

## Rubber-insulated Cables

Ethylene Propylene Rubber Insulated, Chlorinated Polyethylene Rubber Sheathed Flexible Cables (HO7RN-F)

Description: CU/EPR/CPE  
Model Code: NEOPRENE CABLE



Application :	This flexible cable can be installed either as a fixed or mobile cable under adverse conditions such as in oily, acidic or alkaline environment
Voltage rating :	450/750V(VDE); 600/1000V(IEC60092*)
Construction :	Class 5 plain annealed flexible copper, ethylene propylene rubber insulated, chlorinated polyethylene rubber sheathed cable
Insulation colour :	Single-Core: Black 2-Core: Brown & Blue 3-Core: Brown, Blue & Green/Yellow 4-Core: Brown, Black, Grey & Green/Yellow 5-Core: Brown, Black, Grey, Blue & Green/Yellow
Sheath colour :	Black
Specification:	BS EN 50525-2-21(BS6007,BS7919), BS6883, IEC60092-353
Operating Temperature:	-25°C to 90°C
Water Resistance:	AD8 permanent submersion to 450m depth

\*Protected and fixed wiring installation

### 1-CORE

Conductor	Insulation	Sheath	Outer Diam.	Max. Diam.	Approx. Weight
Nominal Area	Thickness	Thickness			
(mm <sup>2</sup> )	(mm)	(mm)	(mm)	(mm)	(kg/km)
1.5	0.8	1.4	5.9	6.8	50
2.5	0.9	1.4	6.5	7.5	65
4	1.0	1.5	7.5	8.4	90
6	1.0	1.6	8.3	9.2	115
10	1.2	1.8	10.0	10.9	180
16	1.2	1.9	11.3	12.2	255
25	1.4	2.0	13.2	14.2	365
35	1.4	2.2	14.6	15.5	485
50	1.6	2.4	17.3	18.3	680
70	1.6	2.6	19.5	20.4	900
95	1.8	2.8	21.9	22.8	1160
120	1.8	3.0	23.9	25.0	1460
150	2.0	3.2	26.4	27.4	1800
185	2.2	3.4	29.0	30.0	2200
240	2.4	3.5	32.0	33.0	2830
300	2.6	3.6	34.7	35.7	3480
400	2.8	3.8	39.0	40.4	4500
500	3.0	4.0	44.7	47.3	5800

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2-CORE					
Conductor	Insulation	Sheath	Outer Diam.	Max. Diam.	Approx. Weight
Nominal Area	Thickness	Thickness			
(mm <sup>2</sup> )	(mm)	(mm)	(mm)	(mm)	(kg/km)
1	0.8	1.3	8.5	9.5	90
1.5	0.8	1.5	9.5	10.5	115
2.5	0.9	1.7	11.3	12.3	165
4	1.0	1.8	13.5	14.5	230
6	1.0	2.0	14.5	15.5	300
10	1.2	3.1	20.1	21.4	545
16	1.2	3.3	22.5	23.9	765
25	1.4	3.6	26.7	28.4	1090

3-CORE (2-Core+E)					
Conductor	Insulation	Sheath	Outer Diam.	Max. Diam.	Approx. Weight
Nominal Area	Thickness	Thickness			
(mm <sup>2</sup> )	(mm)	(mm)	(mm)	(mm)	(kg/km)
1	0.8	1.4	9.2	10.2	110
1.5	0.8	1.6	9.6	10.7	140
2.5	0.9	1.8	11.4	12.5	200
4	1.0	1.9	13.8	14.8	280
6	1.0	2.1	15.3	16.5	375
10	1.2	3.3	21.1	22.5	675
16	1.2	3.5	23.2	24.6	950
25	1.4	3.8	27.7	29.2	1360
35	1.4	4.1	30.5	32.3	1795
50	1.6	4.5	35.9	38.5	2480
70	1.6	4.8	40.6	44.0	3285
95	1.8	5.3	45.9	49.3	4210
120	1.8	5.6	49.7	53.2	5280
150	2.0	6.0	55.2	59.2	6420

4-CORE (3-Core+E)					
Conductor	Insulation	Sheath	Outer Diam.	Max. Diam.	Approx. Weight
Nominal Area	Thickness	Thickness			
(mm <sup>2</sup> )	(mm)	(mm)	(mm)	(mm)	(kg/km)
1	0.8	1.5	10.2	11.2	135
1.5	0.8	1.7	11.3	12.3	170
2.5	0.9	1.9	13.4	14.4	250
4	1.0	2.0	15.1	16.2	350
6	1.0	2.3	17.1	18.2	470
10	1.2	3.4	22.5	23.8	830
16	1.2	3.6	25.5	26.8	1170
25	1.4	4.1	31.0	32.4	1700
35	1.4	4.4	33.9	35.5	2300
50	1.6	4.8	39.7	41.8	3160
70	1.6	5.2	45.0	47.0	4200
95	1.8	5.9	51.4	54.1	5450
120	1.8	6.0	55.2	58.4	6770

5-CORE (4-Core+E)					
Conductor	Insulation	Sheath	Outer Diam.	Max. Diam.	Approx. Weight
Nominal Area	Thickness	Thickness			
(mm <sup>2</sup> )	(mm)	(mm)	(mm)	(mm)	(kg/km)
1	0.8	1.6	11.2	12.2	160
1.5	0.8	1.8	12.4	13.4	205
2.5	0.9	2.0	14.55	15.6	300
4	1.0	2.2	16.8	17.9	420
6	1.0	2.5	19.0	20.1	580
10	1.2	3.6	25.0	26.3	1120
16	1.2	3.9	28.5	26.9	1440
25	1.4	4.4	34.2	36.3	2120

# Current Rating and Voltage Drop

Rubber Insulated Cables



Flexible Cables with Rubber Insulation & Chlorinated Polyethylene Rubber Sheath.

**Table 20 : Current-Carrying Capacities (Amp)**  
[CU/EPR/CPE Cables]

Conductor Operating Temperature : 90°C  
Ambient Temperature 40°C

BS EN 50525-2-21  
AS/NZS 3808

Cross-sectional area (mm <sup>2</sup> )	Single-phase a.c. or d.c.					Three-phase a.c.						
	Unenclosed Spaced	2 single core		Voltage drop (mV/A/m)	Unenclosed space (A)	3 single core			Voltage drop			
		Spaced from surface	Touching			Enclosed in conduit in air	Spaced from surface	Touching	Enclosed in conduit in air	Flat touching or enclosure	In trefoil	
	(A)	(A)	(A)	(A)	(A)	(A)	(A)	(A)	(mV/A/m)	(mV/A/m)	(mV/A/m)	(mV/A/m)
1	21	26	16	17	49.8	20	22	16	41	43.1	45.7	
1.5	26	34	20	21	34.0	25	29	20	55	29.4	31.2	
2.5	35	46	27	28	20.3	33	38	27	73	17.6	18.7	
4	46	58	36	37	12.6	45	49	36	94	10.9	11.6	
6	59	81	46	46	8.42	57	69	46	118	7.29	7.74	
10	83	106	64	64	4.87	80	91	64	144	4.22	4.48	
16	110	141	85	82	5.41	106	121	85	183	4.68	2.84	
25	147	174	114	109	2.01	142	151	114	214	1.74	1.84	
35	183	218	141	132	1.43	177	191	141	256	1.24	1.31	
50	231	274	178	167	1.011	223	241	178	291	0.875	0.921	
70	292	328	225	204	0.728	283	290	225	334	0.630	0.658	
95	351	389	271	248	0.568	341	346	271	391	0.492	0.509	
120	418	448	322	286	0.461	406	400	322	458	0.399	0.408	
150	483	512	373	336	0.390	470	459	372	533	0.338	0.340	
185	555	613	428	377	0.341	540	553	427	630	0.295	0.293	
240	668	705	515	452	0.290	651	637	514	719	0.251	0.242	
300	772	843	594	-	0.262	752	764	591	-	0.227	0.213	
400	933	975	715	-	0.236	909	884	709	-	0.204	0.187	
500	1090	1135	830	-	0.222	1062	1030	821	-	0.192	0.172	
630	1288	-	969	-	0.209	1256	-	956	-	0.181	0.159	

# Current Rating and Voltage Drop

Rubber Insulated Cables



Flexible Cables with Rubber Insulation & Chlorinated Polyethylene Rubber Sheath.

**Table 21 : Current-Carrying Capacities (Amp)**  
[CU/EPR/CPE Cables]

Conductor Operating Temperature : 90°C  
Ambient Temperature 40°C

BS EN 50525-2-21  
AS/NZS 3808

Cross-sectional area (mm <sup>2</sup> )	Unenclosed spaced	Single-phase a.c. or d.c.			Three-phase a.c.			
		2-core cables		Voltage drop (V <sub>s</sub> )	3-core or 4-core cables			Voltage drop (V <sub>s</sub> )
		Unenclosed touching	Enclosure in air		Unenclosed spaced	Unenclosed touching	Enclosure in air	
	(A)	(A)	(A)	(mV/A/m)	(A)	(A)	(A)	(mV/A/m)
1.5	18	16	19	49.8	16	15	14	43.1
2.5	23	20	24	34.0	20	19	17	29.4
4	30	27	32	20.3	27	26	23	17.6
6	40	35	43	12.6	36	34	29	10.9
10	51	44	55	8.42	46	43	37	7.29
16	72	62	78	4.87	66	61	52	4.22
25	96	80	103	3.10	87	81	67	2.68
35	128	106	136	2.00	116	108	89	1.73
50	158	129	169	1.42	144	135	111	1.23
70	199	163	213	1.00	182	170	136	0.866
95	251	207	269	0.714	230	214	173	0.618
120	300	242	322	0.551	275	256	202	0.477
150	355	289	381	0.442	327	303	242	0.383
185	408	328	438	0.367	375	348	274	0.318
240	464	375	499	0.315	428	396	314	0.273
300	554	439	596	0.260	511	472	379	0.225
400	633	511	682	0.225	584	539		0.195
	751	595		0.201	692	638		0.174

\*Note: 1. Current carrying capacity and voltage drop are per comprehensive table in AS/NZS 3008.1.1:2009.

**Table 22 : Correction factor for ambient air temperature**

Ambient temperature	(°C)										
	15	20	25	30	35	40	45	50	55	60	65
EPR (90°C)	1.26	1.2	1.15		1.05	1.0	0.94	0.88	0.81	0.73	0.65