

## Multi-purpose power cable

Multipurpose protected low smoke halogen free wiring cable

### Description

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Nexans NXS pre-wired conduit is a 600/1000v rated range of cable that has been tested to BS8436 and meets all the performance and material requirements of this standard.

#### Applications

Multipurpose including partitioned walls and voids. For power, lighting and control circuits. Fail safe, will operate a 32A Type B MCB circuit breaker when penetrated by a sharp object.

#### Benefits

Installed benefits compared to traditional fixed wiring installations include: Large time/cost savings, much lighter and smaller compared to SWA

#### Design

##### 1. Conductor

- XLPE insulated stranded copper

##### 2. Uninsulated protective conductor

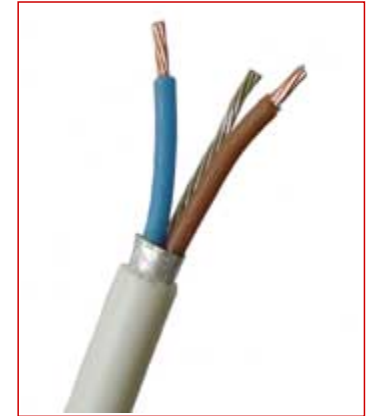
- Uninsulated tinned copper earth conductor

##### 3. Screen

- Bonded Aluminium Screen

##### 5. Outer sheath

- Low smoke halogen free UV stable



### Standards

National BS 8436

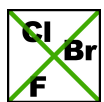
### Marking

ALSECURE NXS Pre wired conduit cable

### Core Identification and Range

All available in sizes 1.5 - 6mm

- 2 cores and earth: brown - blue
- 3 cores and earth: brown - black - grey
- 4 cores and earth: brown - black - grey - blue



Halogen free  
Yes



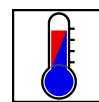
Flame retardant  
BS EN60332-1-2



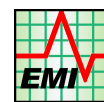
Smoke density  
EN 50268-2



Gases toxicity  
BS EN50267-2-1



Operating temperature,  
range  
-30 .. 90 °C



Electro magnetic interference  
resistance  
Yes

## Multi-purpose power cable

### Nominal Dimensions

#### 2 Core & Earth

1.5mm = 9.3mm  
 2.5mm = 10.1mm  
 4mm = 11.7mm  
 6mm = 12.5mm

#### 3 Core & Earth

1.5mm = 9.6mm  
 2.5mm = 10.5mm  
 4mm = 12.4mm  
 6mm = 13.8mm

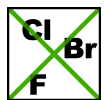
#### 4 Core & Earth

1.5mm = 10.4mm  
 2.5mm = 11.5mm  
 4mm = 13.6mm  
 6mm = 16.4mm

### Installation

Standard stuffing glands can be used. The wiring regulations BS7671 should be adhered to at all times. NXS can be installed in cable trays and baskets, direct on most surfaces and behind plaster. Indoors and outside.

Bending radius: 6D



Halogen free  
Yes



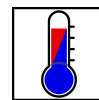
Flame retardant  
BS EN60332-1-2



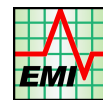
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Operating temperature,  
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Electro magnetic interference  
resistance  
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## Multi-purpose power cable

### Characteristics

Construction characteristics	
Halogen free	Yes
Usage characteristics	
Flame retardant	BS EN60332-1-2
Smoke density	EN 50268-2
Gases toxicity	BS EN50267-2-1
Operating temperature, range	-30 .. 90 °C
Electro magnetic interference resistance	Yes

### Current Ratings

#### NXS Current ratings

Clipped direct				
Area	2 core cable, single phase AC or DC		3 or 4 core cable, three phase AC	
sq.mm	Current rating amp	Volt drop mV per amp per m	Current rating amp	Volt drop mV per amp per m
1	19	46	17	40
1.5	24	31	22	27
2.5	33	19	30	16
4	45	12	40	10
6	58	7.9	52	6.8
On cable tray				
Area	2 core cable, single phase AC or DC		3 or 4 core cable, three phase AC	
sq.mm	Current rating amp	Volt drop mV per amp per m	Current x rating amp	Volt drop mV per amp per m
1	21	46	18	40
1.5	26	31	23	27
2.5	36	19	32	16
4	49	12	42	10
6	63	7.9	54	6.8

Current ratings are based on a "single circuit" in accordance with the IEE Wiring Regulations BS7671, Table 4E2A. Where a conductor operates at a temperature exceeding 70°C it shall be ascertained that the equipment connected to the conductors is suitable for the conductor operating temperature. (BS7671 reg 512-02). The above-tabulated current ratings should be multiplied by the rating factor (0.8) when conductor-operating temperature has not to exceed a recommended terminal temperature of 70°C.

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### Correction rating for grouping

No of Cables	2	3	4	5	6	8	10	12
Clipped direct	0.8	0.7	0.65	0.6	0.57	0.52	0.48	0.45
On cable tray	0.86	0.81	0.77	0.75	0.74	0.73	0.71	0.7

### Electrical Data

#### Electrical Data for NXS

Area mm <sup>2</sup>	Max DC Resistance ohms/KM @ 20oC	Nom AC resistance ohms/km @90oC @ 50Hz	Inductive reactance ohms/km @ 50Hz	Short circuit rating in KA for 1 second
1.5	12.1	15.3	0.1	0.21
2.5	7.41	9.43	0.097	0.35
4	4.61	5.86	0.092	0.57
6	3.08	3.93	0.088	0.85

### Temperature Correcting factors NXS

Ambient Temp oC	25	35	40	45	50	55	60	65	70	75	80	85
Fuse to BS88 or BS1361 or circuit breakers to BS3871 or BS60898	1.02	0.96	0.91	0.87	0.82	0.76	0.71	0.65	0.58	0.5	0.41	0.29
Semi enclosed fuse to BS3036	1.02	0.98	0.95	0.93	0.91	0.89	0.87	0.85	0.79	0.69	0.56	0.39