EXRAD XLE Metric 600 VOLT
Thickwall Hybrid Shielded Battery Cable
-70 - 150°C

EXRAD XLE 600 Volt metric shielded cable designed specifically to handle the higher voltage and current required by today's hybrid and electric powered vehicles. XLE is an extremely flexible, yet tough insulation. These cables significantly reduce the effects of EMI and RFI. The jacket insulation isolates any stray currents making this cable very safe. Our thin wall and high temperature insulations allow for lower weight and less space.

EXRAD XLE 600 volt shielded cable has an irradiated cross-linked elastomer insulation able to withstand temperatures of 240°C and higher. Thinner and lighter than other shielded battery cables, it is flexible enough for easy routing yet tough enough to withstand the roughest environments. XLE has excellent resistance to oil at temperatures exceeding 105°C.

The end result is an automotive wire ideally suited to applications where a combination of flexibility, long life and performance is required. EXRAD XLE 600 volt shielded cable can be routed through twists and turns where other cables fail

Benefits and Features

RFI and EMI Protection
ISO 6722 & SAE J1654 600 Volt Rating
1000 Volt in accordance to UL 758
Rubber Like Flexibility
Fluid Resistant
–40°C to 150°C ISO 6722 Class D

Applications

Including but not limited to:

Battery Packs
Motors
Inverters
Generators
Hybrid Vehicles
Electric Vehicles

Part Number	Standard Conductor Bare Copper	Nom. Dia Cond. in.	Nom. Dia Cond. mm.	Nom. Dia. Primary insulation in.	Nom. Dia. Primary insulation mm.	Nom. Dia Shield in.	Nom. Dia Shield mm.	Nom. Dia. Outside in.	Nom. Dia. Outside mm.	Shield Coverage
EXRAD-XLXM-4X	4mm^2 37/.38mm	.103	2.62	.163	4.14	.181	4.60	.261	6.63	95%
EXRAD-XLXM-6X	6mm^2 37/.45mm	.125	3.16	.185	4.70	.203	5.16	.283	7.19	95%
EXRAD-XLXM-10X	10mm^2 80/.40mm	.157	3.99	.237	6.02	.260	6.60	.340	8.64	95%
EXRAD-XLXM-25X	25mm^2 196/.40mm	.25	6.35	.370	9.40	.393	9.98	.473	12.01	95%
EXRAD-XLXM-35X	35mm^2 551/.28mm	.322	8.18	.402	10.20	.425	10.8	.505	12.83	95%
EXRAD-XLXM-50X	50mm^2 798/.28mm	.390	9.91	.492	12.50	.520	13.2	.600	15.24	95%
EXRAD-XLXM-70X	70mm^2 1140/.28mm	.466	11.84	.571	14.50	.599	15.2	.679	17.20	95%

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EXRAD XLE Metric High Voltage Cable
ISO 6722
EXRAD XLE

Section	Description	Requirement	Typical Results (35mm^2 Sample)
6.4	Insulation Volume Resistivity	10^9 Ω /mm min.	3.39 10^{11} Ω /mm, Pass
7.1	Pressure at High Temperature	'0.8N @150°C no dielectric breakdown	no breakdown Pass
7.2	Strip Force / Adhesion	Per customer agreement	NA Pass
8.1	Low Temperature Winding	3 tns 2.5kg - 40°C no dielectric breakdown	no dielectric breakdown, no cracking, Pass
8.2	Impact	100gm @-40°C no breakdown	No breakdown, Pass
9.2	Sandpaper Abrasion	.2kg 350mm min	NA Pass
9.3	Scrape Abrasion	Per customer agreement	NA Pass
10.1	Long-Term Heat Aging	150°C 3000 hours	no breakdown, no cracks Pass
10.3	Thermal Overload	200°C 6 hours	no breakdown, no cracks, Pass
10.4	Shrinkage by heat	2mm max. 150°C	no shrinkage, Pass
11.2	Fluid Compatibility		
		Gasoline 15% max.	12% Pass
		Diesel Fuel 15% max.	9% Pass
		Engine Oil 15% max.	.3% Pass
		Ethanol 15% max.	2% Pass
		Power Steering 30% max	.3% Pass
		Automatic Transmission 25% max.	.3% Pass
		Engine Coolant 15% max	.3% Pass
		Battery Acid no breakdown	No breakdown, Pass
11.4	Ozone Resistance	45°C 85% Relative Humidity 70 hours, Ozone 50 +/- 5 pphm 1kV 1 min. (no breakdown)	No breakdown, Pass
11.5	Resistance to hot water	not less than 10-5 ohm-mm	10-10 ohm-mm Pass
11.7	Temperature and Humidity Cycling	40 - 8 hours cycles -40°C and 125°C 80 -100% relative humidity	No dielectric breakdown, no cracking, Pass
12	Resistance to Flame Propagation	70 sec. max. 50mm unburned	1 sec. after burn, Pass

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