

## **EXRAD FX 600 Volt**

Cable -70 - 150°C

EXRAD FX high performance cable designed specifically for flexibility and long life. EXRAD FX 600 volt cable is suited to meet the demands of Electric and Hybrid powered vehicles. As engine compartments grow smaller, operating temperatures get hotter and electronics proliferate under the hood. EXRAD FX battery cable fulfills these demands.

EXRAD FX 600 volt cable has an irradiated cross-linked polyolefin insulation able to withstand temperatures of 240°C and higher. Thinner and lighter than other conventional battery cables, it is flexible enough for easy routing yet tough enough to withstand the roughest environments.

The end result is an automotive wire ideally suited to applications where a combination of flexibility, long life and performance is required. Save money and reduce weight by shortening the cable length. EXRAD FX can be routed through twists and turns where other battery cables fail

## **Benefits and Features**

Thin, uses up to 40% less space Very Flexible Standard Dimensions of SAE J1127 STX 600 Volt rating in accordance to SAE 1654 Fluid Resistant -70°C to 150°C Temperature Range Superior Processing

## **Applications**

Including but not limited to:

Batteries Hybrid Vehicles
Starters Electric Vehicles

Power Distribution Ground Wire



Part Number	Standard Conductors	Nom. Dia of Conductor		Insulation Thickness		Nom. OD		Finished Weight	Ampacity
	Bare Copper	in.	mm.	in.	mm.	in.	mm.	(lbs/mft)	
EXRAD-FX6-10XX	10 (105/30)	.112	2.84	.021	.53	.156	3.96	37.6	80
EXRAD-FX6-8XX	8 (133/29)	.166	4.22	.030	.76	.224	5.69	62.0	106
EXRAD-FX6-6XX	6 (133/27)	.195	4.95	.030	.76	.252	6.40	94.0	155
EXRAD-FX6-4XX	4 (133/25)	.242	6.15	.030	.76	.302	7.67	146.0	190
EXRAD-FX6-2XX	2 (665/30)	.318	8.08	.034	.86	.393	9.98	235.0	255
EXRAD-FX6-1XX	1 (779/30)	.346	8.79	.050	1.27	.440	11.18	275.0	293
EXRAD-FX6-1/0XX	1/0 (1007/30)	.390	9.91	.050	1.27	.490	12.45	349.0	339
EXRAD-FX6-2/0XX	2/0 (1254/30)	.438	11.13	.055	1.40	.548	13.92	441.0	390
EXRAD-FX6-3/0XX	3/0 (1568/30)	.520	13.21	.055	1.40	.640	16.26	515.0	451
EXRAD-FX6-4/0XX	4/0 (2107/30)	.602	15.29	.055	1.40	.712	18.08	756.0	529

 $<sup>^{\</sup>star}$  Ampacity 150°C rated single-insulated conductor in free air at 40°C ambient air temperature.





EXRAD FX									
Pro	perty / Attribute	SAE J-1127 STX Req.	EXRAD FX 6 AWG Typical Performance						
Flex Life									
Flex Test	Per Modified ISO 14572		NA	NA					
Dielectric Strength									
Dielectric Test	Wet Dielectric after 5 hour soak		1 kV 1 min.	5 kV 30 min.					
Flame Resistance									
Flame Test	Maximum time after burn		70 Sec	1 sec					
Thermal Performance									
Cold Bend	4 hours at temperature no cracks / breakdown	-40 <sup>0</sup> C	-70°C						
Temperature Rating	240 Hours @180 <sup>0</sup> C heat aging		155 <sup>0</sup> C	180 <sup>0</sup> C					
Temperature Rating	3000 Hours @150 <sup>0</sup> C		125°C	150°C					
Mechanical Properties									
Tensile	Minimum psi		1500	4270					
Elongation	Minimum %		150	570					
Abrasion	Sand Paper Resistance Length in.		10	21					
Abrasion	Scrape Cycles		None	NA					
Pinch	Pounds		None	NA					
Ozone Resistance									
Ozone Test	192 Hours @ 65°C 100 pphm no cracks		Pass	Pass					
Fluids									
Engine Oil	ASTM D471, IRM-902	50 +/-3 °C	15% Max.	1.60%					
Gasoline	ASTM D471 Ref. Fuel C	23 +/-5 °C	15% Max.	<1%					
Brake Fluid	SAE-J-1703	50 +/-5 °C	None	<1%					
Ethanol	85% Ethanol + 15% ASTM D471, Ref. Fuel C	23 +/-5 °C	15% Max.	<1%					
Diesel Fuel	ASTM D471, 90% IRM-903 + 10% p-xylene	23 +/-5 °C	15% Max.	1.80%					
Power Steering	ASTM D471, IRM-903	50 +/-3 °C	30% Max.	1.20%					
Auto Transmission	Citgo #33123 SAE-J311	50 +/-3 °C	25% Max.	5.30%					
Methanol			25% Max.	<1%					
Engine Coolant	50% Ethylene Glyco + 50% distilled Water	50 +/-3 °C	15% Max.	0%					
Battery Acid	$H_2SO_4$ Specific Gravity = 1.260 +/005	23 +/-5 °C	5% Max.	<1%					

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