



# Caledonian

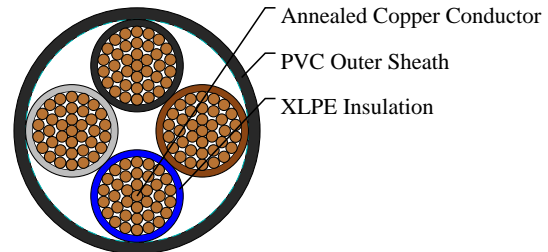
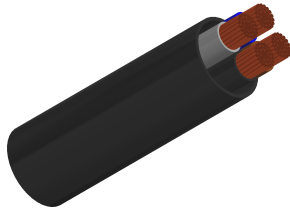
FIREGUARD Flame Retardant Power & Control Cables

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## 600/1000V XLPE Insulated, PVC Sheathed, Unarmoured Power Cables to BS 7889 (4 Cores)

FGD400 1RV-R 4C120 (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
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### VOLTAGE RATING

600/1000V

### CABLE CONSTRUCTION

Conductor: Annealed copper wire, 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.

- The application of synthetic fillers or binder tape(s).
- The optional inner covering.
- The sheath provided it effectively fills the interstices.
- 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



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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:

Four-core: Blue, brown, black, grey. Alternatively, green-and-yellow, brown, black, grey

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. × mm <sup>2</sup>		mm	mm	mm	kg/km
4x120	2	1.2	2.3	44.7	5646

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

Conductor Cross-sectional Area	Ref. Method A 2 cables, 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.
mm <sup>2</sup>	A	A	A	A	A	A	A	A
120	253	227	305	268	382	322	410	346

### 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.
mm <sup>2</sup>	mV/A/m	mV/A/m	mV/A/m
120	0.39	r:0.40 x:0.145 z:0.42	r:0.34 x:0.130 z:0.37



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Rated voltage



BS 7889



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