



Industrial Cable Products

2nd Edition

TECK90 (CSA)

ACWU90 (CSA)

DriveRx[®] VFD Cable (CSA)

Medium Voltage Armoured (CSA)

CORFLEX[®] MC-HL Instrumentation (UL)

CORFLEX[®] MC-HL & VFD (UL)

September 2025

 **Nexans**
ELECTRIFY THE FUTURE

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600 V Instrumentation Dimensions

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Dimensions

Electrical Data

TECK90 600 V, 1 kV & 5 kV (Unshielded)

DESCRIPTION

Nexans TECK90 Cables are versatile, resistant to mechanical abuse, corrosion resistant, compact and reliable. They can be relocated easily because they are rugged and flexible. Nexans TECK90 cables utilize low acid gas and low flame spread PVC jacket compounds to ensure maximum safety to personnel and equipment in the event of fire.

APPLICATIONS

- Exposed and concealed wiring in 90°C dry or 90°C wet locations and where exposed to the weather (-40°C)
- Ventilated, non-ventilated and ladder type cable trays in wet and dry locations
- Commercial and industrial projects
- Direct earth burial and direct embedding in concrete, masonry or plaster
- Service entrance above or below ground
- Suitable for all hazardous locations including Class I, Division 1 & 2; Class II, Division 1 & 2; and Class III

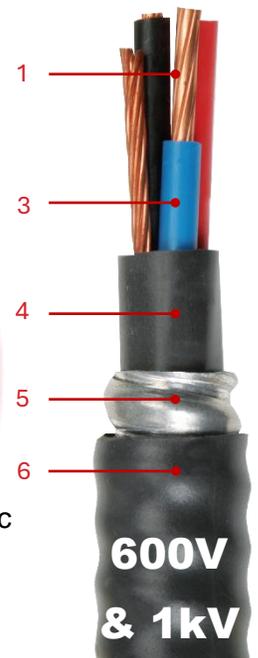
Even in the most demanding industrial and resource industry applications, Nexans TECK90 cables have proven to have a superior service and maintenance record.

CONSTRUCTION CHARACTERISTICS



1. Copper conductors:
 - 14 to 10 AWG - Unilay Compressed Class B (ASTM B8)
 - 8 AWG to 1000 kcmil – Compact (ASTM B496)
2. Conductor Shield: extruded semi-conducting XLPE conductor shield
3. XLPE insulation
4. Black PVC inner jacket
5. Aluminum interlocked armour (AIA)
6. PVC Outer Jacket: Black colour for 600V and 1kV & Orange for 5 kV cables. Outer jacket is sunlight resistant and marked SUN RES

Assembly: conductors are cabled in concentric layers with grounding wire, interstices are filled with suitable non- hygroscopic fillers, as required. A binder tape of synthetic material assembles the core in an essentially round configuration, as required.



CONDUCTOR IDENTIFICATION

- 1 Conductor – Black
- 2 Conductors – Black, White
- 3 Conductors – Red, Black, Blue
- 4 Conductors – Red, Black, Blue, White
- 5+ Conductors (600V) – Black with Number Coding
- 14 AWG to 2 AWG: Coloured Insulation
- 1 AWG to 500 kcmil: Colored Stripes

MINIMUM BEND RADIUS

- Fixed Position: 7 x overall cable diameter
- During Pull: 14 x overall cable diameter

TECK90 600 V, 1 kV & 5 kV (Unshielded)

PRODUCT FEATURES

- CSA listed as Type TECK90 (for cables up to and including 5 kV unshielded)
- CSA listed insulated conductors
- Cables are flame-retardant and pass CSA FT1
- Cables are fire-retardant and pass CSA FT4
- ICEA T-29-520 Fire Test at 210,000 BTU/hr, IEEE 1202, 383 and UL 1685
- Cables are low-acid-gas-emitting per CSA C22.2 No. 2556 and marked AG14
- Cables exhibit a -40°C low temperature rating and can be installed at temperatures lower than -10C with suitable handling precautions
- Temperature rating of 90°C dry and wet
- 130°C emergency rating and 250°C short circuit rating
- Excellent mechanical and physical properties
- Sunlight and oil resistant jacket

STANDARDS

- CSA C22.2 No. 38 – Type RW90 conductors
- CSA C22.2 No. 131 – Type TECK90 Cables
- CSA C22.2 No. 174 – Hazardous Locations

MARKING AND IDENTIFICATION

The outer jackets of Nexans TECK90 cables are printed: (mon/year) NEXANS TECK90 XLPE (-40°C) CSA LL19376 F HL FT4 AG14 SUN RES along with conductor size, number of conductors and sequential metre marking.

OPTIONS

The following constructions can be provided on special orders:

- HAL-FREE FT4-ST1
- Aluminum conductors
- Steel interlock armor
- Extra ground wires
- Special color or number coding
- Specially colored jackets
- Other constructions and combinations

TECK90 600 V – Dimensions

Part Number	# of Cond.	Insulation Thickness	Inner Jacket Thickness	Nominal Diameters			Net Cable Weight	Approx. Copper Content
				Inner Jacket	Armor	Outer Jacket		
		mm	mm	mm	mm	mm	kg/km	kg/km
14 AWG TECK90 600V 14 AWG GROUND - 15 A								
12000132	2	0.76	1.14	9.40	15.24	17.53	291	57
12000133	3	0.76	1.14	9.91	15.75	18.03	327	77
12000134	4	0.76	1.14	11.18	17.27	19.30	369	96
12000135	5	0.76	1.14	11.94	17.78	20.07	409	113
12000136	6	0.76	1.14	13.21	18.80	21.08	453	134
12000137	7	0.76	1.14	13.21	19.30	21.34	490	156
12000138	8	0.76	1.52	15.24	21.08	23.11	568	173
12000113	10	0.76	1.52	17.02	22.86	24.89	653	212
12000139	12	0.76	1.52	17.78	23.62	25.65	722	250
12000103	15	0.76	1.52	19.05	25.15	27.69	823	311
12000129	20	0.76	1.52	21.59	28.19	30.23	1095	404
12000128	25	0.76	2.03	24.89	31.50	33.78	1343	501
12000088	30	0.76	2.03	26.92	33.27	35.56	1526	597
12000106	40	0.76	2.03	29.97	36.32	38.61	1836	790
12000105	50	0.76	2.03	32.51	39.12	41.66	2211	982
12 AWG TECK90 600V 14 AWG GROUND - 20 A								
12000140	2	0.76	1.14	10.41	16.26	18.29	333	80
12000141	3	0.76	1.14	10.92	16.76	19.05	382	111
12000142	4	0.76	1.14	12.70	18.54	20.83	441	141
12000143	6	0.76	1.52	15.24	21.08	23.11	594	203
12000112	8	0.76	1.52	16.76	22.35	24.64	699	264
12000144	10	0.76	1.52	18.80	25.15	27.43	818	325
12000130	12	0.76	1.52	19.81	26.42	28.70	911	387
12000000	15	0.76	1.52	21.34	27.94	30.23	1159	478
12000087	20	0.76	2.03	24.64	31.24	33.53	1478	632
10 AWG TECK90 600V 12 AWG GROUND - 30 A								
12000309	2	0.76	1.14	11.43	17.27	19.56	403	128
12000145	3	0.76	1.14	12.19	18.03	20.32	475	176
12000074	4	0.76	1.14	14.22	19.81	22.10	596	225
12000206	6	0.76	1.52	17.02	22.86	25.15	757	323
12002277	8	0.76	1.52	18.17	24.27	26.47	907	420
12000107	10	0.76	1.52	21.34	27.94	30.23	1172	518
12002294	12	0.76	2.03	22.60	29.59	31.99	1378	615
12000109	20	0.76	2.03	27.94	34.54	36.83	1961	1005
Notes:								
- Dimensions and weights shown are nominal and approximate values, subject to standard manufacturing tolerances. Refer to detailed datasheet for more accurate values.								
- Ampacity in accordance with the Canadian Electrical Code, Part 1.								

TECK90 1 kV – Dimensions

Part #	# of Cond	Conductor Size		Insul. Thick	Inner Jacket Thick.	Approximate Diameters			Net Cable Weight	Copper Content
		Power AWG/kcmil	Bonding AWG			Inner Jkt	Armor	Outer Jkt		
		mm	mm	mm	mm	mm	kg/km	kg/km		
TECK90 1 kV										
12000793	1	4/0	3	2.03	1.14	21.53	28.51	30.92	1887	1228
12000505	1	250	2	2.28	1.52	24.26	31.24	33.65	2200	1429
12000506	1	350	1	2.29	1.52	27.18	34.04	36.83	2830	2062
12000507	1	500	1/0	2.29	1.52	30.48	37.59	40.39	3718	2864
12000794	1	750	2/0	2.29	1.52	35.81	42.67	45.97	5212	4189
12000213	2	12	14	1.14	1.14	11.68	17.78	20.07	369	80
12009936	2	10	12	1.14	1.14	12.76	18.85	21.05	449	128
12000304	2	8	10	1.14	1.52	14.99	20.83	23.62	578	202
12000082	2	6	8	1.52	1.52	18.29	24.13	26.92	782	323
12014907	2	4	8	1.52	1.52	20.12	27.10	29.51	1082	457
12014861	2	4/0	4	2.03	2.03	36.49	43.48	46.39	3476	2179
12000302	3	12	14	1.14	1.14	12.70	18.80	20.83	425	112
12000301	3	10	12	1.14	1.52	14.73	20.57	22.61	560	176
12000075	3	8	10	1.14	1.52	16.00	21.84	23.88	690	281
12000076	3	6	8	1.52	1.52	19.56	26.42	28.70	955	446
12000077	3	4	8	1.52	2.03	22.86	29.97	32.26	1404	665
12000303	3	3	6	1.52	2.03	24.38	31.50	33.78	1648	866
12000078	3	2	6	1.52	2.03	26.16	33.02	35.31	1890	1056
12000079	3	1	6	2.03	2.03	29.97	37.08	39.37	2293	1303
12000080	3	1/0	6	2.03	2.03	32.00	38.86	41.91	2717	1609
12000081	3	2/0	6	2.03	2.03	34.29	41.15	43.94	3175	1997
12000098	3	3/0	4	2.03	2.03	36.83	43.94	46.74	3819	2558
12000099	3	4/0	4	2.03	2.03	39.88	46.23	49.02	4620	3172
12000100	3	250	4	2.29	2.79	44.96	53.85	57.15	5535	3716
12000101	3	350	3	2.29	2.79	50.29	59.18	62.48	7288	5171
12000102	3	500	3	2.29	2.79	56.90	66.04	70.10	9658	7278
12009937	4	12	14	1.14	1.52	14.24	20.34	22.54	529	141
12009938	4	10	12	1.14	1.52	15.76	21.86	24.06	650	225
12000310	4	8	10	1.14	1.52	17.53	23.37	26.16	817	359
12000110	4	6	8	1.52	2.03	22.86	29.72	32.51	1318	568
12000502	4	4	8	1.52	2.03	25.40	32.26	34.29	1692	862
12000256	4	3	6	1.52	2.03	27.69	34.54	36.58	2002	1115
12000111	4	2	6	1.52	2.03	29.21	36.07	38.10	2317	1369
12009947	4	1/0	6	2.03	2.03	34.73	41.71	44.62	3361	2101
12000104	4	2/0	6	2.03	2.03	37.85	44.70	47.50	3960	2620
12000452	4	3/0	4	2.03	2.03	40.89	46.99	49.78	4897	3345
12000456	4	4/0	4	2.03	2.79	45.47	51.56	54.36	6197	4165
12000453	4	250	4	2.29	2.79	49.53	58.42	61.47	7054	4888
12000217	4	350	3	2.29	2.79	55.63	64.52	67.31	9228	6812
12000454	4	500	3	2.29	2.79	62.99	71.88	76.71	12332	9621

Notes:
- Dimensions and weights shown are nominal and approximate values, subject to standard manufacturing tolerances. Refer to detailed datasheet for more accurate values.
- Ampacity in accordance with the Canadian Electrical Code, Part 1.

TECK90 5 kV – Dimensions

Part #	# of Cond	Conductor Size		Insul. Thick	Inner Jacket Thick.	Approximate Diameters			Net Cable Weight	Copper Content
		Power AWG/kcmil	Bonding AWG			Inner Jkt	Armor	Outer Jkt		
		mm	mm	mm	mm	mm				
TECK90 5 kV										
12000250	1	500	1/0	2.29	1.52	31.75	38.61	41.66	3859	2725
12001573	3	6	8	2.29	2.03	26.67	33.78	36.58	1358	446
12000216	3	4	8	2.29	2.03	29.21	36.07	38.86	1665	665
12000273	3	2	6	2.29	2.03	32.26	39.12	42.42	2167	1056
12000293	3	1	6	2.29	2.03	34.04	40.89	44.20	2526	1303
12000258	3	1/0	6	2.29	2.03	34.80	41.66	44.45	2908	1701
12000274	3	2/0	6	2.29	2.03	38.10	45.21	48.26	3376	1997
12000275	3	4/0	4	2.29	2.03	43.69	52.58	56.13	4996	3172
12000276	3	250	4	2.29	2.79	47.75	56.64	60.20	5752	3716
12000277	3	350	3	2.29	2.79	53.09	61.98	65.53	7534	5171
12000278	3	500	3	2.29	2.79	59.94	68.83	72.14	9930	7278
Notes:										
- Dimensions and weights shown are nominal and approximate values, subject to standard manufacturing tolerances. Refer to detailed datasheet for more accurate values.										
- Ampacity in accordance with the Canadian Electrical Code, Part 1.										

ACWU90, 600 V

DESCRIPTION

Nexans ACWU90 cable is rated 600V and available in 1-, 3-, or 4-conductor constructions. This cable consists of sunlight resistant RW90 aluminum conductors, a bare aluminum bonding wire, an interlocked aluminum armour and a sunlight resistant PVC outer jacket. Single conductor cables have aluminum concentric bonding wires.

APPLICATIONS

- Services, feeders, branch circuits, indoors and outdoors
- Cable tray, raceway, direct burial or concrete encasement
- ALL hazardous locations (8 AWG and larger)

CONSTRUCTION CHARACTERISTICS

1. AA-8000 aluminum conductors to ASTM B801 or B836.
2. RW90 XLPE Insulation
3. Bare aluminum bonding wire
Single conductor constructions use aluminum concentric bonding wires.
4. Aluminum interlocked armour
5. Black PVC outer jacket



PRODUCT FEATURES

- Excellent mechanical and physical properties
- Marked Sunlight Resistant “SR”
- 90°C to -40°C
- Marked HL (8 AWG and larger)
- FT4

PHASE IDENTIFICATION

Single conductor – Black
 Three conductor – Black, Red, White
 Four conductor – Black, Red, Blue, White
Sizes 3/0 AWG and larger use coloured stripes.

MARKING

NEXANS- F XX AWG/XC AL ACM ACWU90 XLPE (-40C) CSA LL19376 600V HL FT4 AG14
 SUN RES

OPTIONAL

HAL-FREE FT4-ST1

ACWU90, 600 V - Dimensions

Part Number	Size AWG or kcmil	Insulation Thickness mm	Bonding Wire Size AWG or kcmil	Approximate Diameter		Approximate Net Cable Weight kg/km	Ampacity* (amps) 30°C Ambient
				Armour	PVC Jacket		
	mm	mm					
SINGLE STRANDED CONDUCTOR (WITH CONCENTRIC BONDING WIRES)							
12002653	250	1.65	1	26.6	29.0	928	315
12000991	350	1.65	1/0	29.2	31.4	1115	395
12000992	500	1.65	2/0	31.3	34.8	1422	485
12000995	600	2.03	2/0	35.0	38.1	1704	545
12000996	750	2.03	3/0	36.8	40.6	1961	620
12000994	1000	2.03	3/0	41.3	44.4	2448	750
*Ampacity in accordance with Table 3 (75C column) of the Canadian Electrical Code.							
THREE STRANDED CONDUCTOR (PLUS BONDING WIRE)							
12000980	6	1.14	8	20.6	23.6	500	50 [#]
12000981	4	1.14	6	23.1	25.9	618	65
12000984	2	1.14	6	25.9	28.7	771	90 [#]
12000985	1	1.40	4	28.9	31.7	941	100
12000986	1/0	1.40	4	31.0	33.5	1074	120
12000987	2/0	1.40	4	33.0	35.8	1235	135
12000988	3/0	1.40	4	35.8	38.3	1444	155
12000989	4/0	1.40	4	38.6	41.9	1746	180 [#]
12000990	250	1.65	2	42.2	45.5	2165	205
12001434	300	1.65	2	45.7	48.8	2661	230
12001008	350	1.65	2	48.3	51.6	2958	250
12000993	500	1.65	1	54.9	58.2	3767	310
*Ampacity in accordance with Table 4 (75C column) of the Canadian Electrical Code.							
# For 3-wire 120/240 V and 120/208 V service conductors for single dwellings, or for feeder conductors supplying single dwelling units of row housing, of apartments and similar buildings, and sized in accordance with Rules 8-200(1), 8-200(2) and 8-202(1), the allowable ampacity for sizes 6 AWG, 2 AWG and 4/0 AWG shall be 60 A, 100 A and 200 A respectively. In this case the 5% adjustment Rule 8-106(1) cannot be applied.							
FOUR STRANDED CONDUCTOR (PLUS BONDING WIRE)							
12000982	4	1.14	6	25.4	28.7	774	65
12002449	2	1.14	6	28.2	30.6	905	90
12001821	1	1.40	4	32.0	34.8	1143	100
12001851	4/0	1.40	4	42.4	45.7	2168	180 [#]
12001882	250	1.65	2	47.2	50.5	2897	205
12001880	350	1.65	2	53.0	56.3	3612	250
12001881	500	1.65	1	60.4	64.5	4834	310
*Ampacity in accordance with Table 4 (75C column) of the Canadian Electrical Code, assuming the fourth conductor is the neutral of a balanced 3 phase, 4 wire system.							
# For 3-wire 120/240 V and 120/208 V service conductors for single dwellings, or for feeder conductors supplying single dwelling units of row housing, of apartments and similar buildings, and sized in accordance with Rules 8-200(1), 8-200(2) and 8-202(1), the allowable ampacity for sizes 6 AWG, 2 AWG and 4/0 AWG shall be 60 A, 100 A and 200 A respectively. In this case the 5% adjustment Rule 8-106(1) cannot be applied.							

DriveRx[®] VFD Cable, 1 kV

DESCRIPTION

Nexans DriveRx[®] VFD cable is rated 1 kV and available in 3-conductor constructions with RW90 conductors, a continuously welded and corrugated aluminum sheath and a sunlight resistant outer PVC jacket. They are recommended for industrial and commercial variable frequency drive installations including outdoor wet locations.

The three-conductor construction virtually eliminates magnetic fields outside of the cable, so induced voltage from one power cable to another or cross talk to control/ instrumentation cables is also reduced. The continuous aluminum sheath acts as an effective shield for high frequency "noise" that may still be produced and could affect adjacent control and instrumentation cables. This sheath, in combination with the three grounding conductors, also acts as a long-term low resistance path to the ground. This will eliminate standing voltages that may be created on the motor frame and also reduce bearing currents due to this standing voltage or to common mode voltage.

APPLICATIONS

- Connection between variable frequency drive and motor
- Services, feeders, branch circuits, indoors and outdoors
- Cable tray, raceway, direct burial or concrete encasement
- ALL hazardous locations

STANDARDS

- CSA C22.2 No. 123
- CSA C22.2 No. 174

CONSTRUCTION CHARACTERISTICS

1. Copper conductors Class B stranded to ASTM B8 or ASTM B496.
2. RW90 XLPE Insulation
3. 3 symmetrically placed ground wires
4. Non-hygroscopic fillers
5. Binder tape of synthetic material
6. Continuously welded and corrugated aluminum sheath
7. Black PVC outer jacket

PRODUCT FEATURES

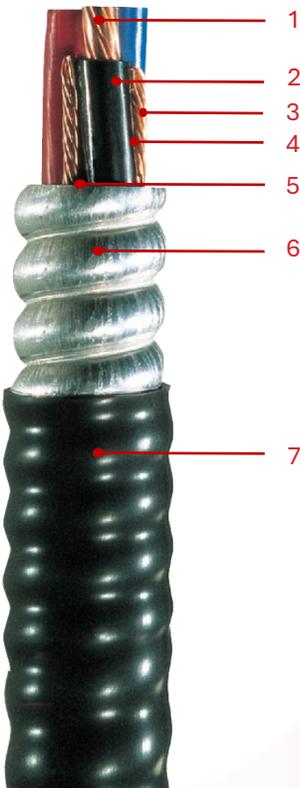
- Excellent mechanical and physical properties
- Excellent electrical shielding properties
- Marked Sunlight Resistant "SR"
- 90°C to -40°C
- Marked HL
- FT4

PRODUCT BENEFITS

- Minimizes net injected ground current into drive system ground bus
- Minimizes common-mode and bearing currents
- Minimizes motor frame standing voltage
- Minimizes cross-talk
- Best possible ground path

OPTIONAL

HAL-FREE FT4-ST1



DriveRx[®] VFD Cable, 1 kV – Dimensions

Part Number	Size AWG or kcmil	Bonding Conductor ⁵	Cable Core	Aluminum Sheath	PVC Jacket	Approx. Net Cable Weight ¹	Ampacity (A) 30°C Ambient ^{2, 4}		
			Nominal Diameter	Nominal Diameter	Nominal Diameter		60°C	75°C	90°C
		# x AWG	mm	mm	mm	kg/km			
12001802	12 (7) ³	3 x #18	9.9	15.0	17.7	350	20	25	30
12001806	10 (7) ³	3 x #16	11.2	15.8	18.4	425	30	35	40
12001812	8 (7)	3 x #14	12.3	19.1	21.8	590	40	50	55
12001815	6 (7)	3 x #12	15.9	21.1	23.7	805	55	65	75
12014997	4(7)	3 x #12	18.6	24.5	27.0	1102	70	85	95
12001224	2 (7)	3 x #10	21.3	29.5	32.1	1665	95	115	130
12014998	1(18)	3 x #10	25.6	34.0	36.6	2103	110	130	145
12014999	1/0(18)	3 x #10	27.9	35.6	38.3	2433	125	150	170
12001816	2/0 (18)	3 x #10	29.4	39.6	43.0	2990	145	175	195
12001817	4/0 (18)	3 x #8	34.9	45.0	48.4	4320	195	230	260
12001223	250 (36)	3 x #8	38.5	49.6	52.9	4975	215	255	290
12001818	350 (36)	3 x #8	43.7	52.1	55.5	6460	260	310	350
12001819	500 (36)	3 x #6	50.3	60.2	64.4	9030	320	380	430

Notes:

¹ Where stated, “nominal” and “approximate” values are provided for information purposes only and are subject to standard manufacturing tolerances.

² Based on CE Code Table 2, for not more than 3 current carrying conductors in a cable or raceway.

³ The overcurrent protection shall not exceed 20 amperes for 12 AWG, and 30 amperes for 10 AWG after any corrections factors for ambient temperature and number of conductors have been applied (CE Code Rule 14-104(2)), or as provided for by other Rules of the CE Code.

⁴ The maximum conductor temperature (used to determine the maximum conductor ampacity) shall be based on the lowest temperature rating of the electrical equipment, any wire connector, or cable (CE Code Rule 4-006).

⁵ Size of each bonding conductor. Total area of 3 conductors meets or exceeds bonding conductor size in CE Code Table 16.

Medium Voltage Armoured, 5 – 35 kV

DESCRIPTION

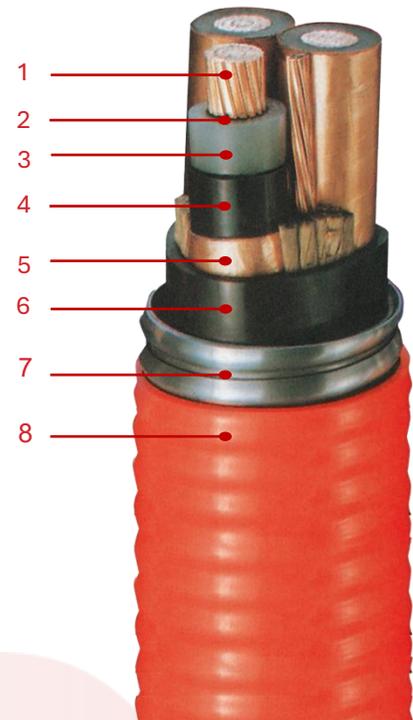
Nexans Medium Voltage (MV) Armoured Power Cables are rated 5 to 35 kV and are available as single- or three-conductor cables with 105°C rated tree retardant cross-linked polyethylene (TR-XLPE). They are versatile, resistant to mechanical abuse and corrosion and are FT1 & FT4 rated. Nexans MV Armoured cables utilize low flame spread PVC jacket compounds to ensure maximum safety to personnel and equipment in the event of fire.

APPLICATIONS

- Wide range of applications, including ALL hazardous locations
- Services, feeders, branch circuits, indoors and outdoors

CONSTRUCTION CHARACTERISTICS

1. Conductor:
 - Copper:** Class B stranded to ASTM B8 or ASTM B496.
 - Aluminum:** Class B stranded to ASTM B231 or ASTM B400.
 2. Conductor shield: extruded thermosetting semi-conducting layer
 3. TR-XLPE Insulation rated 105C
 4. Insulation shield: extruded thermosetting semi-conducting layer
 5. Metallic shield: Flat copper tape or wire shield
 6. PVC inner jacket
 7. Aluminum interlocked armour
 8. PVC outer jacket – sunlight resistant
- Colours: **Orange** – 5kV 133% / 8kV 100%
Red 15 kV 133%
Black – 25kV 133%, 28kV 133%, 35kV 133%
 Other colours jackets available upon request



Assembly: insulated conductors are cabled with bare copper grounding conductor(s) and interstices are filled with suitable non-hygroscopic fillers, as required. A binder tape of synthetic material assembles the core in an essentially round configuration.

Conductor Identification: 3c designs employ red, black, and blue marker threads.

PRODUCT FEATURES

- Marked Sunlight Resistant “SR”
- 105°C to -40°C
- FT4

STANDARDS

CSA C68.10
 CSA C22.2 No. 174

MARKING AND IDENTIFICATION

The outer jackets of Nexans MV Armoured power cables are printed: (month/year) NEXANS number of conductors, conductor size, conductor material, “CPT” TRXLPE (CSA), voltage rating, nominal insulation thickness, LTGG SR FT1 FT4 HL along with lightning bolt symbol, and sequential meter marking.

MV Armoured 5 kV 133% – Dimensions

Part Number	Cond Size	Approximate Diameters			Metallic Shield Type*	Grd Wire Size	Approximate Diameters			Jkt Col	Approx. Net Cable Wgt
		Cond	Insul	Insul Shield			Inner Jkt	Armor	Outer Jkt		
	AWG or kcmil	mm	mm	mm		AWG	mm	mm	mm	kg/km	
5 kV 133%											
1C Copper											
62001463	1/0	8.53	15.49	16.76	WS	4	23.37	30.48	32.77	ORG	1492
62001414	2/0	9.55	16.51	17.78	WS	4	24.38	31.50	33.78	ORG	1686
62001383	3/0	10.75	17.53	19.05	WS	3	25.65	32.51	35.05	ORG	1908
62001190	4/0	12.07	19.05	20.32	WS	3	26.92	34.04	36.32	ORG	2164
62002424	250	13.21	20.32	21.59	WS	2	28.45	35.56	37.85	ORG	2464
62003452	350	15.65	22.86	24.13	WS	1	30.99	38.10	40.39	ORG	3100
62002517	500	18.69	25.91	27.18	WS	1/0	34.80	41.66	44.70	ORG	4091
62002574	750	23.06	30.48	31.75	WS	2/0	39.37	48.01	51.31	ORG	5684
1C Aluminum											
3C Copper											
62008030	4	5.41	12.19	13.72	CTS200L	8	34.29	41.15	44.20	BLK	2196
12014886	2	6.81	13.72	14.99	CTS200L	6	37.34	44.20	47.24	ORG	2748
12010003	2	6.81	13.72	14.99	CTS200L	6	37.34	44.20	47.24	BLK	2748
12014887	1	7.59	14.48	15.75	CTS250L	6	38.86	47.75	50.80	ORG	3204
12014885	1/0	8.53	15.49	16.76	CTS250L	6	41.15	50.04	53.09	ORG	3622
12003281	1/0	8.53	15.49	16.76	CTS250L	6	41.15	50.04	53.09	YEL	3622
12014884	2/0	9.55	16.51	17.78	CTS250L	6	44.70	53.59	56.64	ORG	4311
12003282	2/0	9.55	16.51	17.78	CTS250L	6	44.70	53.59	56.64	YEL	4311
12014883	3/0	10.75	17.53	19.05	CTS250L	4	47.24	56.13	59.18	ORG	4997
12003283	3/0	10.75	17.53	19.05	CTS250L	4	47.24	56.13	59.18	YEL	4997
12014801	4/0	12.07	19.05	20.32	CTS200L	4	51.82	60.71	64.26	ORG	6055
12003284	4/0	12.07	19.05	20.32	CTS200L	4	51.82	60.71	64.26	YEL	6055
12014961	250	13.21	20.32	21.59	CTS250L	4	53.09	61.98	65.53	ORG	6592
12003285	250	13.21	20.32	21.59	CTS250L	4	53.09	61.98	65.53	YEL	6592
12014802	350	15.65	22.86	24.13	CTS250L	3	59.94	68.83	72.39	ORG	8666
12003286	350	15.65	22.86	24.13	CTS250L	3	59.94	68.83	72.39	YEL	8666
12015042	500	18.69	25.91	27.18	CTS250L	3	65.02	73.91	77.47	RED	11161
12014803	500	18.69	25.91	27.18	CTS250L	3	65.02	73.91	77.47	ORG	11161
12003287	500	18.69	25.91	27.18	CTS250L	3	65.02	73.91	77.47	YEL	11161
12015020	750	23.06	30.48	31.75	CTS250L	2	76.20	85.09	89.41	ORG	15584
3C Aluminum											
12015137	250	13.21	20.32	21.59	CTS250L	4	53.09	61.98	65.53	ORG	4169
12015095	350	15.65	22.86	24.13	CTS250L	4	58.67	67.56	71.12	ORG	5007

See Notes on Page 19

MV Armoured 15 kV 133% – Dimensions

Part Number	Cond Size	Approximate Diameters			Metallic Shield Type*	Grd Wire Size	Approximate Diameters			Jkt Col	Approx. Net Cable Wgt
		Cond	Insul	Insul Shield			Inner Jkt	Armor	Outer Jkt		
	AWG or kcmil	mm	mm	mm		AWG	mm	mm	mm	kg/km	
15 kV 133%											
1C Copper											
62002637	1/0	8.53	20.57	21.84	WS	4	28.45	35.56	37.85	RED	1763
12009934	2/0	9.55	21.59	22.86	WS	4	29.72	36.83	39.12	RED	1943
62002716	3/0	10.75	22.61	24.13	WS	3	30.73	37.59	40.13	RED	2195
12000750	4/0	12.07	24.13	25.40	CTS20OL	-	29.72	36.58	39.12	RED	2275
62008050	4/0	12.07	24.13	25.40	WS	3	32.00	39.12	42.16	RED	2524
12015054	250	13.21	25.40	26.67	CTS25OL	-	30.73	37.85	39.88	RED	2434
12000751	350	15.75	27.94	29.21	CTS25OL	-	33.27	40.39	43.43	RED	3123
12000752	500	18.80	30.99	32.26	CTS20OL	-	36.32	43.43	46.48	RED	3961
62005733	750	23.11	35.56	36.83	CTS25OL	-	40.89	49.78	52.83	RED	5491
62003455	750	23.11	35.56	36.83	WS	2/0	45.97	54.86	57.91	RED	6267
62000036	1000	26.92	39.37	40.64	WS	2/0	50.29	59.18	62.74	RED	7677
1C Aluminum											
62009143	2	6.81	16.51	17.78	WS	6	25.40	32.26	34.80	RED	1205
12014869	750	24.59	37.11	38.46	CTS25OL	-	42.47	51.36	54.41	YEL	3214
12014881	750	24.59	37.11	39.28	WS	1/0	48.11	57.00	60.05	YEL	3618
3C Copper											
12000803	2	6.81	18.80	20.07	CTS25OL	6	51.31	60.20	63.75	RED	4168
12014928	2	6.81	18.80	20.07	CTS15OL	6	51.31	60.20	63.75	RED	4147
12014929	2	6.81	18.80	20.07	CTS15GP	6	51.31	60.20	63.75	RED	4107
12000804	1	7.59	19.56	20.83	CTS25OL	6	52.83	61.72	65.28	RED	4567
12014930	1	7.59	19.56	20.83	CTS15OL	6	52.83	61.72	65.28	RED	4546
12014931	1	7.59	19.56	20.83	CTS15GP	6	52.83	61.72	65.28	RED	4504
12000805	1/0	8.53	20.57	21.84	CTS25OL	6	55.12	64.01	67.56	RED	5046
12005462	1/0	8.53	20.57	21.84	CTS25OL	6	55.12	64.01	67.56	BLK	5046
12014932	1/0	8.53	20.57	21.84	CTS15OL	6	55.12	64.01	67.56	RED	5023
12014933	1/0	8.53	20.57	21.84	CTS15GP	6	55.12	64.01	67.56	RED	4981
12000806	2/0	9.55	21.59	22.86	CTS25OL	6	57.15	66.04	69.60	RED	5635
12014934	2/0	9.55	21.59	22.86	CTS15OL	6	57.15	66.04	69.60	RED	5613
12014935	2/0	9.55	21.59	22.86	CTS15GP	6	57.15	66.04	69.60	RED	5568
12009981	3/0	10.75	22.61	24.13	CTS25OL	4	59.69	68.58	72.14	RED	6223
12014936	3/0	10.75	22.61	24.13	CTS15OL	4	59.69	68.58	72.14	RED	6199
12014937	3/0	10.75	22.61	24.13	CTS15GP	4	59.69	68.58	72.14	RED	6152

...CONTINUED...

MV Armoured 15 kV 133% – Dimensions

...CONTINUED...

12000807	4/0	12.07	24.13	25.40	CTS25OL	4	62.74	71.63	75.18	RED	7168
12014938	4/0	12.07	24.13	25.40	CTS15OL	4	62.74	71.63	75.18	RED	7143
12014939	4/0	12.07	24.13	25.40	CTS15GP	4	62.74	71.63	75.18	RED	7093
12000808	250	13.21	25.40	26.67	CTS25OL	4	65.53	74.42	77.98	RED	7962
12014940	250	13.21	25.40	26.67	CTS15OL	4	65.53	74.42	77.98	RED	7936
12014941	250	13.21	25.40	26.67	CTS15GP	4	65.53	74.42	77.98	RED	7883
12000779	350	15.65	27.94	29.21	CTS15OL	3	70.61	79.50	83.82	RED	9976
12014942	350	15.65	27.94	29.21	CTS25OL	3	70.61	79.50	83.82	RED	9946
12014943	350	15.65	27.94	29.21	CTS15GP	3	70.61	79.50	83.82	RED	9889
12000436	500	18.69	30.99	32.26	CTS15OL	3	79.25	88.14	92.46	RED	12921
12014944	500	18.69	30.99	32.26	CTS25OL	3	79.25	88.14	92.46	RED	12603
12014945	500	18.69	30.99	32.26	CTS15GP	3	79.25	88.14	92.46	RED	12888
12015041	500	18.69	30.99	32.26	CTS25OL	3 x 5	77.47	86.36	89.92	RED	12821
12014946	750	23.06	35.56	36.83	CTS25OL	2	89.15	98.04	102.36	RED	17238
12014947	750	23.06	35.56	36.83	CTS15OL	2	89.15	98.04	102.36	RED	17203
12014948	750	23.06	35.56	36.83	CTS15GP	2	89.15	98.04	102.36	RED	17124
3C Aluminum											
12014868	2	7.19	19.15	20.50	CTS20OL	8	50.58	59.47	63.01	YEL	4991
12014867	1	8.18	20.17	21.56	CTS20OL	6	54.33	63.22	66.77	YEL	5760
12014866	4/0	13.00	24.99	26.34	CTS20OL	6	64.65	73.54	77.09	YEL	7794
12015052	500	18.69	30.99	32.34	CTS25OL	3	77.36	86.25	89.81	RED	11135
12015053	750	23.06	35.59	36.93	CTS25OL	2	96.16	96.16	99.72	RED	13978
See Notes on Page 19											

MV Armoured 25 kV 133% – Dimensions

Part Number	Cond Size	Approximate Diameters			Metallic Shield Type*	Grd Wire Size	Approximate Diameters			Jkt Col	Approx. Net Cable Wgt
		Cond	Insul	Insul Shield			Inner Jkt	Armor	Outer Jkt		
	AWG or kcmil	mm	mm	mm		AWG	mm	mm	mm	kg/km	
25 kV 133%											
1C Copper											
12015055	1	7.59	24.59	25.93	WS	4	32.75	39.73	42.68	BLK	1978
12014952	1/0	8.53	25.48	26.82	CTS25OL	-	30.84	37.83	39.87	BLK	1843
12015056	1/0	8.53	25.48	26.82	WS	4	33.46	40.44	43.39	BLK	2117
12015057	2/0	9.55	26.49	27.84	WS	4	34.65	41.64	44.58	BLK	2306
12015058	3/0	10.75	27.64	28.98	WS	3	35.62	42.61	45.55	BLK	2567
12014900	4/0	12.07	29.03	30.38	WS	3	37.02	44.00	47.05	BLK	2866
12015059	250	13.21	30.45	31.80	WS	2	38.44	47.33	50.28	BLK	3295
12015027	350	15.65	32.87	34.21	CTS25OL	-	38.23	47.12	50.07	BLK	3611
12015060	350	15.65	32.87	34.21	WS	1	40.85	49.74	52.69	BLK	3965
12015030	500	18.69	35.92	37.26	CTS25OL	-	41.28	50.17	53.11	BLK	4483
12015061	500	18.69	35.92	37.26	WS	1/0	46.10	54.99	57.93	BLK	5131
12015028	750	23.06	40.51	41.86	CTS25OL	-	47.40	56.29	59.23	BLK	6103
12015062	750	23.06	40.51	41.86	WS	1/0	50.69	59.58	63.03	BLK	6763
12015063	1000	26.92	44.32	45.67	WS	2/0	54.50	63.39	66.84	BLK	8142
1C Aluminum											
12014960	1	7.59	24.59	25.93	CTS25OL	-	29.95	36.94	38.98	BLK	1428
12015092	4/0	12.07	29.03	30.38	CTS25OL	-	34.40	41.38	44.33	BLK	1945
12015091	4/0	12.07	29.03	30.38	WS	4	37.19	44.18	47.12	BLK	2128
12015090	750	23.06	40.51	41.86	CTS25OL	-	47.40	59.23	59.23	BLK	3699
12015089	750	23.06	40.51	41.86	WS	1/0	50.69	59.58	63.03	BLK	4242
3C Copper											
12014974	1	7.59	24.59	25.93	CTS25OL	6	62.29	71.18	74.62	BLK	5287
12014975	1/0	8.53	25.48	26.82	CTS25OL	6	64.20	73.09	76.54	BLK	5707
12014976	2/0	9.55	26.49	27.84	CTS25OL	6	66.39	75.28	78.73	BLK	6352
12014977	3/0	10.75	27.64	28.98	CTS25OL	4	68.86	77.75	81.31	BLK	7075
12014978	4/0	12.07	29.03	30.38	CTS25OL	4	73.21	82.10	85.66	BLK	8176
12014979	250	13.21	30.45	31.80	CTS25OL	4	76.21	85.10	88.66	BLK	9018
12014980	350	15.65	32.87	34.21	CTS25OL	3	81.41	90.30	93.86	BLK	10911
3C Aluminum											
12014902	1/0	8.53	25.48	26.82	CTS25OL	6	64.20	73.09	76.64	BLK	4893

See Notes on Page 19

MV Armoured 28 kV 133% – Dimensions

Part Number	Cond Size	Approximate Diameters			Metallic Shield Type*	Grd Wire Size	Approximate Diameters			Jkt Col	Approx. Net Cable Wgt
		Cond	Insul	Insul Shield			Inner Jkt	Armor	Outer Jkt		
	AWG or kcmil	mm	mm	mm		AWG	mm	mm	mm	kg/km	
28 kV 133%											
1C Copper											
12015064	1	7.59	25.73	27.08	WS	4	33.89	40.87	43.82	BLK	2053
12015065	1/0	8.53	26.75	28.09	WS	4	34.73	41.72	44.66	BLK	2201
12015066	2/0	9.55	27.76	29.11	WS	4	35.92	42.91	45.85	BLK	2393
12015067	3/0	10.75	28.91	30.25	WS	3	36.89	43.88	46.82	BLK	2655
12015068	4/0	12.07	30.30	31.65	WS	3	38.29	47.18	50.12	BLK	3062
12015069	250	13.21	31.60	32.94	WS	2	39.58	48.47	51.42	BLK	3382
12015029	350	15.65	34.14	35.48	CTS25OL	-	39.50	48.39	51.34	BLK	3716
12015070	350	15.65	34.14	35.48	WS	1	42.12	51.01	53.96	BLK	4066
12015026	500	18.69	37.19	38.53	CTS25OL	-	42.55	51.44	54.39	RED	4593
12015071	500	18.69	37.19	38.53	WS	1/0	47.37	56.26	59.20	BLK	5242
12015072	750	23.06	41.78	43.13	WS	1/0	51.96	60.85	64.30	BLK	6884
12015073	1000	26.92	45.59	46.94	WS	2/0	55.77	64.66	68.11	BLK	8270
1C Aluminum											
12015093	500	18.69	37.19	38.53	CTS25OL	-	42.55	51.44	54.39	BLK	2989
12015151	750	23.06	41.78	43.13	CTS25OL	-	48.67	57.56	61.00	BLK	3897
3C Copper											
12014962	1	7.59	25.73	27.08	CTS25OL	-	64.75	73.64	77.09	BLK	5497
12014950	1/0	8.53	26.75	28.09	CTS25OL	-	66.94	75.83	79.23	BLK	5948
12014903	2/0	9.55	27.76	29.11	CTS25OL	-	69.13	78.02	82.34	BLK	6774
12014963	3/0	10.75	28.91	30.25	CTS25OL	-	72.87	81.76	85.32	BLK	7513
12014904	4/0	12.07	30.30	31.65	CTS25OL	-	75.88	84.77	89.09	BLK	8607
12014964	250	13.21	31.60	32.94	CTS25OL	-	78.67	87.56	91.12	BLK	9281
12014951	350	15.65	34.14	35.48	CTS25OL	-	84.14	93.04	96.60	BLK	11197
12014965	500	18.69	37.19	38.53	CTS25OL	-	90.71	99.60	103.20	BLK	13827
3C Aluminum											
12015094	500	18.69	37.19	38.53	CTS25OL	-	90.71	99.60	103.20	BLK	8989
See Notes on Page 19											

MV Armoured 35 kV 133% – Dimensions

Part Number	Cond Size	Approximate Diameters			Metallic Shield Type*	Grd Wire Size	Approximate Diameters			Jkt Col	Approx. Net Cable Wgt
		Cond	Insul	Insul Shield			Inner Jkt	Armor	Outer Jkt		
	AWG or kcmil	mm	mm	mm		AWG	mm	mm	mm	kg/km	
35 kV 133%											
1C Copper											
12015074	1/0	8.53	30.63	31.98	WS	4	38.62	47.51	50.45	BLK	2602
12015022	2/0	9.55	31.65	33.00	CTS25OL	-	37.01	44.00	46.94	RED	2495
12015075	2/0	9.55	31.65	33.00	WS	4	39.63	48.52	51.47	BLK	2793
12015076	3/0	10.75	32.79	34.14	WS	3	40.78	49.67	52.60	BLK	3073
12015077	4/0	12.07	34.06	35.41	WS	3	42.05	50.94	53.88	BLK	3354
12015078	250	13.21	35.48	36.83	WS	2	44.99	53.88	56.83	BLK	3869
12015079	350	15.65	37.90	39.24	WS	1	47.41	56.30	59.24	BLK	4565
12015040	500	18.69	40.94	42.29	CTS25OL	-	47.83	56.72	59.67	RED	5120
12015080	500	18.69	40.94	42.29	WS	1/0	51.13	60.02	63.46	BLK	5662
12015081	750	23.06	45.54	46.89	WS	1/0	55.72	64.61	68.06	BLK	7255
12015082	1000	26.92	49.48	50.83	WS	2/0	59.66	68.55	72.00	BLK	8676
1C Aluminum											
12015032	350	15.65	37.90	39.24	CTS25OL	-	44.78	53.67	54.71	RED	5048
3C Copper											
12014967	1/0	8.53	30.63	31.98	CTS25OL	-	76.59	85.48	89.04	BLK	7057
12014968	2/0	9.55	31.65	33.00	CTS25OL	-	78.78	87.67	91.23	BLK	7726
12014969	3/0	10.75	32.79	34.14	CTS25OL	-	81.07	89.96	93.52	BLK	8384
3C Aluminum											
See Notes on Page 19											

MV Armoured 5 - 35 kV 133% – Notes

Notes for MV Armoured Tables

1. Where stated, “nominal” and “approximate” values are provided for information purposes only and are subject to standard manufacturing tolerances. Refer to detailed datasheet for more accurate dimensions.
2. Other constructions / configurations available upon request.
 - * **CTS25OL** = Copper Tape Shield with 25% Overlap
 - CTS20OL** = Copper Tape Shield with 20% Overlap
 - CTS15OL** = Copper Tape Shield with 15% Overlap
 - CTS15GP** = Copper Tape Shield with 15% Gap
 - WS** = Wire Shield
 - Copper braid shield not available.
3. For conductor ampacities, please reach out to Nexans.

CORFLEX[®] MC-HL Instrumentation, 600 V

DESCRIPTION

CORFLEX[®] MC-HL Instrumentation cables are single or multiple individually shielded pairs or triads and have an overall cable shield. They have a PVC inner and outer jacket with a continuously corrugated and welded aluminum sheath. These cables are suitable for control, signal, and instrumentation circuits with 600 volt rating & 90°C dry and wet installations.

APPLICATIONS

- Wide range of applications, including ALL hazardous locations
- Chemical, oil and gas, and forestry industries, plus commercial or high-rise buildings
- Services, feeders and branch circuits
- Indoors or outdoors
- Exposed or concealed
- Cable tray & raceway
- Direct burial
- Concrete encasement

CONSTRUCTION CHARACTERISTICS

- 1) Conductor: Bare, annealed copper conforming to ASTM B3 & Class B stranded in accordance with ASTM B81
- 2) Insulation: PVC/Nylon type TFN
- 3) Individual shield: aluminum foil/polyester shield helically wrapped to provide 100% coverage and tinned copper drain wire that is two gauge sizes smaller than the circuit conductors. These shields are electrically isolated from each other.
- 4) Overall cable shield: aluminum foil/polyester shield helically wrapped to provide 100% coverage and tinned copper drain wire that is the same size as the circuit conductors.
- 5) PVC inner Jacket: A rip cord is laid longitudinally under the jacket to facilitate stripping.
- 6) Continuously welded and corrugated aluminum sheath
- 7) Black PVC outer jacket

Pairs (SPOS) or Triads (STOS) – 16 AWG

Assembly: pairs/triads are cabled in concentric layers with interstices filled with suitable non-hygroscopic fillers, as required. A binder tape of synthetic material assembles the core in an essentially round configuration.

CONDUCTOR IDENTIFICATION

Pairs: black/white & number coded

Triads: black/white/red & number coded

MINIMUM BEND RADIUS

Fixed Position: 7 × overall cable diameter

During Pull: 14 x overall cable diameter



CORFLEX[®] MC-HL Instrumentation, 600 V

PRODUCT FEATURES

- UL approved cables Type MC, 600 V; File No. E47409
- UL approved insulated conductors
- Cables pass UL 1685 and IEEE 383 vertical tray fire tests at 70,000 BTU/hr, ICEA T-29-520 fire test at 210,000 BTU/hr, IEC 332-3 category A fire test, IEEE 1202 and CSA FT4
- Cables are American Bureau of Shipping (ABS) listed as CWC MC Type MC
- Continuous, impervious aluminum sheath corrugated for flexibility, prevents ingress of moisture, gases and liquids
- Aluminum sheath resistance exceeds requirements of the NEC Article 250.178 for equipment grounding conductor
- Excellent mechanical and physical properties
- Minimal noise and signal interference
- Sunlight resistant jacket

STANDARDS

- UL 66 – TFN rated 90°C 600 V conductors
- UL 1309 listing and marking
- UL 1569 – Type MC, Metal Clad cables
- UL 2225 – Hazardous Locations
- Designated Type MC as per NEC Article 330

MARKING AND IDENTIFICATION

- Marked “MC-HL” for installation and use in Class I Division 1 & 2, Class II Division 1 & 2, and Class III Hazardous Locations
- Marked “-40C” and are suitable for handling and installation below -10°C with suitable handling precautions

OPTIONS

The following constructions can be provided on special orders:

- Different conductor size
- Different pair or triad configurations
- Specially colored jackets

Other constructions and combinations (some manufacturing restrictions apply)

CORFLEX[®] MC-HL Instrumentation, 600 V - Dimensions

Part #	# of Pairs / Triads	Insulation Thickness		Nominal Diameter over Core (inches)	Inner Jacket Thickness (inches)	Nominal Diameter over Inner Jacket (inches)	Nominal Diameter over Sheath (inches)	Outer Jacket Thickness (inches)	Nominal Diameter over Outer Jacket (inches)	Approx. Net Cable Weight (lb/kft)
		PVC (in)	Nylon (in)							
MULTI PAIRS, 600 V - 16 AWG (7W) SPOS										
12001282	1	0.015	0.004	0.21	0.040	0.29	0.49	0.050	0.61	157
12000975	2	0.015	0.004	0.42	0.040	0.48	0.64	0.050	0.74	216
12001283	4	0.015	0.004	0.48	0.050	0.53	0.77	0.050	0.87	375
12001409	8	0.015	0.004	0.64	0.050	0.68	0.93	0.050	1.03	604
12001208	12	0.015	0.004	0.80	0.050	0.84	1.14	0.050	1.25	862
12000970	24	0.015	0.004	1.12	0.050	1.13	1.42	0.050	1.53	1432
MULTI TRIADS, 600 V - 16 AWG (7W) STOS										
12000969	1	0.015	0.004	0.23	0.040	0.32	0.52	0.050	0.62	171
12002866	2	0.015	0.004	0.36	0.040	0.44	0.62	0.050	0.72	252
12002448	4	0.015	0.004	0.49	0.050	0.59	0.80	0.050	0.90	388
12002678	8	0.015	0.004	0.69	0.060	0.81	1.12	0.050	1.24	696
12001835	12	0.015	0.004	0.82	0.050	0.93	1.21	0.050	1.32	955

ELECTRICAL PROPERTIES

600 V Shielded Pairs / Triads with an overall Cable Shield

Conductor Size (AWG)	DC Resistance 20°C Ω/kft	Capacitance			
		Pairs		Triads	
		Conductor - Conductor (pF/ft)	Conductor - Shield (pF/ft)	Conductor - Conductor (pF/ft)	Conductor - Shield (pF/ft)
18	6.64	74	148	63	156
16	4.18	86	172	87	180

PRODUCT DATA

	CORFLEX [®] MC-HL Instrumentation			CORFLEX [®] MC-HL and VFD	
	Insulation	Inner Jacket	Outer Jacket	Insulation	Jacket
Polymer Type	PVC	PVC	PVC	XLPE	PVC
Temperature Rating	105°C	90°C	90°C	90°C	90°C
Applicable Standard	UL 13	UL 13	UL 13	UL 44	UL 1569
	ICEA S-73-532	ICEA S-73-532	ICEA S-73-532	ICEA S-95-658	ICEA S-95-658
Tensile Strength psi min	1500	1500	1500	1500	1500
Elongation % min	100	100	100	150	100

CORFLEX® MC-HL & VFD, 1 kV

DESCRIPTION

CORFLEX® MC-HL & VFD are armored power and control cables rated 1 kV with exceptional fire ratings (as per appropriate specifications). They are impact-resistance, flexible and a continuously welded and corrugated aluminum sheath armor are key components of this design. They are self-supporting, hand trainable, rated 1 kV and suitable for 90°C dry/wet locations and in cold weather down to -40°C installations. CORFLEX® VFD has the optimum VFD cable design. It provides excellent shielding from high frequency noise that can interfere with data and control signals. CORFLEX® MC-HL & VFD are the preferred cable for hazardous locations.

APPLICATIONS

- Wide range of industrial, commercial and utility applications, including ALL hazardous locations
- Chemical, oil and gas, and forestry industries, plus commercial or high-rise buildings
- Services, feeders and branch circuits
- Indoors or outdoors
- Exposed or concealed
- Cable tray & raceway
- Direct burial
- Concrete encasement

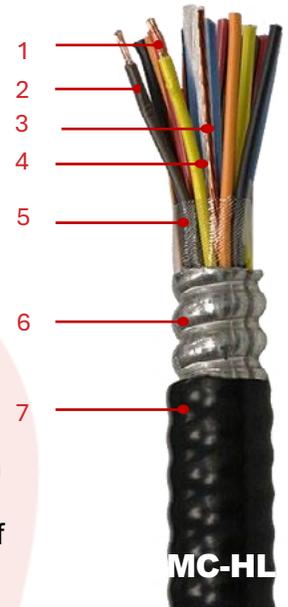


VFD

CONSTRUCTION CHARACTERISTICS

- 1) Conductor: bare, annealed copper conforming to ASTM B3 and Class B stranded in accordance with ASTM B8
- 2) XLPE Insulation, Type XHHW-2
- 3) Ground wires (3 for VFD)
- 4) Non-hygroscopic fillers
- 5) Binder tape of synthetic material
- 6) Continuously welded and corrugated aluminum sheath
- 7) Black PVC outer jacket

Assembly: conductors are cabled in concentric layers with or without grounding wire(s), interstices are filled with suitable non-hygroscopic fillers, as required. A binder tape of synthetic material assembles the core in an essentially round configuration.



MC-HL

CONDUCTOR IDENTIFICATION

Method #1-E2 per ICEA S-73-532 for all below

Multiple Conductor:

- 2 to 37 Conductors – 14 AWG to 10 AWG

Composite Power and Control:

- 3 Power Conductors – 10 AWG to 2 AWG
- 4 Control Conductors – 12 AWG

CORFLEX® VFD:

- 3 Power Conductors – 14 AWG to 500 kcmil

MINIMUM BEND RADIUS

Fixed Position: 7 × overall cable diameter
 During Pull: 12 x overall cable diameter

CORFLEX[®] MC-HL & VFD, 1 kV

PRODUCT FEATURES

- UL approved cables Type MC, 1000 V; File No. E47409
- UL approved insulated conductors
- Cables pass UL 1685 and IEEE 383 vertical tray fire tests at 70,000 BTU/hr, ICEA T-29-520 fire test at 210,000 BTU/hr, IEC 332-3 category A fire test, IEEE 1202 and CSA FT4
- Cables are American Bureau of Shipping (ABS) listed as CWC MC Type MC
- Cables are marked “-40°C” and are suitable for handling and installation below -10°C with suitable handling precautions
- 130°C emergency rating and 250°C short circuit rating
- Continuous, impervious aluminum sheath corrugated for flexibility, prevents ingress of moisture, gases and liquids
- Aluminum sheath resistance exceeds requirements of the NEC Article 250.122 for equipment grounding conductor
- Sheath provides good electronic shielding so that CORFLEX[®] can be used in certain instrumentation applications when adequately grounded
- Excellent mechanical & physical properties
- Sunlight resistant jacket

STANDARDS

- UL 44 – XHHW-2 1 kV conductors
- UL 1309 listing and marking
- UL 1569 –Type MC, Metal Clad cables
- UL 2225 – Hazardous Locations
- Designated Type MC as per NEC Article 330
- CSA C22.2 No. 123 – Aluminum Sheathed Cables
- CSA C22.2 No. 174 – Hazardous Locations

MARKING AND IDENTIFICATION

- Marked “MC-HL” for installation and use in Class I Division 1 & 2, Class II Division 1 & 2, and Class III Hazardous Locations
- Marked “-40C” and are suitable for handling and installation below -10°C with suitable handling precautions

OPTIONS

The following constructions can be provided on special orders:

- Aluminum conductors
- Extra ground wires
- Special color or number coding
- Specially colored jackets

Other constructions and combinations (some manufacturing restrictions apply)

CORFLEX[®] MC-HL & VFD, 1 kV –



Dimensions

Part Number	# of Cond.	Cond. Size AWG or kcmil	Insulation Thickness (in)	Ground Wire Size AWG	Nominal Diameter over Core (in)	Nominal Diameter over Sheath (in)	Jacket Thickness (in)	Nominal Diameter over Jacket (in)	Approx. Net Cable Weight (lb/kft)
MULTICONDUCTORS, WITH BARE GOUND(S) – 14 AWG									
12000047	4	14(7)	0.030	14(7)	0.336	0.503	0.050	0.606	191
12000056	5	14(7)	0.030	14(7)	0.366	0.532	0.050	0.635	212
12000057	7	14(7)	0.030	14(7)	0.417	0.601	0.050	0.704	263
12000058	9	14(7)	0.030	14(7)	0.486	0.645	0.050	0.748	307
12000059	12	14(7)	0.030	14(7)	0.560	0.783	0.050	0.887	388
12000060	19	14(7)	0.030	14(7)	0.669	0.921	0.050	1.028	572
12003307	37	14(7)	0.030	14(7)	0.934	1.219	0.050	1.326	954
MULTICONDUCTORS, WITH BARE GOUND(S) – 12 AWG									
12000048	4	12(7)	0.030	12(7)	0.385	0.550	0.050	0.653	239
12002528	5	12(7)	0.030	12(7)	0.417	0.601	0.050	0.704	281
12000061	7	12(7)	0.030	12(7)	0.478	0.640	0.050	0.744	338
12002486	9	12(7)	0.030	12(7)	0.555	0.779	0.050	0.881	427
12000062	12	12(7)	0.030	12(7)	0.639	0.828	0.050	0.932	502
MULTICONDUCTORS, WITH BARE GOUND(S) – 10 AWG									
12000049	4	10(7)	0.030	10(7)	0.448	0.621	0.050	0.724	319
3 CONDUCTORS WITH 3 BARE GROUNDS									
12001844	3	14(7)	0.030	3x18(7)	0.390	0.555	0.050	0.660	200
12001845	3	12(7)	0.030	3x16(7)	0.340	0.555	0.050	0.660	226
12001846	3	10(7)	0.030	3x14(7)	0.450	0.620	0.050	0.725	312
12001847	3	8(7)	0.045	3x14(7)	0.520	0.750	0.050	0.838	413
12001848	3	6(7)	0.045	3x12(7)	0.600	0.802	0.050	0.905	542
12001849	3	4(7)	0.045	3x12(7)	0.700	0.937	0.050	1.039	735
12001850	3	2(7)	0.045	3x10(7)	0.830	1.127	0.050	1.232	1097
12001823	3	1/0(19)	0.055	3x10(7)	1.040	1.350	0.050	1.473	1592
12001838	3	2/0(19)	0.055	3x10(7)	1.126	1.422	0.050	1.510	1882
12001839	3	3/0(19)	0.055	3x8(7)	1.250	1.606	0.060	1.739	2400
12001840	3	4/0(19)	0.055	3x8(7)	1.360	1.734	0.060	1.867	2910
12001841	3	250(37)	0.065	3x8(7)	1.477	1.925	0.060	2.058	3316
12001842	3	350(37)	0.065	3x6(7)	1.685	2.028	0.060	2.162	4375
12001843	3	500(37)	0.065	3x6(7)	1.954	2.340	0.075	2.504	6026
4 CONDUCTORS WITH 1 BARE GROUND									
12000050	4	8(7)	0.045	10(7)	0.585	0.795	0.050	0.900	465
12000051	4	6(7)	0.045	8(7)	0.680	0.930	0.050	1.027	675
12002274	4	4(7)	0.045	8(7)	0.782	0.995	0.050	1.097	884
12000052	4	2(7)	0.045	6(7)	0.915	1.212	0.050	1.319	1313
12000053	4	2/0(19)	0.055	6(7)	1.041	1.361	0.060	1.466	1628
12000054	4	4/0(19)	0.055	4(7)	1.134	1.427	0.060	1.525	1922
12002275	4	350(37)	0.065	3(7)	1.900	2.297	0.075	2.475	5731
12000055	4	500(37)	0.065	2(7)	2.191	2.689	0.075	2.863	7987

CORFLEX[®] MC-HL & VFD, 1 kV – 3C, Electrical Data



Part Number	Cond. Size AWG or kcmil	Ground Wire Size ² AWG	DC Resistance		AC Resistance 90°C, 60 Hz Ω/kft	Inductive Reactance (Ω/kft @60Hz)	Voltage Drop V/(A.Kft)	Ampacities Note ¹	
			20°C Ω/kft	25°C Ω/kft				75°C	90°C
3 CONDUCTORS WITH 3 BARE GROUNDS²									
12001844	14(7)	3x18(7)	2.5553	2.6064	3.2583	0.0376	2.9489	15	15
12001845	12(7)	3x16(7)	1.6082	1.6404	2.0507	0.0353	1.8610	20	20
12001846	10(7)	3x14(7)	1.0118	1.2902	1.2902	0.0332	1.1756	30	30
12001847	8(7)	3x14(7)	0.6361	0.6488	0.8111	0.0348	0.7452	50	55
12001848	6(7)	3x12(7)	0.4002	0.4082	0.5104	0.0329	0.4737	65	75
12001849	4(7)	3x12(7)	0.2516	0.2566	0.3209	0.0312	0.3025	85	95
12001850	2(7)	3x10(7)	0.1574	0.1605	0.2009	0.0299	0.1938	115	130
12001823	1/0(19)	3x10(7)	0.0999	0.1019	0.1278	0.0281	0.1272	150	170
12001838	2/0(19)	3x10(7)	0.0797	0.0813	0.1021	0.0280	0.1041	175	195
12001839	3/0(19)	3x8(7)	0.0629	0.0642	0.0808	0.0275	0.0847	200	225
12001840	4/0(19)	3x8(7)	0.0497	0.0507	0.0641	0.0271	0.0695	230	260
12001841	250(37)	3x8(7)	0.0424	0.0432	0.0584	0.0263	0.0608	255	290
12001842	350(37)	3x6(7)	0.0301	0.0307	0.0395	0.0263	0.0470	310	350
12001843	500(37)	3x6(7)	0.0212	0.0216	0.0290	0.0250	0.0367	380	430

Notes:

1) Ampacities are based on NEC Table 310.15(B)(16) for not more than three current-carrying conductors in raceway, cable, or earth (direct buried), based on an ambient temperature of 30°C (86°F). Refer to NEC Table 310.15(B)(2) for the ampacity correction factors where the ambient temperature is other than 30°C (86°F).

2) Three conductor cables with 3 ground wires are also excellent for use with variable frequency drives.

Conductor or Phase Identification

Per ICEA S-73-532-E3.4 Method 4

Number Code

Conductor	Printing Details	Conductor	Printing Details
1 st	"1-ONE-1"	4 th	"4-FOUR-4"
2 nd	"2-TWO-2"	5 th	"5-FIVE-5"
3 rd	"3-THREE-3"	6 th	"6-SIX-6"

Per ICEA S-73-532-E3.1 Method 1 and Table E2 (formerly K2) Colored Insulation with/without Colored Stripe

Conductor	Insulation	Stripe	Conductor	Insulation	Stripe
1 st	BLACK	—	19 th	ORANGE	Blue
2 nd	RED	—	20 th	YELLOW	Blue
3 rd	BLUE	—	21 st	BROWN	Blue
4 th	ORANGE	—	22 nd	BLACK	Orange
5 th	YELLOW	—	23 rd	RED	Orange
6 th	BROWN	—	24 th	BLUE	Orange
7 th	RED	Black	25 th	YELLOW	Orange
8 th	BLUE	Black	26 th	BROWN	Orange
9 th	ORANGE	Black	27 th	BLACK	Yellow
10 th	YELLOW	Black	28 th	RED	Yellow
11 th	BROWN	Black	29 th	BLUE	Yellow
12 th	BLACK	Red	30 th	ORANGE	Yellow
13 th	BLUE	Red	31 st	BROWN	Yellow
14 th	ORANGE	Red	32 nd	BLACK	Brown
15 th	YELLOW	Red	33 rd	RED	Brown
16 th	BROWN	Red	34 th	BLUE	Brown
17 th	BLACK	Blue	35 th	ORANGE	Brown
18 th	RED	Blue	36 th	YELLOW	Brown

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