EXAR® 180

UL 3740 CSA AWM
180°C 600 Volts

Champlain Cable announces **Exar® 180,** the **first Class H**, 600 volt, irradiated cross-linked wire. Exar 180 is a **lower cost**, **thin** and flexible insulated hookup wire. Why pay the higher cost of fluoropolymer or silicone insulated wires? Exar 180 can cost effectively **replace** wire with **FEP, Tefzel** and **TFE** or **braided silicone rubber** insulations. Irradiation cross-linking assures this insulation will not melt or flow at soldering temperatures. It has excellent mechanical strength, cut through resistance and outstanding chemical and solvent resistance. Exar 180 processes very well on automated high speed cut and strip equipment. Unlike TFE or FEP, Exar 180 is easy to print. Exar 180 is **the** next generation of **high temperature insulation systems**.

Benefits and Features

Lower Cost Effective Replacement of Fluoropolymer and Braided Silicone Insulation
Flexible
Class H Rating, Suitable for Class N Systems
Superior Processing
Outstanding Chemical and Solvent Resistance
Easy to Print and Pot
RoHS Compliant

Applications

Including but not limited to:

Motors	Lighting Devices
Appliances	Electronic Devices
Heaters	Thermal Sensors
Thermal Protectors	Medical Electronics
Transformers	Generators

Part Number	Standard Conductors Tinned Copper	Nom. Dia of Conductor in.	mm.	Insulation Thickness in.	mm.	Nom. OD in.	mm.	Finished Weight (lbs/mft)	Ampacity
180-28/XX-B0	28 (7/36)	.015	.38	.016	.41	.049	1.25	1.40	1
180-26/XX-B0	26 (7/34)	.019	.48	.016	.41	.051	1.30	1.80	4
180-26/XX-E0	26 (19/38)	.020	.51	.016	.41	.053	1.35	1.87	4
180-24/XX-B0	24 (7/32)	.024	.61	.016	.41	.056	1.42	2.43	8
180-24/XX-E0	24 (19/36)	.024	.61	.016	.41	.057	1.45	2.48	8
180-22/XX-B0	22 (7/30)	.030	.76	.016	.41	.062	1.58	3.40	15
180-22/XX-E0	22 (19/34)	.031	.79	.016	.41	.063	1.60	3.51	15
180-20/XX-B0	20 (7/28)	.038	.97	.016	.41	.070	1.78	4.89	19
180-20/XX-E0	20 (19/32)	.038	.97	.016	.41	.071	1.80	5.10	19
180-18/XX-TT	18 (7/.0152)	.046	1.17	.016	.41	.082	2.08	8.46	26
180-18/XX-B0	18 (7/.0152)	.045	1.14	.016	.41	.077	1.96	6.55	26
180-18/XX-D0	18 (19/.0092)	.045	1.14	.016	.41	.077	1.96	6.45	26
180-16/XX-F0	16 (19/.0117)	.058	1.47	.016	.41	.092	2.34	9.99	33
180-14/XX-H0	14 (41/30)	.071	1.85	.016	.41	.107	2.72	15.07	50
180-12/XX-J0	12 (65/30)	.089	2.26	.016	.41	.121	3.07	23.08	64
180-10/XX-J0	10 (65/28)	.111	2.81	.017	.43	.145	3.68	34.25	85
180-08/XX-X0	8 (84/27)	.147	3.73	.024	.61	.195	4.95	64.15	115
180-06/XX-X0	6 (84/25)	.183	4.65	.024	.61	.231	5.87	97.46	160
180-04/XX-L0	4 (133/25)	.263	6.68	.024	.61	.311	7.90	150.00	205
180-02/XX-M0	2 (259/26)	.323	8.20	.024	.61	.371	9.42	231.00	274
180-01/XX-M0	1 (259/25)	.372	9.44	.030	.76	.432	10.97	295.00	319
180-/1/XX-M0	1/0 (259/24)	.424	10.77	.030	.76	.484	12.29	368.00	369
180-/2/XX-M0	2/0 (259/23)	.456	11.81	.030	.76	.515	13.08	458.00	429
180-/3/XX-M0	3/0 (259/22)	.520	13.21	.030	.76	.581	14.78	577.00	498
180-/4/XX-M0	4/0 (259/21)	.586	14.88	.030	.76	.646	16.41	720.00	579

CHAMPLAIN CABLE
Champlain Cable Corporation
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* Ampacity 150°C rated single-insulated conductor in free air at 40°C ambient air temperature

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PROPERTIES		EXAR® 180
Approvals / Listings:		
UL		UL 3740
CSA		AWM 180°C 600V
Physical: *		
Temperature Rating		180 °C
Voltage Rating (Vrms)		600V
Flexibility - 7 days @ 213 °C		Pass
Cold Bend - 4h @ -40°C		Pass
Sand paper Abrasion (SAE J-1128) 350 mm required		1400 mm
Scrape Abrasion (ISO 6722, 0.45 mm cord)		818 cycle
Tensile Strength: *		
Unaged		6073 PSI
Retention after 7 days @ 213 °C		85%
Elongation: *		
Unaged		410%
Retention after 7 days @ 213 °C		110%
Flame Test: *		
UL Vertical – VW-1		Pass
Chemical Resistance		
Acetone	swell@23°C**	0%
Acid - H2SO4 S.G. 1.260 5%	swell@23°C**	0%
Engine Oil – ASTM D-471 IRM-902	swell@115°C**	0%
Benzene	swell@23°C/24h	0%
Epoxy	swell@23°C/24h	<1%
Gasoline – ASTM D-471 Fuel C	swell@23°C**	0%
Methanol	swell@23°C/24h	0%
Toluene	swell@23°C/24h	0%
Transmission oil	swell@150°C/720h	<2%
Xylene	swell@23°C/24h	<1%
Electrical: *		
Dielectric Constant D150/100MHz		3.5
Dielectric breakdown strength (Vrms)		19,000
Oxygen Index: (D2868 Standard)		42

* Properties are tested to UL 758 and UL 1581.
** Percent swell SAE J-1128 TXL

Test data based on 18 AWG sample

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