

HO1N2-D WELDING FLEXIBLE

Flexible plain annealed copper conductors, Rubber Insulated welding cable. 100/100 volts grade. to VDE0282 /HD 22.6 S1 and BS638 Part 4

Harmonised code: HO1N2-D

For an explanation of harmonised codes see table in technical section

SIZE SQ.MM	CLASS OF CONDUCTOR	MAXIMUM DIAMETER OF WIRES MM	MEAN THICKNESS OF INSULATION	OVERALL DIAMETER MM		APPROX WEIGHT KG/KM
				MIN	MAX	
16	5	0.21	2.0	8.8	11.0	220
25	5	0.21	2.0	10.1	12.7	310
35	5	0.21	2.0	11.4	14.2	415
50	5	0.21	2.2	13.2	16.5	560
70	5	0.21	2.4	15.3	19.2	780
95	5	0.21	2.6	17.1	21.4	1030
120	5	0.51	2.8	19.2	24.0	1305
150	5	0.51	3.0	23.1	28.9	1600



SIZE SQ.MM	BATT PART NO
16	19011
25	19013
35	19014
50	19015
70	19019
95	19020
120	19021
150	19051

Operating temperature:

Maximum 85°C, Minimum flexing -15°C.

Minimum bending radius:

6 x Overall Diameter.

DUTY CYCLE. The duty cycle is defined as the time for which the current flows expressed as a percentage of the 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 maximum of 100% on automatic operation. As conductor temperature varies according to the time in use as well as current, ratings shown are given as a guide.

Automatic welding : Up to 100%
Semi - Automatic : 30 - 85%
Manual Welding : 30 - 60%

AMBIENT TEMPERATURES. Cable operating temperature also varies according to the prevailing ambient temperature. EPR/CSP cables are designed to give optimum performance up to an operating temperature of 85°C at an ambient temperature of 25°C. The reduction factors for increased ambient temperatures are.

Ambient temperature : 30°C 35°C 40°C 45°C 50°C 55°C
Reduction Factor : 0.96 0.91 0.87 0.82 0.76 0.79

OPERATIONS UNDER SEVERE CONDITIONS. High operating temperatures or prolonged maximum loading of the cable reduces the life or makes the cable too hot to handle. Thus 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.

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HO1N2-D WELDING FLEXIBLE (Continued)

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CONDUCTOR RESISTANCE AND VOLTAGE DROP				
CONDUCTOR SIZE MM ²	MAXIMUM RESISTANCE AT 20°C TINNED OHM/KM	VOLTAGE DROP (FOR GUIDANCE ONLY)		
		VOLTS PER 100 AMP PER 10 METRES DC CURRENT *		
		20°C V	60°C V	85°C V
16	1.240	1.240	1.430	1.560
25	0.795	0.795	0.920	0.998
35	0.565	0.565	0.654	0.709
50	0.393	0.393	0.455	0.493
70	0.277	0.277	0.321	0.348
95	0.210	0.210	0.243	0.264
120	0.164	0.164	0.190	0.206
150	0.132	0.132	0.153	0.166

* The values for AC Current may be much higher, depending on the configuration of the cables.

NOMINAL AREA OF CONDUCTOR MM	CURRENT RATINGS FOR COPPER CONDUCTORS FOR A SINGLE CYCLE MAXIMUM DUTY CYCLE PER-CENT			
	100% AMP	85% AMP	60% AMP	35% AMP
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

Ambient air temperature: 25°C

Maximum conductor temperature: 85°C

Derating factors for higher ambient temperatures.

30°C	35°C	40°C	45°C	50°C	55°C
0.96	0.91	0.87	0.82	0.76	0.79

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