NEMA HP 5
TYPE "LL" EXRAD
1000 Volt

(Replaces MIL-DTL 16878/15<>Inactive)

NEMA HP 5 Type "LL" EXRAD is specifically designed for Military Equipment and Applications. **NEMA HP 5 Type "LL" EXRAD** replaces and improves the design of MIL-DTL 16878/15 requirements (specification rendered inactive). It is a high performance wire built to handle the increasingly harsh, adverse environments. It is an irradiation cross-linked polyolefin with impressive properties. It significantly reduces wire and harness routing headaches because it is more heat resistant, tougher and more fluid resistant than previous designs.

NEMA HP 5 Type "LL" EXRAD is rated at 150°C, but it survives temperatures to 240°C and higher. It is safer in overload conditions as it will not melt or prematurely soften.

NEMA HP 5 Type "LL" EXRAD creates opportunities to eliminate unnecessary and expensive convolute tubing, tapes and heat shields that protect inferior wire systems.

NEMA HP 5 Type "LL" EXRAD processes very well on automated high speed cut and strip equipment. This advantageous processing feature will provide ideally suited product for equipment and applications where heat protection, long life and less expensive wiring harnesses are required.

CCC Part Number	Standard Conductors [Tinned Copper]	Nom. Diameter of Conductor Min.	Max.	Nom. Insulation Thickness (inches)	Nom. OD (inches)	Finished Weight (lbs./mft)	Ampacity*
HP5-LL15BDB	26 (7/34)	.018	.020	.017	.053	1.41	4
HP5-LL15BEB	24 (7/32)	.023	.025	.017	.058	2.08	7
HP5-LL15BFB	22 (7/30)	.028	.031	.017	.064	3.10	11
HP5-LL15BGB	20 (7/28)	.036	.039	.017	.072	4.50	15
HP5-LL15BHE	18 (19/30)	.046	.052	.017	.081	6.45	21
HP5-LL15BJE	16 (19/.29)	.052	.059	.017	.091	9.13	28
HP5-LL15BKE	14 (19/27)	.065	.073	.017	.106	15.49	46
HP5-LL15BLJ	12 (65/30)	.083	.092	.018	.128	24.60	60

- **Additional Sizes upon request**

*Ampacity based on 150°C rated single-insulated conductor in free air @ 40°C ambient air temperature

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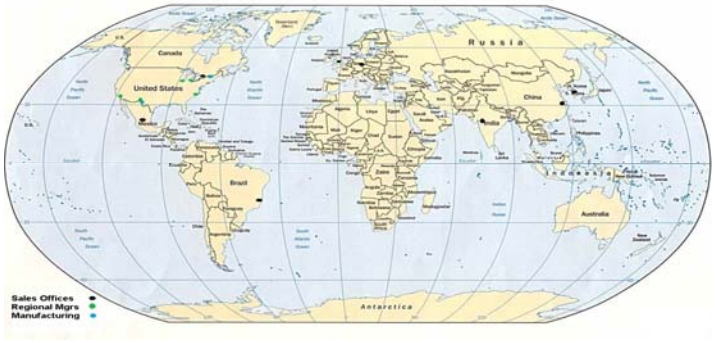

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NEMA HP 5 TYPE "LL" EXRAD				
Property / Attribute			**Requirements**	
			PARA. REF.	**DATA REF**
Flex Life				
Flex Test	Per Modified ISO 14572		TBD	TBD
Dielectric Strength				
Dielectric Test	Wet Dielectric after 1 hr. soak [min] *H.F. Spark		6.2.3	3.4KV <> 5.0KV <> 7.5KV
Flame Test	VW-1 <> U.L. Method 1581		6.1.6	Pass
Thermal Performance				
Cold Bend	Per FED-STD-228 Method 2011		6.1.9	Pass @ -65^{0}C
Heat Aging	Per FED-STD-228 Method 4031		6.1.7	Pass
Temperature Rating	3000 Hours @150^{0}C		N/A	150^{0}C
Temperature Rating	10000 Hours @125^{0}C		NA	125^{0}C
Mechanical Properties				
Tensile	ASTM D3032, Section 17--Minimum psi		6.1.3	1800 psi
Elongation	ASTM D3032, Section 17--Minimum %		6.1.3	100%
Abrasion	Sand Paper Resistance Length in.		N/A	75
Abrasion	Scrape Cycles		N/A	NA
Pinch	Pounds		N/A	10.2
Ozone Resistance				
Ozone Test	192 Hours @ 65^{0}C 100 pphm no cracks		N/A	Pass
Fluids				
Engine Oil	ASTM D471, IRM-902	50 +/-3 ^{0}C	N/A	1.8%
Ethanol	85% Ethanol +15% [Max] ASTM D471, Ref. Fuel C	23 +/-5 ^{0}C	N/A	<1%
Diesel Fuel	ASTM D471, 90% IRM-903 + 10% p-xylene	23 +/-5 ^{0}C	N/A	1.3%
Engine Coolant	50% Ethylene Glyco + 50% Distilled Water—15% [Max]	50 +/-3 ^{0}C	N/A	<1%
Battery Acid	H_2SO_4 Specific Gravity = 1.260 +/- .005—5% [Max]	23 +/-5 ^{0}C	N/A	<1.4%

Manufacturing Locations

Colchester, Vermont

El Paso, Texas

www.champcable.com