



H01N2D Heavy Duty Welding Flexible

Applications:	Welding cable														
Conductor:	Plain annealed highly flexible copper, in accordance with class 6.														
Insulation:	Rubber														
Sheath/Jacket:	PCP (Polychloroprene) more commonly known as OFR (Oil resistant & flame retardant)														
Colour:	Black & Blue														
Operating temperature:	Maximum 85°C, minimum bending -15°C														
Voltage:	100/100v														
Duty cycle:	<p>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.</p> <p>Automatic welding: Up to 100%</p> <p>Semi-automatic: 30 - 85%</p> <p>Manual welding: 30 – 60%</p>														
Ambient temperatures:	<p>Cable operating temperature also varied according to the prevailing ambient temperature. PCP cables are designed to give optimum performance up to an operating temperature at 85°C at an ambient temperature of 25°C. The reduction factors for increased ambient temperatures are:</p> <table><tr><td>Ambient temperature</td><td>30°C</td><td>35°C</td><td>40°C</td><td>45°C</td><td>50°C</td><td>55°C</td></tr><tr><td>Reduction factor</td><td>0.96</td><td>0.91</td><td>0.87</td><td>0.82</td><td>0.76</td><td>0.79</td></tr></table>	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
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Operations under severe conditions:	<p>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 temperature is tolerable the current rating for 25°C may be applied up to an ambient temperature at 40°C.</p>														
Ambient air temperature:	25°C														
Max conductor temperature:	85°C														
Min bending radius:	6 x overall diameter														
Standards:	BS638 Part 4: flexible cables, arc welding, VDE0282-6 arc welding cables & HD22.6 S1, H01N2D														

Size sqmm	Max diameter of wires mm	Mean thickness of insulation	Overall diameter mm		Approx weight kg/km	BATT Part No
			Min	Max		
16	0.21	2.0	8.8	11.0	220	19011
25	0.21	2.0	10.1	12.7	310	19013
35	0.21	2.0	11.4	14.2	415	19014
50	0.21	2.2	13.2	16.5	560	19015
70	0.21	2.4	15.3	19.2	780	19019
95	0.21	2.6	17.1	21.4	1030	19020
120	0.51	2.8	19.2	24.0	1305	19021
150	0.51	3.0	23.1	28.9	1600	19051



Conductor size	Conductor resistance and voltage drop				Current ratings for copper conductors for single cycle max duty cycle %			
	Max resistance at 20°C tinned	Voltage drop (for guidance only) Volts per 100amp per 10 metres DC current*						
mm ₂	OHM/KM	20°C V	60°C V	85°C V	100% AMP	85% AMP	60% AMP	35% AMP
16	0.1240	1.240	1.430	1.560	135	145	175	230
25	0.795	0.795	0.920	0.998	180	195	230	300
35	0.565	0.565	0.654	0.709	225	245	290	375
50	0.393	0.393	0.455	0.493	285	305	365	480
70	0.277	0.277	0.321	0.348	355	385	460	600
95	0.210	0.210	0.243	0.264	430	470	560	730
120	0.164	0.164	0.190	0.206	500	540	650	850
150	0.132	0.132	0.153	0.166	580	630	750	980

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