

H07RN-F / BS EN 50525-2-21 Flexible Rubber Cable

multicomp PRO

**RoHS
Compliant**



Application

These cables are designed to provide high flexibility and have the capacity to withstand weather, oil/grease, mechanical and thermal stresses. Applications include handling equipment, mobile power supplies, worksites, stage and audio visual equipment, port areas and dams. Also for use in drainage and water treatment, cold environments and severe industrial environments.

Characteristics

Voltage Rating (Uo/U)	: 450/750V
Temperature Rating	: Fixed: -30°C to +60°C +85°C. For fixed protected installations. Flexed: -15°C to +60°C
Minimum Bending Radius	: Fixed: 4 × overall diameter Flexed: 6 x overall diameter
Core Identification	: 2 core: Blue, Brown 3 core: Green/Yellow, Blue, Brown 4 core: Green/Yellow, Brown, Black, Grey 5 core: Green/Yellow, Blue, Brown, Black, Grey
Sheath Colour	: Black

Cable Standards

BS EN 50525-2-21 (BS 7919), BS EN 60811-2-1, BS EN/IEC 60332-1-2

Construction

Conductor

Class 5 Flexible copper conductor to BS EN 60228 (previously BS 6360)

Insulation

EPR (Ethylene Propylene Rubber) Type EI4 according to BS EN 50363

Sheath

PCP (Polychloroprene) Type EM2 according to BS EN 50363

Dimensions

Part Number	No. of Cores	Nominal Cross Sectional Area mm ²	Nominal Thickness of Insulation mm	Nominal Overall Dimensions mm	Nominal Weight kg/km	A2 GLANDS Brass	A2PL GLAND Plastic
PP002144	2	1	0.8	8.1	94	20S	20S
PP002145	2	1.5	0.8	9	120	20S	20S
PP002146	2	2.5	0.9	10.7	173	20S	20S
PP002147	3	1	0.8	8.74	117	20S	20S
PP002148	3	1.5	0.8	9.68	147	20S	20S

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Part Number	No. of Cores	Nominal Cross Sectional Area mm ²	Nominal Thickness of Insulation mm	Nominal Overall Dimensions mm	Nominal Weight kg/km	A2 GLANDS Brass	A2PL GLAND Plastic
PP002149	3	2.5	0.9	11.48	123	20	20
PP002150	3	4	1	13.2	297	25	25
PP002151	4	1.5	0.8	10.63	180	20S	20S
PP002152	4	2.5	0.9	12.6	260	20	20
PP002153	4	4	1	14.6	336	25	25
PP002154	5	6	1	18.2	567	32	32

Conductors

Class 5 Flexible Copper Conductors for Single Core and Multi-Core Cables

Nominal Cross Sectional Area mm ²	Maximum Diameter of Wires in Conductor mm	Maximum Resistance of Conductor at 20°C
		Plain Wires Ω/km
1	0.21	19.5
1.5	0.26	13.3
2.5	0.26	7.98
4	0.31	4.95
6	0.31	3.3

The above table is in accordance with BS EN 60228 (previously BS 6360)

Electrical Characteristics (1mm² to 2.5mm²)

Current Carrying Capacity and Mass Supportable

Nominal Cross Sectional Area mm ²	Current Carrying Capacity		Maximum Mass Supportable by Twin Flexible Cable (See Regulations 522.7.2 and 559.6.1.5 of the 17th Edition of IEE Wiring Regulations) kg
	Single-Phase AC Amps	Three-Phase AC Amps	
1	10	10	5
1.5	16	16	
2.5	25	20	

Voltage Drop

Nominal Cross Sectional Area mm ²	DC or Single-Phase AC mV/A/m	Three-Phase AC mV/A/m
1	46	40
1.5	32	27
2.5	19	16

Conductor operating temperature: 60°C

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Electrical Characteristics (4mm² and above)

Current Carrying Capacity

Nominal Cross Sectional Area mm ²	60°C Conductor Operating Temperature		85°C Conductor Operating Temperature**	
	Single-Phase AC or DC	Three-Phase AC	Single-Phase AC or DC	Three-Phase AC
	1 Two Core Cable, With or Without Protective Conductor Amps	1 Three Core, Four Core or Five Core Cable Amps	1 Two Core Cable, With or Without Protective Conductor Amps	1 Three Core, Four Core or Five Core Cable Amps
4	30	26	41	36
6	39	34	53	47

Ambient temperature: 30°C

Conductor operating temperature: 60°C / 85°C

The above table for 60°C conductor operating temperature is in accordance with Table 4F1A of the 17th Edition of IEE Wiring Regulations

** 85°C Table is in accordance with Table 4H2A of the 16th Edition of IEE Wiring Regulations.

The current ratings tabulated are for cables in free air but may also be used for cables resting on a surface. If the cable is to be wound on a drum on load the ratings should be reduced in accordance with NOTE 2 below and for cables which may be covered, NOTE 3 below.

2. Flexible cables wound on reeling drums

The current ratings of cables used on reeling drums are to be reduced by the following factors:

- | | |
|---------------------|-------------------------------------|
| a) Radial type drum | b) Ventilated cylindrical type drum |
| ventilated: 85% | 1 layer of cable: 85% |
| unventilated: 75% | 2 layers of cable: 65% |
| | 3 layers of cable: 45% |
| | 4 layers of cable: 35% |

A radial type drum is one where spiral layers of cable are accommodated between closely spaced flanges; if fitted with solid flanges the ratings given above should be reduced and the drum is described as non-ventilated. If the flanges have suitable apertures the drum is described as ventilated.

A ventilated cylindrical cable drum is one where layers of cable are accommodated between widely spaced flanges and the drum and end flanges have suitable ventilating apertures.

3. Where cable may be covered or coiled up whilst on load, or the air movement over the cable restricted, the current rating should be reduced.

It is not possible to specify the amount of reduction but the table of rating factors for reeling drums can be used as a guide.

Voltage Drop

Nominal Cross Sectional Area mm ²	Two Core Cable, DC mV/A/m	Two Core Cable, Single-Phase AC mV/A/m	1 Three Core, Four Core Or Five Core Cable, Three-Phase AC mV/A/m
4	12	12	10
6	7.8	7.8	6.7

Conductor operating temperature: 60°C

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De-Rating Factors

Ambient Temperature	35°C	40°C	45°C	50°C	55°C
De-Rating Factor	0.91	0.82	0.71	0.58	0.41

Part Number Table

Description	Cable Length	Part Number
Unscreened H07RN-F BS EN 50525-2-21 Flexible Rubber Cable, 2 Core, 1mm ² , Black	100m or per metre	PP002144
Unscreened H07RN-F BS EN 50525-2-21 Flexible Rubber Cable, 2 Core, 1.5mm ² , Black		PP002145
Unscreened H07RN-F BS EN 50525-2-21 Flexible Rubber Cable, 2 Core, 2.5mm ² , Black		PP002146
Unscreened H07RN-F BS EN 50525-2-21 Flexible Rubber Cable, 3 Core, 1mm ² , Black		PP002147
Unscreened H07RN-F BS EN 50525-2-21 Flexible Rubber Cable, 3 Core, 1.5mm ² , Black		PP002148
Unscreened H07RN-F BS EN 50525-2-21 Flexible Rubber Cable, 3 Core, 2.5mm ² , Black		PP002149
Unscreened H07RN-F BS EN 50525-2-21 Flexible Rubber Cable, 3 Core, 4mm ² , Black		PP002150
Unscreened H07RN-F BS EN 50525-2-21 Flexible Rubber Cable, 4 Core, 1.5mm ² , Black	50m or per metre	PP002151
Unscreened H07RN-F BS EN 50525-2-21 Flexible Rubber Cable, 4 Core, 2.5mm ² , Black		PP002152
Unscreened H07RN-F BS EN 50525-2-21 Flexible Rubber Cable, 4 Core, 4mm ² , Black		PP002153
Unscreened H07RN-F BS EN 50525-2-21 Flexible Rubber Cable, 5 Core, 6mm ² , Black		PP002154

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