

# HO7RN - 7 Cable

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

## Technical Data:



1	Conductor	Class 2 plain stranded copper conductor to BS EN 60228:2005 (previously BS6360)
2	Insulation	XLPE (Cross-Linked Polyethylene)
3	Bedding	PVC (Polyvinyl Chloride)
4	Armouring	Single core: AWA (Aluminium Wire Armour) Multi core: SWA (Steel Wire Armour)
5	Sheath	PVC (Polyvinyl Chloride)

**Voltage Rating**            450/750V

**Conductor Operating Temperature**    -30°C to +60°C

### Core Identification

2 Core: Blue, Brown

3 Core: Green/Yellow, Blue, Brown

4 Core: Green/Yellow, Brown, Black, Grey

5 Core: Green/Yellow, Brown, Black, Grey, Blue

6 Core and Above: Black with White numerals, Green/Yellow



### Sizes and Dimensions - 2 Cores

No Cores	Conductor Cross Section Area (mm <sup>2</sup> )	Cable Cross Section Area (mm <sup>2</sup> )	Overall Diameter (mm)	Gland Size	Cleat Size	Nominal Weight (kg/km)	Resistance of Copper Conductor (Ω/Km) at 20°C
2	1.0	55.42	8.4	20s	4	90	19.5
2	1.5	65.04	9.1	20s	4	109	13.3
2	2.5	91.61	10.8	20	5	158	7.98
2	4.0	120.76	12.4	20	5	217	4.95
2	6.0	149.57	13.8	25	6	282	3.30
2	10.0	295.59	19.4	32	8	539	1.91

### Sizes and Dimensions - 3 Cores

No Cores	Conductor Cross Section Area (mm <sup>2</sup> )	Cable Cross Section Area (mm <sup>2</sup> )	Overall Diameter (mm)	Gland Size	Cleat Size	Nominal Weight (kg/km)	Resistance of Copper Conductor (Ω/Km) at 20°C
3	1.0	65.04	9.1	20s	4	110	19.5
3	1.5	75.43	9.8	20s	4	134	13.3
3	2.5	105.68	11.6	20	5	196	7.98
3	4.0	138.93	13.3	20	6	271	4.95
3	6.0	172.03	14.8	25	6	355	3.30
3	10.0	336.53	20.7	32	9	674	1.91
3	16.0	426.38	23.3	32	10	913	1.21
3	25.0	602.63	27.7	40	11	1324	0.78
3	35.0	749.90	30.9	40	12	1754	0.554
3	50.0	1006.60	35.8	50	14	2409	0.386

### Sizes and Dimensions - 4 Cores

No Cores	Conductor Cross Section Area (mm <sup>2</sup> )	Cable Cross Section Area (mm <sup>2</sup> )	Overall Diameter (mm)	Gland Size	Cleat Size	Nominal Weight (kg/km)	Resistance of Copper Conductor (Ω/Km) at 20°C
4	1.0	78.54	10	20s	4	136	19.5
4	1.5	91.61	10.8	20s	5	166	13.3
4	2.5	126.68	12.7	20	5	241	7.98
4	4.0	167.42	14.6	25	6	336	4.95
4	6.0	211.24	16.4	25	7	449	3.30
4	10.0	401.15	22.6	32	9	833	1.91
4	16.0	506.71	25.4	40	10	1138	1.21
4	25.0	740.23	30.7	40	14	1714	0.78
4	35.0	918.63	34.2	50	14	2204	0.554
4	50.0	1231.63	39.6	63	16	3029	0.386
4	70.0	1583.37	44.9	63	18	4121	0.272
4	95.0	1995.04	50.4	75	20	5361	0.206
4	120.0	3421.20	66	75	?	6453	

The information contained within this datasheet is for guidance only. Please note the actual cable dimensions may vary due to manufacturing tolerance.



### Sizes and Dimensions - 5 Cores

No Cores	Conductor Cross Section Area (mm <sup>2</sup> )	Cable Cross Section Area (mm <sup>2</sup> )	Overall Diameter (mm)	Gland Size	Cleat Size	Nominal Weight (kg/km)	Resistance of Copper Conductor (Ω/Km) at 20°C
5	1.5	109.36	11.8	20	5	206	13.3
5	2.5	153.94	14	25	6	297	7.98
5	4.0	208.67	16.3	25	7	422	4.95
5	6.0	254.47	18	32	8	567	3.30
5	10.0	483.05	24.8	32	10	1010	1.91
5	16.0	615.75	28	40	12	1400	1.21
5	25.0	888.68	33.6	50	14	2096	0.78
5	35.0	1225.42	39.5	63	16	2700	0.554

### Sizes and Dimensions - 7 Cores

No Cores	Conductor Cross Section Area (mm <sup>2</sup> )	Cable Cross Section Area (mm <sup>2</sup> )	Overall Diameter (mm)	Gland Size	Cleat Size	Nominal Weight (kg/km)	Resistance of Copper Conductor (Ω/Km) at 20°C
7	1.5	169.72	14.7	25	7	315	13.3
7	2.5	229.66	17.1	25	6	445	7.98

### Sizes and Dimensions - 12 Cores

No Cores	Conductor Cross Section Area (mm <sup>2</sup> )	Cable Cross Section Area (mm <sup>2</sup> )	Overall Diameter (mm)	Gland Size	Cleat Size	Nominal Weight (kg/km)	Resistance of Copper Conductor (Ω/Km) at 20°C
12	1.5	280.55	18.9	32	8	493	13.3
12	2.5	380.13	22.0	32	9	702	7.98

### Sizes and Dimensions - 19 Cores

No Cores	Conductor Cross Section Area (mm <sup>2</sup> )	Cable Cross Section Area (mm <sup>2</sup> )	Overall Diameter (mm)	Gland Size	Cleat Size	Nominal Weight (kg/km)	Resistance of Copper Conductor (Ω/Km) at 20°C
19	1.5	383.6	22.1	32	9	710	13.3



## Table 4F1A

CURRENT CARRY CAPACITY (amperes)

Ambient temperature: 30°C  
Conductor operating temperature: 60°C

Conductor cross sectional area (mm <sup>2</sup> )	Single - Phase a.c. or d.c.	Three - Phase a.c.	Single - Phase a.c. or d.c.
	1 two core cable, with or without Protective conductor	1 three core, four core or five core cable	2 Single-core cables, touching
	(A)	(A)	(A)
4	30	26	-
6	39	34	-
10	51	47	-
16	73	63	-
25	97	83	-
35	-	102	140
50	-	124	175
70	-	158	216
95	-	192	258
120	-	222	302
150	-	255	347
185	-	291	394
240	-	343	471
300	-	394	541
400	-	-	644
500	-	-	738
630	-	-	861

### Notes:

1. 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 layer of cable: 65%
	3 layer of cable: 45%
	4 layer 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 over 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.



## TABLE 4F1B

VOLTAGE DROP (per ampere per metre):

Conductor operating temperature: 60°C

Conductor cross sectional area (mm <sup>2</sup> )	Two Core cable, d.c. (mV/A/m)	Two-core cable, single-phase a.c.			1 three-core, four core or five core cable, three phase a.c.			2 Single-core cables, touching			
		r	x	z	r	x	z	d.c.	single phase a.c.*		
4	12	12			10			-	-		
6	7.8	7.8			6.7			-	-		
10	4.6	4.6			4.0			-	-		
16	2.9	2.9			2.5			-	-		
		r	x	z	r	x	z		r	x	z
25	1.80	1.80	0.175	1.85	1.55	0.150	1.55	-	-	-	-
35	-	-	-	-	1.10	0.150	1.15	1.31	1.31	0.21	1.32
50	-	-	-	-	0.83	0.145	0.84	0.91	0.91	0.21	0.93
70	-	-	-	-	0.57	0.140	0.58	0.64	0.64	0.20	0.67
95	-	-	-	-	0.42	0.135	0.44	0.49	0.49	0.195	0.53
120	-	-	-	-	0.33	0.135	0.36	0.38	0.38	0.190	0.43
150	-	-	-	-	0.27	0.130	0.30	0.31	0.31	0.190	0.36
185	-	-	-	-	0.22	0.130	0.26	0.25	0.25	0.190	0.32
240	-	-	-	-	0.170	0.130	0.21	0.190	0.190	0.185	0.27
300	-	-	-	-	0.135	0.125	0.185	0.150	0.155	0.180	0.24
400	-	-	-	-	-	-	-	0.115	0.120	0.175	0.21
500	-	-	-	-	-	-	-	0.090	0.099	0.170	0.20
600	-	-	-	-	-	-	-	0.068	0.079	0.170	0.185