



Circuit Integrity (Fire Resistant) Cables





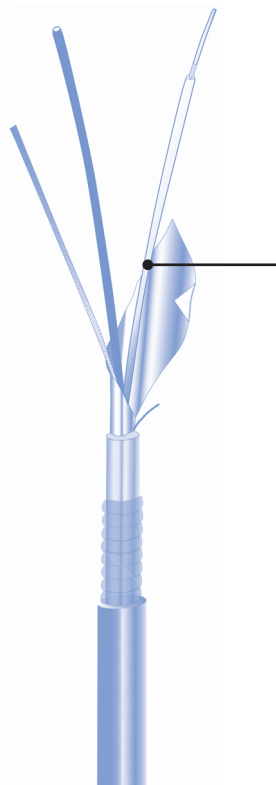
Dekoron is the industry leader in Industrial Wire & Cable

Dekoron Wire & Cable is one of the most reputable industrial cable manufacturers in the world. Manufactured in the United States of America with rigorous attention to detail and quality standards, Dekoron's products are specified by many industry leaders for some of the most challenging projects. As part of the Marmon Group and Berkshire Hathaway, Dekoron has the financial backing, technical support, and resource sharing of other Marmon Wire & Cable companies, giving Dekoron an advantage when dealing with even the most complex requirements. Dekoron's core strengths include the ability to design cables to meet the stringent requirements of our customers, fast delivery to meet on-site needs, and the capability to meet various regulatory standards.

Circuit Integrity Cable

Dekoron Wire & Cable pioneered the use of circuit integrity cables as early as 1992. Since then, Dekoron has continued to improve its circuit integrity cables and expand its offerings to include more size and configurations.

Circuit integrity cables are meant to perform in the event of a fire or other similar emergency. These cables are installed for critical devices and circuits in order to shut down a process during an emergency to lessen the potential for further damage. An example of this would be turning on a valve to activate a fire suppression system in the event of a fire.



Insulated Conductor

The designs of circuit integrity cables utilize inorganic insulation materials that form a non-conductive char layer when exposed to fire. This allows the circuit to continue to function. Our cables constructions are in compliance with UL and ICEA standards. Circuit integrity performance meets IEC 60331 and BS 6387.

Silicone or Silicone/Co-Polymer insulation is combined with a zero halogen thermoplastic jacket that prevents the generation of conductive halogen gases during combustion.

Dekoron® CIC delivers fire protection without sacrificing normal cable constructions, dimensions, handling, access, or ease of installation.

Circuit Integrity Instrumentation & Control Cables



This family of cables is tested for fire resistance and electrical continuity under the harshest conditions; the actual test criteria will depend on the standard the cable must meet in order to be certified, and Dekoron can assist you with your specific requirements.

- FT4/IEEE 1202 – 70,000 BTU/hr flame Dekoron® specifies 60 minute life with minimal propagation.
- IEC 60331 – Cable maintains circuit integrity for 90 Minutes at 750 °C.
- BS 6387 – cable maintains circuit integrity under the following fire conditions:
 Protocol C – Fire Alone – 950°C for 3 Hours
 Protocol W – Fire with Water – 650°C for 30 Minutes
 Protocol Z – Fire with Mechanical Shock 950°C for 15 Minutes
- NEC Class I & II, Divisions 1 & 2 Hazardous Classified Locations:
 600V (Armored) – UL 2225 (MC-HL)
- NEC Class I & II, Division 2 Hazardous Classified Locations:
 300V – UL 13 (PLTC) and UL 2250 (ITC) per NEC Article 725 & 727
 600V – UL 1277 (Type TC) per NEC Article 336

Construction Options

Cable Size	1-100 pairs/triads/conductors, 10-20 AWG
Conductor Types	Annealed, Tinned Copper, Class “B” Stranded, per ASTM B3, B33, and B8 7-strand or 19-strand configurations from 20 AWG to 10 AWG and equivalent metric sizes.
Insulation Types	Silicone, Silicone/Co-Polymer
Color Code	Instrumentation: ICEA Method I, Table E1: Black & White (Pairs); Black, White, & Red (Triads), with Printed Number Control: ICEA Method 4: Black and Numbered, ICEA Method I, Table E1 or E2 Custom Color Codes Available by Request
Shielding	100% Coverage Aluminum-Polyester Tape Shield with 7-Strand Tinned Copper Drain Wire
Inner Jacket	Thermoplastic Low Smoke Zero Halogen (TPN)
Armor	Served Wire Armor (SWA) Galvanized Steel or Aluminum Interlocked Armor (ILA) Gardex® Corrugated, Continuously-Welded Aluminum Armor DekaFlex® Continuously-Welded Stainless Steel, Flexible Armor
Outer Jacket	Thermoplastic Low Smoke Zero Halogen (TPN)
Approvals	300V per UL 13 (PLTC), UL 2250 (ITC), ICEA S-73-532 600V per UL 1277 (Type TC), ICEA S-73-532 600V (Armored) per UL 2225 (MC-HL), UL 1569 (MC)

Optional Features

- Uninsulated, Single or Segmented, Tinned Copper Grounds
- Control Cable with overall shield, 100% Coverage, Aluminum/ Polyester Tape Shield with 7-Strand, Tinned Copper Drain
- Alternate Stranding Available
- Metric Conductor Sizes Available
- Special Jacket Colors
- Twisted Triad Construction also available (Instrumentation)
- Insulated, 7-strand, Bare or Tinned Copper Ground (Instrumentation)
- Custom Color Codes or Conductor Identification (Control)
- Custom Color Codes or Pair Identification (Instrumentation)
- Dekabon® Chemical & Moisture Barrier

Typical Cable Configurations

Insulation	Standard	Cable Type	Type of Armor
1S	300V UL PLTC/ITC	Instrumentation	Unarmored, SWA, ILA, Gardex®
		Control	Unarmored, SWA, ILA, Gardex®
	600V ICEA	Instrumentation	Unarmored, SWA, ILA, Gardex®
		Control	Unarmored, SWA, ILA, Gardex®
6S	600V UL Type TC	Instrumentation	Unarmored
		Control	Unarmored
	600V UL Type MC-HL	Instrumentation	Gardex®, DekaFlex®
		Control	Gardex®, DekaFlex®

Circuit Integrity Cable – Specifications

300V, UL Type PLTC/ITC, Instrumentation, 1S – Unarmored

PRODUCT ATTRIBUTES													
Part Number	Conductor Size [AWG]	Pair Count	Shielding	Insulation Thickness [mils]	Insulation Thickness [mm]	Nominal Outer Diameter [in]	Nominal Outer Diameter [mm]	Weight [lbs/1000ft]	Weight [kg/km]	Bend Radius [in]	Bend Radius [cm]	Pulling Tension [lbs]	Pulling Tension [kg]
1S50-48603	14	1	NS	30	0.76	0.368	9.3	80	119	2.47	6.27	65	29
1S52-48603	14	1	OS	30	0.76	0.372	9.4	85	127	2.50	6.35	70	32
1S70-40263	14	2	OS	30	0.76	0.571	14.5	174	259	3.73	9.47	138	63
1S70-40463	14	4	OS	30	0.76	0.708	18.0	290	431	4.66	11.84	268	122
1S70-40863	14	8	OS	30	0.76	0.935	23.7	506	752	6.10	15.49	528	240
1S70-41263	14	12	OS	30	0.76	1.110	28.2	699	1040	7.13	18.11	788	357
1S70-42463	14	24	OS	30	0.76	1.522	38.7	1299	1933	9.71	24.66	1000	454
1S74-40263	14	2	ISOS	30	0.76	0.634	16.1	215	320	4.19	10.64	146	66
1S74-40463	14	4	ISOS	30	0.76	0.751	19.1	319	474	4.93	12.52	287	130
1S74-40863	14	8	ISOS	30	0.76	0.994	25.2	560	833	6.41	16.28	570	259
1S74-41263	14	12	ISOS	30	0.76	1.207	30.7	785	1168	7.75	19.69	852	386
1S74-42463	14	24	ISOS	30	0.76	1.708	43.4	1497	2228	10.88	27.64	1000	454
1S50-68603	16	1	NS	30	0.76	0.323	8.2	59	88	2.18	5.54	41	19
1S52-68603	16	1	OS	30	0.76	0.328	8.3	64	95	2.22	5.64	46	21
1S70-60263	16	2	OS	30	0.76	0.508	12.9	135	200	3.34	8.48	90	41
1S70-60463	16	4	OS	30	0.76	0.632	16.1	222	330	4.19	10.64	173	78
1S70-60863	16	8	OS	30	0.76	0.817	20.8	359	534	5.35	13.59	338	153
1S70-61263	16	12	OS	30	0.76	0.992	25.2	521	775	6.40	16.26	502	228
1S70-62463	16	24	OS	30	0.76	1.360	34.5	953	1419	8.71	22.12	997	452
1S74-60263	16	2	ISOS	30	0.76	0.547	13.9	152	226	3.58	9.09	99	45
1S74-60463	16	4	ISOS	30	0.76	0.668	17.0	247	368	4.41	11.20	192	87
1S74-60863	16	8	ISOS	30	0.76	0.869	22.1	413	615	5.69	14.45	379	172
1S74-61263	16	12	ISOS	30	0.76	1.078	27.4	599	892	6.95	17.65	566	257
1S74-62463	16	24	ISOS	30	0.76	1.505	38.2	1109	1650	9.62	24.43	1000	454

ELECTRICAL PROPERTIES												
Conductor Size [AWG]	Strand Size	Conductor Material	Resistance [Ω /1000ft]	Resistance [Ω /km]	Inductance [μ H/ft]	Inductance [μ H/m]	L/R Ratio	Insulation Test Voltage [VAC]	Insulation Test Voltage [VDC]	Dielectric Test Voltage [VAC]	Dielectric Test Voltage [VDC]	
14	7	Tin Cu	2.73	8.96	0.188	0.617	34	7,500	11,250	2,500	7,500	
16	7	Tin Cu	4.35	14.3	0.202	0.663	23	7,500	11,250	2,500	7,500	

Circuit Integrity Cable – Specifications

300V, UL Type PLTC/ITC, Instrumentation, 1S – Gardex®

PRODUCT ATTRIBUTES																	
Part Number	Conductor Size [AWG]	Pair Count	Shielding	Insulation Thickness [mils]	Insulation Thickness [mm]	Core Diameter Max. [in]	Core Diameter Max. [mm]	Armor Diameter Nom. [in]	Armor Diameter Nom. [mm]	Outer Diameter Nom. [in]	Outer Diameter Nom. [mm]	Weight [lbs/1000ft]	Weight [kg/km]	Bend Radius [in]	Bend Radius [cm]	Pulling Tension [lbs]	Pulling Tension [kg]
1S5U-48603	14	1	NS	30	0.76	0.392	10.0	0.580	14.7	0.680	17.3	229	341	10.63	27.00	65	29
1S5W-48603	14	1	OS	30	0.76	0.396	10.1	0.580	14.7	0.680	17.3	232	346	10.63	27.00	65	29
1S7U-40263	14	2	OS	30	0.76	0.597	15.2	0.840	21.3	0.940	23.9	391	582	14.42	36.63	130	59
1S7U-40463	14	4	OS	30	0.76	0.746	18.9	1.020	25.9	1.120	28.4	555	826	16.87	42.85	260	118
1S7U-40863	14	8	OS	30	0.76	0.977	24.8	1.260	32.0	1.360	34.5	821	1222	20.33	51.64	520	236
1S7U-41263	14	12	OS	30	0.76	1.154	29.3	1.460	37.1	1.560	39.6	1057	1573	23.21	58.95	780	354
1S7U-42463	14	24	OS	30	0.76	1.572	39.9	2.020	51.3	2.140	54.4	1964	2923	31.72	80.57	1000	454
1S7W-40263	14	2	ISOS	30	0.76	0.671	17.0	0.920	23.4	1.020	25.9	450	670	15.43	39.19	146	66
1S7W-40463	14	4	ISOS	30	0.76	0.790	20.1	1.070	27.2	1.170	29.7	586	873	17.60	44.70	287	130
1S7W-40863	14	8	ISOS	30	0.76	1.037	26.3	1.330	33.8	1.430	36.3	886	1318	21.34	54.20	570	259
1S7W-41263	14	12	ISOS	30	0.76	1.253	31.8	1.640	41.7	1.760	44.7	1265	1882	26.25	66.68	852	386
1S7W-42463	14	24	ISOS	30	0.76	1.761	44.7	2.250	57.2	2.400	61.0	2296	3417	35.48	90.12	1000	454
1S5U-68603	16	1	NS	30	0.76	0.347	8.8	0.540	13.7	0.640	16.3	198	294	10.05	25.53	41	19
1S5W-68603	16	1	OS	30	0.76	0.352	8.9	0.540	13.7	0.640	16.3	203	301	10.05	25.53	41	19
1S7U-60263	16	2	OS	30	0.76	0.535	13.6	0.740	18.8	0.840	21.3	325	484	12.96	32.92	82	37
1S7U-60463	16	4	OS	30	0.76	0.671	17.0	0.920	23.4	1.020	25.9	456	679	15.43	39.19	164	74
1S7U-60863	16	8	OS	30	0.76	0.858	21.8	1.130	28.7	1.230	31.2	640	952	18.45	46.86	329	149
1S7U-61263	16	12	OS	30	0.76	1.036	26.3	1.330	33.8	1.430	36.3	847	1260	21.34	54.20	494	224
1S7U-62463	16	24	OS	30	0.76	1.410	35.8	1.800	45.7	1.920	48.8	1522	2265	28.55	72.52	989	449
1S7W-60263	16	2	ISOS	30	0.76	0.574	14.6	0.840	21.3	0.940	23.9	372	554	14.42	36.63	99	45
1S7W-60463	16	4	ISOS	30	0.76	0.710	18.0	0.965	24.5	1.065	27.1	497	739	16.07	40.82	192	87
1S7W-60863	16	8	ISOS	30	0.76	0.912	23.2	1.200	30.5	1.300	33.0	713	1061	19.47	49.45	379	172
1S7W-61263	16	12	ISOS	30	0.76	1.124	28.5	1.460	37.1	1.560	39.6	957	1425	23.21	58.95	566	257
1S7W-62463	16	24	ISOS	30	0.76	1.557	39.5	2.020	51.3	2.140	54.4	1774	2640	31.72	80.57	1000	454

ELECTRICAL PROPERTIES												
Conductor Size [AWG]	Strand Size	Conductor Material	Resistance [Ω /1000ft]	Resistance [Ω /km]	Inductance [μ H/ft]	Inductance [μ H/m]	L/R Ratio	Insulation Test Voltage [VAC]	Insulation Test Voltage [VDC]	Dielectric Test Voltage [VAC]	Dielectric Test Voltage [VDC]	
14	7	Tin Cu	2.73	8.96	0.188	0.617	34	7,500	11,250	2,500	7,500	
16	7	Tin Cu	4.35	14.3	0.202	0.663	23	7,500	11,250	2,500	7,500	

Circuit Integrity Cable – Specifications

600V, ICEA, Instrumentation, 1S – Unarmored

PRODUCT ATTRIBUTES													
Part Number	Conductor Size [AWG]	Pair Count	Shielding	Insulation Thickness [mils]	Insulation Thickness [mm]	Nominal Outer Diameter [in]	Nominal Outer Diameter [mm]	Weight [lbs/1000ft]	Weight [kg/km]	Bend Radius [in]	Bend Radius [cm]	Pulling Tension [lbs]	Pulling Tension [kg]
1S50-48607	14	1	NS	30	0.76	0.378	9.6	84	126	2.53	6.43	65	29
1S52-48617	14	1	OS	30	0.76	0.382	9.7	91	135	2.56	6.50	73	33
1S70-40267	14	2	OS	30	0.76	0.594	15.1	201	300	3.93	9.98	150	68
1S70-40467	14	4	OS	30	0.76	0.711	18.1	298	443	4.67	11.86	280	127
1S70-40867	14	8	OS	30	0.76	0.958	24.3	535	796	6.24	15.85	540	245
1S70-41267	14	12	OS	30	0.76	1.133	28.8	732	1089	7.27	18.47	801	363
1S70-42467	14	24	OS	30	0.76	1.525	38.7	1309	1948	9.73	24.71	1000	454
1S74-40267	14	2	ISOS	30	0.76	0.637	16.2	227	338	4.21	10.69	154	70
1S74-40467	14	4	ISOS	30	0.76	0.754	19.2	333	496	4.95	12.57	300	136
1S74-40867	14	8	ISOS	30	0.76	1.017	25.8	604	899	6.55	16.64	593	269
1S74-41267	14	12	ISOS	30	0.76	1.230	31.2	841	1252	7.88	20.02	886	402
1S74-42467	14	24	ISOS	30	0.76	1.751	44.5	1596	2375	11.06	28.09	1000	454
1S50-68607	16	1	NS	30	0.76	0.333	8.5	63	93	2.25	5.72	41	19
1S52-68617	16	1	OS	30	0.76	0.338	8.6	69	103	2.28	5.79	49	22
1S70-60267	16	2	OS	30	0.76	0.498	12.6	135	201	3.28	8.33	103	47
1S70-60467	16	4	OS	30	0.76	0.632	16.1	227	338	4.19	10.64	185	84
1S70-60867	16	8	OS	30	0.76	0.817	20.8	365	543	5.35	13.59	350	159
1S70-61267	16	12	OS	30	0.76	1.012	25.7	548	816	6.53	16.59	515	234
1S70-62467	16	24	OS	30	0.76	1.360	34.5	959	1427	8.71	22.12	1000	454
1S74-60267	16	2	ISOS	30	0.76	0.567	14.4	180	268	3.77	9.58	106	48
1S74-60467	16	4	ISOS	30	0.76	0.671	17.0	262	390	4.43	11.25	205	93
1S74-60867	16	8	ISOS	30	0.76	0.909	23.1	471	700	5.94	15.09	403	183
1S74-61267	16	12	ISOS	30	0.76	1.098	27.9	649	965	7.07	17.96	600	272
1S74-62467	16	24	ISOS	30	0.76	1.508	38.3	1159	1725	9.64	24.49	1000	454

ELECTRICAL PROPERTIES												
Conductor Size [AWG]	Strand Size	Conductor Material	Resistance [Ω /1000ft]	Resistance [Ω /km]	Inductance [μ H/ft]	Inductance [μ H/m]	L/R Ratio	Insulation Test Voltage [VAC]	Insulation Test Voltage [VDC]	Dielectric Test Voltage [VAC]	Dielectric Test Voltage [VDC]	
14	7	Tin Cu	2.73	8.96	0.188	0.617	34	7,500	11,250	2,500	7,500	
16	7	Tin Cu	4.35	14.3	0.202	0.663	23	7,500	11,250	2,500	7,500	

Circuit Integrity Cable – Specifications

600V, ICEA, Instrumentation, 1S – Gardex®

PRODUCT ATTRIBUTES																	
Part Number	Conductor Size [AWG]	Pair Count	Shielding	Insulation Thickness [mils]	Insulation Thickness [mm]	Core Diameter Max. [in]	Core Diameter Max. [mm]	Armor Diameter Nom. [in]	Armor Diameter Nom. [mm]	Outer Diameter Nom. [in]	Outer Diameter Nom. [mm]	Weight [lbs/1000ft]	Weight [kg/km]	Bend Radius [in]	Bend Radius [cm]	Pulling Tension [lbs]	Pulling Tension [kg]
1S5U-48607	14	1	NS	30	0.76	0.402	10.2	0.580	14.7	0.680	17.3	232	345	10.63	27.00	65	29
1S5W-48617	14	1	OS	30	0.76	0.406	10.3	0.580	14.7	0.680	17.3	238	354	10.63	27.00	65	29
1S7U-40267	14	2	OS	30	0.76	0.630	16.0	0.880	22.4	0.980	24.9	430	639	14.85	37.72	130	59
1S7U-40467	14	4	OS	30	0.76	0.749	19.0	1.020	25.9	1.120	28.4	563	838	16.87	42.85	260	118
1S7U-40867	14	8	OS	30	0.76	1.000	25.4	1.260	32.0	1.360	34.5	844	1257	20.33	51.64	520	236
1S7U-41267	14	12	OS	30	0.76	1.177	29.9	1.505	38.2	1.625	41.3	1159	1724	24.30	61.72	780	354
1S7U-42467	14	24	OS	30	0.76	1.575	40.0	2.020	51.3	2.140	54.4	1959	2915	31.72	80.57	1000	454
1S7W-40267	14	2	ISOS	30	0.76	0.674	17.1	0.920	23.4	1.020	25.9	462	687	15.43	39.19	154	70
1S7W-40467	14	4	ISOS	30	0.76	0.793	20.1	1.070	27.2	1.170	29.7	601	895	17.60	44.70	300	136
1S7W-40867	14	8	ISOS	30	0.76	1.060	26.9	1.330	33.8	1.430	36.3	924	1376	21.34	54.20	593	269
1S7W-41267	14	12	ISOS	30	0.76	1.276	32.4	1.640	41.7	1.760	44.7	1311	1952	26.25	66.68	886	402
1S7W-42467	14	24	ISOS	30	0.76	1.790	45.5	2.250	57.2	2.400	61.0	2395	3564	35.48	90.12	1000	454
1S5U-68607	16	1	NS	30	0.76	0.357	9.1	0.540	13.7	0.640	16.3	201	300	10.05	25.53	41	19
1S5W-68617	16	1	OS	30	0.76	0.362	9.2	0.540	13.7	0.640	16.3	206	307	10.05	25.53	41	19
1S7U-60267	16	2	OS	30	0.76	0.525	13.3	0.740	18.8	0.840	21.3	326	485	12.96	32.92	82	37
1S7U-60467	16	4	OS	30	0.76	0.671	17.0	0.920	23.4	1.020	25.9	462	688	15.43	39.19	164	74
1S7U-60867	16	8	OS	30	0.76	0.858	21.8	1.130	28.7	1.230	31.2	646	961	18.45	46.86	329	149
1S7U-61267	16	12	OS	30	0.76	1.056	26.8	1.330	33.8	1.430	36.3	869	1293	21.34	54.20	494	224
1S7U-62467	16	24	OS	30	0.76	1.410	35.8	1.800	45.7	1.920	48.8	1528	2274	28.55	72.52	989	449
1S7W-60267	16	2	ISOS	30	0.76	0.604	15.3	0.840	21.3	0.940	23.9	393	584	14.42	36.63	106	48
1S7W-60467	16	4	ISOS	30	0.76	0.710	18.0	0.965	24.5	1.065	27.1	509	757	16.07	40.82	205	93
1S7W-60867	16	8	ISOS	30	0.76	0.952	24.2	1.200	30.5	1.300	33.0	764	1137	19.47	49.45	403	183
1S7W-61267	16	12	ISOS	30	0.76	1.144	29.1	1.460	37.1	1.560	39.6	1007	1498	23.21	58.95	600	272
1S7W-62467	16	24	ISOS	30	0.76	1.560	39.6	2.020	51.3	2.140	54.4	1824	2715	31.72	80.57	1000	454

ELECTRICAL PROPERTIES												
Conductor Size [AWG]	Strand Size	Conductor Material	Resistance [Ω /1000ft]	Resistance [Ω /km]	Inductance [μ H/ft]	Inductance [μ H/m]	L/R Ratio	Insulation Test Voltage [VAC]	Insulation Test Voltage [VDC]	Dielectric Test Voltage [VAC]	Dielectric Test Voltage [VDC]	
14	7	Tin Cu	2.73	8.96	0.188	0.617	34	7,500	11,250	2,500	7,500	
16	7	Tin Cu	4.35	14.3	0.202	0.663	23	7,500	11,250	2,500	7,500	

Circuit Integrity Cable – Specifications

600V, UL Type TC, Instrumentation, 6S – Unarmored

PRODUCT ATTRIBUTES													
Part Number	Conductor Size [AWG]	Pair Count	Shielding	Insulation Thickness [mils]	Insulation Thickness [mm]	Nominal Outer Diameter [in]	Nominal Outer Diameter [mm]	Weight [lbs/1000ft]	Weight [kg/km]	Bend Radius [in]	Bend Radius [cm]	Pulling Tension [lbs]	Pulling Tension [kg]
6S50-48613	14	1	NS	45	1.14	0.442	11.2	104	154	2.96	7.52	65	29
6S52-48613	14	1	OS	45	1.14	0.446	11.3	110	163	2.99	7.59	73	33
6S70-40263	14	2	OS	45	1.14	0.701	17.8	243	361	4.64	11.79	150	68
6S70-40463	14	4	OS	45	1.14	0.886	22.5	398	592	5.82	14.78	280	127
6S70-40863	14	8	OS	45	1.14	1.144	29.1	653	972	7.40	18.80	540	245
6S70-41263	14	12	OS	45	1.14	1.361	34.6	903	1344	8.77	22.28	801	363
6S70-42463	14	24	OS	45	1.14	1.907	48.4	1713	2549	12.13	30.81	1000	454
6S74-40263	14	2	ISOS	45	1.14	0.754	19.2	268	399	4.98	12.65	154	70
6S74-40463	14	4	ISOS	45	1.14	0.940	23.9	445	662	6.17	15.67	300	136
6S74-40863	14	8	ISOS	45	1.14	1.216	30.9	732	1090	7.85	19.94	593	269
6S74-41263	14	12	ISOS	45	1.14	1.480	37.6	1024	1524	9.52	24.18	886	402
6S74-42463	14	24	ISOS	45	1.14	2.112	53.6	1943	2891	13.42	34.09	1000	454
6S50-68613	16	1	NS	45	1.14	0.397	10.1	79	118	2.68	6.81	41	19
6S52-68613	16	1	OS	45	1.14	0.402	10.2	86	128	2.71	6.88	49	22
6S70-60263	16	2	OS	45	1.14	0.636	16.2	197	293	4.24	10.77	103	47
6S70-60463	16	4	OS	45	1.14	0.768	19.5	286	425	5.09	12.93	185	84
6S70-60863	16	8	OS	45	1.14	1.042	26.5	514	765	6.77	17.20	350	159
6S70-61263	16	12	OS	45	1.14	1.240	31.5	705	1050	8.02	20.37	515	234
6S70-62463	16	24	OS	45	1.14	1.742	44.2	1333	1984	11.11	28.22	1000	454
6S74-60263	16	2	ISOS	45	1.14	0.684	17.4	221	329	4.55	11.56	106	48
6S74-60463	16	4	ISOS	45	1.14	0.817	20.8	323	480	5.40	13.72	205	93
6S74-60863	16	8	ISOS	45	1.14	1.109	28.2	586	872	7.19	18.26	403	183
6S74-61263	16	12	ISOS	45	1.14	1.349	34.3	814	1212	8.71	22.12	600	272
6S74-62463	16	24	ISOS	45	1.14	1.929	49.0	1549	2306	12.30	31.24	1000	454

ELECTRICAL PROPERTIES													
Conductor Size [AWG]	Strand Size	Conductor Material	Resistance [Ω /1000ft]	Resistance [Ω /km]	Inductance [μ H/ft]	Inductance [μ H/m]	L/R Ratio	Insulation Test Voltage [VAC]	Insulation Test Voltage [VDC]	Dielectric Test Voltage [VAC]	Dielectric Test Voltage [VDC]		
14	7	Tin Cu	2.73	8.96	0.188	0.617	34	7,500	11,250	3,000	9,000		
16	7	Tin Cu	4.35	14.3	0.202	0.663	23	7,500	11,250	3,000	9,000		

Circuit Integrity Cable – Specifications

600V, UL Type MC-HL, Instrumentation, 6S – Gardex®

PRODUCT ATTRIBUTES																	
Part Number	Conductor Size [AWG]	Pair Count	Shielding	Insulation Thickness [mils]	Insulation Thickness [mm]	Core Diameter Max. [in]	Core Diameter Max. [mm]	Armor Diameter Nom. [in]	Armor Diameter Nom. [mm]	Outer Diameter Nom. [in]	Outer Diameter Nom. [mm]	Weight [lbs/1000ft]	Weight [kg/km]	Bend Radius [in]	Bend Radius [cm]	Pulling Tension [lbs]	Pulling Tension [kg]
6S5W-48643-MC	14	1	OS	45	1.14	0.454	11.5	0.660	16.8	0.760	19.3	287	427	11.79	29.95	65	29
6S7U-40263-MC	14	2	OS	45	1.14	0.714	18.1	0.965	24.5	1.065	27.1	474	705	16.07	40.82	130	59
6S7U-40463-MC	14	4	OS	45	1.14	0.863	21.9	1.130	28.7	1.230	31.2	620	923	18.45	46.86	260	118
6S7U-40863-MC	14	8	OS	45	1.14	1.127	28.6	1.460	37.1	1.560	39.6	934	1389	23.21	58.95	520	236
6S7U-41263-MC	14	12	OS	45	1.14	1.349	34.3	1.710	43.4	1.830	46.5	1302	1937	27.26	69.24	780	354
6S7U-42463-MC	14	24	OS	45	1.14	1.876	47.7	2.350	59.7	2.500	63.5	2385	3550	36.92	93.78	1000	454
6S7W-40263-MC	14	2	ISOS	45	1.14	0.768	19.5	1.070	27.2	1.170	29.7	523	778	17.60	44.70	154	70
6S7W-40463-MC	14	4	ISOS	45	1.14	0.918	23.3	1.200	30.5	1.300	33.0	682	1015	19.47	49.45	300	136
6S7W-40863-MC	14	8	ISOS	45	1.14	1.201	30.5	1.560	39.6	1.680	42.7	1100	1637	25.09	63.73	593	269
6S7W-41263-MC	14	12	ISOS	45	1.14	1.471	37.4	1.870	47.5	1.990	50.5	1515	2254	29.57	75.11	886	402
6S7W-42463-MC	14	24	ISOS	45	1.14	2.086	53.0	2.550	64.8	2.700	68.6	2664	3964	39.80	101.09	1000	454
6S5W-68633-MC	16	1	OS	45	1.14	0.420	10.7	0.620	15.7	0.720	18.3	247	368	11.21	28.47	41	19
6S7U-60263-MC	16	2	OS	45	1.14	0.649	16.5	0.880	22.4	0.980	24.9	400	595	14.85	37.72	82	37
6S7U-60463-MC	16	4	OS	45	1.14	0.785	19.9	1.070	27.2	1.170	29.7	529	787	17.60	44.70	164	74
6S7U-60863-MC	16	8	OS	45	1.14	1.025	26.0	1.330	33.8	1.430	36.3	764	1137	21.34	54.20	329	149
6S7U-61263-MC	16	12	OS	45	1.14	1.228	31.2	1.560	39.6	1.680	42.7	1059	1576	25.09	63.73	494	224
6S7U-62463-MC	16	24	OS	45	1.14	1.712	43.5	2.120	53.8	2.240	56.9	1849	2752	33.17	84.25	989	449
6S7W-60263-MC	16	2	ISOS	45	1.14	0.699	17.8	0.965	24.5	1.065	27.1	451	672	16.07	40.82	106	48
6S7W-60463-MC	16	4	ISOS	45	1.14	0.835	21.2	1.130	28.7	1.230	31.2	583	867	18.45	46.86	205	93
6S7W-60863-MC	16	8	ISOS	45	1.14	1.093	27.8	1.460	37.1	1.560	39.6	872	1297	23.21	58.95	403	183
6S7W-61263-MC	16	12	ISOS	45	1.14	1.340	34.0	1.710	43.4	1.830	46.5	1207	1797	27.26	69.24	600	272
6S7W-62463-MC	16	24	ISOS	45	1.14	1.904	48.4	2.350	59.7	2.500	63.5	2214	3294	36.92	93.78	1000	454

ELECTRICAL PROPERTIES												
Conductor Size [AWG]	Strand Size	Conductor Material	Resistance [Ω/1000ft]	Resistance [Ω/km]	Inductance [μH/ft]	Inductance [μH/m]	L/R Ratio	Insulation Test Voltage [VAC]	Insulation Test Voltage [VDC]	Dielectric Test Voltage [VAC]	Dielectric Test Voltage [VDC]	
14	7	Tin Cu	2.73	8.96	0.188	0.617	34	7,500	11,250	3,000	9,000	
16	7	Tin Cu	4.35	14.3	0.202	0.663	23	7,500	11,250	3,000	9,000	

Circuit Integrity Cable – Specifications

600V, UL Type TC, Control, 6S – Unarmored

PRODUCT ATTRIBUTES													
Part Number	Conductor Size [AWG]	Conductor Count	Shielding	Insulation Thickness [mils]	Insulation Thickness [mm]	Nominal Outer Diameter [in]	Nominal Outer Diameter [mm]	Weight [lbs/1000ft]	Weight [kg/km]	Bend Radius [in]	Bend Radius [cm]	Pulling Tension [lbs]	Pulling Tension [kg]
6S35-B0363	10	3	NS	45	1.14	0.589	15.0	243	361	3.92	9.96	244	111
6S35-B0463	10	4	NS	45	1.14	0.659	16.7	315	469	4.36	11.07	326	148
6S35-20263	12	2	NS	45	1.14	0.469	11.9	129	191	3.13	7.95	102	46
6S35-20363	12	3	NS	45	1.14	0.508	12.9	168	251	3.34	8.48	154	70
6S35-20563	12	5	NS	45	1.14	0.638	16.2	283	421	4.23	10.74	256	116
6S35-20963	12	9	NS	45	1.14	0.806	20.5	452	673	5.30	13.46	462	210
6S35-21263	12	12	NS	45	1.14	0.948	24.1	620	923	6.20	15.75	616	279
6S35-40263	14	2	NS	45	1.14	0.434	11.0	102	152	2.90	7.37	65	29
6S35-40363	14	3	NS	45	1.14	0.469	11.9	132	196	3.13	7.95	97	44
6S35-40563	14	5	NS	45	1.14	0.589	15.0	219	326	3.93	9.98	162	73
6S35-40963	14	9	NS	45	1.14	0.741	18.8	345	514	4.90	12.45	292	132
6S35-41263	14	12	NS	45	1.14	0.873	22.2	472	702	5.74	14.58	390	177
6S35-60263	16	2	NS	45	1.14	0.389	9.9	79	118	2.63	6.68	41	19
6S35-60363	16	3	NS	45	1.14	0.421	10.7	101	151	2.84	7.21	61	28
6S35-60563	16	5	NS	45	1.14	0.503	12.8	148	220	3.33	8.46	103	47
6S35-60963	16	9	NS	45	1.14	0.672	17.1	267	397	4.47	11.35	185	84
6S35-61263	16	12	NS	45	1.14	0.755	19.2	336	500	5.00	12.70	247	112

ELECTRICAL PROPERTIES												
Conductor Size [AWG]	Strand Size	Conductor Material	Resistance [Ω /1000ft]	Resistance [Ω /km]	Inductance [μ H/ft]	Inductance [μ H/m]	L/R Ratio	Insulation Test Voltage [VAC]	Insulation Test Voltage [VDC]	Dielectric Test Voltage [VAC]	Dielectric Test Voltage [VDC]	
10	7	Tin Cu	1.08	3.54	0.166	0.545	77	7,500	11,250	3,000	9,000	
12	7	Tin Cu	1.71	5.61	0.176	0.577	51	7,500	11,250	3,000	9,000	
14	7	Tin Cu	2.73	8.96	0.188	0.617	34	7,500	11,250	3,000	9,000	
16	7	Tin Cu	4.35	14.27	0.202	0.663	23	7,500	11,250	3,000	9,000	

Circuit Integrity Cable – Specifications

600V, UL Type MC-HL, Control, 6S – Gardex®

PRODUCT ATTRIBUTES																		
Part Number	Conductor Size [AWG]	Conductor Count	Shielding	AWG Size Ground	Insulation Thickness [mils]	Insulation Thickness [mm]	Core Diameter Max. [in]	Core Diameter Max. [mm]	Armor Diameter Nom. [in]	Armor Diameter Nom. [mm]	Outer Diameter Nom. [in]	Outer Diameter Nom. [mm]	Weight [lbs/1000ft]	Weight [kg/km]	Bend Radius [in]	Bend Radius [cm]	Pulling Tension [lbs]	Pulling Tension [kg]
6S3W-B0263-200G1MC	10	2	NS	10	45	1.14	0.598	15.2	0.840	21.3	0.940	23.9	441	656	14.42	36.63	244	111
6S3W-B0463-200G1MC	10	4	NS	10	45	1.14	0.713	18.1	0.965	24.5	1.065	27.1	587	874	16.07	40.82	407	185
6S3W-B0863-200G1MC	10	8	NS	10	45	1.14	0.907	23.0	1.200	30.5	1.300	33.0	867	1291	19.47	49.45	733	332
6S3W-B1263-200G1MC	10	12	NS	10	45	1.14	1.077	27.4	1.460	37.1	1.560	39.6	1155	1718	23.21	58.95	1000	454
6S3W-B2463-200G1MC	10	24	NS	10	45	1.14	1.416	36.0	1.800	45.7	1.920	48.8	2004	2983	28.55	72.52	1000	454
6S3W-20263-200G1MC	12	2	NS	12	45	1.14	0.526	13.4	0.740	18.8	0.840	21.3	354	526	12.96	32.92	154	70
6S3W-20463-200G1MC	12	4	NS	12	45	1.14	0.648	16.5	0.880	22.4	0.980	24.9	486	724	14.85	37.72	256	116
6S3W-20863-200G1MC	12	8	NS	12	45	1.14	0.820	20.8	1.130	28.7	1.230	31.2	719	1069	18.45	46.86	462	210
6S3W-21263-200G1MC	12	12	NS	12	45	1.14	0.971	24.7	1.260	32.0	1.360	34.5	908	1351	20.33	51.64	668	303
6S3W-22463-200G1MC	12	24	NS	12	45	1.14	1.272	32.3	1.640	41.7	1.760	44.7	1534	2283	26.25	66.68	1000	454
6S3W-40263-200G1MC	14	2	NS	14	45	1.14	0.487	12.4	0.700	17.8	0.800	20.3	310	461	12.38	31.45	97	44
6S3W-40463-200G1MC	14	4	NS	14	45	1.14	0.600	15.2	0.840	21.3	0.940	23.9	417	620	14.42	36.63	162	73
6S3W-40863-200G1MC	14	8	NS	14	45	1.14	0.755	19.2	1.020	25.9	1.120	28.4	587	873	16.87	42.85	292	132
6S3W-41263-200G1MC	14	12	NS	14	45	1.14	0.892	22.7	1.130	28.7	1.230	31.2	718	1068	18.45	46.86	422	191
6S3W-42463-200G1MC	14	24	NS	14	45	1.14	1.164	29.6	1.505	38.2	1.625	41.3	1206	1795	24.30	61.72	813	369
6S3W-60263-200G1MC	16	2	NS	16	45	1.14	0.440	11.2	0.620	15.7	0.720	18.3	254	378	11.21	28.47	61	28
6S3W-60463-200G1MC	16	4	NS	16	45	1.14	0.524	13.3	0.740	18.8	0.840	21.3	333	495	12.96	32.92	103	47
6S3W-60863-200G1MC	16	8	NS	16	45	1.14	0.686	17.4	0.920	23.4	1.020	25.9	480	714	15.43	39.19	185	84
6S3W-61263-200G1MC	16	12	NS	16	45	1.14	0.811	20.6	1.130	28.7	1.230	31.2	627	932	18.45	46.86	268	122
6S3W-62463-200G1MC	16	24	NS	16	45	1.14	1.059	26.9	1.330	33.8	1.430	36.3	908	1351	21.34	54.20	515	234

ELECTRICAL PROPERTIES												
Conductor Size [AWG]	Strand Size	Conductor Material	Resistance [Ω /1000ft]	Resistance [Ω /km]	Inductance [μ H/ft]	Inductance [μ H/m]	L/R Ratio	Insulation Test Voltage [VAC]	Insulation Test Voltage [VDC]	Dielectric Test Voltage [VAC]	Dielectric Test Voltage [VDC]	
10	7	Tin Cu	1.08	3.54	0.166	0.545	77	7,500	11,250	3,000	9,000	
12	7	Tin Cu	1.71	5.61	0.176	0.577	51	7,500	11,250	3,000	9,000	
14	7	Tin Cu	2.73	8.96	0.188	0.617	34	7,500	11,250	3,000	9,000	
16	7	Tin Cu	4.35	14.3	0.202	0.663	23	7,500	11,250	3,000	9,000	

CHEMICAL RESISTANCE GUIDE

Packaging & Documentation

- Reels – Depending on the size of the cable, the products are delivered on wooden reels of up to 96” in diameter. There is an option to lag wooden reels –wood planks are nailed to the outer reel edges to prevent damages to the cable while in shipping. The wood reels are heat treated to comply with international phytosanitary requirements.
- Ends of the cables (“pig tails”) are exposed on the reels for final testing, but sealed for transportation.
- Certificates of Conformance are available upon request.

Jacketing Compound and Temperature Rating						
Chemical	PVC	PE	Nylon	TPE	CPE	TPN
Acetic Acid	E	E	F	G	E	E
Hydrochloric Acid	G	E	P	G	E	E
Sodium Hydroxide	E	E	G	G	E	E
Sodium Chloride	G	G	G	G	G	E
Aniline	P	F	F	P	P	F
Ethanol	F	G	G	G	G	E
Methanol	P	E	G	G	E	E
Acetaldehyde	P	F	G	G	G	F
ASTM No.2 011	F	P	E	G	E	P
Lubricating Oils	G	F	G	P	G	F
Methyl Chloride	P	F	F	P	P	F
Carbon Tetrachloride	F	P	G	P	G	P
Acetone	P	F	E	P	G	F
MEK	P	F	G	F	F	F
Toluene	P	F	G	F	G	F
Gasoline	F	P	E	P	G	P
Benzene	P	F	G	P	P	F
Kerosene	G	G	E	P	F	G
Naphtha	F	F	G	P	F	F
Diocetyl Phthalate	P	F	E	G	F	F
Water Permeation	G	E	P	G	G	E

E - Excellent

G - Good

F - Fair

P - Poor

Dekoron Wire & Cable LLC

1300 Industrial Boulevard
 Mount Pleasant, Texas 75455
 Phone: (903) 572-0657
 Fax: (903) 572-6153

www.dekoroncable.com

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A Marmon Wire & Cable/Berkshire Hathaway Company