around a world of cables

UL INSTRUMENTATION CABLES
UL THHN CABLES
UL THWN CABLES

2MKABLO

Instrumentation Cables

INDEX

2M CABLE CO. INC.

Founded in 1993, 2M CABLE is a high-technology cable manufacturer specializing in all types of Low Voltage cables. The company is headquartered in Istanbul, Turkey and operates in a 270.000 ft^2 area. Our Sales office and a warehouse in Moscow/Russia has succesfully been active since year 2005.

2M CABLE has been a reliable manufacturer and supplier to the sectors such as; **Construction** (High rise, intelligent&semi intelligent buildings, hospitals, universities, residence projects, etc.), **Oil & Gas, Petrochemical, Power Plant Projects, Automation, Fire & Security, Satellite, Broadcasting, Audio-Video ...**
We export to more than 50 countries worldwide (Mostly to Europe, MEA Countries, CIS Countries and South East Asia).

Instrumentation Cables

2M CABLE manufactures instrumentation cable mostly for refineries and petrochemical plants. Our Engineering and Designing team have knowledge of supporting cable needs for large projects in USA, Europe, Middle East, South East Asia, South America and Far East.

TRAY CABLES

Tray cable, made for Control and Signaling Systems (*NEC Article 336) are used in petrochemical refineries, industrial control systems, intercom systems, traffic controls relay, power extensions. The cable is recognized for use in Class 1 and 2, Division 2, hazardous locations and for installation in trays, wire ways, troughs, ducts, conduit and channels.

ITC/PLTC CABLES

ITC/PLTC Cables have a wide range of application in process control and data processes, in analogue and digital signal transmission and power limited circuits. Factories, burglar alarms, business machines, refineries, petrochemical plants, intercom systems, industrial control systems, power plants, natural gas filling plants and etc. make up the general areas that these cables are used.

We are also capable of designing and manufacturing tailor made cables customized according to your specific needs and as per your requirements of application. Many types of cables are available at your request.

300V & 600V
INSTRUMENTATION CABLE TYPES

300V Instrumentation Cables

2M CABLE UL 300V Instrumentation Cable Meets All Applicable Specifications
UL 13
UL 2250
UL 1685
NEC Type PLTC per Article 725
NEC Type ITC per Article 727

For International Projects, the quality certificates we have & the standards we follow;

Certificates
LPCB
VDE
RINA

Standards
IEC
BS
EN
GOST
TSE

300V Instrumentation Cables

300V, PVC Insulated, 105°C
Type PLTC – UL 13 – NEC ART 725
Type ITC – UL 2250 – NEC ART 727

Applications

Soft annealed bare or tinned copper conductors and PVC flame retardant insulations and jackets are the standard for 300V instrumentation installation. Constructions with PVC/PVC that have three or more conductors and 20 AWG or larger conductors may also be used for direct burial installations.

Construction

Conductor

Bare, Tin-Coated, annealed copper, in solid, 7-strand, or 19-strand configurations from 20 AWG to 12 AWG.

Insulation

Polyvinyl chloride in accordance with UL 13 and UL 2250, flame retardant, 105°C temperature rating.

Insulation Shield (on shielded pair/triad constructions):

2M Cable provides many options for shielding to prevent EMI (electro-magnetic interference) within the twisted pairs, triads and for the overall cable using Overall Foil Shield, Aluminum/Polyester Foil and Aliminum Foil.

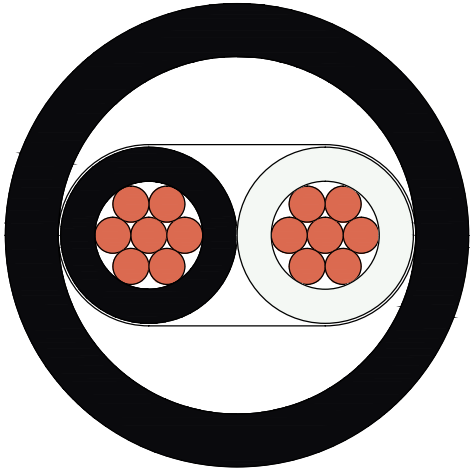
Jacket

UL listed sunlight and moisture resistant, black, flame retardant polyvinyl chloride material.

Features

- UL approved Type PLTC and ITC, 300V
- UL approved insulated conductors
- Cables pass UL 1685 and IEEE 383 vertical fire tests at 70,000 BTU/hr
- Temperature rating 105°C
- Sunlight and moisture resistant jacket
- UL 13 and 2250: The overall jackets of these cables are a “gas/vapour tight continuous sheath”
- in Class 2 and Class 3 Circuits, as defined in NEC ART 725 for Type PLTC cables.

300V 105°C
PVC Insulated Unshielded Pairs
ITC/PLTC



Construction

Conductor : Plain annealed copper wires (7-stranded)
size : AWG 14, AWG 16, AWG 18, AWG 20
(ASTM B-3, Class B stranding per ASTM B-8)
Insulation : Heat resistant PVC (UL 1581 class 105°C, EN 50363-3 TI3)
Core Colors : Black, white, continuously numbered
on white core (1,2,3) for multielement
Separator : Polyester tape (at least 1 layer)
Sheath : Heat resistant and sunlight resistant PVC
(UL 1581 class 105°C)
colour : Black, Blue [other colors upon request]
Reference Standard : UL 13 - UL 2250

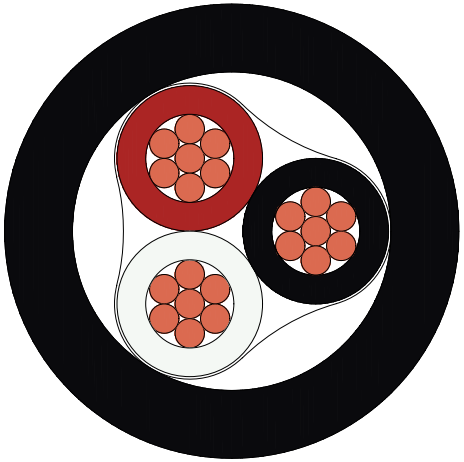
Technical and Electrical Properties (20 °C)

Operating Voltage	:	300 V			
Test Voltage	:	Core-Core: 1500V Core-Screen: 1500V			
Conductor Cross Section	:	AWG 14	AWG 16	AWG 18	AWG 20
Conductor Resistance (Ω/kft)	:	2.71 Ω/kft	4.36 Ω/kft)	6.95 Ω/kft	10.92 Ω/kft
Insulation Thickness (mils)	:	20.08	14.97	14.97	11.82
Insulation Resistance (MΩxkft)	:	100.1 at 15.6°C			
Temperature Range	:	fixed: -40°C .....+105°C during installation: -5°C .....+50°C			
Min. Bending Radius (fixed)	:	7.5 x Cable diameter			
Oxygen Index	:	Min. 27%			
Flame Tests	:	UL 1685 (vertical tray), UL 13 (VW-1), IEC/EN 60332-1, IEC 60332-3-22 (CAT-A), (BS 4066 part 1&3), EN 50266-2-2			
Oil Resistance	:	ASTM No 2 oil 70°C 4 (ICEA S-73-532)			

300V Instrumentation Cables

Conductor AWG	Pair Number	Min. AVG Insulation Thickness		Min. AVG Jacket Thickness		Nominal O.D.		Approximate Copper Weight		Approximate Cable Weight	
		Inches	(mm) (±0.02)	Inches	(mm) (±0.05)	Inches	(mm) (±%5)	LBS/ 1000 FT	(kg/km) (±%5)	LBS/ 1000 FT	(kg/km) (±%5)
*14/7	1	0.020	0.51	0.040	1.02	0.313	7.94	30	44	80	119
	2	0.020	0.51	0.050	1.27	0.478	12.14	57	85	181	270
	4	0.020	0.51	0.060	1.52	0.572	14.54	113	168	305	454
	6	0.020	0.51	0.060	1.52	0.683	17.34	169	251	447	665
	10	0.020	0.51	0.070	1.78	0.888	22.56	280	417	758	1128
	12	0.020	0.51	0.070	1.78	0.916	23.26	302	450	854	1271
	18	0.020	0.51	0.080	2.03	1.093	27.76	503	749	1257	1870
	24	0.020	0.51	0.080	2.03	1.278	32.46	671	998	1697	2525
	50	0.020	0.51	0.090	2.29	1.735	44.08	1394	2075	3346	4979
*16/7	1	0.015	0.38	0.035	0.89	0.255	6.48	19	29	51	76
	2	0.015	0.38	0.050	1.27	0.399	10.14	37	55	122	182
	4	0.015	0.38	0.050	1.27	0.462	11.74	72	107	194	289
	6	0.015	0.38	0.060	1.52	0.569	14.44	108	160	296	440
	10	0.015	0.38	0.060	1.52	0.714	18.14	177	264	481	716
	12	0.015	0.38	0.070	1.78	0.758	19.26	213	317	562	837
	18	0.015	0.38	0.070	1.78	0.884	22.46	319	474	803	1195
	24	0.015	0.38	0.080	2.03	1.050	26.66	424	631	2164	3220
	50	0.015	0.38	0.090	2.29	1.417	35.98	882	1312	2606	3878
*18/7	1	0.015	0.38	0.035	0.89	0.231	5.88	12	18	38	57
	2	0.015	0.38	0.050	1.27	0.360	9.14	23	34	93	139
	4	0.015	0.38	0.050	1.27	0.415	10.54	46	68	144	215
	6	0.015	0.38	0.050	1.27	0.490	12.44	68	101	208	310
	10	0.015	0.38	0.060	1.52	0.635	16.14	112	166	355	529
	12	0.015	0.38	0.060	1.52	0.659	16.74	134	200	400	596
	18	0.015	0.38	0.070	1.78	0.786	19.96	200	298	589	877
	24	0.015	0.38	0.070	1.78	0.912	23.16	266	396	790	1176
	50	0.015	0.38	0.080	2.03	1.235	31.36	553	823	1546	2301
*20/7	1	0.012	0.3	0.035	0.89	0.200	5.08	8	12	27	40
	2	0.012	0.3	0.040	1.02	0.289	7.34	15	22	58	86
	4	0.012	0.3	0.050	1.27	0.348	8.84	29	43	99	147
	6	0.012	0.3	0.050	1.27	0.407	10.34	43	64	139	207
	10	0.012	0.3	0.060	1.52	0.529	13.44	71	105	239	355
	12	0.012	0.3	0.060	1.52	0.545	13.84	85	126	265	395
	18	0.012	0.3	0.060	1.52	0.631	16.04	126	187	374	556
	24	0.012	0.3	0.070	1.78	0.750	19.06	168	250	521	775
	50	0.012	0.3	0.070	1.78	0.991	25.16	347	517	985	1466

300V 105°C
PVC Insulated Unshielded Triads
ITC/PLTC



Construction

Conductor : Plain annealed copper wires (7-stranded)
size : AWG 14, AWG 16, AWG 18, AWG 20
(ASTM B-3, Class B stranding per ASTM B-8)
Insulation : Heat resistant PVC (UL 1581 class 105°C, EN 50363-3 TI3)
Core Colors : Black, white, red continuously numbered
on white core (1,2,3) for multielement
Separator : Polyester tape (at least 1 layer)
Sheath : Heat resistant and sunlight resistant PVC
(UL 1581 class 105°C),
colour : Black, Blue [other colors upon request]
Reference Standard : UL 13 - UL 2250

Technical and Electrical Properties (20 °C)

Operating Voltage	:	300V			
Test Voltage	:	Core-Core: 1500V Core-Screen: 1500V			
Conductor Cross Section	:	AWG 14	AWG 16	AWG 18	AWG 20
Conductor Resistance (Ω/kft)	:	2.71 Ω/kft	4.36 Ω/kft	6.95 Ω/kft	10.92 Ω/kft
Insulation Thickness (mils)	:	20.08	14.97	14.97	11.82
Insulation Resistance (MΩxkft)	:	100.1 at 15.6°C			
Temperature Range	:	fixed: -40°C .....+105°C during installation: -5°C .....+50°C			
Min. Bending Radius (fixed)	:	7.5 x Cable diameter			
Oxygen Index	:	Min. 27%			
Flame Tests	:	UL 1685 (vertical tray), UL 13 (VW-1), IEC/EN 60332-1, IEC 60332-3-22 (CAT-A), (BS 4066 part 1&3), EN 50266-2-2			
Oil Resistance	:	ASTM No 2 oil 70°C 4 (ICEA S-73-532)			
Sunlight Resistance	:	UL 1581 section 1200			

300V Instrumentation Cables

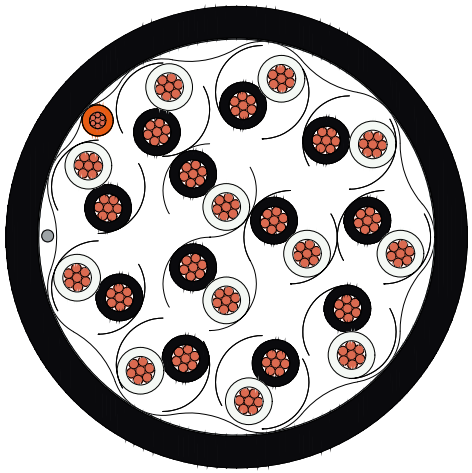
Conductor AWG	Triad Number	Min. AVG Insulation Thickness		Min. AVG Jacket Thickness		Nominal O.D.		Approximate Copper Weight		Approximate Cable Weight	
		Inches	(mm) (±0.02)	Inches	(mm) (±0.05)	Inches	(mm) (±%5)	LBS/ 1000 FT	(kg/km) (±%5)	LBS/ 1000 FT	(kg/km) (±%5)
*14/7	1	0.020	0.51	0.040	1.02	0.328	8.34	42	63	103	154
	2	0.020	0.51	0.050	1.27	0.529	13.44	84	125	243	362
	4	0.020	0.51	0.060	1.52	0.635	16.14	168	250	414	616
	6	0.020	0.51	0.070	1.78	0.782	19.86	252	375	632	940
	8	0.020	0.51	0.070	1.78	0.880	22.36	335	499	816	1215
	10	0.020	0.51	0.070	1.78	0.991	25.16	419	623	1038	1544
	12	0.020	0.51	0.070	1.78	1.030	26.16	503	749	1182	1759
	16	0.020	0.51	0.080	2.03	1.164	29.56	670	997	1549	2305
	18	0.020	0.51	0.080	2.03	1.227	31.16	754	1122	1736	2584
	24	0.020	0.51	0.090	2.29	1.460	37.08	1005	1495	2386	3551
	50	0.020	0.51	0.090	2.29	1.960	49.78	2091	3112	4667	6945
*16/7	1	0.015	0.38	0.040	1.02	0.281	7.14	27	40	69	103
	2	0.015	0.38	0.050	1.27	0.443	11.24	54	80	163	243
	4	0.015	0.38	0.050	1.27	0.513	13.04	107	159	263	391
	6	0.015	0.38	0.060	1.52	0.631	16.04	160	238	403	599
	8	0.015	0.38	0.060	1.52	0.710	18.04	213	317	518	771
	10	0.015	0.38	0.070	1.78	0.821	20.86	266	396	679	1011
	12	0.015	0.38	0.070	1.78	0.849	21.56	319	475	770	1146
	16	0.015	0.38	0.070	1.78	0.939	23.86	425	632	989	1472
	18	0.015	0.38	0.070	1.78	0.991	25.16	477	710	1106	1646
	24	0.015	0.38	0.080	2.03	1.180	29.96	636	946	1523	2267
	50	0.015	0.38	0.090	2.29	1.609	40.88	1322	1967	3004	4470
*18/7	1	0.015	0.38	0.035	0.89	0.243	6.18	17	25	49	73
	2	0.015	0.38	0.050	1.27	0.399	10.14	34	50	122	181
	4	0.015	0.38	0.050	1.27	0.458	11.64	68	101	194	289
	6	0.015	0.38	0.060	1.52	0.565	14.34	101	150	296	441
	8	0.015	0.38	0.060	1.52	0.631	16.04	134	199	381	567
	10	0.015	0.38	0.060	1.52	0.710	18.04	167	248	480	714
	12	0.015	0.38	0.060	1.52	0.734	18.64	200	297	544	810
	16	0.015	0.38	0.070	1.78	0.833	21.16	266	396	719	1070
	18	0.015	0.38	0.070	1.78	0.880	22.36	299	445	800	1191
	24	0.015	0.38	0.070	1.78	1.026	26.06	398	593	1083	1612
	50	0.015	0.38	0.080	2.03	1.388	35.26	827	1231	2135	3177

300V Instrumentation Cables

Conductor AWG	Triad Number	Min. AVG Insulation Thickness		Min. AVG Jacket Thickness		Nominal O.D.		Approximate Copper Weight		Approximate Cable Weight	
		Inches	(mm) (±0.02)	Inches	(mm) (±0.05)	Inches	(mm) (±%5)	LBS/ 1000 FT	(kg/km) (±%5)	LBS/ 1000 FT	(kg/km) (±%5)
*20/7	1	0.012	0.3	0.035	0.89	0.208	5.28	11	16	34	50
	2	0.012	0.3	0.040	1.02	0.317	8.04	21	31	76	113
	4	0.012	0.3	0.050	1.27	0.383	9.74	42	62	130	193
	6	0.012	0.3	0.050	1.27	0.454	11.54	63	94	186	277
	8	0.012	0.3	0.050	1.27	0.506	12.84	84	125	241	358
	10	0.012	0.3	0.060	1.52	0.588	14.94	105	157	319	475
	12	0.012	0.3	0.060	1.52	0.608	15.44	126	187	359	534
	16	0.012	0.3	0.070	1.78	0.671	17.04	167	249	456	678
	18	0.012	0.3	0.070	1.78	0.706	17.94	188	280	508	756
	24	0.012	0.3	0.070	1.78	0.841	21.36	250	372	707	1052
	50	0.012	0.3	0.080	2.03	1.132	28.76	519	773	1382	2056

300V Instrumentation Cables

300V 105°C PVC Insulated, Unshielded Pairs with Overall Shield ITC/PLTC



Construction

Conductor : Plain annealed copper wires (7-stranded)
size : AWG 14, AWG 16, AWG 18, AWG 20
(ASTM B-3, Class B stranding per ASTM B-8)
Insulation : Heat resistant PVC (UL 1581 class 105°C, EN 50363-3 TI3)
Core Colors : Black, white, continuously numbered
on white core (1,2,3) for multielement
Separator : Polyester tape (at least 1 layer)
Overall shield : Plastic coated aluminum tape in contact
with tinned copper drain wire.
Communication Wire : Stranded plain annealed copper wire,
size AWG 22, PVC insulated colored orange
Sheath : Heat resistant and sunlight resistant PVC
(UL 1581 class 105°C),
colour : Black, Blue [other colors upon request]
Reference Standard : UL 13 - UL 2250

Technical and Electrical Properties (20 °C)

Operating Voltage	:	300V			
Test Voltage	:	Core-Core: 1500V Core-Screen: 1500V			
Conductor Cross Section	:	AWG 14	AWG 16	AWG 18	AWG 20
Conductor Resistance (Ω/kft)	:	2.71 Ω/kft	4.36 Ω/kft	6.95 Ω/kft	10.92 Ω/kft
L/R ratio (max.µH/Ω)	:	60	40	25	25
Insulation Thickness (mils)	:	20.08	14.97	14.97	11.82
Insulation Resistance (MΩxkft)	:	100.1 at 15.6°C			
Capacitance (800 Hz) pF/ft	:	51.8			
Temperature Range	:	fixed: -40°C .....+105°C during installation: -5°C .....+50°C			
Min. Bending Radius (fixed)	:	7.5 x Cable diameter			
Oxygen Index	:	Min. 27%			
Flame Tests	:	UL 1685 (vertical tray), UL 13 (VW-1), IEC/EN 60332-1, IEC 60332-3-22 (CAT-A), (BS4066 part 1&3), EN 50266-2-2			
Oil Resistance	:	ASTM No 2 oil 70°C 4 (ICEA S-73-532)			

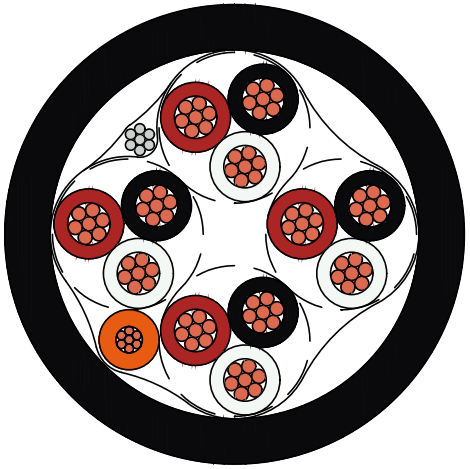
300V Instrumentation Cables

Conductor AWG	Pair Number	Min. AVG Insulation Thickness		Min. AVG Jacket Thickness		Nominal O.D.		Approximate Copper Weight		Approximate Cable Weight	
		Inches	(mm) (±0.02)	Inches	(mm) (±0.05)	Inches	(mm) (±%5)	LBS/ 1000 FT	(kg/km) (±%5)	LBS/ 1000 FT	(kg/km) (±%5)
*14/7	1	0.020	0.51	0.040	1.02	0.317	8.04	29	43	86	128
	2	0.020	0.51	0.050	1.27	0.482	12.24	56	84	188	280
	4	0.020	0.51	0.060	1.52	0.576	14.64	113	168	312	465
	6	0.020	0.51	0.060	1.52	0.687	17.44	167	249	454	676
	8	0.020	0.51	0.070	1.78	0.790	20.06	223	332	605	901
	10	0.020	0.51	0.070	1.78	0.892	22.66	279	415	767	1141
	12	0.020	0.51	0.070	1.78	0.920	23.36	335	499	863	1284
	16	0.020	0.51	0.070	1.78	1.022	25.96	447	665	1106	1646
	18	0.020	0.51	0.080	2.03	1.097	27.86	503	748	1266	1884
	24	0.020	0.51	0.080	2.03	1.282	32.56	669	996	1708	2542
	50	0.020	0.51	0.090	2.29	1.739	44.18	1394	2074	3360	5000
*16/7	1	0.015	0.38	0.035	0.89	0.259	6.58	18	27	56	83
	2	0.015	0.38	0.050	1.27	0.403	10.24	36	54	128	191
	4	0.015	0.38	0.050	1.27	0.466	11.84	71	105	200	298
	6	0.015	0.38	0.060	1.52	0.572	14.54	107	159	303	451
	8	0.015	0.38	0.060	1.52	0.639	16.24	142	211	388	577
	10	0.015	0.38	0.060	1.52	0.718	18.24	177	263	489	727
	12	0.015	0.38	0.070	1.78	0.762	19.36	212	316	570	848
	16	0.015	0.38	0.070	1.78	0.845	21.46	282	420	726	1080
	18	0.015	0.38	0.070	1.78	0.888	22.56	318	473	812	1208
	24	0.015	0.38	0.080	2.03	1.054	26.76	424	631	1117	1663
	50	0.015	0.38	0.090	2.29	1.420	36.08	882	1312	2177	3239
*18/7	1	0.015	0.38	0.035	0.89	0.235	5.98	12	18	44	65
	2	0.015	0.38	0.050	1.27	0.364	9.24	23	34	99	148
	4	0.015	0.38	0.050	1.27	0.419	10.64	46	68	151	224
	6	0.015	0.38	0.050	1.27	0.494	12.54	67	100	214	319
	8	0.015	0.38	0.060	1.52	0.572	14.54	89	132	289	430
	10	0.015	0.38	0.060	1.52	0.639	16.24	111	165	362	538
	12	0.015	0.38	0.060	1.52	0.663	16.84	134	199	407	606
	16	0.015	0.38	0.070	1.78	0.750	19.06	177	264	536	798
	18	0.015	0.38	0.070	1.78	0.790	20.06	200	297	597	889
	24	0.015	0.38	0.070	1.78	0.916	23.26	265	395	799	1189
	50	0.015	0.38	0.080	2.03	1.239	31.46	552	821	1558	2318

300V Instrumentation Cables

Conductor AWG	Pair Number	Min. AVG Insulation Thickness		Min. AVG Jacket Thickness		Nominal O.D.		Approximate Copper Weight		Approximate Cable Weight	
		Inches	(mm) (±0.02)	Inches	(mm) (±0.05)	Inches	(mm) (±%5)	LBS/ 1000 FT	(kg/km) (±%5)	LBS/ 1000 FT	(kg/km) (±%5)
*20/7	1	0.012	0.3	0.035	0.89	0.204	5.18	8	12	32	47
	2	0.012	0.3	0.040	1.02	0.293	7.44	15	22	63	94
	4	0.012	0.3	0.050	1.27	0.352	8.94	28	42	105	156
	6	0.012	0.3	0.050	1.27	0.411	10.44	42	62	144	215
	8	0.012	0.3	0.050	1.27	0.458	11.64	56	83	183	272
	10	0.012	0.3	0.060	1.52	0.533	13.54	69	103	245	365
	12	0.012	0.3	0.060	1.52	0.549	13.94	83	124	271	404
	16	0.012	0.3	0.070	1.78	0.604	15.34	111	165	343	511
	18	0.012	0.3	0.060	1.52	0.635	16.14	125	186	382	569
	24	0.012	0.3	0.070	1.78	0.754	19.16	167	248	529	787
	50	0.012	0.3	0.070	1.78	0.994	25.26	346	515	995	1480

300V 105°C PVC Insulated, Unshielded Triads with Overall Shield ITC/PLTC



Construction

Conductor : Plain annealed copper wires (7-stranded)
size : AWG 14, AWG 16, AWG 18, AWG 20
(ASTM B-3, Class B stranding per ASTM B-8)
Insulation : Heat resistant PVC (UL 1581 class 105°C, EN 50363-3 TI3)
Core Colors : Black, white, red continuously numbered on white core (1,2,3) for multielement
Separator : Polyester tape (at least 1 layer)
Overall Shield : Plastic coated aluminum tape in contact with tinned copper drain wire
Communication Wire : Stranded plain annealed copper wire, size AWG 22, PVC insulated colored orange
Sheath : Heat resistant and sunlight resistant PVC (UL 1581 class 105°C),
colour : Black, Blue [other colors upon request]
Reference Standard : UL 13 - UL 2250

Technical and Electrical Properties (20 °C)

Operating Voltage	:	300V			
Test Voltage	:	Core-Core: 1500V Core-Screen: 1500V			
Conductor Cross Section	:	AWG 14	AWG 16	AWG 18	AWG 20
Conductor Resistance (Ω/kft)	:	2.71 Ω/kft	4.36 Ω/kft	6.95 Ω/kft	10.92 Ω/kft
L/R ratio (max.µH/Ω)	:	60	40	25	25
Insulation Thickness (mils)	:	20.08	14.97	14.97	11.82
Insulation Resistance (MΩxkft)	:	100.1 at 15.6°C			
Capacitance (800 Hz) pF/ft	:	51.8			
Temperature Range	:	fixed: -40°C .....+105°C during installation: -5°C .....+50°C			
Min. Bending Radius (fixed)	:	7.5 x Cable diameter			
Oxygen Index		Min. 27%			
Flame Tests	:	UL 1685 (vertical tray), UL 13 (VW-1), IEC/EN 60332-1, IEC 60332-3-22 (CAT-A), (BS 4066 part 1&3), EN 50266-2-2			
Oil Resistance	:	ASTM No 2 oil 70°C 4 (ICEA S-73-532)			
Sunlight Resistance	:	UL 1581 section 1200			

300V Instrumentation Cables

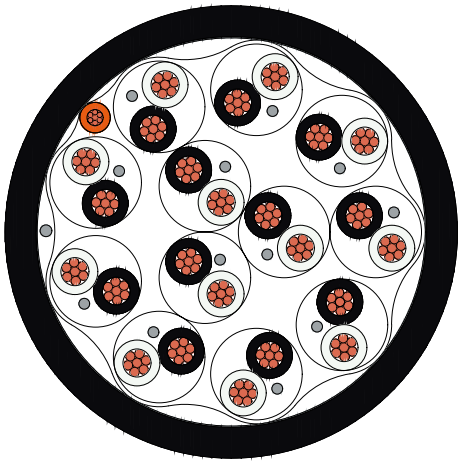
Conductor AWG	Triad Number	Min. AVG Insulation Thickness		Min. AVG Jacket Thickness		Nominal O.D.		Approximate Copper Weight		Approximate Cable Weight	
		Inches	(mm) (±0.02)	Inches	(mm) (±0.05)	Inches	(mm) (±%5)	LBS/ 1000 FT	(kg/km) (±%5)	LBS/ 1000 FT	(kg/km) (±%5)
*14/7	1	0.020	0.51	0.040	1.02	0.332	8.44	42	63	109	162
	2	0.020	0.51	0.050	1.27	0.533	13.54	84	125	251	373
	4	0.020	0.51	0.060	1.52	0.639	16.24	167	249	423	629
	6	0.020	0.51	0.070	1.78	0.786	19.96	251	374	642	955
	8	0.020	0.51	0.070	1.78	0.884	22.46	335	499	828	1232
	10	0.020	0.51	0.070	1.78	0.998	25.36	419	623	1050	1563
	12	0.020	0.51	0.070	1.78	1.034	26.26	503	748	1193	1776
	16	0.020	0.51	0.080	2.03	1.168	29.66	669	996	1562	2324
	18	0.020	0.51	0.080	2.03	1.231	31.26	754	1122	1750	2605
	24	0.020	0.51	0.090	2.29	1.464	37.18	1005	1495	2403	3576
	50	0.020	0.51	0.090	2.29	1.964	49.88	2091	3112	4688	6976
*16/7	1	0.015	0.38	0.040	1.02	0.285	7.24	27	40	75	111
	2	0.015	0.38	0.050	1.27	0.446	11.34	54	80	170	253
	4	0.015	0.38	0.050	1.27	0.517	13.14	107	159	271	403
	6	0.015	0.38	0.060	1.52	0.635	16.14	159	237	411	612
	8	0.015	0.38	0.060	1.52	0.714	18.14	213	317	528	786
	10	0.015	0.38	0.070	1.78	0.825	20.96	265	395	691	1028
	12	0.015	0.38	0.070	1.78	0.853	21.66	319	474	781	1163
	16	0.015	0.38	0.070	1.78	0.943	23.96	424	631	1001	1490
	18	0.015	0.38	0.070	1.78	0.994	25.26	477	710	1119	1665
	24	0.015	0.38	0.080	2.03	1.183	30.06	635	945	1537	2288
	50	0.015	0.38	0.090	2.29	1.602	40.68	1322	1967	3022	4497
*18/7	1	0.015	0.38	0.035	0.89	0.247	6.28	17	25	54	80
	2	0.015	0.38	0.050	1.27	0.403	10.24	34	50	128	190
	4	0.015	0.38	0.050	1.27	0.462	11.74	67	99	200	298
	6	0.015	0.38	0.060	1.52	0.569	14.44	101	150	305	454
	8	0.015	0.38	0.060	1.52	0.635	16.14	134	199	390	580
	10	0.015	0.38	0.060	1.52	0.714	18.14	167	248	491	730
	12	0.015	0.38	0.060	1.52	0.738	18.74	200	297	553	823
	16	0.015	0.38	0.070	1.78	0.837	21.26	265	395	730	1086
	18	0.015	0.38	0.070	1.78	0.884	22.46	298	444	813	1210
	24	0.015	0.38	0.070	1.78	1.030	26.16	398	592	1096	1631
	50	0.015	0.38	0.080	2.03	1.392	35.36	827	1230	2151	3201

300V Instrumentation Cables

Conductor AWG	Triad Number	Min. AVG Insulation Thickness		Min. AVG Jacket Thickness		Nominal O.D.		Approximate Copper Weight		Approximate Cable Weight	
		Inches	(mm) (±0.02)	Inches	(mm) (±0.05)	Inches	(mm) (±%5)	LBS/ 1000 FT	(kg/km) (±%5)	LBS/ 1000 FT	(kg/km) (±%5)
*20/7	1	0.012	0.3	0.035	0.89	0.212	5.38	11	16	38	57
	2	0.012	0.3	0.040	1.02	0.320	8.14	21	31	82	122
	4	0.012	0.3	0.050	1.27	0.387	9.84	42	62	136	202
	6	0.012	0.3	0.050	1.27	0.458	11.64	62	93	193	287
	8	0.012	0.3	0.050	1.27	0.509	12.94	84	125	248	369
	10	0.012	0.3	0.060	1.52	0.592	15.04	105	156	327	487
	12	0.012	0.3	0.060	1.52	0.612	15.54	125	186	368	547
	16	0.012	0.3	0.060	1.52	0.675	17.14	167	248	465	692
	18	0.012	0.3	0.060	1.52	0.710	18.04	188	280	516	768
	24	0.012	0.3	0.070	1.78	0.845	21.46	249	371	719	1070
	50	0.012	0.3	0.080	2.03	1.136	28.86	519	773	1394	2075

300V Instrumentation Cables

300V 105°C PVC Insulated, Individual Pairs with Overall Shield ITC/PLTC



Construction

Conductor : Plain annealed copper wires (7-stranded)
size : AWG 14, AWG 16, AWG 18, AWG 20
(ASTM B-3, Class B stranding per ASTM B-8)
Insulation : Heat resistant PVC (UL 1581 class 105°C, EN 50363-3 TI3)
Core Colors : Black, white, continuously numbered
on white core (1,2,3) for multielement
Individual Shield : Plastic coated aluminum tape in contact with tinned copper drain wire.
Separator : Polyester tape (at least 1 layer)
Overall shield : Plastic coated aluminum tape in contact with tinned copper drain wire.
Communication Wire : Stranded plain annealed copper wire, size AWG 22, PVC insulated colored orange
Sheath : Heat resistant and sunlight resistant PVC (UL 1581 class 105°C),
colour : Black, Blue [other colors upon request]
Reference Standard : UL 13 - UL 2250

Technical and Electrical Properties (20 °C)

Operating Voltage	:	300V			
Test Voltage	:	Core-Core: 1500V Core-Screen: 1500V			
Conductor Cross Section	:	AWG 14	AWG 16	AWG 18	AWG 20
Conductor Resistance (Ω/kft)	:	2.71 Ω/kft	4.36 Ω/kft	6.95 Ω/kft	10.92 Ω/kft
L/R ratio (max.µH/Ω)	:	60	40	25	25
Insulation Thickness (mils)	:	20.08	14.97	14.97	11.82
Insulation Resistance (MΩxkft)	:	100.1 at 15.6°C			
Capacitance (800 Hz) pF/ft	:	51.8			
Temperature Range	:	fixed: -40°C .....+105°C during installation: -5°C .....+50°C			
Min. Bending Radius (fixed)	:	7.5 x Cable diameter			
Oxygen Index	:	Min. 27%			
Flame Tests	:	UL 1685 (vertical tray), UL 13 (VW-1), IEC/EN 60332-1, IEC 60332-3-22 (CAT-A), (BS 4066 part 1&3), EN 50266-2-2			
Oil Resistance	:	ASTM No 2 oil 70°C 4 (ICEA S-73-532)			

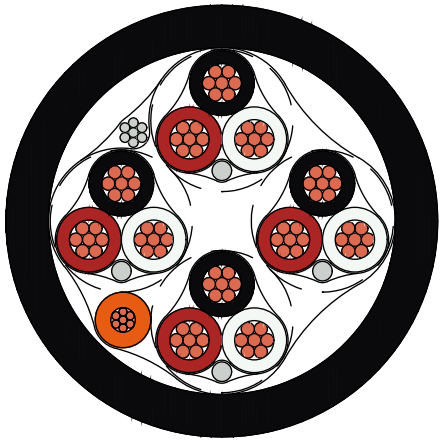
300V Instrumentation Cables

Conductor AWG	Pair Number	Min. AVG Insulation Thickness		Min. AVG Jacket Thickness		Nominal O.D.		Approximate Copper Weight		Approximate Cable Weight	
		Inches	(mm) (±0.02)	Inches	(mm) (±0.05)	Inches	(mm) (±%5)	LBS/ 1000 FT	(kg/km) (±%5)	LBS/ 1000 FT	(kg/km) (±%5)
*14/7	2	0,020	0,51	0,050	1,27	0,529	13,44	56	83	218	324
	4	0,020	0,51	0,060	1,52	0,635	16,14	112	166	362	538
	6	0,020	0,51	0,060	1,52	0,761	19,34	167	249	527	785
	10	0,020	0,51	0,070	1,78	0,991	25,16	279	415	897	1335
	12	0,020	0,51	0,070	1,78	1,026	26,06	335	498	1007	1499
	18	0,020	0,51	0,070	1,78	1,199	30,46	503	748	1445	2151
	20	0,020	0,51	0,080	2,03	1,290	32,76	558	831	1643	2445
	24	0,020	0,51	0,080	2,03	1,431	36,36	670	997	1995	2969
	50	0,020	0,51	0,090	2,29	1,944	49,38	1394	2075	3926	5842
*16/7	2	0,015	0,38	0,050	1,27	0,446	11,34	36	53	152	226
	4	0,015	0,38	0,050	1,27	0,513	13,04	71	105	238	354
	6	0,015	0,38	0,060	1,52	0,635	16,14	106	158	357	532
	10	0,015	0,38	0,060	1,52	0,801	20,34	177	263	585	870
	12	0,015	0,38	0,060	1,52	0,828	21,04	212	316	658	979
	18	0,015	0,38	0,070	1,78	0,991	25,16	318	473	968	1441
	20	0,015	0,38	0,070	1,78	1,046	26,56	353	526	1075	1600
	24	0,015	0,38	0,080	2,03	1,180	29,96	424	631	1332	1982
	50	0,015	0,38	0,090	2,29	1,594	40,48	882	1312	2605	3876
*18/7	2	0,015	0,38	0,050	1,27	0,403	10,24	22	33	119	177
	4	0,015	0,38	0,050	1,27	0,466	11,84	44	66	182	271
	6	0,015	0,38	0,050	1,27	0,553	14,04	67	99	261	389
	10	0,015	0,38	0,060	1,52	0,718	18,24	110	164	445	662
	12	0,015	0,38	0,060	1,52	0,742	18,84	132	197	498	741
	18	0,015	0,38	0,070	1,78	0,884	22,46	198	295	732	1089
	20	0,015	0,38	0,070	1,78	0,935	23,76	220	328	810	1206
	24	0,015	0,38	0,070	1,78	1,034	26,26	265	394	983	1463
	50	0,015	0,38	0,080	2,03	1,400	35,56	550	819	1920	2857

300V Instrumentation Cables

Conductor AWG	Pair Number	Min. AVG Insulation Thickness		Min. AVG Jacket Thickness		Nominal O.D.		Approximate Copper Weight		Approximate Cable Weight	
		Inches	(mm) (±0.02)	Inches	(mm) (±0.05)	Inches	(mm) (±%5)	LBS/ 1000 FT	(kg/km) (±%5)	LBS/ 1000 FT	(kg/km) (±%5)
*20/7	2	0,012	0,3	0,040	1,02	0,328	8,34	14	21	79	117
	4	0,012	0,3	0,050	1,27	0,395	10,04	28	42	130	194
	6	0,012	0,3	0,050	1,27	0,466	11,84	42	62	185	275
	10	0,012	0,3	0,060	1,52	0,608	15,44	69	103	312	464
	12	0,012	0,3	0,060	1,52	0,624	15,84	84	125	348	518
	18	0,012	0,3	0,060	1,52	0,726	18,44	125	186	490	729
	20	0,012	0,3	0,070	1,78	0,935	23,76	139	207	548	815
	24	0,012	0,3	0,070	1,78	1,026	26,06	167	248	682	1015
	50	0,012	0,3	0,070	1,78	1,144	29,06	346	515	1297	1930

300V 105°C
PVC Insulated, Individual Triads with Overall Shield ITC/PLTC



Construction

Conductor : Plain annealed copper wires (7-stranded)
size : AWG 14, AWG 16, AWG 18, AWG 20
(ASTM B-3, Class B stranding per ASTM B-8)
Insulation : Heat resistant PVC (UL 1581 class 105°C, EN 50363-3 TI3)
Core Colors : Black, white, red continuously numbered on white core (1,2,3) for multielement
Individual Shield : Plastic coated aluminum tape in contact with tinned copper drain wire.
Separator : Polyester tape (at least 1 layer)
Overall Shield : Plastic coated aluminum tape in contact with tinned copper drain wire.
Communication Wire : Stranded plain annealed copper wire, size AWG 22, PVC insulated colored orange
Sheath : Heat resistant and sunlight resistant PVC (UL 1581 class 105°C)
colour : Black, Blue [other colors upon request]
Reference Standard : UL 13 - UL 2250

Technical and Electrical Properties (20 °C)

Operating Voltage	:	300V			
Test Voltage	:	Core-Core: 1500V Core-Screen: 1500V			
Conductor Cross Section	:	AWG 14	AWG 16	AWG 18	AWG 20
Conductor Resistance (Ω/kft)	:	2.71 Ω/kft	4.36 Ω/kft	6.95 Ω/kft	10.92 Ω/kft
L/R ratio (max.µH/Ω)	:	60	40	25	25
Insulation Thickness (mils)	:	20.08	14.97	14.97	11.82
Insulation Resistance (MΩxkft)	:	100.1 at 15.6°C			
Capacitance (800 Hz) pF/ft	:	51.8			
Temperature Range	:	fixed: -40°C .....+105°C during installation: -5°C .....+50°C			
Min. Bending Radius (fixed)	:	7.5 x Cable diameter			
Oxygen Index		Min. 27%			
Flame Tests	:	UL 1685 (vertical tray), UL 13 (VW-1), IEC/EN 60332-1, IEC 60332-3-22 (CAT-A), (BS 4066 part 1&3), EN 50266-2-2			
Oil Resistance	:	ASTM No 2 oil 70°C 4 (ICEA S-73-532)			
Sunlight Resistance	:	UL 1581 section 1200			

300V Instrumentation Cables

Conductor AWG	Triad Number	Min. AVG Insulation Thickness		Min. AVG Jacket Thickness		Nominal O.D.		Approximate Copper Weight		Approximate Cable Weight	
		Inches	(mm) (±0.02)	Inches	(mm) (±0.05)	Inches	(mm) (±%5)	LBS/ 1000 FT	(kg/km) (±%5)	LBS/ 1000 FT	(kg/km) (±%5)
*14/7	2	0,020	0,51	0,050	1,27	0,584	14,84	84	125	288	429
	4	0,020	0,51	0,060	1,52	0,698	17,74	167	249	482	718
	6	0,020	0,51	0,060	1,52	0,840	21,34	251	374	710	1056
	8	0,020	0,51	0,070	1,78	0,967	24,56	335	499	948	1411
	10	0,020	0,51	0,070	1,78	1,097	27,86	419	623	1204	1792
	12	0,020	0,51	0,070	1,78	1,136	28,86	503	748	1364	2030
	16	0,020	0,51	0,070	1,78	1,262	32,06	669	996	1753	2609
	18	0,020	0,51	0,080	2,03	1,353	34,36	753	1121	1999	2975
	24	0,020	0,51	0,080	2,03	1,589	40,36	1005	1495	2713	4038
	50	0,020	0,51	0,090	2,29	2,168	55,08	2090	3111	5369	7990
*16/7	2	0,015	0,38	0,050	1,27	0,494	12,54	53	79	196	291
	4	0,015	0,38	0,050	1,27	0,572	14,54	106	158	312	465
	6	0,015	0,38	0,060	1,52	0,706	17,94	159	236	474	706
	8	0,015	0,38	0,060	1,52	0,793	20,14	212	315	612	911
	10	0,015	0,38	0,060	1,52	0,899	22,84	264	393	779	1160
	12	0,015	0,38	0,070	1,78	0,951	24,16	318	473	906	1349
	16	0,015	0,38	0,070	1,78	1,054	26,76	423	630	1161	1728
	18	0,015	0,38	0,070	1,78	1,113	28,26	476	708	1300	1935
	24	0,015	0,38	0,080	2,03	1,325	33,66	634	944	1788	2661
	50	0,015	0,38	0,090	2,29	1,798	45,68	1321	1966	3516	5233
*18/7	2	0,015	0,38	0,050	1,27	0,443	11,24	34	50	155	230
	4	0,015	0,38	0,050	1,27	0,509	12,94	67	99	239	355
	6	0,015	0,38	0,050	1,27	0,608	15,44	100	149	347	516
	8	0,015	0,38	0,060	1,52	0,702	17,84	133	198	468	696
	10	0,015	0,38	0,060	1,52	0,797	20,24	165	246	591	879
	12	0,015	0,38	0,060	1,52	0,820	20,84	199	296	665	990
	18	0,015	0,38	0,070	1,78	0,983	24,96	298	443	976	1453
	24	0,015	0,38	0,070	1,78	1,148	29,16	397	591	1325	1972
	50	0,015	0,38	0,080	2,03	1,561	39,66	827	1230	2595	3862

300V Instrumentation Cables

Conductor AWG	Triad Number	Min. AVG Insulation Thickness		Min. AVG Jacket Thickness		Nominal O.D.		Approximate Copper Weight		Approximate Cable Weight	
		Inches	(mm) (±0.02)	Inches	(mm) (±0.05)	Inches	(mm) (±%5)	LBS/ 1000 FT	(kg/km) (±%5)	LBS/ 1000 FT	(kg/km) (±%5)
*20/7	2	0,012	0,3	0,040	1,02	0,356	9,04	21	31	100	149
	4	0,012	0,3	0,050	1,27	0,431	10,94	42	62	167	249
	6	0,012	0,3	0,050	1,27	0,509	12,94	63	94	241	359
	8	0,012	0,3	0,050	1,27	0,569	14,44	83	124	309	460
	10	0,012	0,3	0,060	1,52	0,663	16,84	104	155	405	602
	12	0,012	0,3	0,060	1,52	0,683	17,34	124	185	455	677
	16	0,012	0,3	0,060	1,52	0,757	19,24	166	247	578	860
	18	0,012	0,3	0,060	1,52	1,038	26,36	187	278	646	962
	24	0,012	0,3	0,070	1,78	0,951	24,16	249	370	899	1338
	50	0,012	0,3	0,070	1,78	1,262	32,06	519	772	1723	2564

Instrumentation Cables


2MKAB TYPE ITC/PLTC 1x2x18 AWG 71191-01-3731200M

600V Instrumentation Cables

600V, PVC/Nylon Insulated, 90°C
Type TC – UL 1277 – NEC ART 336

Applications

The 600V Instrumentation Cables are listed as Type TC per UL 1277. Suitable for installations as described in NEC ART 336.

Construction

Conductor

Bare, annealed copper conforming to ASTM B-3 and Class B stranded in accordance to ASTM B-8.

Insulation

PVC/Nylon Type Flame retardant, 90°C temperature rating.

Insulation Shield (Shielded pair/triad constructions)

Aluminum foil/polyester shield helically wrapped to provide 100 % coverage with a tinned copper drain wire that is two gauge sizes smaller than the circuit conductors

Jacket

UL listed sunlight and moisture resistant, sequentially length marked, black, flame retardant polyvinyl chloride material. A Nylon ripcord can be included for ease of jacket removal.

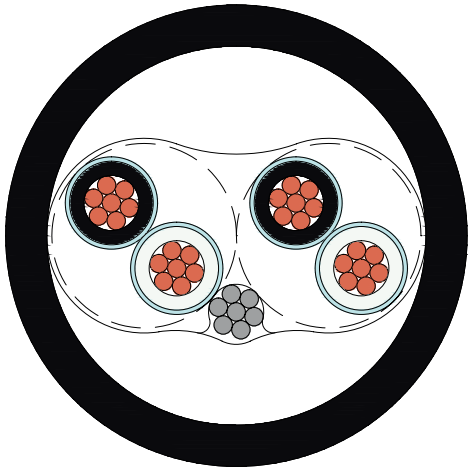
Features

- UL approved Type TC, 600V
- UL approved insulated conductors
- UL 1685 and IEEE 383 vertical fire tests at 70,000 BTU/hr
- Temperature rating 90°C dry
- Sunlight and moisture resistant jacket
- For use within Class 1 Division 2 and Class 2 Division 2 Hazardous Locations and Intrinsically Safe applications as permitted by NEC ART 392, 501, 502, 504 and 505.
- Cables are rated for Direct Burial applications
- For use in cable trays, raceways, conduit or for aerial applications where installed with a messenger
- Cables may be used In Class 1 Circuits, as defined in NEC Section 336.10 and ART 725 for Type TC cables
- The Nylon jacket provides excellent oil and gasoline protection.

Specifications

- UL 1277 Rated 90°C / 600V
- UL requirements for Type TC
- Designated Type TC per NEC ART 336

600V PVC/Nylon/PVC
Overall Shielded Pairs/Triads
TC-ER Rated



Construction

Conductor : Plain annealed stranded copper wires (ASTM B3, Class B stranding per ASTM B-8 IEC/EN 228, HD 383, BS 6360, VDE 0295)
Insulation : Heat resistant PVC (UL 1581 class 90°C, EN 50363-3 TI3) with clear Polyamide (Nylon)
Separator : Polyester tape (at least 1 layer)
Drain Wire : Solid tinned copper wire
AWG 18 : 7x0.0152 Inc.
AWG 16 : 7x0.02 Inc.
Shield : AL-PES foil, Aluminum contact with stranded tinned copper drain wire
Sheath : Heat resistant and sunlight resistant PVC (UL 1581 class 90°C)
Reference Standard : UL 1277

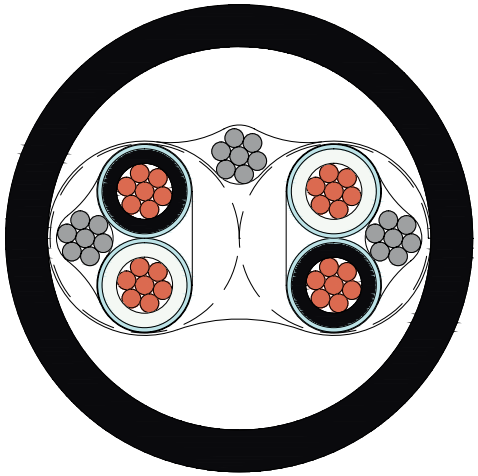
Technical and Electrical Properties (20 °C)

Max. Operating Voltage	:	600V
Conductor Resistance (Ω/kft)	:	AWG 16: 14.3 (4.36 Ω/kft) AWG 18: 22.7 (6.95 Ω/kft)
Insulation Thickness (mils)	:	AWG 16: 0.39 mils PVC + 0.12 mm Nylon AWG 18: 15.36 mils PVC + 4.73 mils Nylon
Min. Bending Radius (fixed)	:	7.5 x Cable Diameter
Temperature Rate	:	Dry: 90°C
Oxygen Index	:	Min. 27%
Flame Tests	:	UL 1685 (vertical tray), UL 13 (VW-1), IEC/EN 60332-1, IEC 60332-3-22 (CAT-A), (BS 4066 part 1&3), EN 50266-2-2
Oil Resistance	:	ASTM No 2 oil 70°C 4 (ICEA S-73-532)

600V Instrumentation Cables

Conductor AWG	Pair Number	Min. AVG Insulation Thickness		Min. AVG Jacket Thickness		Nominal O.D.		Approximate Copper Weight		Approximate Cable Weight	
		Inches	(mm) (±0.02)	Inches	(mm) (±0.05)	Inches	(mm) (±%5)	LBS/ 1000 FT	(kg/km) (±%5)	LBS/ 1000 FT	(kg/km) (±%5)
*16/7	1	0.020	0.51	0.045	1.14	0.268	6.8	18	26	56	83
	1 TRI	0.020	0.51	0.045	1.14	0.461	11.7	26	39	87	131
	2	0.020	0.51	0.045	1.14	0.433	11	35	52	97	145
	3	0.020	0.51	0.045	1.14	0.461	11.7	52	79	123	184
	4	0.020	0.51	0.060	1.52	0.535	13.6	70	105	169	252
	5	0.020	0.51	0.060	1.52	0.583	14.8	88	131	199	297
	7	0.020	0.51	0.060	1.52	0.630	16	123	183	254	378
	12	0.020	0.51	0.060	1.52	0.823	20.9	211	314	400	596
	16	0.020	0.51	0.080	2.03	0.953	24.2	281	419	548	816
	20	0.020	0.51	0.080	2.03	1.055	26.8	352	524	662	986
	24	0.020	0.51	0.080	2.03	1.165	29.6	422	628	776	1156
	36	0.020	0.51	0.080	2.03	1.331	33.8	633	943	1091	1625
	50	0.020	0.51	0.080	2.03	1.555	39.5	880	1310	1464	2180
*18/7	1	0.020	0.51	0.045	1.14	0.280	7.1	11	16	46	69
	1 TRI	0.020	0.51	0.045	1.14	0.295	7.5	16	25	55	83
	2	0.020	0.51	0.045	1.14	0.394	10.00	22	33	74	111
	3	0.020	0.51	0.045	1.14	0.417	10.60	33	49	93	139
	4	0.020	0.51	0.045	1.14	0.453	11.50	44	66	113	168
	5	0.020	0.51	0.060	1.52	0.528	13.40	55	82	151	225
	7	0.020	0.51	0.060	1.52	0.571	14.50	77	115	189	282
	12	0.020	0.51	0.060	1.52	0.736	18.70	132	197	294	438
	16	0.020	0.51	0.080	2.03	0.854	21.70	176	262	406	606
	20	0.020	0.51	0.080	2.03	0.945	24.00	220	328	488	727
	24	0.020	0.51	0.080	2.03	1.043	26.50	264	393	570	849
	36	0.020	0.51	0.080	2.03	1.189	30.20	396	590	790	1176
	50	0.020	0.51	0.080	2.03	1.382	35.10	550	819	1052	1567

600V PVC/Nylon/PVC
Individual and Overall Shielded Pairs
TC-ER Rated



Construction

Conductor : Plain annealed stranded copper wires (ASTM B3, Class B stranding per ASTM B-8 IEC/EN 228, HD 383, BS 6360, VDE 0295)
Insulation : Heat resistant PVC (UL 1581 class 90°C, EN 50363-3 TI3) with clear Polyamide (Nylon)
Individual Separator : Polyester tape
Individual Drain Wire : Solid tinned copper wire
AWG 18 : 7x0.0152 Inc.
AWG 16 : 7x0.02 Inc.
Individual Shield : AL-PES foil, Aluminum contact with stranded tinned copper drain wire
General Separator : Polyester tape (at least 1 layer)
General Drain Wire : Solid tinned copper wire
AWG 18 : 7x0.0152 Inc.
AWG 16 : 7x0.02 Inc.
General Shield : AL-PES foil, Aluminum contact with stranded tinned copper drain wire
Sheath : Heat resistant and sunlight resistant PVC (UL 1581 class 90°C)

Technical and Electrical Properties (20 °C)

Max. Operating Voltage	:	600V
Conductor Resistance (Ω/kft)	:	AWG 16: 14.3 (4.36 Ω/kft) AWG 18: 22.7 (6.95 Ω/kft)
Insulation Thickness (mils)	:	AWG 16: 0.39 mm PVC + 0.12 mm. Nylon AWG 18: 15.36 mils PVC + 4.73 mils Nylon
Min. Bending Radius (fixed)	:	7.5 x Cable diameter
Temperature Rate	:	Dry: 90°C
Oxygen Index	:	Min. 27%
Flame Tests	:	UL 1685 (vertical tray), UL 13 (VW-1), IEC/EN 60332-1, IEC 60332-3-22 (CAT-A), (BS 4066 part 1&3), EN 50266-2-2
Oil Resistance	:	ASTM No 2 oil 70°C 4 (ICEA S-73-532)

600V Instrumentation Cables

Conductor AWG	Pair Number	Min. AVG Insulation Thickness		Min. AVG Jacket Thickness		Nominal O.D.		Approximate Copper Weight		Approximate Cable Weight	
		Inches	(mm) (±0.02)	Inches	(mm) (±0.05)	Inches	(mm) (±%5)	LBS/ 1000 FT	(kg/km) (±%5)	LBS/ 1000 FT	(kg/km) (±%5)
*16/7	2	0.020	0.51	0.04	1.14	0.49	12.38	35	52	154	230
	3	0.020	0.51	0.04	1.14	0.52	13.18	53	79	199	296
	4	0.020	0.51	0.04	1.14	0.57	14.48	70	105	252	374
	5	0.020	0.51	0.06	1.52	0.66	16.64	88	131	323	481
	7	0.020	0.51	0.06	1.52	0.71	18.04	123	183	418	622
	8	0.020	0.51	0.06	1.52	0.80	20.24	141	210	496	737
	12	0.020	0.51	0.06	1.52	0.93	23.74	211	314	714	1063
	16	0.020	0.51	0.08	2.03	1.08	27.46	282	419	956	1423
	20	0.020	0.51	0.08	2.03	1.20	30.46	352	524	1187	1766
	24	0.020	0.51	0.08	2.03	1.33	33.76	422	628	1438	2140
	36	0.020	0.51	0.08	2.03	1.52	38.66	634	943	2036	3030
	50	0.020	0.51	0.08	2.03	1.78	45.26	880	1310	2816	4191
*18/7	2	0.020	0.51	0.04	1.14	0.44	11.18	22	33	115	171
	3	0.020	0.51	0.04	1.14	0.47	11.88	33	49	147	219
	4	0.020	0.51	0.04	1.14	0.51	12.98	44	66	183.90	274
	5	0.020	0.51	0.06	1.52	0.59	14.94	55	82	238	355
	7	0.020	0.51	0.06	1.52	0.64	16.24	77	115	305.80	455
	12	0.020	0.51	0.06	1.52	0.83	21.14	132	197	520	774
	16	0.020	0.51	0.08	2.03	0.96	24.46	176	262	698	1039
	20	0.020	0.51	0.08	2.03	1.07	27.16	220	328	867	1290
	24	0.020	0.51	0.08	2.03	1.20	30.46	264	393	1047	1558
	36	0.020	0.51	0.08	2.03	1.35	34.36	396	590	1477	2198
	50	0.020	0.51	0.08	2.03	1.58	40.06	550	819	2036	3029

Instrumentation Cables

NOTICE

2M CABLE ensures the accuracy of the all data in this publication, however we cannot be liable for the consequences of errors or omissions. The installer and/or user assumes all liability for the consequences of the installation and/or use of any of our products in contravention of any applicable law, regulation or code.

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