ULTREX® XL - Unshielded 3 or 4 Conductors With Ground

3C2(7)ULTREX-XL 600V 1X6GRD ER

Contact
Industrial Cables
Phone: 845-469-2141
USA.IndustrialCable@nexans.com

Part Number: 306886

Type XHHW-2: UL Type TC or TC-ER, 600 V, 90°C dry / wet rated – LEAD FREE

STANDARDS

National ICEA S-73-532; ICEA S-95-658; UL 1277; UL 44

DESCRIPTION

Applications

Nexans 600 V ULTREX® XLTray Cables are listed as type TC or TC-ER under UL 1277 Electrical Power and Control Cables. These cables may be installed in wet or dry locations; in cable trays, raceways and open air; and are suitable for exposure to weather, direct burial Class I, Div. 2 (also Zone 2) and Class II, Div. 2 hazardous locations per NEC, as well as Class III, Div. 1 & 2. Cables with three or more conductors are UL listed for exposed runs (ER) when installed in accordance with NEC Article 336.10(7).

Construction

Conductor:
Bare, annealed copper conforming to ASTM B3 and Class B stranded in accordance with ASTM B8, from 14 AWG to 500 kcmil.

Insulation:
Flame-retardant cross-linked polyethylene meeting the requirements for XHHW-2 per UL 44 and the requirements of ICEA S-95-658 for XLPE insulation as standard. Sizes 14 AWG to 8 AWG are VW-1, and sizes 6 AWG and larger are non-VW-1.

Assembly:
Conductors are cabled in concentric layers with interstices filled with suitable fillers, as required. Ground wires, are sized as required by UL 1277 (refer to the applicable product tables for the standard provided). Sizes 14 AWG to 6 AWG have an insulated green ground wire. Sizes 4 AWG and larger have a bare ground wire. A binder tape of synthetic material assembles the core in a tight circular configuration.

Jacket:
UL listed sunlight and moisture resistant, sequentially length marked, black, flame retardant polyvinyl chloride (PVC) material meeting the requirements of UL 1277.

Sample Print Legend:

(mon/year) NEXANS ULTREX-XL 3/C 250 kcmil - 4 AWG GRD CU TYPE TC-ER XHHW-2 (UL) E64956 F SUN RES DIR BUR 600V

Conductor Identification:

14 AWG to 10 AWG: Color coded per Method 1-E2 of ICEA S-73-532

8 AWG to 500 kcmil: Black with number coding per Method 4 of ICEA S-73-532

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Product Features:

- Cables pass UL 1685 and IEEE 383 vertical tray fire tests at 70,000 BTU/hr.
- All cables pass IEEE 1202 and FT4 70,000 BTU/hr flame test.
- All cables pass ICEA T-29-520 210,000 BTU/hr flame test.
- Can be used within industrial establishments where serviced by qualified personnel and not subject to physical damage.
- Continuous operation temperatures of 90°C dry and wet
- Cold bend of -25°C per UL 1277.
- As indicated in UL 1277: The overall jackets of these cables are a “gas/vapor tight continuous sheath” as discussed in NEC Article 501.15(D) & (E).*
- As permitted in NEC Articles 336.10 and 725 for Class 1 circuits.
- As permitted for non-power-limited alarm circuits as defined in NEC Articles 336.10 and 760.27.

CHARACTERISTICS

Construction characteristics	
Number of conductors	3
Conductor material	Copper
Insulation	XLPE
Dimensional characteristics	
Number of strands	7
Conductor diameter	25.0 mm
Nominal cable weight	922 lb/kft
Approximate net weight	1372.3 kg/km
Conductor cross-section (AWG)	2
Electrical characteristics	
Maximum operating voltage	600 V
Usage characteristics	
Maximum operating temperature	90 °C

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ULTREX® XL - UNSHIELDED TRAY CABLE - 3 CONDUCTORS TYPE XHHW-2 WITH GROUND

Type XHHW-2: UL Type TC or TC-ER, 600 V, 90°C dry / wet rated - LEAD FREE

Part Number	Cond. Size	Ground Size	Insulation Thickness		Jacket Thickness		Nominal Diameter over Jacket		Approximate Net Cable Weight		Ampacity
	(AWG or kcmil)	(AWG)	mils	mm	mils	mm	inches	mm	lb/kft	kg/km	amps
611517	12	12	30	0.76	45	1.14	0.465	11.82	145	216	30(1)
295196	10	10	30	0.76	45	1.14	0.524	13.30	205	305	45(1)
306829	8	10	45	1.14	60	1.52	0.665	16.89	323	480	55
306845	6	8	45	1.14	60	1.52	0.769	19.53	451	672	75
306860	4	8	45	1.14	60	1.52	0.818	20.78	595	886	95
------	3	6	45	1.14	80	2.03	0.917	23.28	824	1226	110
306886	2	6	45	1.14	80	2.03	0.989	25.12	922	1372	130
------	1	6	55	1.40	80	2.03	1.093	27.75	1200	1786	150
306894	1/0	6	55	1.40	80	2.03	1.181	30.00	1358	2021	170
306910	2/0	6	55	1.40	80	2.03	1.273	32.33	1663	2474	195
------	3/0	4	55	1.40	80	2.03	1.405	35.59	2156	3209	225
306928	4/0	4	55	1.40	80	2.03	1.541	39.13	2506	3729	260
619114	250	4	65	1.65	80	2.03	1.634	41.51	2941	4376	290
------	300	3	65	1.65	110	2.79	1.800	45.72	3394	5050	320
619338	350	3	65	1.65	110	2.79	1.934	49.12	4103	6105	350
------	400	3	65	1.65	110	2.79	2.021	51.33	4818	7169	380
619148	500	2	65	1.65	110	2.79	2.190	55.63	5670	8438	430

Minimum Bend Radius: 5 x overall diameter installed / 7.5 x overall diameter during installation.

Notes:
• Dimensions and weights shown are nominal values, subject to standard manufacturing tolerances.
• Cables with different conductor counts and bare or insulated grounds are also available.
• Cables are UL listed for exposed runs (ER) when installed in accordance with NEC Article 336.10(7).
• Ampacities are in accordance with NEC Table 310.15(B)(16)
for conductors in a raceway or direct buried at 30°C ambient temperature and 90°C rated conductors.
• For correction factors for different ambient temperatures and ampacities at different conductor temperature ratings see NEC Table 310.15(B)(16).
(1) NEC Article 240.4(D) requires that overcurrent protection not exceed 20 amperes for 12 AWG, and 30 AWG for 10 AWG copper conductors after any correction factors for ambient temperature and number of conductors have been applied. Exceptions to this may be covered in NEC Article 240.4(E) through (G).

SELLING INFORMATION

OPTIONS

The following constructions can be provided on special orders:

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- Cables sized 4 AWG and larger with an insulated ground conductor
- Aluminum alloy conductors in sizes 12 AWG to 1000 kcmil
- Insulated or bare ground wires
- Different conductor identification methods
- Shields of aluminum/mylar tape (with or without a tinned copper drain wire)
- Composite constructions of different sized conductors.
- 2000 volt rated cables with RHH/RHW-2 insulated conductors.

* Use in Hazardous locations:
Please note that no investigation of these cables has been performed regarding the transmission of gases or vapors through the core. When these cables are used in hazardous locations they should be sealed properly as required by the NEC.