# 150 HVFX / XLE High Voltage Shielded Cable

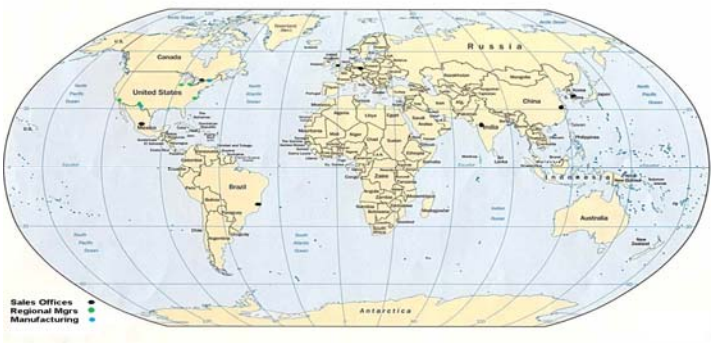
## SAE STX 150ºC 600 - 1000 VOLT

EXRAD 150 HVFX 1000 volt shielded XLE 150 Jacketed battery cable is the next generation of high performance cross-linked insulation designed specifically to handle the higher voltage with electrical currents required by today's hybrid and electric vehicles. The enhanced flexibility of EXRAD allows for a tighter bend radius and ease of flexing. Our thin wall and high temperature insulations allow for lower weight and less space. Champlain Cables are also offered with UV resistance unlike most cross-linked Polyolefins..

The end result is the EXRAD HVFX/XLE cables are ideally suited to applications, especially conventional, hybrid and electric vehicles where a combination of flexibility, long life and performance are required.


| Product Number | Standard Conductor Bare Copper | Nom. Dia . of Conductor in. mm. | Nom Primary Insulation Diameter in. mm. | Nom. Shield Diameter In. mm. | Nom. OD In. mm. | Shield Coverage | Voltage Rating | Min. Bend Radius Non flex mm. | Finished Weight (kg/KM) | Ampacity |
|---|---|---|---|---|---|---|---|---|---|---|
| EXRAD-HVX14X | 14 (105/34) | .074 1.88 | .106 2.69 | .124 3.15 | .164 4.17 | 95% | 600 | 15mm | 28 | 46 |
| EXRAD-HVX12X | 12 (105/32) | .095 2.41 | .127 3.23 | .145 3.68 | .185 4.70 | 95% | 600 | 16mm | 40 | 60 |
| EXRAD-HVX10X | 10 (105/30) | .110 2.79 | .152 3.86 | .170 4.32 | .210 5.33 | 95% | 600 | 19mm | 52 | 80 |
| EXRAD-HVX8X | 8 (133/29) | .166 4.22 | .226 5.74 | .249 6.32 | .309 7.85 | 95% | 1000 | 27mm | 96 | 106 |
| EXRAD-HVX6X | 6 (133/27) | .194 4.93 | .254 6.45 | .277 7.04 | .337 8.56 | 95% | 1000 | 30mm | 129 | 155 |
| EXRAD-HVX4X | 4 (133/25) | .288 5.79 | .302 7.67 | .325 8.26 | .386 9.80 | 95% | 1000 | 34mm | 177 | 190 |
| EXRAD-HVX2X | 2 (665/30) | .318 8.08 | .393 9.98 | .416 10.57 | .476 12.09 | 95% | 1000 | 42mm | 286 | 255 |
| EXRAD-HVX1X | 1 (779/30) | .346 8.79 | .446 11.33 | .469 11.91 | .529 13.44 | 95% | 1000 | 47mm | 338 | 293 |
| EXRAD-HVX1/0X | 1/0 (1007/30) | .390 9.91 | .490 12.45 | .518 13.16 | .598 15.19 | 95% | 1000 | 53mm | 440 | 339 |
| EXRAD-HVX2/0X | 2/0 (1254/30) | .438 11.13 | .548 13.92 | .576 14.63 | .656 16.66 | 95% | 1000 | 58mm | 552 | 390 |
| EXRAD-HVX3/0X | 3/0 (1615/30) | .475 12.07 | .585 14.86 | .613 15.57 | .693 17.60 | 95% | 1000 | 62mm | 652 | 451 |
| EXRAD-HVX4/0X | 4/0 (2107/30) | .602 15.29 | .712 18.08 | .740 18.80 | .828 21.03 | 95% | 1000 | 74mm | 869 | 529 |

CHAMPLAIN CABLE



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| EXRAD HVFX | | | | |
|---|---|---|---|---|
| **Property / Attribute** | | | **SAE J1127 STX Req.** | **EXRAD HVFX 6 AWG Typical Performance** |
| **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$^0$C | -70$^0$C |
| Temperature Rating | 240 Hours @180$^0$C heat aging | | 155$^0$C | 180$^0$C |
| Temperature Rating | 3000 Hours @150$^0$C | | 125$^0$C | 150$^0$C |
| **Mechanical Properties** | | | | |
| Tensile | Minimum psi | | 1500 | 3300 |
| 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$^0$C 100 pphm no cracks | | Pass | Pass |
| **Fluids** | | | | |
| Engine Oil | ASTM D471, IRM-902 | 50 +/-3 $^0$C | 15% Max. | 1.60% |
| Gasoline | ASTM D471 Ref. Fuel C | 23 +/-5 $^0$C | 15% Max. | <1% |
| Brake Fluid | SAE-J-1703 | 50 +/-5 $^0$C | None | <1% |
| Ethanol | 85% Ethanol + 15% ASTM D471, Ref. Fuel C | 23 +/-5 $^0$C | 15% Max. | <1% |
| Diesel Fuel | ASTM D471, 90% IRM-903 + 10% p-xylene | 23 +/-5 $^0$C | 15% Max. | 1.80% |
| Power Steering | ASTM D471, IRM-903 | 50 +/-3 $^0$C | 30% Max. | 1.20% |
| Auto Transmission | Citgo #33123 SAE-J311 | 50 +/-3 $^0$C | 25% Max. | 5.30% |
| Methanol | | | 25% Max. | <1% |
| Engine Coolant | 50% Ethylene Glyco + 50% distilled Water | 50 +/-3 $^0$C | 15% Max. | 0% |
| Battery Acid | $H_2SO_4$ Specific Gravity = 1.260 +/- .005 | 23 +/-5 $^0$C | 5% Max. | <1% |



**Manufacturing Locations**

**Colchester, Vermont**

**El Paso, Texas**

**www.champcable.com**