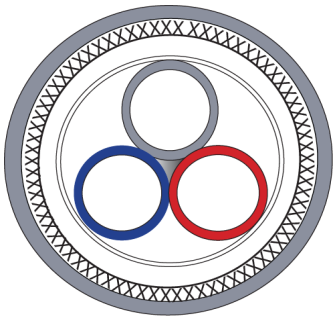
BS 6883:1999 600/1000 Volt

Single and Multicore

APPLICATION
Offshore installations.
CONSTRUCTION



CONDUCTOR	Tinned copper conductors to BS EN 60228 class 2 or 5 for 1.5mm²
INSTALLATION	EPR Type GP4 to BS 7655 90 Deg C
COLOUR CODE	Numbered or coloured as specified
INNER SHEATH	SW4 to BS 7655 section 2.6
ARMOURING	Galvanised steel wire braid BS EN 10257-1
OUTER SHEATH	SW4 to BS 7655 section 2.6

ELECTRICAL DATA

Continuous current ratings for groups of circuits (up to 6 cables bunched) for single core EPR insulated cables, run open or enclosed. Also applicable to mica tape fire resistant types

CURRENT RATINGS

		Voltage Drop Per Amp Per Metre		
Nominal Conductor Area	Current Rating Single Phase a.c. Or d.c or Three Phase a.c.	d.c.	Single phase a.c.	Three Phase a.c.
mm²	A	mV	mV	mV
1.0	17	53	53	46
1.5	21	34	34	29
2.5	30	18	18	16
4.0	40	12	12	10
6.0	51	7.6	7.6	6.6
10	71	4.5	4.5	3.9
16	95	2.7	2.7	2.3
25	125	1.7	1.7	1.5
35	155	1.2	1.2	1.1
50	190	0.96	0.98	0.87
70	240	0.67	0.69	0.63
95	290	0.48	0.52	0.49
120	340	0.38	0.42	0.43
150	385	0.31	0.36	0.38
185	440	0.25	0.32	0.34
240	520	0.19	0.27	0.31
300	590	0.15	0.24	0.29

Where more than six cables are bunched, a rating factor of 0.85 should be applied to the current rating.

For ambient temperatures other than 45°C, the following rating factors should be applied

Ambient air temp. °C	40	45	50	55	60	65	70	75
Rating factor	1.05	1	0.94	0.88	0.82	0.75	0.67	0.58

Twin & Multi-Core Cables, EPR Insulated

Continuous current ratings fro groups of circuits (up to six cables bunched) for twin and multi-core EPR insulated, run ope or enclosed. Also applicable to mica taped fire resistant types

CURRENT RATINGS

Nominal Conductor Area	Twin Cables			Three & Four Core Cables	
	Current Rating Single Phase a.c. or d.c.	Voltage Drop Per Amp Per Metre		Current Rating Three Phase a.c.	Voltage Drop Per Ampere Per Metre
		d.c.	Single Phase a.c.		
mm²	A	mV	mV	A	mV
1.0	14	54	54	12	47
1.5	18	35	35	15	30
2.5	25	18	18	21	16
4.0	34	12	12	29	10
6	43	7.8	7.8	36	6.7
10	60	4.6	4.6	50	4
16	81	2.7	2.7	67	2.3
25	105	1.7	1.7	89	1.5
35	135	1.2	1.2	105	1.1
50	165	0.98	1	135	0.89
70	200	0.68	0.7	170	0.64
95	250	0.49	0.53	205	0.5
120	290	0.39	0.43	240	0.44
150	330	0.31	0.36	270	0.38
185	370	0.25	0.32	305	0.34
240	445	0.19	0.27	365	0.31
300	505	0.15	0.24	415	0.29

Where moe than six cables are bunched, a rating factor of 0.85 shoulc be applied to the current rating.

For ambient temperatures other than 45°C, the following rating factors should be applied

Ambient air temp. °C	40	45	50	55	60	65	70	75
Rating factor	1.05	1	0.94	0.88	0.82	0.75	0.67	0.58

CABLE TYPES

Single Core TCU/EPR/SW4/PBWB/SW4 Type 600/1000V to BS6883

ELECTRICAL CHARACTERISTICS

Conductor Size	Maximum d.c. Conductor Resistance @20°C	Maximum a.c. Conductor Resistance @90°C		Reactance @ 60 Hz Single Core Cables in Trefoil		Impedance @ 90°C, Hz Single Core Cables in Trefoil	
		Unarmoured	Armoured	Unarmoured	Armoured	Unarmoured	Armoured
mm²	ohms/km	ohms/km	ohms/km	ohms/km	ohms/km	ohms/km	ohms/km
1.5	12.2	15.6	15.6	0.178	0.222	15.6	15.6
2.5	7.56	9.64	9.64	0.165	0.207	9.64	9.64
4.0	4.7	5.99	5.99	0.159	0.196	5.99	5.99
6.0	3.11	3.97	3.97	0.15	0.184	3.97	3.97
10.0	1.84	2.35	2.35	0.139	0.177	2.35	2.35
16.0	1.16	1.48	1.48	0.132	0.161	1.48	1.49
25.0	0.734	0.935	0.936	0.124	0.15	0.943	0.948
35.0	0.529	0.673	0.674	0.12	0.145	0.684	0.689
50.0	0.391	0.499	0.499	0.119	0.141	0.513	0.519
70.0	0.27	0.344	0.344	0.113	0.134	0.352	0.369
95.0	0.195	0.271	0.271	0.111	0.313	0.293	0.301
120.0	0.154	0.214	0.214	0.108	0.127	0.24	0.249
150.0	0.126	0.175	0.175	0.108	0.126	0.206	0.215
185.0	0.1	0.14	0.14	0.108	0.126	0.177	0.188
240.0	0.0762	0.108	0.108	0.106	0.123	0.151	0.163
300.0	0.0607	0.0864	0.087	0.105	0.121	0.136	0.149
400.0	0.0475	0.0693	0.069	0.104	0.119	0.125	0.138
500.0	0.0369	0.0576	0.058	0.103	0.117	0.118	0.131
630.0	0.0286	0.0436	0.045	0.101	0.114	0.11	0.123

CABLE TYPES

Multi-Core TCU/EPR/SW4/GSWB/SW4

ELECTRICAL CHARACTERISITICS

Conductor Size	Maximum d.c. Conductor Resistance @20°C	Maximum a.c. Conductor Resistance @90°C	Reactance @ 60 Hz	Impedance @ 90°C 60 Hz
mm²	ohms/km	ohms/km	ohms/km	ohms/km
1.5	12.2	15.6	0.142	15.6
1.5*	13.7	17.5	0.142	17.5
2.5	7.56	9.64	0.133	9.64
4.0	4.7	5.99	0.133	5.99
6.0	3.11	3.97	0.126	3.97
10.0	1.84	2.35	0.118	2.35
16.0	1.16	1.48	0.112	1.48
25.0	0.734	0.936	0.107	0.941
35.0	0.529	0.674	0.104	0.684
50.0	0.391	0.499	0.103	0.51
70.0	0.27	0.344	0.102	0.358
95.0	0.195	0.271	0.099	0.288
120.0	0.154	0.214	0.097	0.235
150.0	0.126	0.175	0.097	0.2
185.0	0.1	0.14	0.097	0.17
240.0	0.0762	0.108	0.096	0.144
300.0	0.0607	0.087	0.096	0.129

*Class 5 (30/0.25mm) flexible conductors

CABLE TYPES

Multi-Core TCU/MICA/EPR/ZH/GSWB/SW4 600/1000V to BS7917

ELECTRICAL CHARACTERISTICS

Conductor Size	Maximum d.c. Conductor Resistance @20°C	Maximum a.c. Conductor Resistance @90°C	Reactance @ 60 Hz	Impedance @ 90°C 60 Hz
mm²	ohms/km	ohms/km	ohms/km	ohms/km
1.5	12.2	15.6	0.152	15.6
1.5*	13.7	17.5	0.152	17.5
2.5	7.56	9.64	0.142	9.64
4.0	4.7	5.99	0.139	5.99
6.0	3.11	3.97	0.131	3.97
10.0	1.84	2.35	0.123	2.35
16.0	1.16	1.48	0.116	1.48
25.0	0.734	0.936	0.111	0.943
35.0	0.529	0.674	0.108	0.683
50.0	0.391	0.499	0.107	0.51
70.0	0.27	0.344	0.103	0.359
95.0	0.195	0.271	0.101	0.289
120.0	0.154	0.214	0.099	0.236
150.0	0.126	0.175	0.099	0.201
185.0	0.1	0.14	0.099	0.171
240.0	0.0762	0.108	0.097	0.145
300.0	0.0607	0.087	0.097	0.13

* Class 5 (30/0.25mm) flexible conductors

BS 6883:1999 600/1000 Volt

Geometrical Data is approximate and final dimensions will be confirmed at time orf order								
No. And size of conductor	Nominal Cond Stranding	Radical Thickness of Insulation	Diameter Over Inner Sheath Minimum	Maximum	Minimum O/	Maximum O/I	Approx Weight	UKOOA Code
mm²	#/mm	mm	mm	mm	mm	mm	kg/km	
TWO CORE								
1.5	30/0.25	0.8	8.4	9.5	12.4	14	268	WB202
2.5	7/0.67	0.8	9.2	10.3	13.2	14.7	314	WB203
4.0	7/0.85	1	11.3	12.6	15.5	17.2	430	WB204
6.0	7/1.04	1	12.4	13.8	16.8	18.5	523	WB206
10.0	7/0.35	1	14.5	15.9	18.9	20.6	687	WB210
16.0	7/1.70	1	16.8	18.3	21.3	23.5	925	WB216
25.0	19/1.35	1.2	20.5	22.4	25.4	27.9	1365	WB225
THREE CORE								
1.5	30/0.25	0.8	8.9	10	12.9	14.4	298	WB302
2.5	7/0.67	0.8	9.8	11	14	15.5	360	WB303
4.0	7/0.85	1	12	13.4	16.2	17.9	490	WB304
6.0	7/1.04	1	13.2	14.6	17.6	19.4	601	WB306
10.0	7/1.35	1	15.4	17	19.9	22.2	821	WB310
16.0	7/1.70	1	17.9	19.4	22.6	24.8	1113	WB316
25.0	19/1.35	1.2	22.1	24.1	27.2	29.8	1687	WB325
35.0	19/1.53	1.2	24.1	26.1	30.1	33.1	2120	WB335
50.0	19/1.78	1.4	27.8	29.8	34	36.9	2736	WB350
70.0	19/2.14	1.4	31.9	34.3	38.5	41.8	3660	WB370
95.0	37/1.78	1.6	36.8	39.2	43.8	47.2	4773	WB395
120.0	37/2.03	1.6	40.6	43.4	48	51.9	5925	WB30A
150.0	37/2.25	1.8	45	47.9	52.7	56.8	7178	WB30B
185.0	37/2.52	2	50.2	53.6	58.3	62.9	8881	WB30C
240.0	61/2.25	2.2	56.8	60.3	65.3	70.1	11325	WB30D
FOUR CORE								
1.5	30/0.25	0.8	9.7	10.9	13.9	15.4	342	WB402
2.5	7/0.67	0.8	10.7	12	14.9	16.4	419	WB403
4.0	7/0.85	1	13.2	14.6	17.6	19.3	586	WB404
6.0	7/1.04	1	14.7	16.2	19.3	21.1	737	WB406
10.0	7/1.35	1	17.2	18.7	21.9	24.1	1013	WB410
16.0	7/1.70	1	19.9	21.8	24.8	27.1	1382	WB416
25.0	19/1.35	1.2	24.6	26.6	30.6	33.6	2191	WB425
35.0	19/1.53	1.2	26.9	28.9	33.1	36	2654	WB435
50.0	19/1.78	1.4	30.9	33.3	37.5	40.6	3434	WB450
70.0	19/2.14	1.4	35.5	37.9	42.4	46	4625	WB470
95.0	37/1.78	1.6	40.9	43.7	48.3	52.1	6020	WB495
120.0	37/2.03	1.6	45.4	48.3	53.1	57.2	7525	WB40A
150.0	37/2.25	1.8	50.3	53.5	58.4	62.9	9125	WB40B
185.0	37/2.52	2	56	59.5	64.5	69.4	11221	WB40C
SEVEN CORE 6587								
1.5	30/0.25	0.8	11.8	13.2	16	17.7	476	WB702
2.5	7/0.67	0.8	13.1	14.4	17.4	19.1	590	WB703
TWELVE CORE 6580/12								
1.5	30/0.25	0.8	15.7	17.2	20.2	22.4	732	WBA02
2.5	7/0.67	0.8	17.7	19.3	22.4	24.8	935	WBA03
NINETEEN CORE 6580/19								
1.5	30/0.25	0.8	18.6	20.1	22.5	24.8	935	WBB02
2.5	7/0.67	0.8	20.9	22.7	25.8	28	1287	WBB03
TWENTY SEVEN CORE 6580/27								
1.5	30/0.25	0.8	22.7	24.5	27.8	30	1359	LBC02
2.5	7/0.67	0.8	25.4	27.6	31.4	34.5	1854	LBC03
THIRTY SEVEN CORE 6580/37								
1.5	30/0.25	0.8	25.5	27.3	31.5	34.2	18.5	LBD02
2.5	7/0.67	0.8	28.7	30.9	34.9	38.1	2349	_

$$\frac{80}{0.47}$$

$$\frac{80}{0.47}$$