Welding Cable -BS638 Part 4, 0361TQ, EPR, CSP - 16mm² to 185mm²

Description

0361TQ is an orange sleeved flexible welding cable used for connection of an electric welding machine to the welding gun. This cable carries large current for the purposes of welding metal together in automatic and manual welding machines. It is high quality cable for all work from occasional use to a 100% duty cycle.

Suitable for use in factory assembly lines, conveyor systems, machine tools and car manufacturing.

Key Features

Voltage Rating
100 Volts

Minimum Bending Radius
Flexing: 6 x overall diameter

Flame Retardancy
BS EN 50525-2-81
BS EN/IEC 60332-1-2

Temperature Limits
Temperature Range: -20°C to +85°C

Core Colours

All sizes available in natural coloured insulation

Standards

- BS EN/IEC 60228
- BS EN/IEC 60332-1-2
- BS EN 50525-2-81

Construction

- **Conductor**: Class 5 tinned copper
- **Insulation**: EPR (Ethylene Propylene Rubber)
- **Separator**: Polyester Tape (PET)
- **Outer Sheath**: Chlorosulphonated polyethylene (CSP)
- **Sheath Colour**: Orange

QA Lab

Cleveland Cable Test & Training Lab
Our state-of-the-art cable testing facility ensures that every cable meets the highest standards of quality and compliance through continuous, rigorous testing. Where applicable, cables are independently tested and certified by BASEC to ensure full compliance.

CPR
Cleveland Cable Company is committed to compliance with the Construction Products Regulation (CPR). Where applicable, all cables manufactured after 1st July 2017 have been assessed in accordance with CPR requirements, with full supporting documentation available.

Our Sustainability Commitment

We are committed to the journey to Net Zero as a business partner, an employer and a community member.

By thinking and acting sustainably, we deliver excellent customer service while reducing carbon emissions in collaboration with our customers and suppliers.

ecovadis
Cleveland Cable Company has been independently assessed by EcoVadis, a globally recognised provider of business sustainability ratings. Our score places us among the top 35% of companies evaluated worldwide, reflecting our strong commitment to environmental, social, and ethical performance

Welding Cable -BS638 Part 4, 0361TQ, EPR, CSP - 16mm² to 185mm² - Dimensions

Reference	Conductor Size (mm2)	No Of Cores	Stranding(mm)	Outside Diameter(mm)	Overall Diameter(mm)	Weight(Kg/Km)	Gland Size
0361TQ16OR	16	1	513/0.20	235	11.5	235	20S
0361TQ25	25	1	783/0.20	330	13	330	20
0361TQ35	35	1	1107/0.20	440	14.5	440	25
0361TQ50OR	50	1	1566/0.20	610	17	610	25
0361TQ70OR	70	1	2214/0.20	840	19.5	840	32
0361TQ95OR	95	1	2997/0.20	1120	22	1120	32
0361TQ120OR	120	1	608/0.50	1410	24	1410	32
0361TQ185OR	185	1	925/0.50	2100	29	2100	40

BS638 (Part 4) WELDING CABLE – CURRENT CARRYING CAPACITY (AMPS)

NOMINAL CROSS SECTIONAL AREA MM2	CURRENT RATING FOR SINGLE CYCLE OPERATION OVER A MAXIMUM PERIOD OF 5 MINUTES			
	100%	80%	60%	35%
16	135	145	175	230
25	180	195	230	300
35	225	245	290	375
50	285	305	365	480
70	355	385	460	600
95	430	470	560	730
120	500	540	650	850
150	580	630	750	980
185	665	720	860	1120

Duty Cycle and Current Carrying Capacity

The current carrying capacity of a welding cable depends on the length of the duty cycle. The duty cycle is the length of time during which a loaded current passes through the cable over an operation period of 5 minutes, expressed as a percentage of that period. For example, if the current is flowing for the whole 5 minutes the duty cycle is 100%, and if the current is flowing for 1 minute the duty cycle is 20%. As conductor temperature varies according to the time in use as well as current, ratings shown are given as a guide.

The permissible loading of the cable for duty cycles other than those shown in the table can be calculated using the following formula: $I = I100 \times \sqrt{100/F}$
Where: I: is the maximum permissible loading current for the required duty cycle.
I100 : is the maximum permissible loading current for a duty cycle of 100%.
F: is the required duty cycle calculated as a percentage of the 5 minute operation period.

Typical guidance values for different welding processes are as follows:

- Fully automatic welding 100%
- Semi-automatic welding 65 - 85%
- Manual Welding 30 - 60%
- Very infrequent or occasional welding 20%

Ambient Temperature De-rating Factors

To find the adjusted ampacity, multiply the standard rating from the previous table by the corresponding factor below:

Ambient Air Temperature (°C)	De-rating Factor
25°C	1
30°C	0.96
35°C	0.91
40°C	0.87
45°C	0.82
50°C	0.76
55°C	0.71