



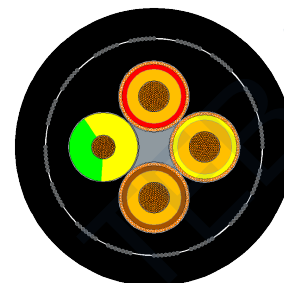
TEBAOFLEX CABLE

DATA SHEET

Mining&Industrial cable

BS 6708 TYPE 321 / TYPE 331 1900/3300 V CABLE

Flexible trailing cable with galvanised steel pliable wire armouring



APPLICATION

For use as mine roadway extension cables and mechanically protected trailing cables in quarries.

ENVIRONMENT

Designed for mining and quarry environments, including surface applications and coalface service.

CONSTRUCTION

Parameter	Value
Conductor	Three flexible tinned annealed copper conductors, MEPR insulated
Type 331	Three copper/nylon screened power cores plus one unscreened earth core
Type 321	Three unscreened power cores plus one unscreened earth core
Lay-up	Power cores and earth core laid up around an elastomeric centre
Bedding	Extruded PCP bedding sheath
Armour	Pliable galvanised steel wire armour
Overall sheath	Heavy duty flame retardant elastomeric compound, PCP black with blue stripe

CABLE CHARACTERISTICS

Parameter	Value
Standard	BS 6708:1998
Rated voltage	1900/3300 V
Test voltage	6.5 kV
Phase identification	Red, yellow and brown
Type 331 screen	Composite copper/nylon braid over phase cores

TECHNICAL DATA

Complete nominal dimensional data. Source ordering codes have been omitted.

TYPE 331 CABLE DIMENSIONS							
Parameter	25	35	50	70	95	120	150
Phase diameter over insulation and tape mm	13.50	15.10	16.20	18.15	19.60	21.95	23.10
Phase diameter over screen mm	15.50	17.10	18.20	20.15	21.60	23.95	25.40
Earth conductor nominal CSA mm2	16	25	35	50	70	70	70
Earth diameter over insulation and tape mm	15.50	17.10	18.20	20.15	21.60	23.95	25.40
Diameter over inner sheath - minimum mm	42.20	48.20	52.60	60.00	65.10	68.80	71.50
Diameter over inner sheath - maximum mm	44.70	50.70	55.60	63.00	68.90	72.60	74.00
Overall diameter - minimum mm	57.80	64.60	69.80	80.30	86.40	90.90	93.80
Overall diameter - maximum mm	61.60	68.40	73.80	84.60	90.70	95.20	98.10
Minimum bending radius mm	620	690	740	850	910	960	980
Maximum pulling tension kgf	540	780	1110	1560	2000	2000	2000
Approximate cable weight kg/km	6400	7800	9100	12400	14600	16300	18200

TYPE 321 CABLE DIMENSIONS					
Parameter	35	50	70	95	120
Phase diameter over insulation and tape mm	15.10	16.20	18.15	19.60	21.95
Earth conductor nominal CSA mm2	35	50	70	95	120
Earth diameter over insulation and tape mm	15.10	16.20	18.15	19.60	21.95
Diameter over inner sheath - minimum mm	44.30	51.30	56.40	63.80	67.50
Diameter over inner sheath - maximum mm	46.80	54.30	59.40	66.80	71.30
Overall diameter - minimum mm	60.30	68.30	74.40	84.90	89.40
Overall diameter - maximum mm	64.10	72.30	78.40	89.20	93.70
Minimum bending radius mm	640	720	790	890	940
Maximum pulling tension kgf	840	1200	1680	2000	2000
Approximate cable weight kg/km	4900	6400	7700	10800	12300

TECHNICAL DATA

Complete nominal dimensional data. Source ordering codes have been omitted.

TYPE 331 ELECTRICAL DETAILS							
Parameter	25	35	50	70	95	120	150
Continuous current rating at 25 deg C ambient A	110	135	170	205	250	295	320
Power conductor DC resistance at 20 deg C ohm/km	0.795	0.565	0.393	0.277	0.210	0.164	0.132
Earth conductor DC resistance at 20 deg C ohm/km	1.240	0.795	0.565	0.393	0.277	0.277	0.277
Screens in parallel DC resistance ohm/km	1.350	0.800	0.700	0.690	0.840	0.550	0.550
Armour DC resistance at 20 deg C ohm/km	0.965	0.844	0.715	0.488	0.382	0.299	0.240
Nominal reactance at 50 Hz ohm/km	0.125	0.117	0.113	0.108	0.105	0.101	0.098
Nominal reactance at 60 Hz ohm/km	0.150	0.140	0.136	0.129	0.126	0.121	0.118
Min. insulation resistance of power cores MOhm/km	1250	1100	950	820	720	660	600
3 phase voltage drop at 50 Hz mV/A/m	1.69	1.21	0.85	0.61	0.48	0.39	0.32

TECHNICAL DATA

Complete nominal dimensional data. Source ordering codes have been omitted.

TYPE 321 ELECTRICAL DETAILS					
Parameter	35	50	70	95	120
Continuous current rating at 25 deg C ambient A	135	170	205	250	295
Power conductor DC resistance at 20 deg C ohm/km	0.565	0.393	0.277	0.210	0.164
Earth conductor DC resistance at 20 deg C ohm/km	0.565	0.393	0.277	0.210	0.164
Armour DC resistance at 20 deg C ohm/km	0.990	0.760	0.530	0.400	0.320
Nominal reactance at 50 Hz ohm/km	0.117	0.113	0.108	0.105	0.101
Nominal reactance at 60 Hz ohm/km	0.140	0.136	0.129	0.126	0.121
Min. insulation resistance of power cores MOhm/km	1100	950	820	720	660
3 phase voltage drop at 50 Hz mV/A/m	1.21	0.85	0.61	0.48	0.39

NOTES

Nominal values are for cable selection. Actual cable dimensions may vary due to manufacturing tolerances.

CERTIFICATIONS

