

FIREX®-II TECK90 (XLPE) -40°C 1 kV

FIREX®-II TECK90 (XLPE) 1 kV 3C

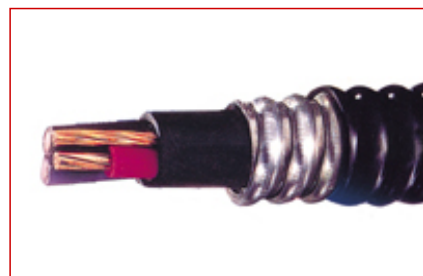
Nexans ref.: 1 kV 3C

Nexans FIREX®-II TECK90 Cables are intended for use in various primary and secondary industries, including chemical processing plants, refineries and general factory environments.

Description

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

FIREX®-II TECK90 Cables utilize low acid gas, low flame spread PVC jacket compounds to ensure maximum safety to personnel and equipment in the event of fire.



Applications

FIREX®-II TECK90 Cables, originally developed for use in Canadian mines, are flexible, resistant to mechanical abuse, corrosion resistant, compact and reliable. They are suitable for a wide range of applications, including ALL hazardous locations.

Industries such as pulp and paper, chemical, petroleum and other primary and secondary manufacturing industries have used FIREX®-II TECK90 Cables, particularly in areas where cables are subject to the risk of mechanical damage and chemical attack.

Commercial applications for FIREX®-II TECK90 Cables include apartment buildings and commercial complexes.

FIREX®-II TECK90 Cables can be relocated easily because they are rugged and flexible. They can be used in both dry and wet locations in open wiring, in ventilated, non-ventilated and ladder-type cable troughs, in ventilated flexible cableways, and for direct burial.

TECK90 Cables are also suitable for service entrance installations - above and below ground.

Highlights

Nexans FIREX®-II TECK90 Cables are:

- Available from stock
- Versatile
- Flexible
- Resistant to Mechanical Abuse and Corrosion
- Compact and Reliable
- "HL" and "FT4" Rated per CSA
- 90°C to -40°C
- Low Acid Gas (AG14)
- Inner and outer jackets are sunlight resistant
- LEAD FREE
- RoHS compliant

Standards

National CSA C22.2 N° 131

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Marking and Identification

The inner jackets of Nexans FIREX ®-II TECK90 cables are printed: SUN RES.

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

Conductor Identification:

- Red, Black, Blue
- 14 AWG to 2 AWG: Coloured Insulation
- 1 AWG to 500 kcmil: Coloured Stripes

Characteristics

Construction characteristics	
Conductor material	Copper
Electrical characteristics	
Maximum operating voltage	1 kV
Usage characteristics	
Maximum operating temperature	90 °C

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3C 1 kV TECK90

Conductor Size		Insulation Thickness		Inner Jacket Thickness		Approximate Diameters						Approx. Weight Al Armour		Copper Content
						Inner Jacket		Armour		Outer Covering				
Power AWG or kcmil	Bonding AWG	inches	mm	inches	mm	inches	mm	inches	mm	inches	mm	lb/kft	kg/km	kg/km
14	14	0.045	1.14	0.045	0.14	0.448	11.38	0.685	17.40	0.770	19.56	247	367	77
12	14	0.045	1.14	0.045	0.14	0.503	12.77	0.735	18.67	0.821	20.85	297	441	111
10	12	0.045	1.14	0.060	1.52	0.576	14.63	0.807	20.50	0.891	22.63	381	567	176
8	10	0.045	1.14	0.060	1.52	0.627	15.93	0.855	21.72	0.942	23.93	491	730	281
6	8	0.060	1.52	0.060	1.52	0.766	19.44	1.035	26.29	1.125	28.58	644	959	446
4	8	0.060	1.52	0.080	2.03	0.904	22.96	1.176	29.87	1.265	32.13	924	1375	665
3	6	0.060	1.52	0.080	2.03	0.964	24.48	1.236	31.39	1.326	33.68	1026	1526	866
2	6	0.060	1.52	0.080	2.03	1.026	26.05	1.300	33.02	1.388	35.26	1274	1896	1057
1	6	0.080	2.03	0.080	2.03	1.182	30.03	1.457	37.01	1.547	39.29	1539	2291	1304
1/0	6	0.080	2.03	0.080	2.03	1.256	31.90	1.531	38.89	1.653	41.99	1852	2757	1609
2/0	6	0.080	2.03	0.080	2.03	1.348	34.23	1.621	41.17	1.729	43.92	2165	3222	1997
3/0	4	0.080	2.03	0.080	2.03	1.450	36.82	1.725	43.82	1.835	46.61	2571	3827	2558
4/0	4	0.080	2.03	0.080	2.03	1.567	39.80	1.815	46.10	1.925	48.9	3196	4733	3173
250	4	0.090	2.29	0.110	2.79	1.768	44.91	2.120	53.85	2.250	57.15	3830	5700	3716
300	4	0.090	2.29	0.110	2.79	1.877	47.67	2.235	56.77	2.367	60.12	4382	6520	4414
350	3	0.090	2.29	0.110	2.79	1.976	50.20	2.330	59.18	2.462	62.53	4990	7426	5171
400	3	0.090	2.29	0.110	2.79	2.074	52.68	2.422	61.52	2.554	64.87	5534	8235	5883
500	3	0.090	2.29	0.110	2.79	2.241	56.92	2.595	65.91	2.757	70.03	6674	9932	7278
600	2	0.090	2.29	0.110	2.79	2.408	61.17	2.758	70.05	2.935	74.55	7747	11528	8747
750	2	0.090	2.29	0.110	2.79	2.614	66.40	2.959	75.16	3.121	79.27	9596	14281	10872

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3C 1 kV TECK90 Fitting Sizes and Ampacity

Conductor Size		Ampacity (A) 30°C Ambient (Notes 2, 4)			Fittings			
Power	Bonding				Appleton	T & B	CMP Products	Cooper Crouse-Hinds
AWG or kcmil	AWG	60°C	75°C	90°C				
14 (Note 3)	14	15	15	15	TMC5099	10465-TB/ST050-465	TMC075A	TECK050-3
12 (Note 3)	14	20	20	20	TMC5099	10465-TB/ST050-465	TMC075A	TECK050-3
10 (Note 3)	12	30	30	30	TMC5099	10466/ST050-466	TMC075A	TECK050-4
8	10	40	50	55	TMC5099	10467/ST075-467	TMC075A	TECK050-4
6	8	55	65	75	TMC75121	10468/ST075-468	TMC100A	TECK075-6
4	8	70	85	95	TMC100138	10469/ST100-469	TMC125A	TECK100-7
3	6	85	100	115	TMC100138	10469/ST100-469	TMC125A	TECK100-7
2	6	95	115	130	TMC125163	10470/ST125-470	TMC125A	TECK125-8
1	6	110	130	145	TMC125163	10470/ST125-470	TMC150A	TECK125-8
1/0	6	125	150	170	TMC125188	10471/ST125-471	TMC150A	TECK125-10
2/0	6	145	175	195	TMC125188	10471/ST125-471	TMC200SA	TECK125-10
3/0	4	165	200	225	TMC125188	10472/ST150-472	TMC200SA	TECK125-10
4/0	4	195	230	260	TMC150200	10472/ST150-473	TMC200A	TECK150-11
250	4	215	255	290	TMC200238	10474/ST200-474	TMC250SA	TECK200-14
300	4	240	285	320	TMC200275	10475/ST200-475	TMC250SA	TECK200-15
350	3	260	310	350	TMC200275	10475/ST200-475	TMC250A	TECK200-15
400	3	280	335	380	TMC200275	10552/ST250-477	TMC250A	TECK200-15
500	3	320	380	430	TMC300A	10477/ST250-478	TMC300A	TECK200-16
600	2	350	420	475	TMC300A	10477/ST300-479	TMC300A	TECK300-19
750	2	400	475	535	TMC300A	10555/ST300-480	TMC350A	TECK300-20

Notes:

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

2) Based on 2012 CEC Table 2, for not more than 3 current carrying conductors in a cable or raceway.

3) The overcurrent protection shall not exceed 15 amperes for 14 AWG, 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 (2012 CEC Rule 14-104(2)), or as provided for by other Rules of the 2012 CEC.

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 (2012 CEC Rule 4-006).

Selling information

Caution Notice

In case of fire, well maintained early warning smoke detectors will give an alarm long before non-metallic coverings become combustible.

However, in spite of the widespread and long-standing use of PVC in residential and commercial buildings, all purchasers of PVC insulated/ jacketed products should be aware of the following:

- Non-metallic coverings of electrical cables can burn and may transmit fire when ignited.
- Burning non-metallic coverings may emit acid gases which are toxic and may generate dense smoke.
- Emission of acid gases may corrode metal in the vicinity; e.g. sensitive instruments and reinforcing rods in cement.