

Rubber sheathed welding cables

These charts relate to single core flexible welding cables with rubber outer sheathing, such as HO1N2D & 0361TQ. The figures shown are to be considered as guiding values only.

Current Carrying Capacity in Ampere (Amps) Based on a maximum conductor temperature of 85°C and an ambient temperature of 25°C for a single maximum duty cycle *					
Area (mm ²)	100%	85%	60%	35%	20%
10.0	100	103	108	122	143
16.0	135	145	175	230	212
25.0	180	195	230	300	305
35.0	225	245	290	375	400
50.0	285	305	365	480	529
70.0	355	385	460	600	682
95.0	430	470	560	730	850
120.0	500	540	650	850	1006
150.0	580	630	750	980	1184
185.0	665	720	860	1120	-
240.0	780	850	975	1250	-

* The duty cycle is defined as the time for which the current flows expressed as a percentage of a complete cycle, which is taken as 5 minutes. Since the length of time for which the current flows during welding operation varies from occasional to continuous, the duty cycle can vary from as little as 20% to a maximum of 100% on automatic operation. As conductor temperature varies according to the time in use as well as current the ratings shown are given as a guide.

Conversion factors for deviating ambient air temperatures						
Temperature:	30°C	35°C	40°C	45°C	50°C	55°C
Factor:	0.96	0.91	0.87	0.82	0.76	0.79

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Operation under severe conditions

High operating temperatures or prolonged maximum loading of the cable can reduce the life and/or make the cable hot to handle. Therefore under conditions where a long service life cannot be expected or where a high surface temperature is tolerable the current rating for 25°C may be applied up to an ambient temperature of 40°C.

Voltage drop per 100amp DC current (V/10m)

Area (mm ²)	@ 20°C	@ 60°C	@ 85°C
16.0	1.24	1.43	0.156
25.0	0.795	0.92	0.998
35.0	0.565	0.654	0.709
50.0	0.393	0.455	0.493
70.0	0.277	0.321	0.348
95.0	0.210	0.243	0.264
120.0	0.164	0.19	0.206
150.0	0.132	0.153	0.166
185.0	0.108	0.125	0.136

Please note, the values for AC current may be much higher

Maximum conductor resistance in Ohms @ 20°C

Area (mm ²):	16.0	25.0	35.0	50.0	70.0	95.0	120.0	150.0	185.0
Ω/km:	1.240	0.795	0.565	0.393	0.277	0.210	0.164	0.132	0.108

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