Caledonian

FIREGUARD Flame Retardant Power & Control Cables

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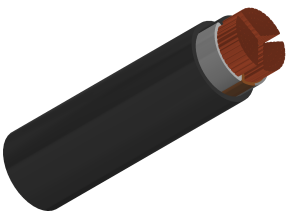
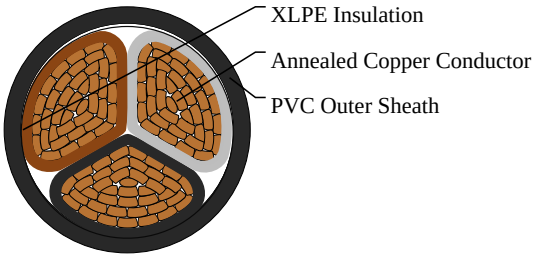
600/1000V XLPE Insulated, PVC Sheathed,Unarmoured Power Cables to BS 7889 (3 Cores)

FGD400 1RV-R 3C50 (CU/XLPE/PVC 600/1000V Class 2)





APPLICATIONS

The cables are mainly use in fixed installations in industrial areas, buildings and similar applications but not for burial in the ground, either directly or in ducts.

STANDARDS

Basic design to BS 7889:2012

APPROVALS

TUV Certification (Z1 17 08 98200 008)

FIRE PERFORMANCE

Flame Retardance (Single vertical wire or cable test)	BS EN 60332-1-2

VOLTAGE RATING

600/1000V

CABLE CONSTRUCTION

Conductor: Annealed copper wire, shaped stranded according to BS EN 60228 class 2.
Insulation: XLPE type GP8 according to BS 7655-1.3.
Filling: If necessary, the formation of a compact and reasonably circular cable shall be achieved by one of the following methods.
a) The application of synthetic fillers or binder tape(s).
b) The optional inner covering.
c) The sheath provided it effectively fills the interstices.
d) Any combination of the above.
Inner Covering Option: The optional inner covering, where used, shall consist of an extruded layer of synthetic polymeric material. It shall surround the single core and the laid-up two, three, four or five cores,giving the assembly a practically circular shape.
Outer Sheath: PVC Type 9 according to BS 7655-4.2.
Outer Sheath Option: UV resistance, hydrocarbon resistance, oil resistance, anti rodent and anti termite properties can be offered as option. Compliance to fire performance standard (IEC 60332-1, IEC 60332-3,UL 1581, UL

1666 etc) depends on the oxygen index of the PVC compound and the overall cable design.LSPVC can also be provided upon request.

COLOUR CODE

Insulation Colour:
Three-core: Brown, black, grey. Alternatively, green-and-yellow, blue, brown
Note: Depending on their intended use, the cables might be subject to the core colour requirements specified in BS 7671 or other standards, or in statutory requirements.
Sheath Colour: Black, other colours can be offered upon request

PHYSICAL AND THERMAL PROPERTIES

Maximum temperature range during operation: 90°C
Maximum short circuit temperature (5 Seconds): 250°C
Minimum bending radius
circular copper conductors OD<=25mm : 4 × Overall Diameter
circular copper conductors OD>25mm: 6 × Overall Diameter
shaped copper conductors: 8 × Overall Diameter

Electrical Properties

Conductor operating temperature: 90°C
Ambient temperature: 30°C

DIMENSION AND PARAMETERS

No. of Cores × Cross-sectional Area	Conductor Class	Nominal Insulation Thickness	Nominal Sheath Thickness	Nom. Overall Diameter	Approx. Weight
No.×mm²		mm	mm	mm	kg/km
3x50S	2	1.0	1.8	24.1	1620

Current-Carrying Capacities (Amp) according to BS 7671:2008 table 4E2A

Conductor Cross-sectional Area	Ref. Method A 2cables, 1-phase a.c. or d.c.	Ref. Method A 3/4 cables, 3-phase a.c.	Ref. Method B 2 cables, 1-phase a.c. or d.c	Ref. Method B 3/4 cables, 3-phase a.c.	Ref. Method C 2 cables, 1-phase a.c. or d.c. flat and touching	Ref. Method C 3/4 cables, 3-phase a.c. flat and touching or trefoil	Ref. Method E One 2C cable, 1-phase a.c. or d.c.	Ref. Method E One 3C or 4C cable, 3-phase a.c.
mm²	A	A	A	A	A	A	A	A
50	145	130	175	154	209	179	225	192

Voltage Drop (Per Amp Per Meter) according to BS 7671:2008 table 4E2B

Conductor Cross-sectional Area	2C cable, d.c.	2C cable, 1-phase a.c.	3C or 4C cable, 3-phase a.c.
mm²	mV/A/m	mV/A/m	mV/A/m
50	0.98	r:0.99 x:0.155 z:1.00	r:0.86 x:0.135 z:0.87

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Rated voltage

BS 7889

Flame Retardancy
BS/EN/IEC 60332-1-2