14 X 2 X 1.0	24.2	762	27 X 2 X 1.5	36.6	1810
7 X 2 X 0.75	16.1	331	16 X 2 X 1.0	25.6	851	30 X 2 X 1.5	38.8	2038

MIP - 210C / MIP - 210Q

PVC Sheathed Shipboard Braided Instrumentation Cables

150/250 V
90 °C

Type Approval Certificates : ABS - BV - LR



CONSTRUCTION	
1. Conductor	: Annealed Stranded Circular Copper
2. Insulation	: XLPE
3. Individual Screen	: Aluminium Mylar Foil With Drain Wire
4. Collective Screen	: Aluminium Mylar Foil With Drain Wire
5. Inner Sheath	: Extruded PVC
6. Wire Braid	: Annealed Copper Wires (C) Galvanized Steel Wires (Q)
7. Outer Sheath	: Flame Retardant PVC

CORE IDENTIFICATION	
Each Pair	: Black and white cores with pair number printed on the cores
Sheath Colour	: Grey : Black - On request

PRODUCT TECHNICAL	
Application :	This cable is specially designed for use in measuring, control, instrumentation and communication system on ship where flame retardant properties are required.
Applicable Standard	: IEC 60092-376
Rated Voltage	: 150 / 250 V
Temperature Range	: - 15 °C to 90 °C

PRODUCT PERFORMANCE	
Flame Retardant Test	: IEC 60332 - 1 : IEC 60332-3-22 Cat. A

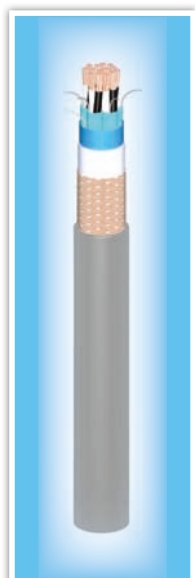
No. of Core & Nominal Area of Conductor	Approx. O.D.	Approx. Weight		No. of Core & Nominal Area of Conductor	Approx. O.D.	Approx. Weight		No. of Core & Nominal Area of Conductor	Approx. O.D.	Approx. Weight	
		MIP-210C	MIP-210Q			MIP-210C	MIP-210Q			MIP-210C	MIP-210Q
No. X mm ²	mm	Kg/Km	Kg/Km	No. X mm ²	mm	Kg/Km	Kg/Km	No. X mm ²	mm	Kg/Km	Kg/Km
2 X 2 X 0.5	12.9	231	224	8 X 2 X 0.75	21.0	655	637	19 X 2 X 1.0	31.8	1454	1426
3 X 2 X 0.5	13.6	265	258	10 X 2 X 0.75	23.1	776	756	20 X 2 X 1.0	32.4	1513	1484
4 X 2 X 0.5	14.8	311	303	12 X 2 X 0.75	24.7	878	857	24 X 2 X 1.0	35.2	1760	1729
6 X 2 X 0.5	17.5	446	431	14 X 2 X 0.75	26.1	973	950	27 X 2 X 1.0	36.8	1915	1882
7 X 2 X 0.5	17.5	466	452	16 X 2 X 0.75	27.6	1080	1055	30 X 2 X 1.0	38.7	2110	2075
8 X 2 X 0.5	18.7	519	504	19 X 2 X 0.75	29.6	1225	1199	2 X 2 X 1.5	17.4	423	408
10 X 2 X 0.5	20.5	617	600	20 X 2 X 0.75	30.4	1287	1260	3 X 2 X 1.5	18.5	505	490
12 X 2 X 0.5	22.0	695	677	24 X 2 X 0.75	33.0	1499	1470	4 X 2 X 1.5	20.2	603	585
14 X 2 X 0.5	23.2	767	747	27 X 2 X 0.75	34.5	1626	1595	6 X 2 X 1.5	23.9	817	796
16 X 2 X 0.5	24.3	838	817	30 X 2 X 0.75	36.1	1768	1736	7 X 2 X 1.5	23.9	867	846
19 X 2 X 0.5	26.3	963	940	2 X 2 X 1.0	15.2	313	305	8 X 2 X 1.5	24.7	936	915
20 X 2 X 0.5	26.8	998	974	3 X 2 X 1.0	16.4	408	395	10 X 2 X 1.5	27.1	1115	1092
24 X 2 X 0.5	28.9	1144	1119	4 X 2 X 1.0	17.9	485	470	12 X 2 X 1.5	29.3	1290	1264
27 X 2 X 0.5	30.4	1255	1228	6 X 2 X 1.0	21.2	653	635	14 X 2 X 1.5	31.0	1435	1408
30 X 2 X 0.5	31.8	1365	1337	7 X 2 X 1.0	21.2	691	673	16 X 2 X 1.5	33.0	1620	1591
2 X 2 X 0.75	14.4	278	270	8 X 2 X 1.0	22.3	754	735	19 X 2 X 1.5	35.2	1830	1799
3 X 2 X 0.75	15.1	323	314	10 X 2 X 1.0	24.5	897	876	20 X 2 X 1.5	36.3	1938	1906
4 X 2 X 0.75	16.6	414	401	12 X 2 X 1.0	26.3	1021	998	24 X 2 X 1.5	39.5	2352	2304
6 X 2 X 0.75	19.7	559	542	14 X 2 X 1.0	28.0	1150	1125	27 X 2 X 1.5	41.6	2582	2532
7 X 2 X 0.75	19.7	588	571	16 X 2 X 1.0	29.6	1274	1248	30 X 2 X 1.5	43.7	2834	2782

MIP - 210C (SST) * / MIP - 210Q (SST) *

PVC Sheathed Shipboard Braided Instrumentation Cables

150/250 V
90 °C

Type Approval Certificates : ABS - BV - LR



CONSTRUCTION	
1. Conductor	: Annealed Stranded Circular Copper
2. Insulation	: XLPE
3. Individual Screen	: Aluminium Mylar Foil With Drain Wire
4. Collective Screen	: Aluminium Mylar Foil With Drain Wire
5. Inner Covering	: Lapped With Suitable Tape(s)
6. Wire Braid	: Annealed Copper Wires (C) Galvanized Steel Wires (Q)
7. Outer Sheath	: Flame Retardant PVC

PRODUCT TECHNICAL	
Application :	
This cable is specially designed for use in measuring, control, instrumentation and communication system on ship where flame retardant properties are required.	
Applicable Standard	: IEC 60092-376
Rated Voltage	: 150 / 250 V
Temperature Range	: - 15 °C to 90 °C

CORE IDENTIFICATION	
Each Pair	: Black and white cores with pair number printed on the cores
Sheath Colour	: Grey : Black - On request

PRODUCT PERFORMANCE	
Flame Retardant Test	: IEC 60332 - 1 : IEC 60332-3-22 Cat. A

No. of Core & Nominal Area of Conductor	Approx. O.D.	Approx. Weight		No. of Core & Nominal Area of Conductor	Approx. O.D.	Approx. Weight		No. of Core & Nominal Area of Conductor	Approx. O.D.	Approx. Weight	
		MIP-210C	MIP-210Q			MIP-210C	MIP-210Q			MIP-210C	MIP-210Q
No. X mm ²	mm	Kg/Km	Kg/Km	No. X mm ²	mm	Kg/Km	Kg/Km	No. X mm ²	mm	Kg/Km	Kg/Km
2 X 2 X 0.5	11.7	176	171	8 X 2 X 0.75	19.3	532	517	19 X 2 X 1.0	29.5	1224	1199
3 X 2 X 0.5	12.2	200	194	10 X 2 X 0.75	21.0	621	604	20 X 2 X 1.0	30.3	1288	1263
4 X 2 X 0.5	13.2	235	228	12 X 2 X 0.75	22.8	723	704	24 X 2 X 1.0	32.9	1500	1472
6 X 2 X 0.5	15.6	316	307	14 X 2 X 0.75	24.2	807	787	27 X 2 X 1.0	34.5	1649	1619
7 X 2 X 0.5	15.6	336	328	16 X 2 X 0.75	25.5	892	871	30 X 2 X 1.0	36.2	1809	1778
8 X 2 X 0.5	16.6	371	362	19 X 2 X 0.75	27.5	1027	1004	2 X 2 X 1.5	15.4	289	281
10 X 2 X 0.5	18.6	489	474	20 X 2 X 0.75	28.1	1068	1044	3 X 2 X 1.5	16.9	406	393
12 X 2 X 0.5	20.1	561	545	24 X 2 X 0.75	30.5	1237	1212	4 X 2 X 1.5	18.4	482	467
14 X 2 X 0.5	21.5	633	616	27 X 2 X 0.75	32.0	1355	1328	6 X 2 X 1.5	21.8	655	637
16 X 2 X 0.5	22.6	695	677	30 X 2 X 0.75	33.8	1508	1479	7 X 2 X 1.5	21.8	705	687
19 X 2 X 0.5	24.2	786	766	2 X 2 X 1.0	13.8	240	233	8 X 2 X 1.5	22.8	780	761
20 X 2 X 0.5	24.9	832	811	3 X 2 X 1.0	14.6	290	282	10 X 2 X 1.5	25.0	934	913
24 X 2 X 0.5	27.0	964	942	4 X 2 X 1.0	15.9	346	337	12 X 2 X 1.5	27.0	1075	1053
27 X 2 X 0.5	28.3	1051	1027	6 X 2 X 1.0	19.3	519	504	14 X 2 X 1.5	28.9	1227	1203
30 X 2 X 0.5	29.7	1151	1125	7 X 2 X 1.0	19.3	557	541	16 X 2 X 1.5	30.5	1360	1333
2 X 2 X 0.75	12.8	203	197	8 X 2 X 1.0	20.6	625	608	19 X 2 X 1.5	32.9	1570	1542
3 X 2 X 0.75	13.7	250	243	10 X 2 X 1.0	22.6	743	725	20 X 2 X 1.5	33.8	1657	1628
4 X 2 X 0.75	14.8	295	287	12 X 2 X 1.0	24.4	855	834	24 X 2 X 1.5	36.6	1930	1899
6 X 2 X 0.75	18.0	446	432	14 X 2 X 1.0	25.9	960	938	27 X 2 X 1.5	38.5	2119	2086
7 X 2 X 0.75	18.0	475	461	16 X 2 X 1.0	27.5	1075	1051	30 X 2 X 1.5	40.6	2349	2314

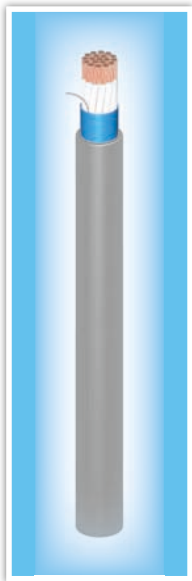
Note : * SST = Cables with lapped inner covering and a single sheath design.

MIM - 210

PVC Sheathed Shipboard Instrumentation Cables

150/250 V
90 °C

Type Approval Certificates : ABS - BV - LR



CONSTRUCTION	
1. Conductor	: Annealed Stranded Circular Copper
2. Insulation	: XLPE
3. Collective	: Aluminium Mylar Foil With Drain Screen Wire
4. Outer Sheath	: Flame Retardant PVC

CORE IDENTIFICATION	
Each Core	: White insulated cores with black number printed on the cores
Sheath Colour	: Grey : Black - On request

PRODUCT TECHNICAL	
Application :	
This cable is intended for lighting and control system for fixed in most areas and on open deck in ships where flame retardant properties are required.	
Applicable Standard	: IEC 60092-376
Rated Voltage	: 150 / 250 V
Temperature Range	: - 15 °C to 90 °C

PRODUCT PERFORMANCE	
Flame Retardant Test	: IEC 60332 - 1 : IEC 60332-3-22 Cat. A

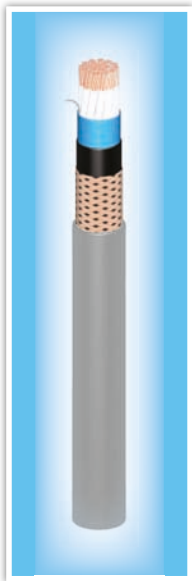
No. of Core & Nominal Area of Conductor	MIM-210		No. of Core & Nominal Area of Conductor	MIM-210		No. of Core & Nominal Area of Conductor	MIM-210	
	Approx. O.D.	Approx. Weight		Approx. O.D.	Approx. Weight		Approx. O.D.	Approx. Weight
No. X mm ²	mm	Kg/Km	No. X mm ²	mm	Kg/Km	No. X mm ²	mm	Kg/Km
2 X 0.5	6.2	60	7 X 0.75	9.1	139	19 X 1.0	15.0	383
3 X 0.5	6.5	65	8 X 0.75	10.3	163	20 X 1.0	16.0	413
4 X 0.5	7.0	76	10 X 0.75	11.5	194	24 X 1.0	17.6	481
5 X 0.5	7.5	88	12 X 0.75	12.0	221	27 X 1.0	18.0	524
6 X 0.5	8.2	102	16 X 0.75	13.3	281	37 X 1.0	20.2	687
7 X 0.5	8.2	109	19 X 0.75	14.0	318	2 X 1.5	8.2	105
8 X 0.5	9.1	123	20 X 0.75	14.7	335	3 X 1.5	8.7	124
10 X 0.5	10.3	152	24 X 0.75	16.4	400	4 X 1.5	9.6	155
12 X 0.5	10.7	172	27 X 0.75	16.7	434	5 X 1.5	10.4	181
16 X 0.5	11.7	210	37 X 0.75	18.8	567	6 X 1.5	11.3	208
19 X 0.5	12.3	237	2 X 1.0	7.2	83	7 X 1.5	11.3	227
20 X 0.5	12.9	249	3 X 1.0	7.6	95	8 X 1.5	12.7	265
24 X 0.5	14.4	298	4 X 1.0	8.2	113	10 X 1.5	14.3	318
27 X 0.5	14.7	323	5 X 1.0	8.9	131	12 X 1.5	14.9	365
37 X 0.5	16.5	420	6 X 1.0	9.9	158	16 X 1.5	16.6	467
2 X 0.75	6.8	72	7 X 1.0	9.9	171	19 X 1.5	17.5	534
3 X 0.75	7.2	81	8 X 1.0	11.0	194	20 X 1.5	18.7	580
4 X 0.75	7.7	96	10 X 1.0	12.3	231	24 X 1.5	20.6	678
5 X 0.75	8.3	111	12 X 1.0	13.0	272	27 X 1.5	21.0	741
6 X 0.75	9.1	129	16 X 1.0	14.3	337	37 X 1.5	23.7	975

MIM - 210C / MIM - 210Q

PVC Sheathed Shipboard Braided Instrumentation Cables

150/250 V
90 °C

Type Approval Certificates : ABS - BV - LR



CONSTRUCTION	
1. Conductor	: Annealed Stranded Circular Copper
2. Insulation	: XLPE
3. Collective	: Aluminium Mylar Foil With Drain Screen Wire
4. Inner Sheath	: Extruded PVC
5. Wire Braid	: Annealed Copper Wires (C) Galvanized Steel Wires (Q)
6. Outer Sheath	: Flame Retardant PVC

CORE IDENTIFICATION	
Each Core	: White insulated cores with black number printed on the cores
Sheath Colour	: Grey : Black - On request

PRODUCT TECHNICAL	
Application :	This cable is intended for lighting and control system for fixed in most areas and on open deck in ships where flame retardant properties are required.
Applicable Standard	: IEC 60092-376
Rated Voltage	: 150 / 250 V
Temperature Range	: - 15 °C to 90 °C

PRODUCT PERFORMANCE	
Flame Retardant Test	: IEC 60332 - 1 : IEC 60332-3-22 Cat. A

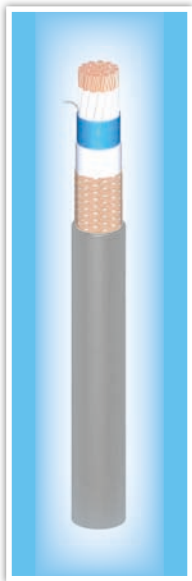
No. of Core & Nominal Area of Conductor	Approx. O.D.	Approx. Weight		No. of Core & Nominal Area of Conductor	Approx. O.D.	Approx. Weight		No. of Core & Nominal Area of Conductor	Approx. O.D.	Approx. Weight	
		MIM-210C	MIM-210Q			MIM-210C	MIM-210Q			MIM-210C	MIM-210Q
No. X mm ²	mm	Kg/Km	Kg/Km	No. X mm ²	mm	Kg/Km	Kg/Km	No. X mm ²	mm	Kg/Km	Kg/Km
2 X 0.5	8.9	133	129	7 X 0.75	11.9	244	238	19 X 1.0	18.6	612	596
3 X 0.5	9.2	142	137	8 X 0.75	13.3	287	280	20 X 1.0	19.6	657	641
4 X 0.5	9.7	157	152	10 X 0.75	14.9	368	356	24 X 1.0	21.2	747	729
5 X 0.5	10.2	174	169	12 X 0.75	15.3	396	384	27 X 1.0	21.6	794	775
6 X 0.5	10.9	194	189	16 X 0.75	16.7	479	465	37 X 1.0	24.0	1001	980
7 X 0.5	11.0	205	199	19 X 0.75	17.6	534	519	2 X 1.5	10.8	195	189
8 X 0.5	11.9	228	222	20 X 0.75	18.3	562	547	3 X 1.5	11.3	218	212
10 X 0.5	13.1	268	261	24 X 0.75	20.0	650	633	4 X 1.5	12.2	258	251
12 X 0.5	13.6	295	288	27 X 0.75	20.3	687	670	5 X 1.5	13.2	299	292
16 X 0.5	14.7	347	340	37 X 0.75	22.6	861	842	6 X 1.5	14.2	337	330
19 X 0.5	15.7	421	408	2 X 1.0	9.9	167	162	7 X 1.5	14.3	360	353
20 X 0.5	16.3	441	428	3 X 1.0	10.3	182	177	8 X 1.5	16.1	455	442
24 X 0.5	17.8	510	495	4 X 1.0	10.9	206	200	10 X 1.5	17.9	539	524
27 X 0.5	18.1	540	524	5 X 1.0	11.6	231	225	12 X 1.5	18.4	588	573
37 X 0.5	20.1	670	653	6 X 1.0	12.7	271	265	16 X 1.5	20.2	718	701
2 X 0.75	9.5	152	147	7 X 1.0	12.7	284	278	19 X 1.5	21.1	798	780
3 X 0.75	9.9	163	159	8 X 1.0	14.0	325	317	20 X 1.5	22.4	862	843
4 X 0.75	10.4	184	178	10 X 1.0	15.7	416	403	24 X 1.5	24.3	989	968
5 X 0.75	11.0	205	199	12 X 1.0	16.3	460	446	27 X 1.5	24.7	1059	1037
6 X 0.75	11.9	234	227	16 X 1.0	17.9	555	540	37 X 1.5	27.6	1339	1315

MIM - 210C (SST) * / MIM - 210Q (SST) *

PVC Sheathed Shipboard Braided Instrumentation Cables

150/250 V
90 °C

Type Approval Certificates : ABS - BV - LR



CONSTRUCTION	
1. Conductor	: Annealed Stranded Circular Copper
2. Insulation	: XLPE
3. Collective	: Aluminium Mylar Foil With Drain Screen Wire
4. Inner Covering	: Lapped With Suitable Tape(s)
5. Wire Braid	: Annealed Copper Wires (C) Galvanized Steel Wires (Q)
6. Outer Sheath	: Flame Retardant PVC

CORE IDENTIFICATION	
Each Core	: White insulated cores with black number printed on the cores
Sheath Colour	: Grey : Black - On request

PRODUCT TECHNICAL	
Application :	This cable is intended for lighting and control system for fixed in most areas and on open deck in ships where flame retardant properties are required.
Applicable Standard	: IEC 60092-376
Rated Voltage	: 150 / 250 V
Temperature Range	: - 15 °C to 90 °C

PRODUCT PERFORMANCE	
Flame Retardant Test	: IEC 60332 - 1 : IEC 60332-3-22 Cat. A

No. of Core & Nominal Area of Conductor	Approx. O.D.	Approx. Weight		No. of Core & Nominal Area of Conductor	Approx. O.D.	Approx. Weight		No. of Core & Nominal Area of Conductor	Approx. O.D.	Approx. Weight	
		MIM-210C	MIM-210Q			MIM-210C	MIM-210Q			MIM-210C	MIM-210Q
No. X mm ²	mm	Kg/Km	Kg/Km	No. X mm ²	mm	Kg/Km	Kg/Km	No. X mm ²	mm	Kg/Km	Kg/Km
2 X 0.5	7.5	93	90	7 X 0.75	10.6	193	188	19 X 1.0	16.9	510	497
3 X 0.5	7.8	100	97	8 X 0.75	11.6	217	211	20 X 1.0	17.7	536	522
4 X 0.5	8.3	114	110	10 X 0.75	13.0	261	254	24 X 1.0	19.5	627	612
5 X 0.5	8.8	128	124	12 X 0.75	13.4	287	280	27 X 1.0	19.9	675	659
6 X 0.5	9.5	145	141	16 X 0.75	14.6	349	341	37 X 1.0	22.1	855	837
7 X 0.5	9.5	153	148	19 X 0.75	15.9	437	425	2 X 1.5	9.6	151	147
8 X 0.5	10.6	177	172	20 X 0.75	16.6	459	446	3 X 1.5	10.1	173	168
10 X 0.5	11.6	205	200	24 X 0.75	18.3	537	523	4 X 1.5	10.8	202	197
12 X 0.5	11.9	224	218	27 X 0.75	18.6	573	558	5 X 1.5	11.6	233	227
16 X 0.5	13.2	277	270	37 X 0.75	20.5	713	696	6 X 1.5	12.8	273	266
19 X 0.5	13.8	308	301	2 X 1.0	8.5	122	118	7 X 1.5	12.8	292	286
20 X 0.5	14.4	325	317	3 X 1.0	8.9	136	132	8 X 1.5	14.0	330	323
24 X 0.5	15.7	371	363	4 X 1.0	9.7	162	157	10 X 1.5	16.2	439	426
27 X 0.5	16.0	398	389	5 X 1.0	10.4	184	179	12 X 1.5	16.7	487	474
37 X 0.5	18.2	548	533	6 X 1.0	11.2	210	204	16 X 1.5	18.5	605	591
2 X 0.75	8.1	109	105	7 X 1.0	11.2	223	217	19 X 1.5	19.4	679	664
3 X 0.75	8.5	119	115	8 X 1.0	12.3	251	245	20 X 1.5	20.3	716	700
4 X 0.75	9.0	137	133	10 X 1.0	13.8	303	296	24 X 1.5	22.4	841	823
5 X 0.75	9.8	161	156	12 X 1.0	14.2	334	327	27 X 1.5	22.8	906	887
6 X 0.75	10.6	183	177	16 X 1.0	16.2	457	444	37 X 1.5	25.5	1162	1141

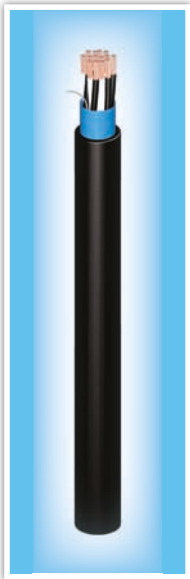
Note : * SST = Cables with lapped inner covering and a single sheath design.

MIC - 200

LSOH Sheathed Shipboard Instrumentation Cables

150/250 V
90 °C

Type Approval Certificates : ABS - BV - LR



CONSTRUCTION	
1. Conductor	: Annealed Stranded Circular Copper
2. Insulation	: XLPE
3. Collective Screen	: Aluminium Mylar Foil With Drain Wire
4. Outer Sheath	: Flame Retardant LSOH, SHF 1

CORE IDENTIFICATION	
Each Pair	: Black and white cores with pair number printed on the cores
1 Triple	: Black, White & Red
Sheath Colour	: Black
	: Grey - On request

PRODUCT TECHNICAL	
Application :	This cable is specially designed for use in measuring, control, instrumentation and communication system on ship where flame retardant and low smoke halogen free properties are required.
Applicable Standard	: IEC 60092-376
Rated Voltage	: 150 / 250 V
Temperature Range	: - 15 °C to 90 °C

PRODUCT PERFORMANCE	
Flame Retardant Test	: IEC 60332 - 1 : IEC 60332-3-22 Cat. A
Halogen Content Test	: IEC 60754 - 1
Corrosivity Test	: IEC 60754 - 2
Smoke Density Test	: IEC 61034 - 1 & 2

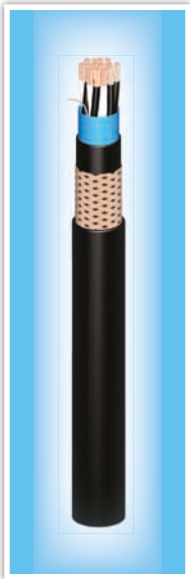
No. of Core & Nominal Area of Conductor	MIC-200		No. of Core & Nominal Area of Conductor	MIC-200		No. of Core & Nominal Area of Conductor	MIC-200	
	Approx. O.D.	Approx. Weight		Approx. O.D.	Approx. Weight		Approx. O.D.	Approx. Weight
No. X mm ²	mm	Kg/Km	No. X mm ²	mm	Kg/Km	No. X mm ²	mm	Kg/Km
1 X 2 X 0.5	6.2	60	7 X 2 X 0.75	15.2	277	19 X 2 X 1.0	26.6	794
1 X 3 X 0.5	6.5	65	8 X 2 X 0.75	16.1	314	20 X 2 X 1.0	27.2	827
1 X 4 X 0.5	7.0	76	10 X 2 X 0.75	18.1	381	24 X 2 X 1.0	29.7	977
3 X 2 X 0.5	10.1	115	12 X 2 X 0.75	19.8	450	27 X 2 X 1.0	31.4	1095
4 X 2 X 0.5	11.6	154	14 X 2 X 0.75	21.1	506	30 X 2 X 1.0	33.2	1224
6 X 2 X 0.5	13.6	198	16 X 2 X 0.75	22.3	561	1 X 2 X 1.5	8.1	104
7 X 2 X 0.5	13.6	211	19 X 2 X 0.75	24.2	657	1 X 3 X 1.5	8.7	124
8 X 2 X 0.5	14.6	241	20 X 2 X 0.75	24.8	684	1 X 4 X 1.5	9.6	155
10 X 2 X 0.5	16.2	294	24 X 2 X 0.75	27.0	807	3 X 2 X 1.5	14.0	240
12 X 2 X 0.5	17.5	331	27 X 2 X 0.75	28.4	887	4 X 2 X 1.5	15.9	298
14 X 2 X 0.5	18.9	383	30 X 2 X 0.75	30.1	993	6 X 2 X 1.5	18.6	411
16 X 2 X 0.5	20.0	424	1 X 2 X 1.0	7.2	83	7 X 2 X 1.5	18.6	450
19 X 2 X 0.5	21.5	483	1 X 3 X 1.0	7.6	95	8 X 2 X 1.5	19.5	509
20 X 2 X 0.5	22.2	516	1 X 4 X 1.0	8.2	113	10 X 2 X 1.5	21.8	629
24 X 2 X 0.5	24.0	594	3 X 2 X 1.0	12.1	176	12 X 2 X 1.5	23.9	731
27 X 2 X 0.5	25.4	667	4 X 2 X 1.0	13.9	221	14 X 2 X 1.5	25.7	844
30 X 2 X 0.5	26.9	749	6 X 2 X 1.0	16.4	304	16 X 2 X 1.5	27.3	949
1 X 2 X 0.75	6.7	72	7 X 2 X 1.0	16.4	330	19 X 2 X 1.5	29.6	1112
1 X 3 X 0.75	7.2	81	8 X 2 X 1.0	17.6	377	20 X 2 X 1.5	30.3	1160
1 X 4 X 0.75	7.7	96	10 X 2 X 1.0	20.1	470	24 X 2 X 1.5	33.0	1370
3 X 2 X 0.75	11.4	151	12 X 2 X 1.0	21.7	540	27 X 2 X 1.5	35.0	1533
4 X 2 X 0.75	12.7	186	14 X 2 X 1.0	23.1	609	30 X 2 X 1.5	36.5	1693
6 X 2 X 0.75	15.2	256	16 X 2 X 1.0	24.7	692			

MIC - 200C / MIC - 200Q

LSOH Sheathed Shipboard Braided Instrumentation Cables

150/250 V
90 °C

Type Approval Certificates : ABS - BV - LR



CONSTRUCTION	
1. Conductor	: Annealed Stranded Circular Copper
2. Insulation	: XLPE
3. Collective Screen	: Aluminium Mylar Foil With Drain Wire
4. Inner Sheath	: Extruded LSOH
5. Wire Braid	: Annealed Copper Wires (C) Galvanized Steel Wires (Q)
6. Outer Sheath	: Flame Retardant LSOH, SHF 1

CORE IDENTIFICATION	
Each Pair	: Black and white cores with pair number printed on the cores
1 Triple	: Black , White & Red
Sheath Colour	: Black : Grey - On request

PRODUCT TECHNICAL	
Application :	This cable is specially designed for use in measuring, control, instrumentation and communication system on ship where flame retardant and low smoke halogen free properties are required.
Applicable Standard	: IEC 60092-376
Rated Voltage	: 150 / 250 V
Temperature Range	: - 15 °C to 90 °C

PRODUCT PERFORMANCE	
Flame Retardant Test	: IEC 60332 - 1 : IEC 60332-3-22 Cat. A
Halogen Content Test	: IEC 60754 - 1
Corrosivity Test	: IEC 60754 - 2
Smoke Density Test	: IEC 61034 - 1 & 2

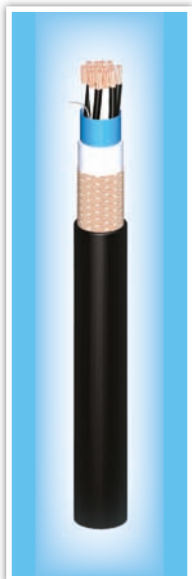
No. of Core & Nominal Area of Conductor	Approx. O.D.	Approx. Weight		No. of Core & Nominal Area of Conductor	Approx. O.D.	Approx. Weight		No. of Core & Nominal Area of Conductor	Approx. O.D.	Approx. Weight	
		MIC-200C	MIC-200Q			MIC-200C	MIC-200Q			MIC-200C	MIC-200Q
No. X mm ²	mm	Kg/Km	Kg/Km	No. X mm ²	mm	Kg/Km	Kg/Km	No. X mm ²	mm	Kg/Km	Kg/Km
1 X 2 X 0.5	8.9	139	135	7 X 2 X 0.75	18.6	514	498	19 X 2 X 1.0	30.4	1225	1198
1 X 3 X 0.5	9.2	147	143	8 X 2 X 0.75	19.7	577	560	20 X 2 X 1.0	31.2	1291	1263
1 X 4 X 0.5	9.7	164	159	10 X 2 X 0.75	21.6	665	647	24 X 2 X 1.0	33.7	1477	1446
3 X 2 X 0.5	12.8	235	228	12 X 2 X 0.75	23.6	777	757	27 X 2 X 1.0	35.6	1640	1608
4 X 2 X 0.5	14.2	280	272	14 X 2 X 0.75	24.9	856	834	30 X 2 X 1.0	37.3	1782	1749
6 X 2 X 0.5	17.0	412	398	16 X 2 X 0.75	26.1	927	904	1 X 2 X 1.5	10.7	200	194
7 X 2 X 0.5	17.0	427	413	19 X 2 X 0.75	28.0	1054	1029	1 X 3 X 1.5	11.3	224	218
8 X 2 X 0.5	18.0	471	456	20 X 2 X 0.75	28.8	1104	1079	1 X 4 X 1.5	12.2	265	258
10 X 2 X 0.5	19.7	548	532	24 X 2 X 0.75	31.0	1260	1233	3 X 2 X 1.5	17.2	450	436
12 X 2 X 0.5	21.1	615	596	27 X 2 X 0.75	32.4	1369	1339	4 X 2 X 1.5	19.3	544	528
14 X 2 X 0.5	22.5	687	667	30 X 2 X 0.75	34.0	1485	1455	6 X 2 X 1.5	22.2	713	693
16 X 2 X 0.5	23.6	740	720	1 X 2 X 1.0	9.9	172	167	7 X 2 X 1.5	22.2	751	732
19 X 2 X 0.5	25.1	824	802	1 X 3 X 1.0	10.3	188	183	8 X 2 X 1.5	23.3	833	813
20 X 2 X 0.5	26.0	880	857	1 X 4 X 1.0	10.9	213	207	10 X 2 X 1.5	25.5	981	958
24 X 2 X 0.5	27.8	988	964	3 X 2 X 1.0	15.0	326	318	12 X 2 X 1.5	27.9	1139	1114
27 X 2 X 0.5	29.2	1082	1056	4 X 2 X 1.0	17.1	430	416	14 X 2 X 1.5	29.7	1277	1251
30 X 2 X 0.5	30.6	1173	1146	6 X 2 X 1.0	20.0	570	553	16 X 2 X 1.5	31.2	1397	1370
1 X 2 X 0.75	9.4	156	151	7 X 2 X 1.0	20.0	597	580	19 X 2 X 1.5	33.7	1619	1589
1 X 3 X 0.75	9.9	170	165	8 X 2 X 1.0	21.2	661	642	20 X 2 X 1.5	34.4	1677	1646
1 X 4 X 0.75	10.4	190	185	10 X 2 X 1.0	23.8	794	774	24 X 2 X 1.5	37.3	1947	1914
3 X 2 X 0.75	14.2	290	282	12 X 2 X 1.0	25.5	897	875	27 X 2 X 1.5	39.3	2151	2115
4 X 2 X 0.75	15.9	379	366	14 X 2 X 1.0	26.9	992	968	30 X 2 X 1.5	41.2	2446	2396
6 X 2 X 0.75	18.6	493	477	16 X 2 X 1.0	28.5	1096	1071				

MIC - 200C (SST) * / MIC - 200Q (SST) *

LSOH Sheathed Shipboard Braided Instrumentation Cables

150/250 V
90 °C

Type Approval Certificates : ABS - BV - LR



CONSTRUCTION	
1. Conductor	: Annealed Stranded Circular Copper
2. Insulation	: XLPE
3. Collective Screen	: Aluminium Mylar Foil With Drain Wire
4. Inner Covering	: Lapped With Suitable Tape(s)
5. Wire Braid	: Annealed Copper Wires (C) Galvanized Steel Wires (Q)
6. Outer Sheath	: Flame Retardant LSOH, SHF 1

CORE IDENTIFICATION	
Each Pair	: Black and white cores with pair number printed on the cores
1 Triple	: Black , White & Red
Sheath Colour	: Black
	: Grey - On request

PRODUCT TECHNICAL	
Application :	This cable is specially designed for use in measuring, control, instrumentation and communication system on ship where flame retardant and low smoke halogen free properties are required.
Applicable Standard	: IEC 60092-376
Rated Voltage	: 150 / 250 V
Temperature Range	: - 15 °C to 90 °C

PRODUCT PERFORMANCE	
Flame Retardant Test	: IEC 60332 - 1 : IEC 60332-3-22 Cat. A
Halogen Content Test	: IEC 60754 - 1
Corrosivity Test	: IEC 60754 - 2
Smoke Density Test	: IEC 61034 - 1 & 2

No. of Core & Nominal Area of Conductor	Approx. O.D.	Approx. Weight		No. of Core & Nominal Area of Conductor	Approx. O.D.	Approx. Weight		No. of Core & Nominal Area of Conductor	Approx. O.D.	Approx. Weight	
		MIC-200C	MIC-200Q			MIC-200C	MIC-200Q			MIC-200C	MIC-200Q
No. X mm ²	mm	Kg/Km	Kg/Km	No. X mm ²	mm	Kg/Km	Kg/Km	No. X mm ²	mm	Kg/Km	Kg/Km
1 X 2 X 0.5	7.5	97	94	7 X 2 X 0.75	16.5	367	358	19 X 2 X 1.0	28.5	1040	1015
1 X 3 X 0.5	7.8	99	96	8 X 2 X 0.75	17.8	454	440	20 X 2 X 1.0	29.1	1078	1053
1 X 4 X 0.5	8.3	118	115	10 X 2 X 0.75	19.9	544	527	24 X 2 X 1.0	31.6	1247	1220
3 X 2 X 0.5	11.6	182	177	12 X 2 X 0.75	21.5	617	600	27 X 2 X 1.0	33.1	1366	1337
4 X 2 X 0.5	12.8	213	207	14 X 2 X 0.75	23.0	700	681	30 X 2 X 1.0	35.0	1516	1486
6 X 2 X 0.5	15.1	285	277	16 X 2 X 0.75	24.2	770	749	1 X 2 X 1.5	9.5	156	151
7 X 2 X 0.5	15.1	300	292	19 X 2 X 0.75	25.9	868	845	1 X 3 X 1.5	10.1	178	174
8 X 2 X 0.5	15.9	327	319	20 X 2 X 0.75	26.7	913	891	1 X 4 X 1.5	10.8	208	203
10 X 2 X 0.5	18.0	436	421	24 X 2 X 0.75	28.9	1058	1033	3 X 2 X 1.5	15.2	318	310
12 X 2 X 0.5	19.4	493	478	27 X 2 X 0.75	30.3	1147	1121	4 X 2 X 1.5	17.7	442	428
14 X 2 X 0.5	20.6	547	530	30 X 2 X 0.75	31.9	1254	1227	6 X 2 X 1.5	20.5	585	569
16 X 2 X 0.5	21.9	610	592	1 X 2 X 1.0	8.5	127	123	7 X 2 X 1.5	20.5	624	607
19 X 2 X 0.5	23.4	683	664	1 X 3 X 1.0	8.9	140	136	8 X 2 X 1.5	21.4	688	671
20 X 2 X 0.5	23.9	706	686	1 X 4 X 1.0	9.7	167	163	10 X 2 X 1.5	23.6	823	803
24 X 2 X 0.5	25.9	816	794	3 X 2 X 1.0	13.4	248	241	12 X 2 X 1.5	25.8	951	930
27 X 2 X 0.5	27.1	885	862	4 X 2 X 1.0	15.3	308	299	14 X 2 X 1.5	27.4	1060	1037
30 X 2 X 0.5	28.7	987	963	6 X 2 X 1.0	18.3	456	441	16 X 2 X 1.5	29.1	1191	1166
1 X 2 X 0.75	8.0	112	108	7 X 2 X 1.0	18.3	483	468	19 X 2 X 1.5	31.2	1352	1325
1 X 3 X 0.75	8.5	123	120	8 X 2 X 1.0	19.3	527	512	20 X 2 X 1.5	32.1	1423	1396
1 X 4 X 0.75	9.0	142	138	10 X 2 X 1.0	21.7	637	619	24 X 2 X 1.5	34.8	1660	1630
3 X 2 X 0.75	12.6	214	208	12 X 2 X 1.0	23.4	727	708	27 X 2 X 1.5	36.6	1815	1784
4 X 2 X 0.75	14.1	265	257	14 X 2 X 1.0	25.0	823	802	30 X 2 X 1.5	38.7	2108	2064
6 X 2 X 0.75	16.5	346	337	16 X 2 X 1.0	26.4	906	884				

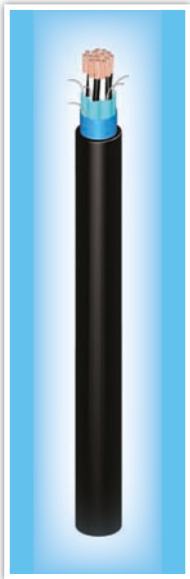
Note : * SST = Cables with lapped inner covering and a single sheath design.

MIP - 200

LSOH Sheathed Shipboard Instrumentation Cables

150/250 V
90 °C

Type Approval Certificates : ABS - BV - LR



CONSTRUCTION	
1. Conductor	: Annealed Stranded Circular Copper
2. Insulation	: XLPE
3. Individual Screen	: Aluminium Mylar Foil With Drain Wire
4. Collective Screen	: Aluminium Mylar Foil With Drain Wire
5. Outer Sheath	: Flame Retardant LSOH, SHF 1

CORE IDENTIFICATION	
Each Pair	: Black and white cores with pair number printed on the cores
Sheath Colour	: Black : Grey - On request

PRODUCT TECHNICAL	
Application :	This cable is specially designed for use in measuring, control, instrumentation and communication system on ship where flame retardant and low smoke halogen free properties are required.
Applicable Standard	: IEC 60092-376
Rated Voltage	: 150 / 250 V
Temperature Range	: - 15 °C to 90 °C

PRODUCT PERFORMANCE	
Flame Retardant Test	: IEC 60332 - 1 : IEC 60332-3-22 Cat. A
Halogen Content Test	: IEC 60754 - 1
Corrosivity Test	: IEC 60754 - 2
Smoke Density Test	: IEC 61034 - 1 & 2

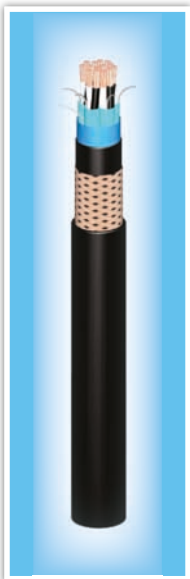
No. of Core & Nominal Area of Conductor	MIP-200		No. of Core & Nominal Area of Conductor	MIP-200		No. of Core & Nominal Area of Conductor	MIP-200	
	Approx. O.D.	Approx. Weight		Approx. O.D.	Approx. Weight		Approx. O.D.	Approx. Weight
No. X mm ²	mm	Kg/Km	No. X mm ²	mm	Kg/Km	No. X mm ²	mm	Kg/Km
2 X 2 X 0.5	10.2	108	8 X 2 X 0.75	17.4	379	19 X 2 X 1.0	27.8	999
3 X 2 X 0.5	10.9	139	10 X 2 X 0.75	19.3	463	20 X 2 X 1.0	28.4	1043
4 X 2 X 0.5	11.9	167	12 X 2 X 0.75	20.9	541	24 X 2 X 1.0	31.0	1235
6 X 2 X 0.5	14.1	229	14 X 2 X 0.75	22.3	613	27 X 2 X 1.0	32.6	1366
7 X 2 X 0.5	14.1	250	16 X 2 X 0.75	23.8	697	30 X 2 X 1.0	34.6	1543
8 X 2 X 0.5	15.3	287	19 X 2 X 0.75	25.6	802	2 X 2 X 1.5	14.1	211
10 X 2 X 0.5	16.9	350	20 X 2 X 0.75	26.4	852	3 X 2 X 1.5	15.0	271
12 X 2 X 0.5	18.4	409	24 X 2 X 0.75	28.8	1007	4 X 2 X 1.5	16.7	343
14 X 2 X 0.5	19.6	462	27 X 2 X 0.75	30.3	1111	6 X 2 X 1.5	20.1	488
16 X 2 X 0.5	20.7	514	30 X 2 X 0.75	32.0	1241	7 X 2 X 1.5	20.1	539
19 X 2 X 0.5	22.5	603	2 X 2 X 1.0	12.3	164	8 X 2 X 1.5	20.9	596
20 X 2 X 0.5	23.0	629	3 X 2 X 1.0	13.1	209	10 X 2 X 1.5	23.1	730
24 X 2 X 0.5	25.1	744	4 X 2 X 1.0	14.6	264	12 X 2 X 1.5	25.3	872
27 X 2 X 0.5	26.4	820	6 X 2 X 1.0	17.5	374	14 X 2 X 1.5	27.0	992
30 X 2 X 0.5	27.9	919	7 X 2 X 1.0	17.5	412	16 X 2 X 1.5	28.8	1127
2 X 2 X 0.75	11.5	140	8 X 2 X 1.0	18.7	459	19 X 2 X 1.5	31.0	1304
3 X 2 X 0.75	12.2	175	10 X 2 X 1.0	20.7	562	20 X 2 X 1.5	31.9	1381
4 X 2 X 0.75	13.3	212	12 X 2 X 1.0	22.5	659	24 X 2 X 1.5	34.7	1635
6 X 2 X 0.75	16.1	302	14 X 2 X 1.0	24.2	762	27 X 2 X 1.5	36.6	1810
7 X 2 X 0.75	16.1	331	16 X 2 X 1.0	25.6	851	30 X 2 X 1.5	38.8	2038

MIP - 200C / MIP - 200Q

LSOH Sheathed Shipboard Braided Instrumentation Cables

150/250 V
90 °C

Type Approval Certificates : ABS - BV - LR



CONSTRUCTION	
1. Conductor	: Annealed Stranded Circular Copper
2. Insulation	: XLPE
3. Individual Screen	: Aluminium Mylar Foil With Drain Wire
4. Collective Screen	: Aluminium Mylar Foil With Drain Wire
5. Inner Sheath	: Extruded LSOH
6. Wire Braid	: Annealed Copper Wires (C) Galvanized Steel Wires (Q)
7. Outer Sheath	: Flame Retardant LSOH, SHF 1

CORE IDENTIFICATION	
Each Pair	: Black and white cores with pair number printed on the cores
Sheath Colour	: Black : Grey - On request

PRODUCT TECHNICAL	
Application :	This cable is specially designed for use in measuring, control, instrumentation and communication system on ship where flame retardant and low smoke halogen free properties are required.
Applicable Standard	: IEC 60092-376
Rated Voltage	: 150 / 250 V
Temperature Range	: - 15 °C to 90 °C

PRODUCT PERFORMANCE	
Flame Retardant Test	: IEC 60332 - 1 : IEC 60332-3-22 Cat. A
Halogen Content Test	: IEC 60754 - 1
Corrosivity Test	: IEC 60754 - 2
Smoke Density Test	: IEC 61034 - 1 & 2

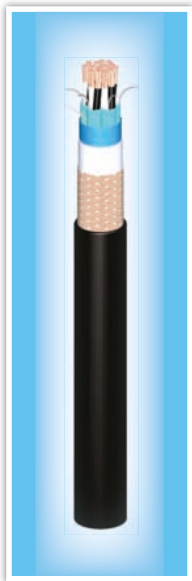
No. of Core & Nominal Area of Conductor	Approx. O.D.	Approx. Weight		No. of Core & Nominal Area of Conductor	Approx. O.D.	Approx. Weight		No. of Core & Nominal Area of Conductor	Approx. O.D.	Approx. Weight	
		MIP-200C	MIP-200Q			MIP-200C	MIP-200Q			MIP-200C	MIP-200Q
No. X mm ²	mm	Kg/Km	Kg/Km	No. X mm ²	mm	Kg/Km	Kg/Km	No. X mm ²	mm	Kg/Km	Kg/Km
2 X 2 X 0.5	12.9	236	232	8 X 2 X 0.75	21.0	667	654	19 X 2 X 1.0	31.8	1477	1460
3 X 2 X 0.5	13.6	271	267	10 X 2 X 0.75	23.1	790	777	20 X 2 X 1.0	32.4	1536	1518
4 X 2 X 0.5	14.8	318	313	12 X 2 X 0.75	24.7	894	880	24 X 2 X 1.0	35.2	1787	1768
6 X 2 X 0.5	17.5	455	444	14 X 2 X 0.75	26.1	990	975	27 X 2 X 1.0	36.8	1943	1924
7 X 2 X 0.5	17.5	475	465	16 X 2 X 0.75	27.6	1098	1082	30 X 2 X 1.0	38.7	2141	2122
8 X 2 X 0.5	18.7	529	518	19 X 2 X 0.75	29.6	1246	1229	2 X 2 X 1.5	17.4	432	421
10 X 2 X 0.5	20.5	629	617	20 X 2 X 0.75	30.4	1308	1292	3 X 2 X 1.5	18.5	515	504
12 X 2 X 0.5	22.0	708	695	24 X 2 X 0.75	33.0	1524	1507	4 X 2 X 1.5	20.2	614	602
14 X 2 X 0.5	23.2	781	767	27 X 2 X 0.75	34.5	1652	1634	6 X 2 X 1.5	23.9	832	818
16 X 2 X 0.5	24.3	853	838	30 X 2 X 0.75	36.1	1797	1778	7 X 2 X 1.5	23.9	882	868
19 X 2 X 0.5	26.3	980	965	2 X 2 X 1.0	15.2	321	315	8 X 2 X 1.5	24.7	952	937
20 X 2 X 0.5	26.8	1015	999	3 X 2 X 1.0	16.4	416	406	10 X 2 X 1.5	27.1	1134	1119
24 X 2 X 0.5	28.9	1163	1147	4 X 2 X 1.0	17.9	494	483	12 X 2 X 1.5	29.3	1310	1295
27 X 2 X 0.5	30.4	1276	1259	6 X 2 X 1.0	21.2	665	653	14 X 2 X 1.5	31.0	1457	1440
30 X 2 X 0.5	31.8	1388	1371	7 X 2 X 1.0	21.2	703	691	16 X 2 X 1.5	33.0	1645	1628
2 X 2 X 0.75	14.4	285	280	8 X 2 X 1.0	22.3	767	754	19 X 2 X 1.5	35.2	1857	1838
3 X 2 X 0.75	15.1	330	325	10 X 2 X 1.0	24.5	912	898	20 X 2 X 1.5	36.3	1967	1949
4 X 2 X 0.75	16.6	423	412	12 X 2 X 1.0	26.3	1038	1023	24 X 2 X 1.5	39.5	2384	2353
6 X 2 X 0.75	19.7	570	558	14 X 2 X 1.0	28.0	1169	1153	27 X 2 X 1.5	41.6	2618	2585
7 X 2 X 0.75	19.7	599	587	16 X 2 X 1.0	29.6	1294	1278	30 X 2 X 1.5	43.7	2873	2840

MIP - 200C (SST) * / MIP - 200Q (SST) *

LSOH Sheathed Shipboard Braided Instrumentation Cables

150/250 V
90 °C

Type Approval Certificates : ABS - BV - LR



CONSTRUCTION		PRODUCT TECHNICAL	
1. Conductor	: Annealed Stranded Circular Copper	Application :	This cable is specially designed for use in measuring, control, instrumentation and communication system on ship where flame retardant and low smoke halogen free properties are required.
2. Insulation	: XLPE	Applicable Standard	: IEC 60092-376
3. Individual Screen	: Aluminium Mylar Foil With Drain Wire	Rated Voltage	: 150 / 250 V
4. Collective Screen	: Aluminium Mylar Foil With Drain Wire	Temperature Range	: - 15 °C to 90 °C
5. Inner Covering	: Lapped With Suitable Tape(s)		
6. Wire Braid	: Annealed Copper Wires (C) Galvanized Steel Wires (Q)		
7. Outer Sheath	: Flame Retardant LSOH, SHF 1		
CORE IDENTIFICATION		PRODUCT PERFORMANCE	
Each Pair	: Black and white cores with pair number printed on the cores	Flame Retardant Test	: IEC 60332 - 1 : IEC 60332-3-22 Cat. A
Sheath Colour	: Black : Grey - On request	Halogen Content Test	: IEC 60754 - 1
		Corrosivity Test	: IEC 60754 - 2
		Smoke Density Test	: IEC 61034 - 1 & 2

No. of Core & Nominal Area of Conductor	Approx. O.D.	Approx. Weight		No. of Core & Nominal Area of Conductor	Approx. O.D.	Approx. Weight		No. of Core & Nominal Area of Conductor	Approx. O.D.	Approx. Weight	
		MIP-200C	MIP-200Q			MIP-200C	MIP-200Q			MIP-200C	MIP-200Q
No. X mm ²	mm	Kg/Km	Kg/Km	No. X mm ²	mm	Kg/Km	Kg/Km	No. X mm ²	mm	Kg/Km	Kg/Km
2 X 2 X 0.5	11.7	181	175	8 X 2 X 0.75	19.3	543	527	19 X 2 X 1.0	29.5	1243	1218
3 X 2 X 0.5	12.2	205	199	10 X 2 X 0.75	21.0	632	615	20 X 2 X 1.0	30.3	1309	1283
4 X 2 X 0.5	13.2	240	233	12 X 2 X 0.75	22.8	736	718	24 X 2 X 1.0	32.9	1523	1495
6 X 2 X 0.5	15.6	323	315	14 X 2 X 0.75	24.2	822	802	27 X 2 X 1.0	34.5	1673	1643
7 X 2 X 0.5	15.6	344	335	16 X 2 X 0.75	25.5	908	886	30 X 2 X 1.0	36.2	1836	1805
8 X 2 X 0.5	16.6	379	370	19 X 2 X 0.75	27.5	1045	1021	2 X 2 X 1.5	15.4	296	288
10 X 2 X 0.5	18.6	499	484	20 X 2 X 0.75	28.1	1086	1062	3 X 2 X 1.5	16.9	415	401
12 X 2 X 0.5	20.1	572	555	24 X 2 X 0.75	30.5	1258	1232	4 X 2 X 1.5	18.4	491	476
14 X 2 X 0.5	21.5	645	628	27 X 2 X 0.75	32.0	1377	1349	6 X 2 X 1.5	21.8	667	649
16 X 2 X 0.5	22.6	708	690	30 X 2 X 0.75	33.8	1533	1504	7 X 2 X 1.5	21.8	717	699
19 X 2 X 0.5	24.2	800	780	2 X 2 X 1.0	13.8	247	239	8 X 2 X 1.5	22.8	793	775
20 X 2 X 0.5	24.9	847	826	3 X 2 X 1.0	14.6	297	289	10 X 2 X 1.5	25.0	949	928
24 X 2 X 0.5	27.0	982	959	4 X 2 X 1.0	15.9	353	344	12 X 2 X 1.5	27.0	1092	1070
27 X 2 X 0.5	28.3	1069	1045	6 X 2 X 1.0	19.3	529	514	14 X 2 X 1.5	28.9	1247	1222
30 X 2 X 0.5	29.7	1171	1146	7 X 2 X 1.0	19.3	567	551	16 X 2 X 1.5	30.5	1380	1354
2 X 2 X 0.75	12.8	209	202	8 X 2 X 1.0	20.6	636	620	19 X 2 X 1.5	32.9	1593	1565
3 X 2 X 0.75	13.7	257	250	10 X 2 X 1.0	22.6	756	738	20 X 2 X 1.5	33.8	1682	1653
4 X 2 X 0.75	14.8	301	294	12 X 2 X 1.0	24.4	869	849	24 X 2 X 1.5	36.6	1959	1928
6 X 2 X 0.75	18.0	456	441	14 X 2 X 1.0	25.9	975	954	27 X 2 X 1.5	38.5	2149	2116
7 X 2 X 0.75	18.0	484	470	16 X 2 X 1.0	27.5	1092	1069	30 X 2 X 1.5	40.6	2383	2349

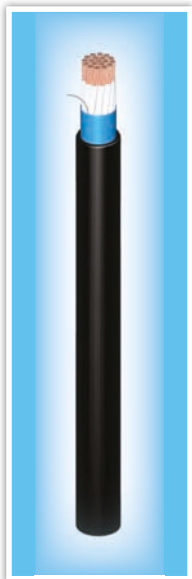
Note : * SST = Cables with lapped inner covering and a single sheath design.

MIM - 200

LSOH Sheathed Shipboard Instrumentation Cables

150/250 V
90 °C

Type Approval Certificates : ABS - BV - LR



CONSTRUCTION	
1. Conductor	: Annealed Stranded Circular Copper
2. Insulation	: XLPE
3. Collective	: Aluminium Mylar Foil With Drain Screen Wire
4. Outer Sheath	: Flame Retardant LSOH, SHF 1

CORE IDENTIFICATION	
Each Core	: White insulated cores with black number printed on the cores
Sheath Colour	: Black
	: Grey - On request

PRODUCT TECHNICAL	
Application :	
This cable is intended for lighting and control system for fixed in most areas and on open deck in ships where flame retardant and low smoke halogen free properties are required.	
Applicable Standard	: IEC 60092-376
Rated Voltage	: 150 / 250 V
Temperature Range	: - 15 °C to 90 °C

PRODUCT PERFORMANCE	
Flame Retardant Test	: IEC 60332 - 1
	: IEC 60332-3-22 Cat. A
Halogen Content Test	: IEC 60754 - 1
Corrosivity Test	: IEC 60754 - 2
Smoke Density Test	: IEC 61034 - 1 & 2

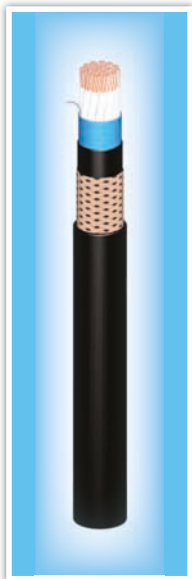
No. of Core & Nominal Area of Conductor	MIM-200		No. of Core & Nominal Area of Conductor	MIM-200		No. of Core & Nominal Area of Conductor	MIM-200	
	Approx. O.D.	Approx. Weight		Approx. O.D.	Approx. Weight		Approx. O.D.	Approx. Weight
No. X mm ²	mm	Kg/Km	No. X mm ²	mm	Kg/Km	No. X mm ²	mm	Kg/Km
2 X 0.5	6.2	60	7 X 0.75	9.1	139	19 X 1.0	15.0	383
3 X 0.5	6.5	65	8 X 0.75	10.3	163	20 X 1.0	16.0	413
4 X 0.5	7.0	76	10 X 0.75	11.5	194	24 X 1.0	17.6	481
5 X 0.5	7.5	88	12 X 0.75	12.0	221	27 X 1.0	18.0	524
6 X 0.5	8.2	102	16 X 0.75	13.3	281	37 X 1.0	20.2	687
7 X 0.5	8.2	109	19 X 0.75	14.0	318	2 X 1.5	8.2	105
8 X 0.5	9.1	123	20 X 0.75	14.7	335	3 X 1.5	8.7	124
10 X 0.5	10.3	152	24 X 0.75	16.4	400	4 X 1.5	9.6	155
12 X 0.5	10.7	172	27 X 0.75	16.7	434	5 X 1.5	10.4	181
16 X 0.5	11.7	210	37 X 0.75	18.8	567	6 X 1.5	11.3	208
19 X 0.5	12.3	237	2 X 1.0	7.2	83	7 X 1.5	11.3	227
20 X 0.5	12.9	249	3 X 1.0	7.6	95	8 X 1.5	12.7	265
24 X 0.5	14.4	298	4 X 1.0	8.2	113	10 X 1.5	14.3	318
27 X 0.5	14.7	323	5 X 1.0	8.9	131	12 X 1.5	14.9	365
37 X 0.5	16.5	420	6 X 1.0	9.9	158	16 X 1.5	16.6	467
2 X 0.75	6.8	72	7 X 1.0	9.9	171	19 X 1.5	17.5	534
3 X 0.75	7.2	81	8 X 1.0	11.0	194	20 X 1.5	18.7	580
4 X 0.75	7.7	96	10 X 1.0	12.3	231	24 X 1.5	20.6	678
5 X 0.75	8.3	111	12 X 1.0	13.0	272	27 X 1.5	21.0	741
6 X 0.75	9.1	129	16 X 1.0	14.3	337	37 X 1.5	23.7	975

MIM - 200C / MIM - 200Q

LSOH Sheathed Shipboard Braided Instrumentation Cables

150/250 V
90 °C

Type Approval Certificates : ABS - BV - LR



CONSTRUCTION	
1. Conductor	: Annealed Stranded Circular Copper
2. Insulation	: XLPE
3. Collective	: Aluminium Mylar Foil With Drain Screen Wire
4. Inner Sheath	: Extruded LSOH
5. Wire Braid	: Annealed Copper Wires (C) Galvanized Steel Wires (Q)
6. Outer Sheath	: Flame Retardant LSOH, SHF 1

CORE IDENTIFICATION	
Each Core	: White insulated cores with black number printed on the cores
Sheath Colour	: Black : Grey - On request

PRODUCT TECHNICAL	
Application :	This cable is intended for lighting and control system for fixed in most areas and on open deck in ships where flame retardant and low smoke halogen free properties are required.
Applicable Standard	: IEC 60092-376
Rated Voltage	: 150 / 250 V
Temperature Range	: - 15 °C to 90 °C

PRODUCT PERFORMANCE	
Flame Retardant Test	: IEC 60332 - 1 : IEC 60332-3-22 Cat. A
Halogen Content Test	: IEC 60754 - 1
Corrosivity Test	: IEC 60754 - 2
Smoke Density Test	: IEC 61034 - 1 & 2

No. of Core & Nominal Area of Conductor	Approx. O.D.	Approx. Weight		No. of Core & Nominal Area of Conductor	Approx. O.D.	Approx. Weight		No. of Core & Nominal Area of Conductor	Approx. O.D.	Approx. Weight	
		MIM-200C	MIM-200Q			MIM-200C	MIM-200Q			MIM-200C	MIM-200Q
No. X mm ²	mm	Kg/Km	Kg/Km	No. X mm ²	mm	Kg/Km	Kg/Km	No. X mm ²	mm	Kg/Km	Kg/Km
2 X 0.5	8.9	138	134	7 X 0.75	11.9	251	245	19 X 1.0	18.6	627	611
3 X 0.5	9.2	147	143	8 X 0.75	13.3	297	290	20 X 1.0	19.6	674	657
4 X 0.5	9.7	163	158	10 X 0.75	14.9	378	366	24 X 1.0	21.2	765	747
5 X 0.5	10.2	180	174	12 X 0.75	15.3	407	395	27 X 1.0	21.6	812	794
6 X 0.5	10.9	201	195	16 X 0.75	16.7	491	478	37 X 1.0	24.0	1023	1003
7 X 0.5	11.0	211	206	19 X 0.75	17.6	548	533	2 X 1.5	10.8	201	196
8 X 0.5	11.9	236	228	20 X 0.75	18.3	577	562	3 X 1.5	11.3	225	219
10 X 0.5	13.1	277	270	24 X 0.75	20.0	667	650	4 X 1.5	12.2	266	259
12 X 0.5	13.6	305	298	27 X 0.75	20.3	704	687	5 X 1.5	13.2	308	301
16 X 0.5	14.7	358	350	37 X 0.75	22.6	882	863	6 X 1.5	14.2	347	340
19 X 0.5	15.7	432	419	2 X 1.0	9.9	172	167	7 X 1.5	14.3	370	363
20 X 0.5	16.3	453	440	3 X 1.0	10.3	188	183	8 X 1.5	16.1	467	454
24 X 0.5	17.8	524	509	4 X 1.0	10.9	212	207	10 X 1.5	17.9	553	538
27 X 0.5	18.1	554	538	5 X 1.0	11.6	238	232	12 X 1.5	18.4	603	587
37 X 0.5	20.1	687	670	6 X 1.0	12.7	280	273	16 X 1.5	20.2	735	718
2 X 0.75	9.5	157	152	7 X 1.0	12.7	293	286	19 X 1.5	21.1	816	798
3 X 0.75	9.9	169	164	8 X 1.0	14.0	335	327	20 X 1.5	22.4	883	864
4 X 0.75	10.4	190	184	10 X 1.0	15.7	427	414	24 X 1.5	24.3	1011	990
5 X 0.75	11.0	212	206	12 X 1.0	16.3	472	458	27 X 1.5	24.7	1082	1060
6 X 0.75	11.9	241	235	16 X 1.0	17.9	569	555	37 X 1.5	27.6	1366	1343

MIM - 200C (SST) * / MIM - 200Q (SST) *

LSOH Sheathed Shipboard Braided Instrumentation Cables

150/250 V
90 °C

Type Approval Certificates : ABS - BV - LR



CONSTRUCTION	
1. Conductor	: Annealed Stranded Circular Copper
2. Insulation	: XLPE
3. Collective	: Aluminium Mylar Foil With Drain Screen Wire
4. Inner Covering	: Lapped With Suitable Tape(s)
5. Wire Braid	: Annealed Copper Wires (C) Galvanized Steel Wires (Q)
6. Outer Sheath	: Flame Retardant LSOH, SHF 1

CORE IDENTIFICATION	
Each Core	: White insulated cores with black number printed on the cores
Sheath Colour	: Black : Grey - On request

PRODUCT TECHNICAL	
Application :	This cable is intended for lighting and control system for fixed in most areas and on open deck in ships where flame retardant and low smoke halogen free properties are required.
Applicable Standard	: IEC 60092-376
Rated Voltage	: 150 / 250 V
Temperature Range	: - 15 °C to 90 °C

PRODUCT PERFORMANCE	
Flame Retardant Test	: IEC 60332 - 1 : IEC 60332-3-22 Cat. A
Halogen Content Test	: IEC 60754 - 1
Corrosivity Test	: IEC 60754 - 2
Smoke Density Test	: IEC 61034 - 1 & 2

No. of Core & Nominal Area of Conductor	Approx. O.D.	Approx. Weight		No. of Core & Nominal Area of Conductor	Approx. O.D.	Approx. Weight		No. of Core & Nominal Area of Conductor	Approx. O.D.	Approx. Weight	
		MIM-200C	MIM-200Q			MIM-200C	MIM-200Q			MIM-200C	MIM-200Q
No. X mm ²	mm	Kg/Km	Kg/Km	No. X mm ²	mm	Kg/Km	Kg/Km	No. X mm ²	mm	Kg/Km	Kg/Km
2 X 0.5	7.5	96	93	7 X 0.75	10.6	197	192	19 X 1.0	16.9	519	506
3 X 0.5	7.8	103	100	8 X 0.75	11.6	222	216	20 X 1.0	17.7	545	532
4 X 0.5	8.3	117	113	10 X 0.75	13.0	267	260	24 X 1.0	19.5	638	623
5 X 0.5	8.8	131	127	12 X 0.75	13.4	294	287	27 X 1.0	19.9	687	670
6 X 0.5	9.5	149	145	16 X 0.75	14.6	356	349	37 X 1.0	22.1	868	850
7 X 0.5	9.5	156	152	19 X 0.75	15.9	445	433	2 X 1.5	9.6	155	151
8 X 0.5	10.6	181	176	20 X 0.75	16.6	467	455	3 X 1.5	10.1	177	172
10 X 0.5	11.6	210	205	24 X 0.75	18.3	547	533	4 X 1.5	10.8	207	201
12 X 0.5	11.9	229	223	27 X 0.75	18.6	583	569	5 X 1.5	11.6	237	232
16 X 0.5	13.2	283	277	37 X 0.75	20.5	724	708	6 X 1.5	12.8	279	272
19 X 0.5	13.8	314	307	2 X 1.0	8.5	125	121	7 X 1.5	12.8	298	292
20 X 0.5	14.4	332	324	3 X 1.0	8.9	139	135	8 X 1.5	14.0	337	330
24 X 0.5	15.7	379	371	4 X 1.0	9.7	166	161	10 X 1.5	16.2	447	435
27 X 0.5	16.0	406	397	5 X 1.0	10.4	189	184	12 X 1.5	16.7	496	483
37 X 0.5	18.2	557	543	6 X 1.0	11.2	214	209	16 X 1.5	18.5	616	601
2 X 0.75	8.1	112	108	7 X 1.0	11.2	227	222	19 X 1.5	19.4	690	675
3 X 0.75	8.5	122	119	8 X 1.0	12.3	256	250	20 X 1.5	20.3	727	711
4 X 0.75	9.0	140	136	10 X 1.0	13.8	309	302	24 X 1.5	22.4	854	836
5 X 0.75	9.8	165	160	12 X 1.0	14.2	341	333	27 X 1.5	22.8	919	901
6 X 0.75	10.6	187	182	16 X 1.0	16.2	465	453	37 X 1.5	25.5	1178	1157

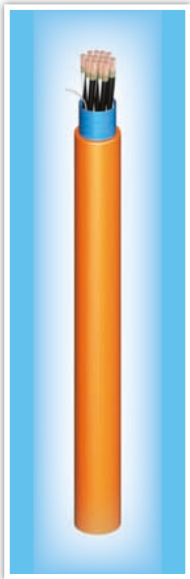
Note : * SST = Cables with lapped inner covering and a single sheath design.

FRIC - 200 - M

Fire Resistant Shipboard Instrumentation Cables

150/250 V
90 °C

Type Approval Certificates : ABS - BV - LR



CONSTRUCTION	
1. Conductor	: Annealed Stranded Circular Copper
2. Fire Barrier	: Mica Tape
3. Insulation	: XLPE
4. Collective Screen	: Aluminium Mylar Foil With Drain Wire
5. Outer Sheath	: Flame Retardant LSOH, SHF 1

CORE IDENTIFICATION	
Each Pair	: Black and white cores with pair number printed on the cores
1 Triple	: Black, White & Red
Sheath Colour	: Orange

PRODUCT TECHNICAL	
Application :	
This cable is specially designed for use in measuring, control, instrumentation and communication system on ship where flame retardant, low smoke halogen free and fire resistant properties are required.	
Applicable Standard	: IEC 60092-376
Rated Voltage	: 150 / 250 V
Temperature Range	: - 15 °C to 90 °C

PRODUCT PERFORMANCE	
Flame Retardant Test	: IEC 60332 - 1
	: IEC 60332-3-22 Cat. A
Halogen Content Test	: IEC 60754 - 1
Corrosivity Test	: IEC 60754 - 2
Smoke Density Test	: IEC 61034 - 1 & 2
Fire Alone Test	: IEC 60331 - 21
Fire With Shock Test	: IEC 60331 - 1 (LR)

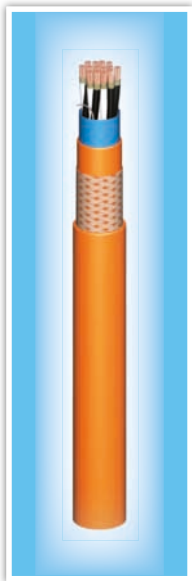
No. of Core & Nominal Area of Conductor	FRIC-200-M		No. of Core & Nominal Area of Conductor	FRIC-200-M		No. of Core & Nominal Area of Conductor	FRIC-200-M	
	Approx. O.D.	Approx. Weight		Approx. O.D.	Approx. Weight		Approx. O.D.	Approx. Weight
No. X mm ²	mm	Kg/Km	No. X mm ²	mm	Kg/Km	No. X mm ²	mm	Kg/Km
1 X 2 X 0.75	8.8	96	24 X 2 X 0.75	37.9	1188	20 X 2 X 1.0	36.7	1166
1 X 3 X 0.75	9.3	114	1 X 2 X 1.0	9.2	104	1 X 2 X 1.5	10.0	126
1 X 4 X 0.75	10.1	134	1 X 3 X 1.0	9.7	127	1 X 3 X 1.5	10.6	156
3 X 2 X 0.75	15.4	217	1 X 4 X 1.0	10.6	154	1 X 4 X 1.5	11.7	198
4 X 2 X 0.75	17.5	266	3 X 2 X 1.0	16.2	242	3 X 2 X 1.5	17.6	308
6 X 2 X 0.75	20.7	367	4 X 2 X 1.0	18.4	303	4 X 2 X 1.5	20.2	384
7 X 2 X 0.75	20.7	399	6 X 2 X 1.0	21.8	421	6 X 2 X 1.5	23.9	535
8 X 2 X 0.75	23.1	464	7 X 2 X 1.0	21.8	460	7 X 2 X 1.5	23.9	588
10 X 2 X 0.75	25.1	547	8 X 2 X 1.0	23.4	524	8 X 2 X 1.5	24.8	662
12 X 2 X 0.75	27.5	655	10 X 2 X 1.0	26.8	655	10 X 2 X 1.5	27.8	818
14 X 2 X 0.75	29.4	740	12 X 2 X 1.0	29.0	756	12 X 2 X 1.5	30.5	954
16 X 2 X 0.75	31.2	822	14 X 2 X 1.0	31.1	855	14 X 2 X 1.5	32.9	1102
19 X 2 X 0.75	34.0	964	16 X 2 X 1.0	33.2	972	16 X 2 X 1.5	35.0	1242
20 X 2 X 0.75	34.7	1005	19 X 2 X 1.0	35.8	1118	19 X 2 X 1.5	38.0	1455

FRIC - 200C - M / FRIC - 200Q - M

Fire Resistant Shipboard Braided Instrumentation Cables

150/250 V
90 °C

Type Approval Certificates : ABS - BV - LR



CONSTRUCTION	
1. Conductor	: Annealed Stranded Circular Copper
2. Fire Barrier	: Mica Tape
3. Insulation	: XLPE
4. Collective	: Aluminium Mylar Foil With Drain Screen Wire
5. Inner Sheath	: Extruded LSOH
6. Wire Braid	: Annealed Copper Wires (C) Galvanized Steel Wires (Q)
7. Outer Sheath	: Flame Retardant LSOH, SHF 1

CORE IDENTIFICATION	
Each Pair	: Black and white cores with pair number printed on the cores
1 Triple	: Black , White & Red
Sheath Colour	: Orange

PRODUCT TECHNICAL	
Application :	This cable is specially designed for use in measuring, control, instrumentation and communication system on ship where flame retardant, low smoke halogen free and fire resistant properties are required.
Applicable Standard	: IEC 60092-376
Rated Voltage	: 150 / 250 V
Temperature Range	: - 15 °C to 90 °C

PRODUCT PERFORMANCE	
Flame Retardant Test	: IEC 60332 - 1 : IEC 60332-3-22 Cat. A
Halogen Content Test	: IEC 60754 - 1
Corrosivity Test	: IEC 60754 - 2
Smoke Density Test	: IEC 61034 - 1 & 2
Fire Alone Test	: IEC 60331 - 21
Fire With Shock Test	: IEC 60331 - 1 (LR)

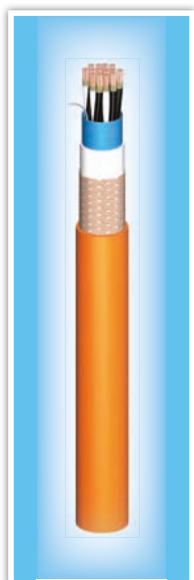
No. of Core & Nominal Area of Conductor	Approx. O.D.	Approx. Weight		No. of Core & Nominal Area of Conductor	Approx. O.D.	Approx. Weight		No. of Core & Nominal Area of Conductor	Approx. O.D.	Approx. Weight	
		FRIC-200C-M	FRIC-210Q-M			FRIC-200C-M	FRIC-210Q-M			FRIC-200C-M	FRIC-210Q-M
No. X mm ²	mm	Kg/Km	Kg/Km	No. X mm ²	mm	Kg/Km	Kg/Km	No. X mm ²	mm	Kg/Km	Kg/Km
1 X 2 X 0.75	11.5	204	198	1 X 2 X 1.0	11.9	215	209	1 X 2 X 1.5	12.6	243	237
1 X 3 X 0.75	12.0	227	221	1 X 3 X 1.0	12.4	244	238	1 X 3 X 1.5	13.4	289	282
1 X 4 X 0.75	12.8	257	250	1 X 4 X 1.0	13.3	282	274	1 X 4 X 1.5	14.5	343	335
3 X 2 X 0.75	18.7	455	439	3 X 2 X 1.0	19.7	503	486	3 X 2 X 1.5	21.0	586	568
4 X 2 X 0.75	20.9	548	525	4 X 2 X 1.0	22.0	603	585	4 X 2 X 1.5	23.8	717	696
6 X 2 X 0.75	24.5	721	699	6 X 2 X 1.0	25.6	789	767	6 X 2 X 1.5	27.7	951	926
7 X 2 X 0.75	24.5	753	731	7 X 2 X 1.0	25.6	828	806	7 X 2 X 1.5	27.7	1003	979
8 X 2 X 0.75	26.7	835	811	8 X 2 X 1.0	27.4	930	906	8 X 2 X 1.5	28.8	1095	1070
10 X 2 X 0.75	29.1	984	959	10 X 2 X 1.0	30.7	1107	1080	10 X 2 X 1.5	31.9	1312	1283
12 X 2 X 0.75	31.5	1128	1100	12 X 2 X 1.0	33.0	1259	1229	12 X 2 X 1.5	34.7	1500	1469
14 X 2 X 0.75	33.6	1269	1238	14 X 2 X 1.0	35.3	1409	1377	14 X 2 X 1.5	37.3	1706	1673
16 X 2 X 0.75	35.4	1379	1347	16 X 2 X 1.0	37.4	1559	1525	16 X 2 X 1.5	39.3	1879	1843
19 X 2 X 0.75	38.2	1563	1529	19 X 2 X 1.0	40.0	1748	1712	19 X 2 X 1.5	42.3	2142	2103
20 X 2 X 0.75	38.9	1617	1582	20 X 2 X 1.0	41.3	1857	1821				

FRIC - 200C - M (SST) * / FRIC - 200Q - M (SST) *

Fire Resistant Shipboard Braided Instrumentation Cables

150/250 V
90 °C

Type Approval Certificates : ABS - BV - LR



CONSTRUCTION

1. Conductor : Annealed Stranded Circular Copper
2. Fire Barrier : Mica Tape
3. Insulation : XLPE
4. Collective : Aluminium Mylar Foil With Drain Screen Wire
5. Inner Covering : Lapped With Suitable Tape(s)
6. Wire Braid : Annealed Copper Wires (C) Galvanized Steel Wires (Q)
7. Outer Sheath : Flame Retardant LSOH, SHF 1

CORE IDENTIFICATION

- Each Pair : Black and white cores with pair number printed on the cores
- 1 Triple : Black , White & Red
- Sheath Colour : Orange

PRODUCT TECHNICAL

- Application :
This cable is specially designed for use in measuring, control, instrumentation and communication system on ship where flame retardant, low smoke halogen free and fire resistant properties are required.
- Applicable Standard : IEC 60092-376
Rated Voltage : 150 / 250 V
Temperature Range : - 15 °C to 90 °C

PRODUCT PERFORMANCE

- Flame Retardant Test : IEC 60332 - 1
: IEC 60332-3-22 Cat. A
- Halogen Content Test : IEC 60754 - 1
- Corrosivity Test : IEC 60754 - 2
- Smoke Density Test : IEC 61034 - 1 & 2
- Fire Alone Test : IEC 60331 - 21
- Fire With Shock Test : IEC 60331 - 1 (LR)

No. of Core & Nominal Area of Conductor	Approx. O.D.	Approx. Weight		No. of Core & Nominal Area of Conductor	Approx. O.D.	Approx. Weight		No. of Core & Nominal Area of Conductor	Approx. O.D.	Approx. Weight	
		FRIC-200C-M	FRIC-200Q-M			FRIC-200C-M	FRIC-200Q-M			FRIC-200C-M	FRIC-200Q-M
No. X mm ²	mm	Kg/Km	Kg/Km	No. X mm ²	mm	Kg/Km	Kg/Km	No. X mm ²	mm	Kg/Km	Kg/Km
1 X 2 X 0.75	10.1	148	143	1 X 2 X 1.0	10.7	163	158	1 X 2 X 1.5	11.4	187	181
1 X 3 X 0.75	10.8	174	169	1 X 3 X 1.0	11.2	190	185	1 X 3 X 1.5	12.0	221	215
1 X 4 X 0.75	11.6	200	194	1 X 4 X 1.0	12.1	223	217	1 X 4 X 1.5	12.9	263	256
3 X 2 X 0.75	16.9	317	308	3 X 2 X 1.0	17.4	342	333	3 X 2 X 1.5	19.4	464	448
4 X 2 X 0.75	19.1	379	368	4 X 2 X 1.0	20.4	478	462	4 X 2 X 1.5	22.0	565	546
6 X 2 X 0.75	22.6	557	538	6 X 2 X 1.0	23.9	636	616	6 X 2 X 1.5	25.8	768	746
7 X 2 X 0.75	22.6	589	570	7 X 2 X 1.0	23.9	675	655	7 X 2 X 1.5	25.8	821	799
8 X 2 X 0.75	25.0	680	659	8 X 2 X 1.0	25.3	736	715	8 X 2 X 1.5	26.9	904	881
10 X 2 X 0.75	27.2	792	769	10 X 2 X 1.0	28.6	888	864	10 X 2 X 1.5	29.8	1080	1055
12 X 2 X 0.75	29.4	907	882	12 X 2 X 1.0	31.1	1038	1012	12 X 2 X 1.5	32.6	1247	1219
14 X 2 X 0.75	31.5	1024	997	14 X 2 X 1.0	33.2	1153	1125	14 X 2 X 1.5	34.8	1403	1373
16 X 2 X 0.75	33.3	1130	1101	16 X 2 X 1.0	35.1	1276	1245	16 X 2 X 1.5	37.0	1568	1536
19 X 2 X 0.75	36.1	1294	1263	19 X 2 X 1.0	37.9	1465	1432	19 X 2 X 1.5	40.0	1806	1771
20 X 2 X 0.75	36.8	1342	1310	20 X 2 X 1.0	38.8	1520	1486				

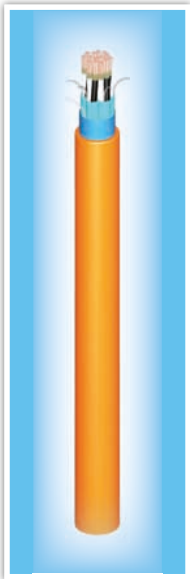
Note : * SST = Cables with lapped inner covering and a single sheath design.

FRIP - 200 - M

Fire Resistant Shipboard Instrumentation Cables

150/250 V
90 °C

Type Approval Certificates : ABS - BV - LR



CONSTRUCTION	
1. Conductor	: Annealed Stranded Circular Copper
2. Fire Barrier	: Mica Tape
3. Insulation	: XLPE
4. Individual Screen	: Aluminium Mylar Foil With Drain Wire
5. Collective Screen	: Aluminium Mylar Foil With Drain Wire
6. Outer Sheath	: Flame Retardant LSOH, SHF 1

CORE IDENTIFICATION	
Each Pair	: Black and white cores with pair number printed on the cores
Sheath Colour	: Orange

PRODUCT TECHNICAL	
Application :	
This cable is specially designed for use in measuring, control, instrumentation and communication system on ship where flame retardant, low smoke halogen free and fire resistant properties are required.	
Applicable Standard	: IEC 60092-376
Rated Voltage	: 150 / 250 V
Temperature Range	: - 15 °C to 90 °C

PRODUCT PERFORMANCE	
Flame Retardant Test	: IEC 60332 - 1 : IEC 60332-3-22 Cat. A
Halogen Content Test	: IEC 60754 - 1
Corrosivity Test	: IEC 60754 - 2
Smoke Density Test	: IEC 61034 - 1 & 2
Fire Alone Test	: IEC 60331 - 21
Fire With Shock Test	: IEC 60331 - 1 (LR)

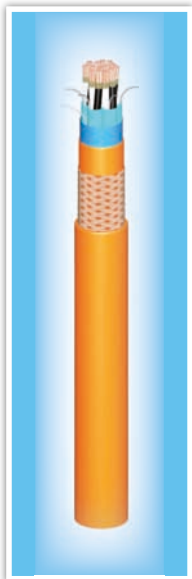
No. of Core & Nominal Area of Conductor	FRIP-200-M		No. of Core & Nominal Area of Conductor	FRIP-200-M		No. of Core & Nominal Area of Conductor	FRIP-200-M	
	Approx. O.D.	Approx. Weight		Approx. O.D.	Approx. Weight		Approx. O.D.	Approx. Weight
No. X mm ²	mm	Kg/Km	No. X mm ²	mm	Kg/Km	No. X mm ²	mm	Kg/Km
2 X 2 X 0.75	15.4	200	24 X 2 X 0.75	39.1	1444	20 X 2 X 1.0	37.9	1437
3 X 2 X 0.75	16.5	254	2 X 2 X 1.0	16.2	227	2 X 2 X 1.5	17.9	283
4 X 2 X 0.75	18.0	307	3 X 2 X 1.0	17.3	287	3 X 2 X 1.5	19.1	359
6 X 2 X 0.75	21.6	431	4 X 2 X 1.0	19.2	368	4 X 2 X 1.5	21.1	452
7 X 2 X 0.75	21.6	472	6 X 2 X 1.0	23.1	515	6 X 2 X 1.5	25.3	635
8 X 2 X 0.75	24.1	547	7 X 2 X 1.0	23.1	566	7 X 2 X 1.5	25.3	701
10 X 2 X 0.75	25.9	661	8 X 2 X 1.0	24.7	632	8 X 2 X 1.5	26.6	778
12 X 2 X 0.75	28.2	773	10 X 2 X 1.0	27.5	782	10 X 2 X 1.5	29.6	962
14 X 2 X 0.75	30.2	877	12 X 2 X 1.0	29.8	907	12 X 2 X 1.5	32.3	1138
16 X 2 X 0.75	32.2	997	14 X 2 X 1.0	32.1	1049	14 X 2 X 1.5	34.5	1294
19 X 2 X 0.75	34.8	1149	16 X 2 X 1.0	34.1	1173	16 X 2 X 1.5	36.9	1481
20 X 2 X 0.75	35.8	1220	19 X 2 X 1.0	37.0	1377			

FRIP - 200C - M / FRIP - 200Q - M

Fire Resistant Shipboard Braided Instrumentation Cables

150/250 V
90 °C

Type Approval Certificates : ABS - BV - LR



CONSTRUCTION	
1. Conductor	: Annealed Stranded Circular Copper
2. Fire Barrier	: Mica Tape
3. Insulation	: XLPE
4. Individual Screen	: Aluminium Mylar Foil With Drain Wire
5. Collective Screen	: Aluminium Mylar Foil With Drain Wire
6. Inner Sheath	: Extruded LSOH
7. Wire Braid	: Annealed Copper Wires (C) Galvanized Steel Wires (Q)
8. Outer Sheath	: Flame Retardant LSOH, SHF 1

CORE IDENTIFICATION	
Each Pair	: Black and white cores with pair number printed on the cores
Sheath Colour	: Orange

PRODUCT TECHNICAL	
Application :	This cable is specially designed for use in measuring, control, instrumentation and communication system on ship where flame retardant, low smoke halogen free and fire resistant properties are required.
Applicable Standard	: IEC 60092-376
Rated Voltage	: 150 / 250 V
Temperature Range	: - 15 °C to 90 °C

PRODUCT PERFORMANCE	
Flame Retardant Test	: IEC 60332 - 1 : IEC 60332-3-22 Cat. A
Halogen Content Test	: IEC 60754 - 1
Corrosivity Test	: IEC 60754 - 2
Smoke Density Test	: IEC 61034 - 1 & 2
Fire Alone Test	: IEC 60331 - 21
Fire With Shock Test	: IEC 60331 - 1 (LR)

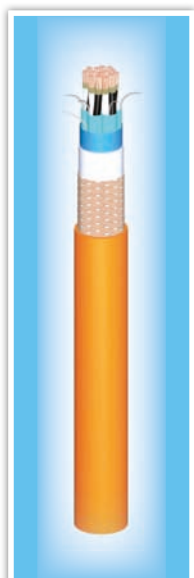
No. of Core & Nominal Area of Conductor	Approx. O.D.	Approx. Weight		No. of Core & Nominal Area of Conductor	Approx. O.D.	Approx. Weight		No. of Core & Nominal Area of Conductor	Approx. O.D.	Approx. Weight	
		FRIP-200C-M	FRIP-200Q-M			FRIP-200C-M	FRIP-200Q-M			FRIP-200C-M	FRIP-200Q-M
No. X mm ²	mm	Kg/Km	Kg/Km	No. X mm ²	mm	Kg/Km	Kg/Km	No. X mm ²	mm	Kg/Km	Kg/Km
2 X 2 X 0.75	18.7	441	425	2 X 2 X 1.0	19.7	493	476	2 X 2 X 1.5	21.3	565	546
3 X 2 X 0.75	20.0	522	504	3 X 2 X 1.0	20.8	569	551	3 X 2 X 1.5	22.7	673	653
4 X 2 X 0.75	21.6	602	584	4 X 2 X 1.0	22.6	669	650	4 X 2 X 1.5	24.5	782	760
6 X 2 X 0.75	25.4	797	775	6 X 2 X 1.0	26.7	888	864	6 X 2 X 1.5	29.1	1058	1033
7 X 2 X 0.75	25.4	839	816	7 X 2 X 1.0	26.7	939	915	7 X 2 X 1.5	29.1	1123	1098
8 X 2 X 0.75	28.1	969	944	8 X 2 X 1.0	28.7	1063	1037	8 X 2 X 1.5	30.8	1255	1228
10 X 2 X 0.75	29.9	1110	1083	10 X 2 X 1.0	31.6	1271	1243	10 X 2 X 1.5	34.1	1523	1492
12 X 2 X 0.75	32.4	1282	1253	12 X 2 X 1.0	34.0	1442	1411	12 X 2 X 1.5	36.7	1731	1699
14 X 2 X 0.75	34.6	1438	1407	14 X 2 X 1.0	36.3	1620	1587	14 X 2 X 1.5	38.9	1925	1890
16 X 2 X 0.75	36.4	1569	1536	16 X 2 X 1.0	38.3	1775	1741	16 X 2 X 1.5	41.4	2174	2136
19 X 2 X 0.75	39.4	1819	1783	19 X 2 X 1.0	41.4	2060	2022				
20 X 2 X 0.75	40.2	1883	1846	20 X 2 X 1.0	42.5	2160	2121				

FRIP - 200C - M (SST) * / FRIP - 200Q - M (SST) *

Fire Resistant Shipboard Braided Instrumentation Cables

150/250 V
90 °C

Type Approval Certificates : ABS - BV - LR



CONSTRUCTION	
1. Conductor	: Annealed Stranded Circular Copper
2. Fire Barrier	: Mica Tape
3. Insulation	: XLPE
4. Individual Screen	: Aluminium Mylar Foil With Drain Wire
5. Collective Screen	: Aluminium Mylar Foil With Drain Wire
6. Inner Covering	: Lapped With Suitable Tape(s)
7. Wire Braid	: Annealed Copper Wires (C) Galvanized Steel Wires (Q)
8. Outer Sheath	: Flame Retardant LSOH, SHF 1

CORE IDENTIFICATION	
Each Pair	: Black and white cores with pair number printed on the cores
Sheath Colour	: Orange

PRODUCT TECHNICAL	
Application :	
This cable is specially designed for use in measuring, control, instrumentation and communication system on ship where flame retardant, low smoke halogen free and fire resistant properties are required.	
Applicable Standard	: IEC 60092-376
Rated Voltage	: 150 / 250 V
Temperature Range	: - 15 °C to 90 °C

PRODUCT PERFORMANCE	
Flame Retardant Test	: IEC 60332 - 1 : IEC 60332-3-22 Cat. A
Halogen Content Test	: IEC 60754 - 1
Corrosivity Test	: IEC 60754 - 2
Smoke Density Test	: IEC 61034 - 1 & 2
Fire Alone Test	: IEC 60331 - 21
Fire With Shock Test	: IEC 60331 - 1 (LR)

No. of Core & Nominal Area of Conductor	Approx. O.D.	Approx. Weight		No. of Core & Nominal Area of Conductor	Approx. O.D.	Approx. Weight		No. of Core & Nominal Area of Conductor	Approx. O.D.	Approx. Weight	
		FRIP-200C-M	FRIP-200Q-M			FRIP-200C-M	FRIP-200Q-M			FRIP-200C-M	FRIP-200Q-M
No. X mm ²	mm	Kg/Km	Kg/Km	No. X mm ²	mm	Kg/Km	Kg/Km	No. X mm ²	mm	Kg/Km	Kg/Km
2 X 2 X 0.75	16.9	299	290	2 X 2 X 1.0	17.7	333	324	2 X 2 X 1.5	19.7	444	428
3 X 2 X 0.75	18.0	361	351	3 X 2 X 1.0	18.8	402	391	3 X 2 X 1.5	20.9	530	512
4 X 2 X 0.75	20.0	480	464	4 X 2 X 1.0	21.0	540	523	4 X 2 X 1.5	22.9	642	623
6 X 2 X 0.75	23.7	645	625	6 X 2 X 1.0	25.0	728	707	6 X 2 X 1.5	27.2	868	845
7 X 2 X 0.75	23.7	687	667	7 X 2 X 1.0	25.0	782	760	7 X 2 X 1.5	27.2	933	910
8 X 2 X 0.75	26.2	784	762	8 X 2 X 1.0	26.8	873	851	8 X 2 X 1.5	28.7	1040	1015
10 X 2 X 0.75	28.0	917	893	10 X 2 X 1.0	29.5	1042	1017	10 X 2 X 1.5	31.6	1239	1212
12 X 2 X 0.75	30.3	1047	1022	12 X 2 X 1.0	31.9	1203	1175	12 X 2 X 1.5	34.4	1452	1422
14 X 2 X 0.75	32.3	1176	1147	14 X 2 X 1.0	34.2	1364	1334	14 X 2 X 1.5	36.6	1628	1596
16 X 2 X 0.75	34.3	1312	1282	16 X 2 X 1.0	36.2	1504	1472	16 X 2 X 1.5	38.9	1823	1789
19 X 2 X 0.75	36.9	1486	1454	19 X 2 X 1.0	39.1	1731	1697				

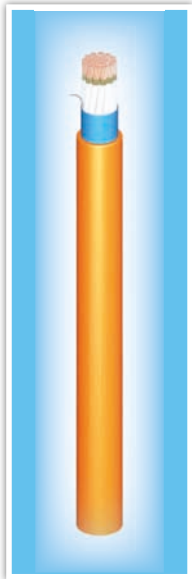
Note : * SST = Cables with lapped inner covering and a single sheath design.

FRIM - 200 - M

Fire Resistant Shipboard Instrumentation Cables

150/250 V
90 °C

Type Approval Certificates : ABS - BV - LR



CONSTRUCTION	
1. Conductor	: Annealed Stranded Circular Copper
2. Fire Barrier	: Mica Tape
3. Insulation	: XLPE
4. Collective Screen	: Aluminium Mylar Foil With Drain Wire
5. Outer Sheath	: Flame Retardant LSOH, SHF 1

CORE IDENTIFICATION	
Each Core	: White insulated cores with black number printed on the cores
Sheath Colour	: Orange

PRODUCT TECHNICAL	
Application :	
This cable is intended for lighting and control system for fixed in most areas and on open deck in ships where flame retardant, low smoke halogen free and fire resistant properties are required.	
Applicable Standard	: IEC 60092-376
Rated Voltage	: 150 / 250 V
Temperature Range	: - 15 °C to 90 °C

PRODUCT PERFORMANCE	
Flame Retardant Test	: IEC 60332 - 1 : IEC 60332-3-22 Cat. A
Halogen Content Test	: IEC 60754 - 1
Corrosivity Test	: IEC 60754 - 2
Smoke Density Test	: IEC 61034 - 1 & 2
Fire Alone Test	: IEC 60331 - 21
Fire With Shock Test	: IEC 60331 - 1 (LR)

No. of Core & Nominal Area of Conductor	FRIM-200-M		No. of Core & Nominal Area of Conductor	FRIM-200-M		No. of Core & Nominal Area of Conductor	FRIM-200-M	
	Approx. O.D.	Approx. Weight		Approx. O.D.	Approx. Weight		Approx. O.D.	Approx. Weight
No. X mm ²	mm	Kg/Km	No. X mm ²	mm	Kg/Km	No. X mm ²	mm	Kg/Km
2 X 0.75	8.8	96	2 X 1.0	9.0	104	2 X 1.5	10.0	126
3 X 0.75	9.3	114	3 X 1.0	9.5	127	3 X 1.5	10.8	162
4 X 0.75	10.1	133	4 X 1.0	10.3	153	4 X 1.5	11.7	196
5 X 0.75	11.2	167	5 X 1.0	11.5	186	5 X 1.5	12.8	231
6 X 0.75	12.2	189	6 X 1.0	12.5	217	6 X 1.5	14.1	274
7 X 0.75	12.2	205	7 X 1.0	12.5	236	7 X 1.5	14.1	300
8 X 0.75	13.7	233	8 X 1.0	14.2	276	8 X 1.5	15.8	341
10 X 0.75	15.6	288	10 X 1.0	16.0	331	10 X 1.5	18.0	422
12 X 0.75	16.1	324	12 X 1.0	16.6	379	12 X 1.5	18.7	485
16 X 0.75	18.1	418	16 X 1.0	18.6	484	16 X 1.5	20.9	621
19 X 0.75	19.1	475	19 X 1.0	19.6	551	19 X 1.5	22.1	710
20 X 0.75	20.1	501	20 X 1.0	20.7	582	20 X 1.5	23.4	756
24 X 0.75	22.5	598	24 X 1.0	23.1	694	24 X 1.5	26.1	901
27 X 0.75	23.0	650	27 X 1.0	23.6	757	27 X 1.5	26.6	986
37 X 0.75	25.9	851	37 X 1.0	26.6	994	37 X 1.5	30.0	1298

FRIM - 200C - M / FRIM - 200Q - M

Fire Resistant Shipboard Braided Instrumentation Cables

150/250 V
90 °C

Type Approval Certificates : ABS - BV - LR



CONSTRUCTION

1. Conductor : Annealed Stranded Circular Copper
2. Fire Barrier : Mica Tape
3. Insulation : XLPE
4. Collective : Aluminium Mylar Foil With Drain Screen Wire
5. Inner Sheath : Extruded LSOH
6. Wire Braid : Annealed Copper Wires (C) Galvanized Steel Wires (Q)
7. Outer Sheath : Flame Retardant LSOH, SHF 1

CORE IDENTIFICATION

- Each Core : White insulated cores with black number printed on the cores
- Sheath Colour : Orange

PRODUCT TECHNICAL

Application :

This cable is intended for lighting and control system for fixed in most areas and on open deck in ships where flame retardant, low smoke halogen free and fire resistant properties are required.

- Applicable Standard : IEC 60092-376
 Rated Voltage : 150 / 250 V
 Temperature Range : - 15 °C to 90 °C

PRODUCT PERFORMANCE

- Flame Retardant Test : IEC 60332 - 1
 : IEC 60332-3-22 Cat. A
 Halogen Content Test : IEC 60754 - 1
 Corrosivity Test : IEC 60754 - 2
 Smoke Density Test : IEC 61034 - 1 & 2
 Fire Alone Test : IEC 60331 - 21
 Fire With Shock Test : IEC 60331 - 1 (LR)

No. of Core & Nominal Area of Conductor	Approx. O.D.	Approx. Weight		No. of Core & Nominal Area of Conductor	Approx. O.D.	Approx. Weight		No. of Core & Nominal Area of Conductor	Approx. O.D.	Approx. Weight	
		FRIM-200C-M	FRIM-200Q-M			FRIM-200C-M	FRIM-200Q-M			FRIM-200C-M	FRIM-200Q-M
No. X mm ²	mm	Kg/Km	Kg/Km	No. X mm ²	mm	Kg/Km	Kg/Km	No. X mm ²	mm	Kg/Km	Kg/Km
2 X 0.75	11.5	202	196	2 X 1.0	11.7	214	208	2 X 1.5	12.6	241	234
3 X 0.75	12.0	225	219	3 X 1.0	12.2	243	236	3 X 1.5	13.4	285	278
4 X 0.75	12.8	254	247	4 X 1.0	13.0	278	271	4 X 1.5	14.5	338	330
5 X 0.75	14.1	306	299	5 X 1.0	14.6	340	332	5 X 1.5	16.2	435	421
6 X 0.75	15.2	345	337	6 X 1.0	15.5	380	371	6 X 1.5	17.5	497	482
7 X 0.75	15.2	361	353	7 X 1.0	15.5	399	390	7 X 1.5	17.5	523	508
8 X 0.75	17.1	450	436	8 X 1.0	17.6	504	489	8 X 1.5	19.4	600	583
10 X 0.75	19.0	532	516	10 X 1.0	19.6	598	581	10 X 1.5	21.6	715	696
12 X 0.75	19.7	588	571	12 X 1.0	20.1	648	631	12 X 1.5	22.2	780	761
16 X 0.75	21.7	709	690	16 X 1.0	22.2	790	770	16 X 1.5	24.7	969	947
19 X 0.75	22.7	782	762	19 X 1.0	23.2	870	850	19 X 1.5	25.9	1073	1051
20 X 0.75	23.7	824	803	20 X 1.0	24.3	920	898	20 X 1.5	27.1	1134	1110
24 X 0.75	26.3	966	943	24 X 1.0	26.9	1085	1061	24 X 1.5	30.0	1332	1306
27 X 0.75	26.8	1027	1004	27 X 1.0	27.4	1155	1130	27 X 1.5	30.5	1426	1399
37 X 0.75	29.7	1273	1247	37 X 1.0	30.6	1452	1425	37 X 1.5	33.9	1793	1763

FRIM - 200C - M (SST) * / FRIM - 200Q - M (SST)*

Fire Resistant Shipboard Braided Instrumentation Cables

150/250 V
90 °C

Type Approval Certificates : ABS - BV - LR



CONSTRUCTION	
1. Conductor	: Annealed Stranded Circular Copper
2. Fire Barrier	: Mica Tape
3. Insulation	: XLPE
4. Collective Screen	: Aluminium Mylar Foil With Drain Wire
5. Inner Covering	: Lapped With Suitable Tape(s)
6. Wire Braid	: Annealed Copper Wires (C) Galvanized Steel Wires (Q)
7. Outer Sheath	: Flame Retardant LSOH, SHF 1

CORE IDENTIFICATION	
Each Core	: White insulated cores with black number printed on the cores
Sheath Colour	: Orange

PRODUCT TECHNICAL	
Application :	
This cable is intended for lighting and control system for fixed in most areas and on open deck in ships where flame retardant, low smoke halogen free and fire resistant properties are required.	
Applicable Standard	: IEC 60092-376
Rated Voltage	: 150 / 250 V
Temperature Range	: - 15 °C to 90 °C

PRODUCT PERFORMANCE	
Flame Retardant Test	: IEC 60332 - 1 : IEC 60332-3-22 Cat. A
Halogen Content Test	: IEC 60754 - 1
Corrosivity Test	: IEC 60754 - 2
Smoke Density Test	: IEC 61034 - 1 & 2
Fire Alone Test	: IEC 60331 - 21
Fire With Shock Test	: IEC 60331 - 1 (LR)

No. of Core & Nominal Area of Conductor	Approx. O.D.	Approx. Weight		No. of Core & Nominal Area of Conductor	Approx. O.D.	Approx. Weight		No. of Core & Nominal Area of Conductor	Approx. O.D.	Approx. Weight	
		FRIM-200C-M	FRIM-200Q-M			FRIM-200C-M	FRIM-200Q-M			FRIM-200C-M	FRIM-200Q-M
No. X mm ²	mm	Kg/Km	Kg/Km	No. X mm ²	mm	Kg/Km	Kg/Km	No. X mm ²	mm	Kg/Km	Kg/Km
2 X 0.75	10.1	155	150	2 X 1.0	10.5	166	160	2 X 1.5	11.4	196	190
3 X 0.75	10.8	176	170	3 X 1.0	11.0	192	187	3 X 1.5	12.0	231	225
4 X 0.75	11.6	208	202	4 X 1.0	11.8	231	225	4 X 1.5	12.9	270	263
5 X 0.75	12.6	245	238	5 X 1.0	12.9	268	262	5 X 1.5	14.3	361	350
6 X 0.75	13.5	270	263	6 X 1.0	14.0	303	295	6 X 1.5	15.4	407	394
7 X 0.75	13.5	286	279	7 X 1.0	14.0	322	315	7 X 1.5	15.4	433	420
8 X 0.75	15.2	372	359	8 X 1.0	15.5	415	402	8 X 1.5	17.7	501	487
10 X 0.75	16.9	434	421	10 X 1.0	17.9	486	471	10 X 1.5	19.9	592	576
12 X 0.75	18.0	476	462	12 X 1.0	18.4	545	530	12 X 1.5	20.5	654	638
16 X 0.75	19.8	588	572	16 X 1.0	20.3	662	645	16 X 1.5	22.6	817	798
19 X 0.75	21.0	653	636	19 X 1.0	21.5	740	722	19 X 1.5	24.0	915	895
20 X 0.75	22.0	702	684	20 X 1.0	22.6	795	776	20 X 1.5	25.2	982	961
24 X 0.75	24.2	806	786	24 X 1.0	25.0	916	894	24 X 1.5	27.9	1153	1129
27 X 0.75	24.9	867	846	27 X 1.0	25.5	997	975	27 X 1.5	28.4	1242	1218
37 X 0.75	27.6	1094	1070	37 X 1.0	28.5	1251	1225	37 X 1.5	31.8	1589	1561

Note : * SST = Cables with lapped inner covering and a single sheath design.

Notes



WILSON CABLES PRIVATE LIMITED

142, Gul Circle, Jurong Industrial Estate, Singapore 629602

Tel : + 65 68617888 Fax : + 65 68617871

E-mail : exports@wilson-cables.com.sg /
sales.sg@wilson-cables.com.sg

Website : <http://www.wilson-cables.com>

Distributed By :

