



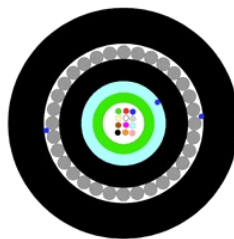
- X 25 Year System Warranty
- X Internal External Grade
- X Sequentially Metre Marked
- X Steel Wire Armour

Features

- 25 Year System Warranty
- Sequentially Metre Marked
- 62.5/125 Multimode Fibre
- Duct Grade
- Rodent Resistant
- Internal External Grade
- Steel Wire Armour
- LSZH Black Sheath
- Cut to length service

Product Overview

Excel range steel wire armoured cables suitable for direct burial and the most demanding of installations. Available from stock these cables are constructed from standard single loose tube cables which are then packed into a flexible but strong fibreglass waterblocking strength member. An internal sheath of Black Low Smoke Zero Halogen material is then applied, a rip cord is inserted under this sheath to ease cable stripping. Lengths of steel wire armouring are then applied and an oversheath of Black Low Smoke Zero Halogen is added.



Performance Overview

Excel loose tube fibre optic cables are designed and manufactured to ensure that optimum performance is possible from installed fibre links. Support of protocols such as Gigabit Ethernet over maximum distances are assured, due to improved bandwidth available as standard from Excel fibre cables.

Cores Colours

1. Red	2. Green	3. Blue	4. Yellow
5. White	6. Grey	7. Brown	8. Violet
9. Turquoise	10. Black	11. Orange	12. Pink
13. Yellow with mark every 70 mm	14. White with mark every 70 mm	15. Grey with mark every 70 mm	16. Turquoise with mark every 70 mm
17. Orange with mark every 70 mm	18. Pink with mark every 70 mm	19. Yellow with mark every 35 mm	20. White with mark every 35 mm
21. Grey with mark every 35 mm	22. Turquoise with mark every 35 mm	23. Orange with mark every 35 mm	24. Pink with mark every 35 mm

Physical Properties

Property	Test method	Value
Permanent tensile strength	IEC 60974-1 E1	1000 N (no attenuation change, fibre strain less than ¼ of proof test level)
Short term tensile strength	IEC 60974-1 E1	2000 N (fibre strain less than ½ of proof test level)
Maximum installation tensile strength	IEC 60974-1 E1	3000 N (fibre strain less than ½ of proof test level)
Impact	IEC 60974-1 E4	15 Nm (no attenuation change, no broken cable elements)
Crush (compressive strength)	IEC 60974-1 E3	1500 N
Torsion	IEC 60974-1 E7	5 cycles ± 1 turn
Kink	IEC 60974-1 E10	The cables do not form a kink when a loop is drawn together to a diameter of 100 mm
Temperature range	IEC 60974-1 F1	Operation -30°C to +60°C Installation -30°C to +40°C Storage -40°C to +60°C
Water penetration	IEC 60974-1 F5B	No water on free end

Property	4-16 Cores	24 Core
Nominal diameter	10.0 mm	10.5 mm
Nominal cable weight	165 kg/km	180 kg/km
Minimum bend radius		
	Unloaded (IEC 60794-1 E11)	160 mm
	Loaded	160 mm

Property		
Strength member	Waterblocked E-Glass rovings	
Inner Sheath	1.0 mm black, Halogen free, flame resistant thermoplastic sheathing compound acc. to EN 50290-2-27, UV stabilised	
Outer Sheath	1.4 mm black, Halogen free, flame resistant thermoplastic sheathing compound acc. to EN 50290-2-27, UV stabilised	
Armouring	Ø 0.6 mm soft zinc coated steel wires	
Fire rating	IEC 60332-1-2	Single vertical wire test
	IEC 60754-1	No halogens
	IEC 60754-2	No acid matters
	IEC 61034-2	No dense smoke

Performance Properties

Cable attenuation	IEC 60793-1-40
Maximum attenuation value of cable at 850 nm	≤ 3.2 dB/km
Maximum attenuation value of cable at 1300 nm	≤ 1.0 dB/km
Inhomogeneity of OTDR trace for any two 1000 metre fibre lengths	Max. 0.2 dB/km

Bandwidth	IEC 60793-1-41
Overfilled (OFL) modal bandwidth at 850 nm	200 MHz.km
Overfilled (OFL) modal bandwidth at 1300 nm	600 MHz.km

Standards and Norms	
IEC 60793-2-10 Category A1b	EN 50173-1 category OM1
IBM™ Fibre Optic Channel Links; ESCON™	ISO / IEC 11801 category OM1
IEEE 802.3	TIA / EIA-492 AAAA
EN 60793-2-10: type A1b	ANSI / TIA / EIA-568-B.3

Property	Standard	Value
Core diameter	IEC / EN 60793-1-20	62.5 ± 2.5 µm
Core non-circularity	IEC / EN 60793-1-20	≤ 5 %
Cladding diameter	IEC / EN 60793-1-20	125.0 ± 1.0 µm
Cladding non-circularity	IEC / EN 60793-1-20	≤ 5 %
Core - cladding concentricity error	IEC / EN 60793-1-20	≤ 1.5 µm
Primary coating diameter - uncoloured	IEC / EN 60793-1-21	242 ± 7 µm
Primary coating diameter - coloured	IEC / EN 60793-1-21	250 ± 15 µm
Primary coating non-circularity	IEC / EN 60793-1-21	≤ 5 %
Primary coating - cladding concentricity error	IEC / EN 60793-1-21	≤ 10 µm
Group index of refraction:	IEC / EN 60793-1-22	
	at 850 nm	1.496
	at 1300 nm	1.491
Proof stress level	IEC / EN 60793-1-30	≥ 0.7 (≈ 1 % strain) Gpa
Typical average stripforce	IEC / EN 60793-1-32	1.7 N
Strip force (peak)	IEC / EN 60793-1-32	1.3 ≤ F _{peak.strip} ≤ 8.9 N
Numerical aperture	IEC / EN 60793-1-43	0.275 ± 0.015

Typical Applications

- 100BASE-FX ■ 1000BASE-SX ■ 1000BASE-LX ■ FDDI
- 155 Mbps ATM ■ 622 Mbps ATM ■ 531 Mbps Fibre Channel ■ 1062 Mbps Fibre Channel

Part Number Information

Part No.	Description
205-340	Internal/External Grade SWA Fibre Cable 4 Core 62.5/125 OM1
205-342	Internal/External Grade SWA Fibre Cable 8 Core 62.5/125 OM1
205-344	Internal/External Grade SWA Fibre Cable 12 Core 62.5/125 OM1
205-372	Internal/External Grade SWA Fibre Cable 16 Core 62.5/125 OM1
205-346	Internal/External Grade SWA Fibre Cable 24 Core 62.5/125 OM1

System Warranty

The Excel System Warranty provides a 25-year product and applications assurance of compliance with the industry performance standard appropriate to the class of cabling installed. The warranty may be applied for by an accredited Excel Partner who has designed, supplied and installed the said system.



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