



■ USA Cable Solutions

Lutze Flexible Cable and Wire Management for Industrial Automation



Control Cable
Flexible Tray-ER Cable
High Flexing Cable
Motor & VFD Cable
Ethernet Cable
Cable Fittings and Accessories
NPT, Pg, Metric Fittings

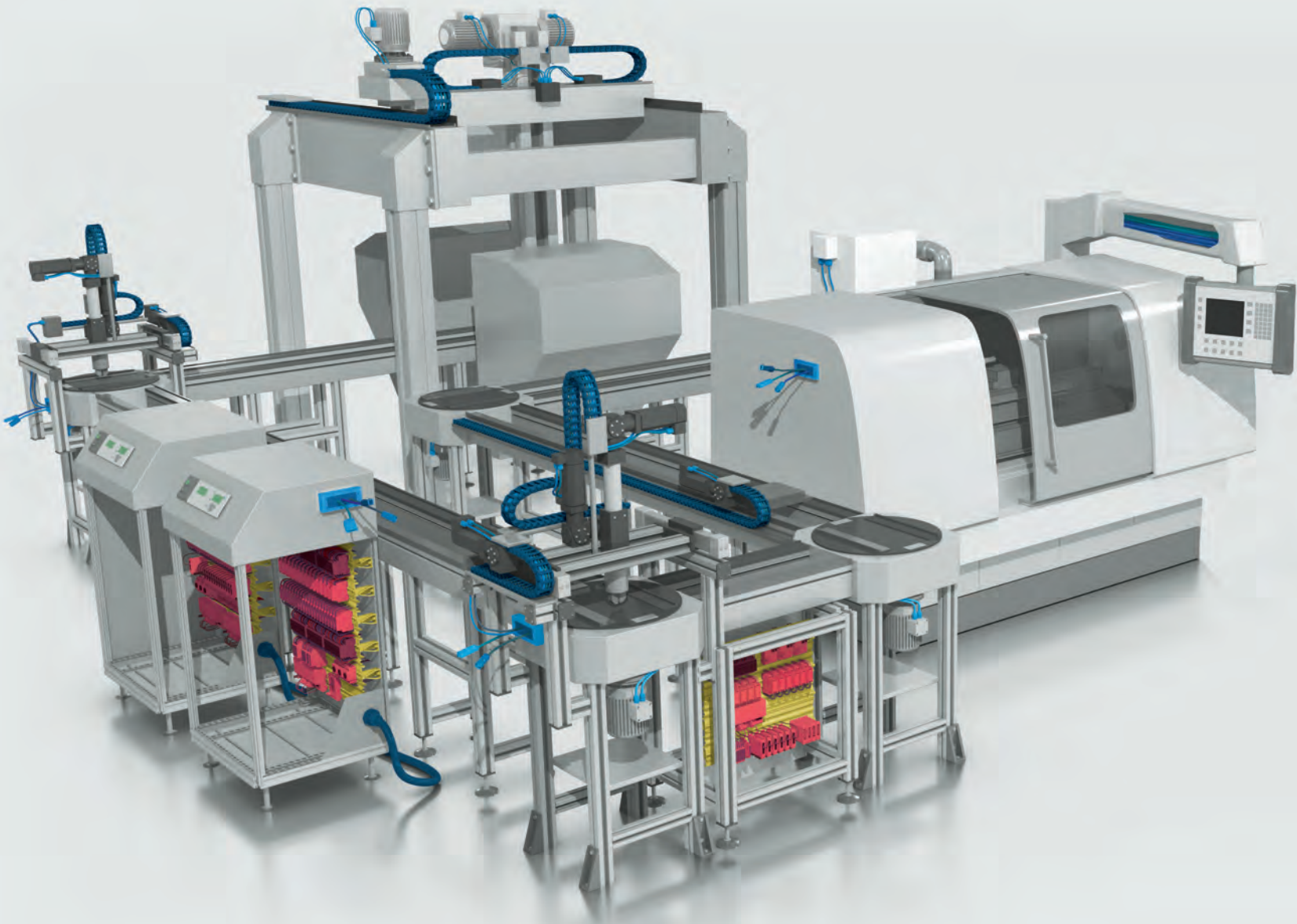


**Lutze: Your ultimate Partner in flexible
and continuously flexing cable.**



- **UL/CSA/CE and Tray-ER approvals**
- **NFPA 79 compliant cables available**
- **Accepted by the Automotive Industry**
- **Suitable for the North American market**
- **Standard size reels available**
- **We cut cable to any length compliant with
“UL processed wire respooled” procedure**
- **No minimum length required for standard items**
- **Low minimum order**
- **Our goal is “On time-All the time”.**

From products to solutions!



Cable Solutions



Automation Solutions



Cabinet Solutions

Flexible Cables

Lutze Silflex® for Flexible and Stationary Applications

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High Flexing Cables

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Flexible Cables

Lutze Silflex® for Flexible and Stationary Applications



Lutze Silflex® N PVC, Unshielded

Flexible Control Cable with UL/CSA/CE Approvals



Application

- Multi-conductor control cable for machine and plant construction, HVAC technology, assembly and production lines, and many other industrial applications
- Easy strip design specially suited for cable assemblies

Characteristics

- Most flexible design without Nylon for easy stripping and easy installation
- Easy routing and bending due to flexibility
- Specially formulated gray PVC jacket for oil resistance
- Resistant to mineral oils, coolants and solvents
- Non-wicking fillers
- RoHS compliant

Technical Data

Voltage	600V UL AWM
Temperature	-40°C - +90°C static
Bending radius	4 x cable OD
Conductor marking	Black with white numbers and one green/yellow ground; * no ground included
Approvals	UL AWM Style 2587, VW-1, Oil Res I & II CSA AWM, I/II A/B FT4 CE RoHS

Construction

- Flexible stranded bare copper conductors
- PVC insulation
- Gray PVC jacket, compliant Oil Res I & II
- Other jacket colors available

Part No.	Description No. of conductors incl. ground	OD - Ø ca. mm	OD - Ø inches	Weight Lbs/Mft	Copper Lbs/Mft
AWG 20 (10/30)					
108350A	3	6.0	0.235	31	10
108351A	4	6.5	0.255	38	12
108352A	5	7.2	0.282	46	16
108353A	7	8.8	0.345	65	22
108354A	12	10.8	0.424	103	38
108355A	18	12.8	0.505	153	56
108356A	25	15.0	0.592	206	88
AWG 18 (16/30)					
108401A	2*	6.5	0.254	34	10
108357A	3	6.7	0.263	41	15
108358A	4	7.2	0.285	51	20
108359A	5	7.7	0.305	63	25
108360A	7	9.1	0.360	82	35
108392A	9	11.7	0.460	119	45
108361A	12	12.0	0.473	142	60
108362A	18	13.8	0.543	198	90
108363A	25	16.0	0.630	263	125
108387A	34	18.8	0.739	356	171
108388A	50	22.9	0.901	501	251
AWG 16 (26/30)					
108391A	2*	6.9	0.270	41	16
108372A	3	7.4	0.290	55	24
108373A	4	8.0	0.316	69	32
108374A	5	8.7	0.341	84	40
108375A	7	10.3	0.406	112	57
108393A	9	13.0	0.511	159	73
108376A	12	13.8	0.543	198	97
108377A	18	15.5	0.610	274	147
108378A	25	18.0	0.708	366	204
108379A	34	21.0	0.826	498	277
108441A	41	22.6	0.890	634	370
AWG 14 (41/30)					
108380A	3	8.9	0.352	82	38
108381A	4	9.8	0.384	103	51
108382A	5	10.9	0.430	130	63
108383A	7	13.4	0.529	183	89
108389A	9	16.3	0.642	246	115
108384A	12	16.9	0.666	307	153
108385A	18	19.7	0.774	433	230
108386A	25	23.7	0.935	598	320

Lutze Silflex® N (C) PVC, Shielded

Flexible Control Cable with UL/CSA/CE Approvals



Application

- Shielded multi-conductor control cable for machine and plant construction, HVAC technology, assembly and production lines, and many other industrial applications
- Control applications where shielding is required
- Easy strip design specially suited for cable assemblies

Characteristics

- Most flexible design without Nylon for easy stripping and easy installation
- Easy routing and bending due to flexibility
- Specially formulated gray PVC jacket for oil resistance
- Resistant to mineral oils, coolants and solvents
- Non-wicking fillers
- RoHS compliant

Technical Data

Voltage	600V UL AWM
Temperature	-40°C - +90°C static
Bending radius	6 x cable OD
Conductor marking	Black with white numbers and one green/yellow ground; *no ground included
Approvals	UL/CSA/CE Oil Res I & II RoHS

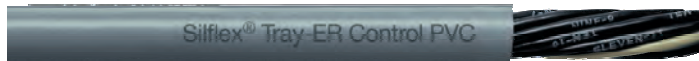
Construction

- Flexible stranded bare copper conductors
- PVC insulation
- Tinned Copper braided shield
- Gray PVC jacket, compliant Oil Res I & II
- Yellow PVC jacket also available

Part No.	Description No. of conductors incl. ground	OD - Ø ca. mm	OD - Ø inches	Weight Lbs/Mft	Copper Lbs/Mft
AWG 20 (10/30)					
A1212003	3	7.8	0.308	66	25
A1212004	4	8.3	0.325	74	29
A1212005	5	8.8	0.345	83	33
A1212007	7	9.3	0.367	98	42
A1212012	12	11.5	0.452	140	64
A1212018	18	14.0	0.553	222	88
A1212025	25	15.9	0.624	279	117
AWG 18 (16/30)					
A1211802	2*	7.7	0.304	65	21
A1211803	3	8.0	0.314	74	31
A1211804	4	8.5	0.333	85	38
A1211805	5	9.0	0.356	94	45
A1211807	7	10.3	0.404	119	58
A1211812	12	13.1	0.518	200	88
A1211818	18	14.9	0.587	276	128
A1211825	25	16.9	0.665	367	179
AWG 16 (26/30)					
A1211603	3	8.5	0.335	88	42
A1211604	4	9.2	0.362	106	53
A1211605	5	9.9	0.390	120	64
A1211607	7	10.6	0.418	146	82
A1211612	12	14.8	0.581	274	131
A1211618	18	16.6	0.654	350	188
A1211625	25	19.1	0.753	486	272
AWG 14 (41/30)					
A1211404	4	10.9	0.430	146	75
A1211405	5	12.0	0.472	171	90
A1211407	7	13.0	0.510	195	126

Lutze Silflex® Control-ER PVC, Unshielded

Flexible Control and Tray Cable with UL/TC-ER/WTTC/MTW/CSA/CE Approvals



Application

- Multi-conductor cable for tray and control applications, with **exposed run** (open wiring) approval
- Compliant with **NFPA 79** requirements
- **TC-ER** for use on machines and in cable trays **without conduit**, which can reduce material and labor costs
- Machine tools, machine and plant construction, HVAC technology, assembly and production lines, and other industrial applications
- WTTC – wind turbine tray cable rating for use in wind power generation
- Dry, damp or wet locations

Characteristics

- Flexible design with Nylon for crush impact resistance per UL 1277 and easy installation
- Specially formulated jacket for oil resistance
- Gray jacket for control cable applications according to *DESINA*
- Non-wicking fillers
- RoHS compliant
- Sunlight resistant
- Direct burial
- UL Type TC-Exposed Run
- Dry or wet conditions
- Talc free
- Silicone free

Technical Data

Voltage	600V UL TC 1000V WTTC
Temperature	-40°C - +90°C static
Bending radius	4 x cable OD
Conductor marking	Black with white numbers and one green/yellow ground *no ground included
Approvals	UL Type TC-ER UL/AWM/CSA/CE (UL) Type MTW or DP-1 WTTC Class 1 Div. 2 per NEC Art. 336, 392, 501 C(UL) TC and CIC FT4 UL 1277, RoHS Oil Res II

Construction

- Flexible fine wire stranded bare copper conductors
- PVC/Nylon insulation
- Oil resistant gray PVC jacket

Part No.	Description No. of conductors incl. ground	OD - Ø ca. mm	OD - Ø inches	Weight Lbs/Mft	Copper Lbs/Mft
AWG 18 (19/30)					
A3081802	2	7.0	0.276	40	12
A3081803	3	7.5	0.296	57	18
A3081804	4	8.1	0.320	66	24
A3081805	5	8.8	0.346	77	30
A3081807	7	9.5	0.373	100	42
A3081812	12	12.1	0.477	171	72
A3081818	18	14.9	0.587	245	108
A3081825	25	17.2	0.677	322	150
A3081841	41	22.1	0.895	469	247
A3081850	50	23.1	0.910	581	302
AWG 16 (26/30)					
A3081602	2*	7.7	0.305	52	16
A3081603	3	8.1	0.21	69	24
A3081604	4	8.7	0.347	83	32
A3081605	5	9.5	0.377	98	40
A3081607	7	10.2	0.406	127	57
A3081609	9	12.0	0.473	159	74
A3081612	12	13.4	0.527	220	98
A3081618	18	16.4	0.647	289	147
A3081625	25	19.0	0.748	397	204
AWG 14 (41/30)					
A3081403	3	8.8	0.348	87	38
A3081404	4	9.6	0.378	107	51
A3081405	5	10.4	0.410	128	64
A3081407	7	11.3	0.445	169	89
A3081409	9	13.1	0.516	204	115
A3081412	12	15.5	0.610	308	154
A3081418	18	18.2	0.715	402	231
A3081425	25	20.9	0.825	534	321
AWG 12 (65/30)					
A3081203	3	9.8	0.382	110	63
A3081204	4	11.1	0.437	152	83
A3081205	5	12.1	0.475	187	105
A3081207	7	14.1	0.556	258	147
AWG 10 (105/30)					
A3081004	4	14.6	0.573	265	130
A3081005	5	15.8	0.623	241	162
AWG 8 (168/30)					
A3080804	4	18.9	0.744	366	214
A3080805	5	22.4	0.874	452	268
AWG 6 (266/30)					
A3080604	4	21.7	0.853	580	339
A3080605	5	24.1	0.949	673	425
AWG 4 (413/30)					
A3080404	4	27.9	1.098	514	514
AWG 2 (665/30)					
A3080203	3	28.6	1.125	1063	655
A3080204	4	32.2	1.27	1305	874

Lutze Silflex® (C) Control-ER PVC, Shielded

Flexible Shielded Control and Tray Cable with UL/TC-ER/WTTC/MTW/CSA/CE Approvals



Application

- Shielded multi-conductor control cable for tray applications, with **exposed run** (open wiring) approval
- Compliant with **NFPA 79** for machine tool wiring
- **TC-ER** for use on machines and in cable trays **without conduit**, which can reduce material and labor costs
- Machine tools, machine and plant construction, HVAC technology, assembly and production lines, and other industrial applications
- **WTTC** – wind turbine tray cable for use in wind power generation
- Dry, damp or wet locations

Characteristics

- Flexible design with Nylon for crush impact resistance per UL 1277 and easy installation
- Specially formulated jacket for oil resistance
- Gray jacket for control cable applications according to *DESINA*
- Non-wicking fillers
- RoHS compliant
- Sunlight resistant
- Direct burial
- UL Type TC-Exposed Run
- Dry or wet conditions
- Talc free
- Silicone free

Technical Data

Voltage	600V UL TC 1000V WTTC
Temperature	-40°C - +90°C static
Bending radius	6 x cable OD
Conductor marking	Black with white numbers and one green/yellow ground
Approvals	UL Type TC-ER UL AWM/CSA/CE (UL) Type MTW or DP-1 WTTC Class 1, Div. 2 per NEC Art. 336, 392, 501 C(UL) TC and CIC FT4 UL1277, RoHS Oil Res II

Construction

- Flexible fine wire stranded bare copper conductors
- PVC/Nylon insulation
- Shielded with foil tape, tinned copper braid and drain wire
- Oil resistant gray PVC jacket

Part No.	Description No. of conductors incl. ground	OD - Ø ca. mm	OD - Ø inches	Weight Lbs/Mft	Copper Lbs/Mft
AWG 18 (19/30)					
A3091803	3	7.9	0.310	68	30
A3091804	4	8.7	0.343	84	38
A3091805	5	9.1	0.357	94	44
A3091807	7	10.0	0.395	119	58
A3091812	12	12.8	0.505	187	91
A3091818	18	15.5	0.610	266	131
A3091825	25	18.0	0.710	360	177
AWG 16 (26/30)					
A3091603	3	8.8	0.345	87	39
A3091604	4	9.4	0.370	99	49
A3091605	5	10.2	0.400	116	57
A3091607	7	10.8	0.425	144	75
A3091612	12	14.0	0.550	227	121
A3091618	18	16.9	0.665	326	174
A3091625	25	19.6	0.770	441	233
AWG 14 (41/30)					
A3091403	3	9.4	0.370	109	57
A3091404	4	10.3	0.406	128	74
A3091405	5	11.1	0.435	155	85
A3091407	7	12.2	0.480	198	113
A3091412	12	16.1	0.635	315	182
AWG 12 (65/30)					
A3091203	3	10.8	0.425	150	88
A3091204	4	11.6	0.457	173	112
A3091205	5	12.7	0.500	215	133
AWG 10 (105/30)					
A3091004	4	15.1	0.594	284	171

Lutze Silflex® Tray-ER PVC, Unshielded

Flexible Tray Cable with UL/TC-ER/WTTC/MTW/CSA/CE Approvals



Application

- Multi-conductor cable for tray applications, with **exposed run** (open wiring) approval
- Compliant with **NFPA 79** for machine tool wiring
- **TC-ER** for use with cable trays **without conduit**, which can reduce material and labor costs
- Machine tools, machine and plant construction, HVAC technology, assembly and production lines, and other industrial applications
- WTTC – wind turbine tray cable rating for use in wind power generation (approval effective as of 03/2009)
- Dry, damp and wet locations

Characteristics

- Flexible design with Nylon for crush impact resistance per UL 1277 and easy installation
- Specially formulated jacket for oil resistance
- Non-wicking fillers
- RoHS compliant
- Sunlight resistant
- Direct burial
- UL Type TC-Exposed Run
- Dry or wet conditions
- Talc free
- Silicone free

Technical Data

Voltage	600V UL TC 1000V WTTC
Temperature	-40°C - +90°C static
Bending radius	4 x cable OD
Conductor marking	Black with white numbers and one green/yellow ground
Approvals	UL Type TC-ER UL/CSA/CE UL AWM, Oil res I, UL 83 (UL) Type MTW or DP-1 WTTC Class 1, Div. 2 per NEC Art. 336, 392, 501 C(UL) TC and CIC FT4 UL1277, RoHS Oil Res II

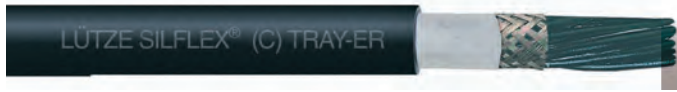
Construction

- Flexible fine wire stranded bare copper conductors
- PVC/Nylon insulation / THHN - THWN
- Oil resistant black PVC jacket

Part No.	Description No. of conductors incl. ground	OD - Ø ca. mm	OD - Ø inches	Weight Lbs/Mft	Copper Lbs/Mft
AWG 18 (19/30)					
A3221803	3	7.5	0.296	52	18
A3221804	4	8.1	0.320	63	24
A3221805	5	8.8	0.346	74	30
A3221807	7	9.5	0.373	96	42
A3221812	12	12.1	0.477	152	72
A3221818	18	14.9	0.587	233	108
A3221825	25	17.2	0.677	305	150
AWG 16 (26/30)					
A3221603	3	8.1	0.321	66	24
A3221604	4	8.7	0.347	79	32
A3221605	5	9.5	0.377	92	40
A3221607	7	10.2	0.406	119	57
A3221612	12	13.4	0.527	189	98
A3221618	18	16.4	0.647	292	147
A3221625	25	19.0	0.748	381	204
AWG 14 (41/30)					
A3221403	3	8.8	0.348	83	38
A3221404	4	9.6	0.378	102	51
A3221405	5	10.4	0.410	122	64
A3221407	7	11.3	0.445	159	89
A3221409	9	13.1	0.516	204	115
A3221412	12	15.5	0.610	280	154
AWG 12 (65/30)					
A3221203	3	9.8	0.382	121	63
A3221204	4	11.1	0.437	143	83
A3221205	5	12.1	0.475	176	105
A3221207	7	14.1	0.556	253	147
AWG 10 (105/30)					
A3221004	4	14.6	0.573	171	130
A3221005	5	15.8	0.623	241	162
AWG 8 (168/30)					
A3220804	4	18.9	0.744	395	214
A3220805	5	22.4	0.874	452	268
AWG 6 (266/30)					
A3220604	4	21.7	0.853	551	339
AWG 4 (413/30)					
A3220404	4	27.9	1.098	514	514
AWG 2 (665/30)					
A3220204	4	32.3	1.272	1305	874
AWG 1 (836/30)					
A3220103	3	32.9	1.293	1217	817

Lutze Silflex® (C) Tray-ER PVC, Shielded

Flexible Shielded Tray Cable with UL/TC-ER/WTTC/MTW/CSA/CE Approvals



Application

- Shielded multi-conductor cable for tray applications, with exposed run (open wiring) approval
- Compliant with NFPA 79 for machine tool wiring
- TC-ER for use with cable trays without conduit, which can reduce material and labor costs
- Machine tools, machine and plant construction, HVAC technology, assembly and production lines, and other industrial applications
- WTTC – wind turbine tray cable rating for use in wind power generation (approval effective as of 03/2009)
- Dry, damp and wet locations

Characteristics

- Flexible design with Nylon for crush impact resistance per UL 1277 and easy installation
- Specially formulated jacket for oil resistance
- RoHS compliant
- Sunlight resistant
- Direct burial
- UL Type TC-Exposed Run
- Dry or wet conditions
- Talc free
- Silicone free

Technical Data

Voltage	600V UL TC 1000V WTTC
Temperature	-40°C - +90°C static
Bending radius	6 x cable OD
Conductor marking	Black with white numbers and one green/yellow ground
Approvals	UL Type TC-ER UL/CSA/CE UL AMW, Oil res I, UL 83 (UL) Type MTW or DP-1 WTTC Class 1, Div. 2 per NEC Art. 336, 392, 501 C(UL) TC and CIC FT4 UL1277, RoHS

Construction

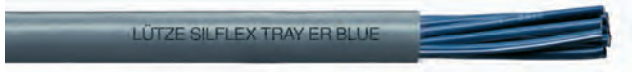
- Flexible fine wire stranded bare copper conductors
- PVC/Nylon insulation
- Shielded with foil tape, tinned copper braid and drain wire
- Oil resistant black PVC jacket

Part No.	Description No. of conductors incl. ground	OD - Ø ca. mm	OD - Ø inches	Weight Lbs/Mft	Copper Lbs/Mft
AWG 18 (19/30)					
A3211803	3	7.9	0.310	68	30
A3211805	5	9.1	0.357	94	44
A3211807	7	10.0	0.395	119	58
A3211812	12	12.8	0.505	187	91
A3211818	18	15.5	0.610	266	131
A3211825	25	18.0	0.710	360	177
AWG 16 (26/30)					
A3211603	3	8.8	0.345	87	39
A3211605	5	10.2	0.400	116	57
A3211607	7	10.8	0.425	144	75
A3211612	12	14.0	0.550	227	121
A3211618	18	16.9	0.665	326	174
A3211625	25	19.6	0.770	441	233
AWG 14 (41/30)					
A3211403	3	9.4	0.370	109	57
A3211405	5	11.1	0.435	155	85
A3211407	7	12.2	0.480	198	113
A3211412	12	16.1	0.635	315	182
AWG 12 (65/30)					
A3211203	3	10.8	0.425	150	88
A3211205	5	12.7	0.500	215	133
A3211209	9	16.4	0.655	392	240

Also see **A116** cable series with **four (4)** conductor configuration, PVC Shielded, 0.6/1kV VFD Motor cable, TC-ER rated.

Lutze Silflex® Tray-ER Blue PVC, Unshielded

Flexible Control and Tray Cable with UL/TC-ER/CSA/CE/NOM Approvals, Blue Conductors for 24V Applications



Application

- Multi-conductor cable for tray applications, with **exposed run** (open wiring) approval
- Machine tools, machine and plant construction, HVAC technology, assembly and production lines, and other industrial applications
- **Automotive** applications with 24 Volt
- MTW rating as required per **NFPA 79** for machine tool wiring
- TC-ER for use on machines and in cable trays without conduit

Characteristics

- Flexible design with Nylon for crush impact resistance per UL 1277 and easy installation
- Specially formulated jacket for oil resistance
- Non-wicking fillers
- RoHS compliant
- Sunlight resistant
- Direct burial
- UL Type TC-Exposed Run
- Dry or wet conditions
- Talc free
- Silicone free

Technical Data

Voltage	600V UL TC 1000V UL AWM
Temperature	-40°C - +90°C static
Bending radius	4 x cable OD
Conductor marking	Blue with white numbers; No. 2 is white with a blue stripe and one green/yellow ground; *** only two blue with white numbers and one green/yellow ground, no white stripe
Approvals	UL Type TC-ER UL/CSA/CE/NOM UL AWM, Oil res I, UL 83 (UL) Type MTW or DP-1 Class 1, Div. 2 per NEC Art. 336, 392, 501 C(UL) TC and CIC FT4 UL1277, RoHS

Construction

- Flexible stranded bare copper conductors
- PVC/Nylon insulation
- Oil resistant gray PVC jacket

Part No.	Description No. of conductors incl. ground	OD - Ø ca. mm	OD - Ø inches	Weight Lbs/Mft	Copper Lbs/Mft
AWG 18 (19/30)					
A3251803	3***	7.5	0.295	57	18
A3251807	7	9.4	0.370	100	42
A3251812	12	12.1	0.476	171	72
A3251819	19	14.8	0.583	254	114
A3251825	25	17.2	0.677	322	150
A3251837	37	20.1	0.791	417	223
AWG 16 (26/30)					
A3251603	3***	8.2	0.323	65	24
A3251607	7	10.4	0.409	125	57
A3251612	12	14.1	0.555	220	98
A3251619	19	16.3	0.642	285	155
A3251625	25	18.7	0.736	397	204
AWG 14 (41/30)					
A3251404	4	9.6	0.378	102	51
AWG 12 (65/30)					
A3251204	4	11.1	0.347	143	83

Lutze Silflex® N PUR, Unshielded

Flexible Control Cable with UL/CSA/CE Approvals



Application

- Multi-conductor cable for machine tools, handling equipment, machine and plant construction, transport and conveying technology

Characteristics

- Flexible for easy installation
- PUR jacket for highest oil and abrasion resistance
- Non-wicking fillers
- RoHS compliant
- Talc free
- Silicone free

Technical Data

Voltage	600V UL AWM
Temperature	-40°C - +80°C
Bending radius	4 x cable OD
Conductor marking	Black with white numbers and one green/yellow ground
Approvals	UL/CSA/CE RoHS

Construction

- Flexible stranded bare copper conductors
- PVC insulation
- Extremely oil resistant gray PUR jacket

Part No.	Description No. of conductors incl. ground	OD - Ø ca. mm	OD - Ø inches	Weight Lbs/Mft	Copper Lbs/Mft
AWG 18 (18/30)					
A1241803	3	6.5	0.254	39	15
A1241804	4	7.4	0.289	50	20
A1241805	5	7.5	0.296	60	25
A1241807	7	8.6	0.339	79	35
A1241812	12	11.2	0.440	135	60
A1241818	18	13.1	0.515	191	90
A1241825	25	15.4	0.605	254	125
AWG 16 (26/30)					
A1241603	3	7.2	0.282	52	24
A1241604	4	7.8	0.305	67	32
A1241605	5	8.4	0.331	82	40
A1241607	7	9.6	0.378	109	57
A1241612	12	11.5	0.443	190	97
A1241618	18	14.7	0.580	265	147
A1241625	25	17.4	0.684	356	204
AWG 14 (41/30)					
A1241404	4	9.7	0.380	102	51
A1241407	7	11.5	0.452	190	89
A1241412	12	16.2	0.636	295	153
AWG 12 (65/30)					
A1241204	4	12.2	0.480	162	83

Lutze Silflex® N (C) VFD PVC 0.6/1kV, Shielded

Flexible VFD & Motor Cable with UL/TC-ER/WTTC/MTW/CSA/CE Approvals



Application

- Shielded multi-conductor cable for VFD and Motor applications to connect power from drives to motors
- Cable design for harsh industrial environments and operating conditions with high noise levels
- Due to semi-conductive layer suitable for applications with high voltage spikes and long cable runs
- Compliant with **NFPA 79** for machine tool wiring
- **TC-ER** for use with cable trays **without conduit**, which can reduce material and labor costs
- WTTC – wind turbine tray cable rating for use in wind power generation

Characteristics

- Flexible design with Nylon for crush impact resistance per UL 1277 and easy installation
- Very round cable with small Diameter
- Specially formulated jacket for oil resistance
- Semi-conductive layer prevents premature cable failure and reduces corona effects, thus increasing the reliability and lifetime (production after 05/2009)
- Non-wicking fillers
- RoHS compliant
- Sunlight resistant
- Direct burial
- UL Type TC-Exposed Run
- Dry or wet conditions
- Talc free
- Silicone free

Technical Data

Voltage	600V UL TC 1000V WTTC
Temperature	-40°C - +90°C static
Bending radius	6 x cable OD
Conductor marking	Black with white numbers and one green/yellow ground
Approvals	UL Type TC-ER UL/AWM/CSA/CE UL MTW or DP-1 WTTC Class 1, Div. 2 per NEC Art. 336, 392, 501 C(UL) TC and CIC FT4 UL 1277 RoHS

Construction

- Flexible fine wire stranded tinned copper conductors for improved electrical characteristics and reduced oxidation
- PVC/Nylon insulation with semi-conductive layer
- Shielded with foil tape, tinned copper braid and drain wire
- Oil resistant black or orange PVC jacket

Part No.	Description No. of conductors incl. ground	OD - Ø ca. mm	OD - Ø inches	Weight Lbs/Mft	Copper Kg/km
AWG 18 (19/30)					
A1161804	4	9.7	0.384	96	38
AWG 16 (26/30)					
A1161604	4	10.2	0.402	112	49
AWG 14 (41/30)					
A1161404	4	11.4	0.448	151	74
AWG 12 (65/30)					
A1161204	4	12.8	0.503	203	112
AWG 10 (105/30)					
A1161004	4	16.7	0.658	320	171
AWG 8 (168/30)					
A1160804	4	21.0	0.827	481	268
AWG 6 (266/30)					
A1160604	4	24.3	0.957	721	410
AWG 4 (413/30)					
A1160404	4	29.4	1.157	1,086	620
AWG 2 (665/30)					
A1160204	4	33.9	1.336	1,518	978

Orange Jacket

AWG 18 (19/30)					
A1161804-ORG	4	9.7	0.384	96	38
AWG 16 (26/30)					
A1161604-ORG	4	10.2	0.402	112	49
AWG 14 (41/30)					
A1161404-ORG	4	11.4	0.448	151	74
AWG 12 (65/30)					
A1161204-ORG	4	12.8	0.503	203	112
AWG 10 (105/30)					
A1161004-ORG	4	16.7	0.658	320	171

Lutze Silflex® N (C) VFD Composite PVC 0.6/1kV, Shielded

Flexible Composite VFD & Motor Cable with UL/TC-ER/WTTC/MTW/CSA/CE Approvals



Application

- Shielded multi-conductor cable for VFD and Motor applications to connect power from drives to motors
- Cable design for harsh industrial environments and operating conditions with high noise levels
- Due to semi-conductive layer suitable for applications with high voltage spikes and long cable runs
- Compliant with **NFPA 79** for machine tool wiring
- **TC-ER** for use with cable trays **without conduit**, which can reduce material and labor costs
- WTTC – wind turbine tray cable rating for use in wind power generation

Characteristics

- Flexible design with Nylon for crush impact resistance per UL 1277 and easy installation
- Very round cable with small Diameter
- Specially formulated jacket for oil resistance
- Semi-conductive layer prevents premature cable failure and reduces corona effects, thus increasing the reliability and lifetime (production after 05/2009)
- Non-wicking fillers
- RoHS compliant
- Sunlight resistant
- Direct burial
- UL Type TC-Exposed Run
- Dry or wet conditions
- Talc free
- Silicone free

Technical Data

Voltage	600V UL TC 1000V WTTC
Temperature	-40°C - +90°C static
Bending radius	6 x cable OD
Conductor marking	Black with white numbers and one green/yellow ground
Approvals	UL Type TC-ER UL/AWM/CSA/CE UL MTW or DP-1 WTTC Class 1, Div. 2 per NEC Art. 336, 392, 501 C(UL) TC and CIC FT4 UL 1277 RoHS Oil Res II

Construction

- Flexible fine wire stranded tinned copper conductors for improved electrical characteristics and reduced oxidation
- PVC/Nylon insulation with semi-conductive layer
- Shielded with foil tape, tinned copper braid and drain wire
- Oil resistant black PVC jacket

WITH ONE CONTROL PAIR

Part No.	Description No. of conductors incl. ground	OD - Ø ca. mm	OD - Ø inches	Weight Lbs/Mft	Copper Lbs/Mft
A1171604	AWG 16 (26/30) (4C/AWG 16 + 1 pair AWG 18))	12.8	0.504	151	69
A1171404	AWG 14 (41/30) (4C/AWG 14 + 1 pair AWG 18))	14.5	0.569	202	93
A1171204	AWG 12 (65/30) (4C/AWG 12 + 1 pair AWG 16))	16.0	0.631	264	139
A1171004	AWG 10 (105/30) (4C/AWG 10 + 1 pair AWG 14))	19.1	0.753	373	207
A1170804	AWG 8 (168/30) (4C/AWG 8 + 1 pair AWG 14))	23.9	0.941	592	308
A1170604	AWG 6 (266/30) (4C/AWG 6 + 1 pair AWG 14))	26.1	1.029	812	443
A1170404	AWG 4 (413/30) (4C/AWG 4 + 1 pair AWG 14))	30.6	1.206	1,125	650
A1170204	AWG 2 (665/30) (4C/AWG 2 + 1 pair AWG 14))	34.8	1.369	1,523	988

Lutze Electronic PVC, Unshielded

Flexible Electronic Cable with UL/CSA/CE Approvals



Application

- Industrial grade electronic cable for machine tools, process controls, computer peripherals, HVAC technology, assembly and production lines, and other industrial applications

Characteristics

- Flexible for easy installation
- Easy strip design
- Color coded conductors
- Specially formulated jacket for oil resistance
- Premium durability
- RoHS compliant
- **UL listed** and **NFPA 79** compliant

Technical Data

Voltage	300V UL AWM
Temperature	-20°C - +80°C AWM -20°C - +75°C CM
Bending radius	4 x cable OD
Conductor marking	See table
Approvals	UL Type CM, AWM Style 2464, 300V, VW-1, CSA PCC FT4 CE RoHS

Construction

- Flexible stranded tinned copper conductors
- PVC insulation
- Oil resistant gray premium PVC jacket

Part No.	Description No. of conductors	OD - Ø ca. mm	OD - Ø inches	Weight Lbs/Mft	Copper Lbs/Mft
AWG 24 (7/32)					
A1032402	2	4.0	0.16	14	3
A1032403	3	4.4	0.17	17	4
A1032404	4	4.7	0.19	19	6
A1032406	6	5.3	0.21	26	8
A1032408	8	5.8	0.23	31	11
A1032410	10	6.2	0.24	38	14
A1032415	15	7.1	0.28	50	21
A1032420	20	7.9	0.31	63	28
A1032425	25	8.5	0.34	76	35

Color Code Table

1-	Black		
2-	Brown		
3-	Red		
4-	Orange		
5-	Yellow		
6-	Green		
7-	Blue		
8-	Purple		
9-	Gray		
10-	White		
11-	White	Black	
12-	White	Brown	
13-	White	Red	
14-	White	Orange	
15-	White	Yellow	
16-	White	Green	
17-	White	Blue	
18-	White	Purple	
19-	White	Gray	
20-	White	Black	Brown
21-	White	Black	Red
22-	White	Black	Orange
23-	White	Black	Yellow
24-	White	Black	Green
25-	White	Black	Blue

Lutze Electronic PVC, Shielded

Shielded Flexible Electronic Cable with UL/CSA/CE Approvals



Application

- Industrial grade electronic cable for machine tools, process controls, computer peripherals, HVAC technology, assembly and production lines, and other industrial applications

Characteristics

- Double shield for EMC compliant applications
- Flexible for easy installation
- Easy strip design
- Color coded conductors
- Specially formulated jacket for oil resistance
- Premium durability
- RoHS compliant
- **UL listed** and **NFPA 79** compliant

Technical Data

Voltage	300V UL AWM
Temperature	-20°C - +80°C AWM -20°C - +75°C CM
Bending radius	6 x cable OD
Conductor marking	See table
Approvals	UL Type CM, AWM Style 2464, 300V, VW-1, CSA PCC FT4 CE RoHS

Construction

- Flexible stranded tinned copper conductors
- PVC insulation
- Shielded with foil tape, tinned copper braid and drain wire
- Oil resistant gray premium PVC jacket

Part No.	Description No. of conductors	OD - Ø ca. mm	OD - Ø inches	Weight Lbs/Mft	Copper Kg/km
AWG 24 (7/32)					
A1132402	2	4.6	0.18	23	8
A1132403	3	4.8	0.19	26	11
A1132404	4	5.4	0.21	30	12
A1132406	6	5.9	0.23	38	16
A1132408	8	6.4	0.25	43	20
A1132410	10	6.9	0.27	52	24
A1132415	15	7.6	0.30	65	32
A1132420	20	8.4	0.33	79	40
A1132425	25	9.2	0.36	106	49

Color Code Table

1-	Black		
2-	Brown		
3-	Red		
4-	Orange		
5-	Yellow		
6-	Green		
7-	Blue		
8-	Purple		
9-	Gray		
10-	White		
11-	White	Black	
12-	White	Brown	
13-	White	Red	
14-	White	Orange	
15-	White	Yellow	
16-	White	Green	
17-	White	Blue	
18-	White	Purple	
19-	White	Gray	
20-	White	Black	Brown
21-	White	Black	Red
22-	White	Black	Orange
23-	White	Black	Yellow
24-	White	Black	Green
25-	White	Black	Blue

Lutze Electronic PLTC PVC, Unshielded

Flexible Electronic Cable with UL/CSA/CE/PLTC Approvals



Application

- **Industrial grade PLTC** electronic cable for machine tools, process instrumentation and controls, computer peripherals, HVAC technology, assembly and production lines, low voltage interconnect and other industrial applications including **installation in cable trays**

Characteristics

- Flexible for easy installation
- Easy strip design
- Color coded conductors
- Specially formulated jacket for oil resistance
- Premium durability
- Extended temperature range
- RoHS compliant
- **UL listed** and **NFPA 79** compliant

Technical Data

Voltage	300V
Temperature	-25°C - +105°C
Bending radius	4 x cable OD
Conductor marking	See tables
Approvals	UL Type PLTC CMG AWM Style 2464 VW-1, CSA CMG/FT4 AWM II A/B CE Oil Res II Meets NEC 725, 760, 800 Class I Div. 2 (PLTC use only) RoHS

Construction

- Flexible stranded tinned copper conductors
- PVC insulation
- Oil resistant gray premium PVC jacket

Part No.	Description No. of conductors	OD - Ø ca. mm	OD - Ø inches	Weight Lbs/Mft	Copper Lbs/Mft
AWG 22 (19/34)					
A3032202	2	4.4	0.172	20	4
A3032203	3	4.6	0.180	24	7
A3032204	4	4.9	0.193	28	9
A3032206	6	5.6	0.222	38	14
A3032208	8	6.0	0.238	45	19
A3032210	10	7.2	0.282	55	24
A3032215	15	7.9	0.310	75	35
A3032220	20	8.7	0.341	93	47
A3032225	25	10.4	0.408	124	59
AWG 20 (19/32)					
A3032002	2	4.9	0.195	27	7
A3032003	3	5.2	0.204	35	11
A3032004	4	5.6	0.220	41	15
A3032006	6	6.5	0.254	58	22
A3032008	8	7.2	0.282	76	30
A3032010	10	8.2	0.323	94	37
A3032015	15	11.3	0.446	136	56
A3032020	20	12.7	0.500	182	75
A3032025	25	14.0	0.551	222	94

Color Code Table AWG 22

1-	Black		
2-	Brown		
3-	Red		
4-	Orange		
5-	Yellow		
6-	Green		
7-	Blue		
8-	Purple		
9-	Gray		
10-	White		
11-	White	Black	
12-	White	Brown	
13-	White	Red	
14-	White	Orange	
15-	White	Yellow	
16-	White	Green	
17-	White	Blue	
18-	White	Purple	
19-	White	Gray	
20-	White	Black	Brown
21-	White	Black	Red
22-	White	Black	Orange
23-	White	Black	Yellow
24-	White	Black	Green
25-	White	Black	Blue

Color Code Table AWG 20

1-	Black		
2-	Red		
3-	White		
4-	Green		
5-	Orange		
6-	Blue		
7-	Brown		
8-	Yellow		
9-	Purple		
10-	Gray		
11-	Pink		
12-	Tan		
13-	Red	Green	
14-	Red	Yellow	
15-	Red	Black	
16-	White	Black	
17-	White	Red	
18-	White	Green	
19-	White	Yellow	
20-	White	Blue	
21-	White	Brown	
22-	White	Orange	
23-	White	Gray	
24-	White	Purple	
25-	White	Black	Red

Lutze Electronic PLTC PVC, Shielded

Shielded Flexible Electronic Cable with UL/CSA/CE/PLTC Approvals



Application

- Double shielded industrial grade PLTC electronic cable for machine tools, process instrumentation and controls, computer peripherals, HVAC technology, assembly and production lines, low voltage interconnect and other industrial applications including installation in cable trays

Characteristics

- Flexible for easy installation
- Easy strip design
- Color coded conductors
- Specially formulated jacket for oil resistance
- Premium durability
- Extended temperature range
- RoHS compliant
- UL listed and NFPA 79 compliant

Technical Data

Voltage	300V
Temperature	-25°C - +105°C
Bending radius	6 x cable OD
Conductor marking	See tables
Approvals	UL Type PLTC CMG AWM Style 2464 VW-1, CSA CMG/FT4 AWM II A/B CE Oil Res II Meets NEC 725, 760, 800 Class I Div. 2 (PLTC use only) RoHS

Construction

- Flexible stranded tinned copper conductors
- Shielded with foil tape, tinned copper braid and full size drain wire
- PVC insulation
- Oil resistant gray premium PVC jacket

Part No.	Description No. of conductors	OD - Ø ca. mm	OD - Ø inches	Weight Lbs/Mft	Copper Lbs/Mft
AWG 22 (19/34)					
A3132202	2	5.2	0.172	28	11
A3132203	3	5.4	0.180	33	15
A3132204	4	5.7	0.193	37	18
A3132206	6	6.5	0.222	48	24
A3132208	8	6.6	0.238	57	30
A3132210	10	8.0	0.282	68	36
A3132215	15	8.9	0.310	91	50
A3132220	20	9.7	0.341	120	62
A3132225	25	11.2	0.408	148	77
AWG 20 (19/32)					
A3132002	2	6.4	0.210	40	17
A3132003	3	6.5	0.221	49	22
A3132004	4	7.2	0.238	56	27
A3132006	6	8.5	0.289	80	37
A3132008	8	8.9	0.331	94	46
A3132010	10	10.4	0.379	115	55
A3132015	15	12.3	0.446	174	76
A3132020	20	13.5	0.500	209	97
A3132025	25	14.8	0.551	254	118

Color Code Table AWG 22

1-	Black
2-	Brown
3-	Red
4-	Orange
5-	Yellow
6-	Green
7-	Blue
8-	Purple
9-	Gray
10-	White
11-	White Black
12-	White Brown
13-	White Red
14-	White Orange
15-	White Yellow
16-	White Green
17-	White Blue
18-	White Purple
19-	White Gray
20-	White Black Brown
21-	White Black Red
22-	White Black Orange
23-	White Black Yellow
24-	White Black Green
25-	White Black Blue

Color Code Table AWG 20

1-	Black
2-	Red
3-	White
4-	Green
5-	Orange
6-	Blue
7-	Brown
8-	Yellow
9-	Purple
10-	Gray
11-	Pink
12-	Tan
13-	Red Green
14-	Red Yellow
15-	Red Black
16-	White Black
17-	White Red
18-	White Green
19-	White Yellow
20-	White Blue
21-	White Brown
22-	White Orange
23-	White Gray
24-	White Purple
25-	White Black Red

Lutze Electronic (C) PLTC PVC TP, Shielded

Shielded Flexible Electronic Cable with twisted pairs and UL/CSA/CE/PLTC Approvals



Application

- **Double shielded industrial grade PLTC** electronic cable for machine tools, process instrumentation and controls, computer peripherals, HVAC technology, assembly and production lines, low voltage interconnect and other industrial applications including **installation in cable trays**

Characteristics

- Flexible for easy installation
- Easy strip design
- Color coded conductors
- Conductors twisted in pairs
- Specially formulated jacket for oil resistance
- Premium durability
- Extended temperature range
- RoHS compliant
- **UL listed** and **NFPA 79** compliant

Technical Data

Voltage	300V
Temperature	-25°C - +105°C
Bending radius	6 x cable OD
Conductor marking	See table
Approvals	UL Type PLTC CMG AWM Style 2464 VW-1, CSA CMG/FT4 AWM II A/B CE Oil Res II Meets NEC 725, 760, 800 Class I Div. 2 (PLTC use only) RoHS

Part No.	Description No. of pairs	OD - Ø ca. mm	OD - Ø inches	Weight Lbs/Mft	Copper Lbs/Mft
AWG 22 (19/34)					
A3142204	2	6.5	0.257	46	21
A3142208	4	7.6	0.301	68	31
A3142212	6	8.9	0.349	84	43
A3142216	8	9.6	0.376	102	54
AWG 20 (19/32)					
A3142004	2	8.1	0.320	64	30
A3142008	4	9.6	0.376	96	47
A3142012	6	11.8	0.463	144	66
A3142016	8	12.6	0.498	172	84

Color Code Table AWG 22 Pair#

1-	White	Black
2-	White	Brown
3-	White	Red
4-	White	Orange
5-	White	Yellow
6-	White	Green
7-	White	Blue
8-	White	Purple

Color Code Table AWG 20 Pair#

1-	Black	Red
2-	Black	White
3-	Black	Green
4-	Black	Blue
5-	Black	Brown
6-	Black	Yellow
7-	Black	Orange
8-	Red	Green

Construction

- Flexible stranded tinned copper conductors
- Shielded with foil tape, tinned copper braid and full size drain wire
- PVC insulation
- Oil resistant gray premium PVC jacket

Lutze BUS (C), Shielded

Flexible Bus Cable with International Approvals



Application

- Flexible Bus and Network cable for wiring of industrial bus systems

Technical Data

Temperature	Fixed	-30°C - +70°C
Bending radius	Fixed	6 x cable OD
Approvals		UL/CSA/CE

Characteristics

- Specially formulated jacket for oil resistance
- RoHS compliant

Part No.	Description No. of conductors	OD - Ø ca. mm	OD - Ø inches	Weight Lbs/Mft	Copper Lbs/Mft
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Profibus

Purple PVC jacket; Impedance: 150 Ω ± 15%; Loop resistance: < 155 Ω/km;
Mutual capacitance: <30 pF/m; UL 30V;

104264	(1x2x0.64 Ø) (1 pair AWG 24) RD, GN	7.9	0.311	35.5	17
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Profibus

Purple PVC jacket; Impedance: 150 Ω ± 15%; Loop resistance: < 175 Ω/km
Mutual capacitance: <30 pF/m; CMG, UL AWM 20201 80°C 600V;
Temperature -25°C - +80°C

104344	(1x2x0.64 Ø) (1 pair AWG 24)	8.0	0.315	44	17
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Profibus FC

(Insulation Displacement Connection)

Purple PVC jacket; Impedance: 150 Ω ± 15%; Loop resistance:
< 155 Ω/km; Mutual capacitance: <30 pF/m

104293	(1x2x0.64 Ø) (1 pair AWG 22) RD, GN Solid conductors	8.1	0.319	61.0	13
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ASI BUS

Yellow or black TPE jacket; Loop resistance: 27.4 mΩ/m

AWG 16 / 1.5 mm ²					
104216	(2C/AWG 16)	Yellow	TPE	45.6	28
104217	(2C/AWG 16)	Black	TPE	45.6	28.8



ODVA DeviceNet™

Gray PVC jacket; 300V UL Class 2, CM, CL2, CSA I/II A, ODVA Class 2,
UL1685 Vertical Tray Flame

104280	((2xAWG 22) + (2xAWG 24))	7.1	0.280	41	57
104281	((2xAWG 15) + (2xAWG 18))	12.2	0.480	108	144



Thin:

- AWG 22 pair – 17.5 Ω/M', 57.4 Ω/km
- AWG 24 pair – 28 Ω/M', 91.9 Ω/km

Thick:

- AWG 15 pair – 3.6 Ω/M', 11.8 Ω/km
- AWG 18 pair – 6.9 Ω/M', 22.6 Ω/km

Lutze ETHERNET/ProfiNet Network Cable (C), Shielded PVC

Flexible ETHERNET Network Cable with UL/CSA/CE Approvals



Application

- Flexible Industrial Field Network cable for Fast Ethernet applications
- UL listed and compliant with NFPA 79 2007 requirements

Characteristics

- Shielded for optimal data integrity in industrial environments
- Silicone/Talc free
- RoHS compliant

Technical Data

Impedance	100 Ω +/- 10% (1-100 MHz)
Loop Resistance	
AWG22	<110 Ω/km
AWG24	<165 Ω/km
AWG26	<273 Ω/km
Operating capacitance	< 50 pF/m
Nominal Voltage	250V
Test Voltage	1500V
Temperature	
Moving	-5°C - +75°C, CMG
Fixed	-30°C - +75°C, CMG
Bending radius fixed	6 x cable OD
Approvals	UL/CSA/CE CMG UL 1581 UL VW-1; CSA FT1 IEC 60332-1 RoHS UL listed and meets NEC 800

Construction

- Bare copper conductor per AWG
- Polyolefin insulation
- Tinned copper braid > 85%
- Green PVC Jacket

Part No.	Description No. of conductors	OD - Ø ca. mm	OD - Ø inches	Weight Lbs/Mft	Copper Lb/Mft
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Cat 5e 100 Mhz, CMG

104335	(4x2xAWG 26/7 StC) WH/BU, BU; WH/OG, OG; WH/GN, GN; WH/BN, BN	6.3	0.248	36.2	20
104336	(4x2xAWG 24/7 StC) WH/BU, BU; WH/OG, OG; WH/GN, GN; WH/BN, BN	7.6	0.299	44.9	37

Cat 6 250 MHz, CMG

104338	(4x(2xAWG26/7)St)C WH/BU, BU; WH/OG, OG; WH/GN, GN; WH/BN, BN	6.4	0.252	35.5	22
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Cat 7 600 MHz, CMG

104331	(4x(2xAWG26/7)St)C WH/BU, BU; WH/OG, OG; WH/GN, GN; WH/BN, BN:	7.0	0.276	41.9	22
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ProfiNet Industrial Ethernet UL600V AWM, CMG, PLTC

104301	(2x2x0.22 Ø) (2 pair AWG 22/1) STAR QUAD Type A WH, YE; OG, BU	6.5	0.256	24.8	24.8
104307	(2x2x0.22 Ø) (2 pair AWG 22/7) STAR QUAD Type B WH, YE; OG, BU	6.5	0.256	24.8	20.8

Lutze ETHERNET Network Cable (C), Shielded PUR

Flexible ETHERNET Network Cable with UL/CSA/CE Approvals

halogen-free



Application

- Flexible Industrial Field Network cable for Fast Ethernet applications

Characteristics

- Shielded for optimal data integrity in industrial environments
- Silicone/Talc free
- RoHS compliant

Technical Data

Impedance	100 Ω +/- 10% (1-100 MHz)
Loop Resistance	
AWG22	<110 Ω/km
AWG24	<165 Ω/km
AWG26	<273 Ω/km
Operating capacitance	< 50 pF/m
Nominal Voltage	250V
Test Voltage	1500V
Temperature	
Moving	-25°C - +75°C, CMX
fixed	-40°C - +75°C, CMX
Bending radius fixed	6 x cable OD
Approvals	UL/CSA/CE CMX UL 1581 UL VW-1; CSA FT1 IEC 60332-1 RoHS

Construction

- Bare copper conductor per AWG
- Polyolefin insulation
- Tinned copper braid > 85%
- PUR jacket

Part No.	Description No. of conductors	OD – Ø ca. mm	OD – Ø inches	Weight Lbs/Mft	Copper Lb/ft
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CAT 5 100 MHz Purple PUR Jacket UL 300V AMW



104247	(2x2x0.22 Ø) (2 pair AWG 24/7) STAR QUAD WH/BN; GN/YE	6.1	0.240	43.6	16.75
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CAT 7 600 MHz Green PUR Jacket, CMX



104339	(4x(2xAWG26/7)St)C WH/BU, BU; WH/OG, OG; WH/GN, GN; WH/BN, BN	7.0	0.276	40.9	22
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Lutze Single Conductor, Unshielded Hook Up Wire

Flexible Single Conductor Hook Up Wire with UL/CSA/CE/MTW and HAR Approvals



Application

- Single-conductor cable for wiring of cabinets and use in electrical and electronic equipment
- Specially suited for machines exported to Europe
- MTW rating as required **per NFPA 79** for machine tool wiring

Characteristics

- Very flexible for easy installation
- MTW rated

Technical Data

Nominal voltage	H05V-K 300/500 V, H07V-K 450/750 V, UL 600 V, style 1015
Test voltage	3000V
Bending radius	Fixed: 5 x cable OD
Temperature	Flexible -5 to +105°C Fixed -40 to + 105°C H05/H07 up to +90°C
Conductor stranding	Fine wire, tinned copper per VDE 0295
Insulation resistance	> 10 GΩ x cm
Approvals	H05V-K <= AWG 18: HAR UL 1063 MTW Listed UL AWM 1015 CSA TEW H07VK => AWG 16: HAR UL 1063 MTW Listed UL AWM 1015 CSA TEW
Put ups	AWG 20 – AWG 12 100m (328 ft) carton or reel 500m (1,640 ft) reel AWG 10 and larger Cuts of any length up to 1,000m (3,280 ft) reel

Construction

- Flexible stranded tinned copper conductors
- PVC insulation according to UL 1581, class 43 heat and humidity resistant
- Flame retardant and self extinguishing per UL VW-1
- Free from silicone and other varnish damaging substances
- RoHS compliant
- Conditionally resistant to oils, solvents, acids and bases

More colors and sizes upon request. Please call us for information!

Part No.	Description Color	OD - Ø ca. mm	OD - Ø inches	Copper Lbs/Mft
AWG 18 / 1.0 mm² H05V-K				
A61801	Black	2.8	0.110	6
A61804	Red	2.8	0.110	6
A61802	Blue	2.8	0.110	6
A61800	Green/Yellow	2.8	0.110	6
AWG 16 / 1.5 mm² H07V-K				
A61601	Black	3.3	0.130	10
A61604	Red	3.3	0.130	10
A61602	Blue	3.3	0.130	10
A61600	Green/Yellow	3.3	0.130	10
A61614	DarkBlue	3.3	0.130	10
A61615	Blue/White	3.3	0.130	10
AWG 14 / 2.5 mm² H07V-K				
A61401	Black	3.7	0.145	16
A61404	Red	3.7	0.145	16
A61402	Blue	3.7	0.145	16
A61400	Green/Yellow	3.7	0.145	16
AWG 12 / 4.0 mm² H07V-K				
A61201	Black	4.3	0.169	25
A61200	Green/Yellow	4.3	0.169	25
AWG 10/ 6.0 mm² H07V-K				
A61001	Black	4.8	0.189	39
A61000	Green/Yellow	4.8	0.189	39
AWG 8 / 10 mm² H07V-K				
A60801	Black	6.8	0.267	64
A60800	Green/Yellow	6.8	0.267	64
AWG 6 / 16 mm² H07V-K				
A60601	Black	8.6	0.338	103
A60600	Green yellow	8.6	0.338	103
AWG 4 / 25 mm² H07V-K				
A60401	Black	10	0.394	161
A60400	Green/Yellow	10	0.394	161
AWG 2 / 35 mm² H07V-K				
A60201	Black	11	0.433	225
A60200	Green/yellow	11	0.433	225
AWG 1 / 50 mm² H07V-K				
A60101	Black	14	0.511	322
A60100	Green/Yellow	14	0.511	322
AWG 2/0 / 70 mm² H07V-K				
A67001	Black	16.5	0.649	450
A67000	Green/Yellow	16.5	0.649	450

High Flexing Cables

Lutze Superflex®, Lutze Superflex® Plus for Continuously Moving/Flexing Applications, C-track



Handling and Installation Lutze Superflex® – Quick Overview

1) Selecting Cables for Continuous Motion Applications – C-Tracks

We recommend special high flexing cables such as Lutze Superflex® cables, for use in C-tracks to ensure long life times:

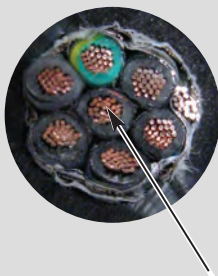
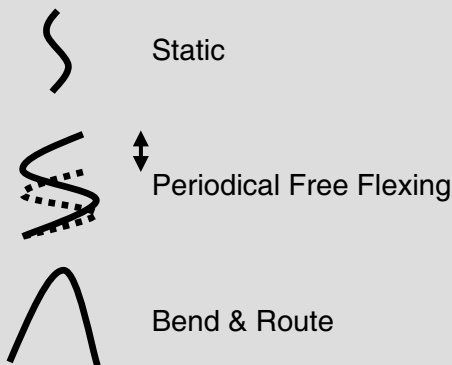
- All Lutze Superflex® cable is proven to be compatible with all major brands of C-tracks.
- Lutze Superflex® N is designed for moderate flexing in short to medium length C-tracks.
- Lutze Superflex® Plus **PUR** is designed for high performance flexing or longer C-tracks.

High Flexing Cables such as Lutze Superflex® cables, are different from standard flexible cables:

Standard Flexible Cables



- Low number of strands per conductor
- longer pitch layering
- designed as a pliable cable for easy routing and installation



- no central core
- mostly PVC as insulation material
- foil shield or braid shield
- jacket material depends on application

High Flexing Cables - Lutze Superflex®



- high number of super fine strands per conductor
- short pitch layering
- conductors are cabled without back twist
- higher quality of materials
- slower and more complex manufacturing process on high-end equipment
- designed for linear constant motion

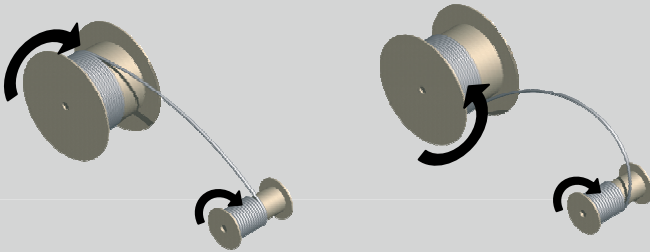


- central core for single layer construction
- special PVC or TPE as insulation material
- tinned copper braid shield
- high abrasion resistant jacket material such as PUR

Handling and Installation Lutze Superflex® – Quick Overview

2) Correct Handling of Lutze Superflex® Cables

- When unreeling the cable, do not change the bend direction. The cable has to go on the new reel in the same direction it came off the reel. Low and equal tensile force during spooling!



DO ✓ DO NOT ✗

- Ring put ups require careful uncoiling by rolling the ring upright over the floor.

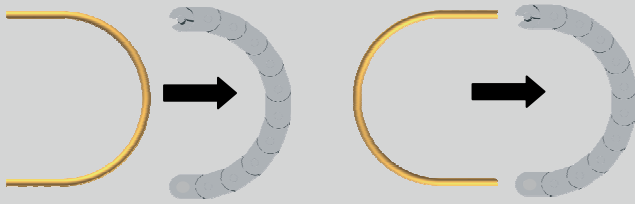


- Do not twist the cable when unwinding. Always unwind straight from spool.



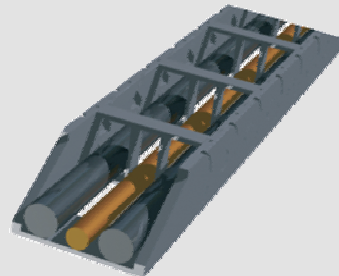
3) Correct Installation of Lutze Superflex® Cable

- Cable retains bend from reel. Do not flex against original bend or relax cable for 24 hrs by laying it flat.



DO ✓ DO NOT ✗

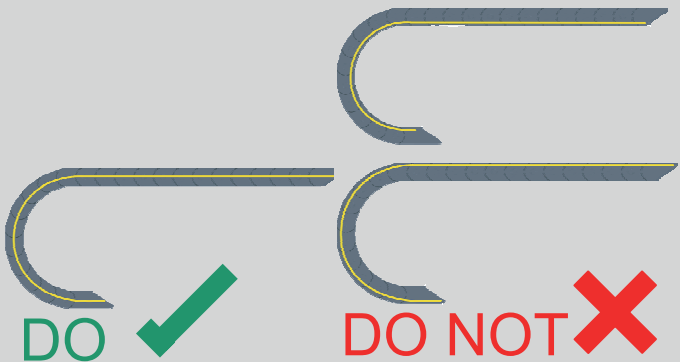
- Try to ensure balanced weight distribution. If you have more than one heavy cable, we recommend installing the heavy cables evenly to each side of the track.



- Use dividers horizontally and vertically to separate the track into separate cavities. Install just one cable per separated cavity. If absolutely necessary, two small or a small and a big cable can share a cavity.



- Observe the minimum bending radius for optimum performance. Make sure that all cables are length-adjusted and run in the neutral zone.



DO ✓ DO NOT ✗

For further information please visit: www.lutze.com/superflex

Lutze Superflex® N PVC, Unshielded

High Flexing Control Cable with UL/CSA/CE Approvals



Application

- Suitable for control, monitoring and instrumentation applications with continuous flexing cycles
- For flexing applications such as C-tracks and other applications where linear flexing occurs
- Compatible with all major brand C-tracks

Characteristics

- Extremely small cable ODs due to special **TPE High Glide Insulation** compliant with UL
- TPE/PVC combination preferable over PVC/PVC
- Low capacitance
- Very flexible with superfine stranding
- Specially formulated PVC jacket per UL Class 43
- Non-wicking fillers
- Abrasion, high wear and tear resistance
- Hydrolysis, microbe and decompose resistant
- Talc free
- Silicone free
- RoHS compliant
- Dry and wet conditions

Technical Data

Voltage	600V UL AWM
Test voltage	3000 V
Insulation resistance	Min 100 MΩ x km
Temperature	Moving -5 - +90°C
	Fixed -25 - +90°C
Bending radius	Moving 7.5 x cable OD
	Fixed 4 x cable OD
Conductor marking	Black with white numbers and one green/yellow ground
Burning behavior	Flame-retardant per UL VW-1, DIN EN 50265-2-1
Oil resistance	Oil resistant per UL 4D100C and DIN EN 60811-2-1

Construction

- Bare copper super finely stranded per DIN VDE 0295 Class 6 or IEC 60228 Class 6
- HGI insulation based on TPE
- Optimized construction for flexing applications
- Conductors cabled with fleece wrap
- Special PVC Jacket per UL class 43 / VDE 0207 TM5
- Oil resistant gray Jacket RAL 7001

Part No.	Description No. of conductors incl. ground	OD - Ø ca. mm	OD - Ø inches	Weight Lbs/Mft	Copper Lbs/Mft
AWG 20 / 0.5 mm²					
A1382003	3	5.7	0.224	29.5	9.8
A1382004	4	6.1	0.240	35.5	13
A1382005	5	6.7	0.264	41.5	16
A1382007	7	7.7	0.303	52.9	23
A1382012	12	9.3	0.366	77.7	39
A1382018	18	10.7	0.421	108.5	59
A1382025	25	12.5	0.492	146.0	82
AWG 18 / 1.0 mm²					
A1381803	3	6.6	0.260	44.2	13
A1381804	4	7.2	0.283	54.3	20
A1381805	5	7.8	0.307	63.6	27
A1381807	7	9.1	0.358	83.1	33
A1381812	12	10.8	0.425	126.6	46
A1381818	18	12.7	0.500	178.9	80
A1381825	25	15.1	0.594	243.2	119
A1381834	34	16.8	0.661	318.3	166
A1381841	41	19.0	0.750	325.1	272
A1381850	50	21.3	0.839	331.7	332
AWG 16 / 1.5 mm²					
A1381603	3	7.2	0.283	57.6	30
A1381604	4	7.8	0.307	71.0	39
A1381605	5	8.6	0.339	84.4	49
A1381607	7	10.1	0.398	111.2	69
A1381612	12	12.4	0.488	172.9	118
A1381618	18	14.5	0.571	245.9	177
A1381625	25	16.8	0.661	335.7	246
AWG 14 / 2.5 mm²					
A1381404	4	9.1	0.358	106.5	65
A1381405	5	10.0	0.394	126.6	82
A1381407	7	12.1	0.476	169.5	114
AWG 12 / 4 mm²					
A1381204	4	10.7	0.421	154.1	105
A1381207	7	14.0	0.551	252.6	183

Available also in **NFPA 79** compliant version with PVC/Nylon conductor insulation per UL 1063 (MTW).

High Flexing Control Cable with UL-MTW/CSA/CE Approvals



Application

- Suitable for control, monitoring and instrumentation applications with continuous flexing cycles
- For moderate flexing applications in C-tracks up to 10 meters and other applications where linear flexing occurs
- Compatible with all major brand C-tracks
- **Machine Tool Wire (MTW)** conforms with **NFPA 79 2007 edition**

Characteristics

- Small cable ODs due to special **PVC/Nylon** insulation compliant with UL 1063
- Very flexible with superfine stranding
- Specially formulated PVC jacket per UL Class 43
- Non-wicking fillers
- Abrasion, high wear and tear resistance
- Hydrolysis, microbe and decompose resistant
- Talc free
- Silicone free
- RoHS compliant
- Dry, damp and wet conditions

Technical Data

Voltage	600V UL MTW
Test voltage	3000 V
Insulation resistance	Min 100 MΩ x km
Temperature	Moving -5 - +90°C Fixed -40 - +90°C
Bending radius	Moving 10 x cable OD Fixed 5 x cable OD
Conductor marking	Black with white numbers and one green/yellow ground
Burning behavior	Flame-retardant per UL VW-1, DIN EN 50265-2-1
Oil resistance	Oil resistant per UL 4D100C and DIN EN 60811-2-1

Construction

- Bare copper super finely stranded per DIN VDE 0295 Class 6 or IEC 60228 Class 6
- PVC/Nylon insulation
- Optimized construction for flexing applications, tested per VDE flexing test.
- Conductors cabled with fleece wrap
- Special PVC Jacket per UL class 43 / VDE 0207 TM5
- Oil resistant gray Jacket RAL 7001

Part No.	Description No. of conductors incl. ground	OD - Ø ca. mm	OD - Ø inches	Weight Lbs/Mft	Copper Lbs/Mft
AWG 20 / 0.5 mm²					
A2382003	3	7.3	0.288	41	9.8
A2382004	4	8	0.314	49	13
A2382005	5	8.6	0.339	57	16
A2382007	7	9.9	0.392	73	23
A2382012	12	11.4	0.448	105	39
A2382018	18	14.2	0.559	163	59
A2382025	25	17	0.668	211	82
AWG 18 / 1.0 mm²					
A2381803	3	7.6	0.299	50	13
A2381804	4	8.3	0.326	60	20
A2381805	5	9	0.354	71	27
A2381807	7	10	0.394	92	33
A2381812	12	12.4	0.488	153	46
A2381818	18	15.2	0.598	210	80
A2381825	25	18	0.709	275	119
AWG 16 / 1.5 mm²					
A2381603	3	8.5	0.335	67	30
A2381604	4	9.2	0.362	82	39
A2381605	5	10	0.394	98	49
A2381607	7	11.2	0.441	129	69
A2381612	12	14.7	0.579	219	118
A2381618	18	17	0.669	306	177
A2381625	25	20.2	0.795	442	246
AWG 14 / 2.5 mm²					
A2381404	4	10.3	0.406	116	65
A2381407	7	12.1	0.476	201	114
AWG 12 / 4 mm²					
A2381204	4	11.5	0.453	161	105
AWG 10 / 6 mm²					
A2381004	4	14.5	0.571	250	105

High Flexing Control Cable with UL/TC-ER/CSA/CE Approvals



Application

- Suitable for control, monitoring and instrumentation applications with continuous flexing cycles
- For flexing applications such as C-tracks and other applications where linear flexing occurs
- Compatible with all major brand C-tracks
- Compliant with **NFPA 79** requirements
- **TC-ER** for use with cable trays **without conduit**, which can reduce material and labor costs

Characteristics

- Small cable ODs due to special **PVC-Nylon Insulation** compliant with UL
- Compliant with NFPA 79 2007 requirements
- Very flexible with superfine stranding
- Specially formulated Alloy jacket per UL
- Non-wicking fillers
- Abrasion, high wear and tear resistance
- Hydrolysis, microbe and decompose resistant
- Talc free
- RoHS compliant
- Dry and wet conditions

Technical Data

Voltage	600V UL TC, AWM
Test voltage	3000 V
Insulation resistance	Min 100 MΩ x km
Temperature	Moving -15 - +90°C
	Fixed -25 - +90°C
Bending radius	Moving 7.5 x cable OD
	Fixed 4 x cable OD
Conductor marking	Black with white numbers and one green/yellow
Burning behavior	Flame-retardant per UL VW-1, UL 1581, FT4
Oil resistance	Oil resistant per UL Oil res I and DIN EN 60811-2-1
Approvals	UL Type TC-ER per UL 1277 C(UL) TC and CIC FT4

Construction

- Bare copper super finely stranded per DIN VDE 0295 Class 6 or IEC 60228 Class 6
- PVC-Nylon Skin insulation
- Optimized construction for flexing applications
- Conductors cabled with fleece wrap
- Special Alloy Jacket per UL
- Oil resistant black Jacket RAL 9005

Part No.	Description No. of conductors incl. ground	OD - Ø ca. mm	OD - Ø inches	Weight Lbs/Mft	Copper Lbs/Mft
AWG 18 / 1.0 mm²					
A3381802	2	7.4	0.291	44.9	13
A3381803	3	7.7	0.303	52.6	20
A3381804	4	8.3	0.327	63.8	26
A3381805	5	9.1	0.358	75.1	33
A3381807	7	10.6	0.417	97.8	46
A3381812	12	12.6	0.496	146.8	79
A3381816	16	14.7	0.579	202.1	105
A3381818	18	15.4	0.606	222.2	118
A3381825	25	18.1	0.713	297.4	164
A3381834	34	20.2	0.795	383.2	223
AWG 16 / 1.5 mm²					
A3381602	2	8.0	0.315	55.7	20
A3381603	3	8.4	0.331	66.5	29
A3381604	4	9.1	0.358	81.8	39
A3381605	5	9.9	0.390	96.2	49
A3381607	7	11.5	0.453	126.7	68
A3381612	12	14.6	0.575	209.5	117
A3381616	16	16.1	0.634	264.6	275
A3381618	18	16.9	0.665	291.9	303
A3381625	25	20.0	0.787	393.2	244
AWG 14 / 2.5 mm²					
A3381402	2	9.0	0.354	78	32
A3381403	3	9.5	0.374	95.5	48
A3381404	4	10.3	0.406	117.7	65
A3381405	5	11.3	0.445	140.8	81
A3381407	7	13.2	0.520	186.9	113
A3381412	12	16.7	0.657	309.8	194
A3381414	14	17.5	0.689	352.7	226
A3381418	18	19.4	0.764	437.9	291
A3381425	25	24.1	0.949	625.9	404
AWG 12 / 4 mm²					
A3381202	2	10.8	0.425	114.5	52
A3381203	3	11.4	0.449	141.2	78
A3381204	4	12.4	0.488	174.9	104
A3381205	5	14.4	0.567	224.6	130
A3381207	7	16.9	0.665	298.5	181

High Flexing Control Cable with UL/TC-ER/CSA/CE Approvals



Application

- Suitable for control, monitoring and instrumentation applications with continuous flexing cycles
- For flexing applications such as C-tracks and other applications where linear flexing occurs
- Compatible with all major brand C-tracks
- Compliant with **NFPA 79** requirements

Characteristics

- Small cable ODs due to special **PVC-Nylon Insulation**
- Very flexible with superfine stranding
- Specially formulated Alloy jacket per UL
- Non-wicking fillers
- Abrasion, high wear and tear resistance
- Hydrolysis, microbe and decompose resistant
- Talc free
- RoHS compliant
- Dry and wet conditions

Technical Data

Voltage	600V UL TC, AWM
Test voltage	3000 V
Insulation resistance	Min 100 MΩ x km
Temperature	Moving -15 - +90°C Fixed -25 - +90°C
Bending radius	Moving 12 x cable OD Fixed 4 x cable OD
Conductor marking	Black with white numbers and one green/yellow
Burning behavior	Flame-retardant per UL VW-1, UL 1581, FT4
Oil resistance	Oil resistant per UL Oil res I and DIN EN 60811-2-1
Approvals	UL Type TC-ER per UL 1277 C(UL) TC and CIC FT4

Construction

- Bare copper super finely stranded per DIN VDE 0295 Class 6 or IEC 60228 Class 6
- PVC-Nylon Skin insulation
- Optimized construction for flexing applications
- Conductors cabled with fleece wrap
- Tinned copper braid shield 85% coverage
- Special Alloy Jacket per UL
- Oil resistant black Jacket RAL 9005

Part No.	Description No. of conductors incl. ground	OD - Ø ca. mm	OD - Ø inches	Weight Lbs/Mft	Copper Lbs/Mft
AWG 18 / 1.0 mm²					
A3391802	2	8.0	0.315	54	13
A3391803	3	8.3	0.327	62.5	20
A3391804	4	9.0	0.354	75.2	15
A3391805	5	9.7	0.382	86.9	19
A3391807	7	11.3	0.445	116.9	25
A3391812	12	15.1	0.594	205.1	34
A3391816	16	15.4	0.606	228.8	59
A3391818	18	16.2	0.638	255.4	69
A3391825	25	19.1	0.752	351	88
A3391834	34	21.2	0.835	443.3	123
AWG 16 / 1.5 mm²					
A3391602	2	8.6	0.339	65.7	20
A3391603	3	9.0	0.354	77.4	30
A3391604	4	9.7	0.382	93.2	39.4
A3391605	5	10.5	0.413	109.5	49
A3391607	7	12.3	0.484	147.2	69
A3391612	12	15.4	0.606	235.4	118
A3391616	16	16.9	0.665	298.7	158
A3391618	18	17.7	0.697	327.9	177
A3391625	25	21.0	0.827	451.6	230
AWG 14 / 2.5 mm²					
A3391402	2	9.6	0.378	87.8	33
A3391403	3	10.1	0.398	106.4	49
A3391404	4	11.1	0.437	136.2	65
A3391405	5	12.0	0.472	160.3	82
A3391407	7	14.7	0.579	225.4	114
A3391412	12	17.5	0.689	344.1	196
A3391414	14	18.5	0.728	403.3	228
A3391418	18	20.4	0.803	494.3	293
A3391425	25	25.1	0.988	693.4	408
AWG 12 / 4 mm²					
A3391202	2	11.5	0.453	130.1	52
A3391203	3	12.1	0.476	158.9	78
A3391204	4	15.0	0.591	229.4	105
A3391205	5	15.2	0.598	247.5	131
A3391207	7	17.7	0.697	330.2	183

Lutze Superflex® Plus N PUR, Unshielded

High Flexing Control Cable with UL/CSA/CE Approvals

halogen-free



Application

- Multi-conductor cable for robots, handling equipment, machine tools, C-tracks and applications with extremely rough operating conditions
- For the most demanding flexing applications such as C-tracks and linear flexing
- Compatible with all major brand C-tracks

Characteristics

- Superfine stranding per Class 6 for continuous moving applications
- Extremely small cable ODs due to special **TPE High Glide Insulation** compliant with UL
- Reduced friction
- PUR jacket
- Highest level of resistance against cooling fluids, greases and oils
- Abrasion and hydrolysis resistant, low water absorption
- Dry and wet conditions
- UV resistant
- Non-wicking fillers
- Silicone/Talc free
- RoHS compliant

Technical Data

Voltage	300/600V UL AWM
Temperature	Moving -25°C - +80°C Fixed -40°C - +80°C
Bending radius	Moving 7.5 x cable OD Fixed 4 x cable OD
Conductor marking	Black with white numbers and one green/yellow ground; *no ground included
Isolation resistance	Min 100 MΩ x km
Approvals	UL/CSA/CE Halogen free per DIN EN 50264-1, EN 50267-2-1, EN 60684-2, Flame-retardant per DIN EN 50265-2-1, IEC 60332-1, VW 1, FT 1 RoHS

Construction

- Bare copper super finely stranded per DIN VDE 0295 Class 6 or IEC 60228 Class 6
- TPE conductor insulation
- Extremely oil resistant gray PUR jacket

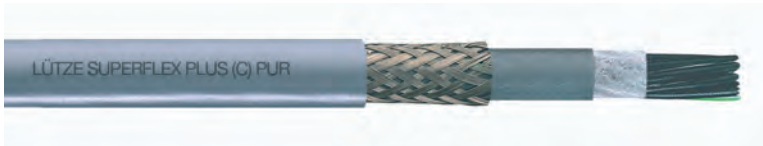
Part No.	Description No. of conductors incl. ground	OD - Ø ca. mm	OD - Ø inches	Weight Lbs/Mft	Copper Lbs/Mft
AWG 20 / 0.5 mm² 300V UL AWM					
113431	2*	4.7	0.185	18.1	7
113441	3	4.9	0.193	21.4	10
113442	4	5.2	0.205	27.5	13
113443	5	5.6	0.220	36.9	16
113444	7	6.6	0.260	42.9	23
113446	12	8.0	0.315	64.3	40
113438	18	9.0	0.354	92.5	59
113447	25	10.8	0.425	121.9	82
AWG 18 / 1.0 mm² 300V UL AWM					
113484	2*	5.8	0.228	31.5	13
113400	3	6.1	0.240	33.5	20
113433	4	6.6	0.260	48.2	27
113401	5	7.2	0.283	57.0	34
113402	7	8.7	0.343	77.1	46
113403	12	10.1	0.398	120.6	80
113404	18	11.6	0.457	180.9	119
113405	25	14.1	0.555	227.1	166
AWG 16 / 1.5 mm² 600V UL AWM					
113485	2*	6.8	0.268	51.6	19
113406	3	8.0	0.315	52.3	30
113412	4	8.3	0.327	63.7	40
113407	5	9.1	0.360	77.1	50
113408	7	10.0	0.394	117.3	69
113409	12	12.6	0.496	177.6	118
113410	18	14.9	0.587	240.5	178
113411	25	17.6	0.693	348.4	247
AWG 14 / 2.5 mm² 600V UL AWM					
113483	3	9.2	0.362	81.1	49
113415	4	9.9	0.390	95.8	66
113416	5	10.7	0.421	117.3	82
113417	7	12.6	0.496	164.2	114
113426	12	15.5	0.610	261.3	192
113479	18	17.6	0.693	389.3	294

* no ground conductor included

Lutze Superflex® Plus N (C) PUR, Shielded

High Flexing Control Cable with UL/CSA/CE Approvals

halogen-free



Application

- Multi-conductor cable for robots, handling equipment, machine tools, C-tracks and applications with extremely rough operating conditions
- For the most demanding flexing applications such as C-tracks and linear flexing
- Compatible with all major brand C-tracks

Characteristics

- Superfine stranding per Class 6 for continuous moving applications
- Extremely small cable ODs due to special **TPE High Glide Insulation** compliant with UL
- Reduced friction
- PUR jacket
- Highest level of resistance against cooling fluids, greases and oils
- Abrasion and hydrolysis resistant, low water absorption
- Dry and wet conditions
- UV resistant
- Non-wicking fillers
- Talc free
- RoHS compliant

Technical Data

Voltage	300/600V UL AWM
Temperature	Moving -25°C - +80°C Fixed -40°C - +80°C
Bending radius	Moving 10 x cable OD Fixed 6 x cable OD
Conductor marking	Black with white numbers and one green/yellow ground
Isolation resistance	Min 100 MΩ x km
Approvals	UL/CSA/CE Halogen free per DIN EN 50264-1, EN 50267-2-1, EN 60684-2, Flame-retardant per DIN EN 50265-2-1, IEC 60332-1, VW 1, FT 1 RoHS

Construction

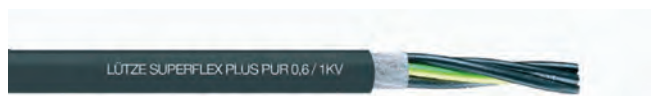
- Bare copper super finely stranded per DIN VDE 0295 Class 6 or IEC 60228 Class 6
- TPE subjacket for long flex life
- Tinned copper braid shield
- Extremely oil resistant gray PUR jacket

Part No.	Description No. of conductors incl. ground	OD - Ø ca. mm	OD - Ø inches	Weight Lbs/Mft	Copper Lbs/Mft
AWG 20 / 0.5 mm² 300V UL AWM					
113300	3	6.3	0.248	41.0	18
113347	4	6.9	0.272	46.2	22
113301	5	7.3	0.287	53.1	26
113302	7	8.2	0.323	65.9	34
113303	12	9.7	0.382	91.4	53
113304	18	11.0	0.433	129.0	80
113305	25	11.7	0.461	167.3	107
AWG 18 / 1.0 mm² 300V UL AWM					
113312	3	7.8	0.307	61.1	30
113324	4	8.3	0.327	71.2	38
113313	5	8.9	0.350	82.0	46
113314	7	10.1	0.398	104.8	61
113315	12	11.5	0.453	161.3	103
113316	18	13.1	0.516	217.7	147
113317	25	15.8	0.622	295.7	204
AWG 16 / 1.5 mm² 600V UL AWM					
113318	3	9.5	0.374	80.6	42
113331	4	10.5	0.413	94.7	58
113319	5	11.3	0.445	118.3	70
113320	7	13.2	0.484	163.3	93
113321	12	14.7	0.563	235.2	147
113322	18	16.7	0.650	326.6	217
113323	25	19.7	0.764	454.3	310
AWG 14 / 2.5 mm² 600V UL AWM					
113341	3	10.1	0.398	125.0	64
113332	4	11.7	0.461	160.6	86
113339	5	12.6	0.496	186.8	105
113340	7	14.4	0.567	241.9	142
113344	12	17.1	0.673	365.2	236
113342	18	19.9	0.783	526.6	356

Lutze Superflex® Plus N PUR 0.6/1kV, Unshielded

High Flexing Control & Motor Cable with UL/CSA/CE Approvals

halogen-free



Application

- High flexible multi-conductor cable for continuous moving applications such as machine tools, handling equipment and processing machines
- Designed for demanding industrial C-track applications
- Compatible with all major brand C-tracks

Characteristics

- Superfine stranding per Class 6 for continuous moving applications
- TPE conductor insulation
- PUR jacket
- Highest level of resistance against cooling fluids, greases and oils
- Abrasion and hydrolysis resistant, low water absorption
- UV resistant
- Non-wicking fillers
- Silicone/Talc free
- RoHS compliant

Technical Data

Voltage	1000V UL AWM U ₀ /U 0.6/1kV
Temperature	Moving -25°C - +80°C Fixed -40°C - +80°C
Bending radius	Moving 7.5 x cable OD Fixed 4 x cable OD
Conductor marking	Black with white numbers and one green/yellow ground
Isolation resistance	Min 100MΩ x km
Approvals	UL/CSA/CE UL VW-1; CSA FT1 IEC 60332-1 Halogen free per DIN EN 50264-1, EN 50267-2-1, EN 60684-2, RoHS

Construction

- Bare copper super finely stranded per DIN VDE 0295 Class 6 or IEC 60228 Class 6
- HGI insulation based on TPE
- Extremely oil resistant black PUR jacket

Part No.	Description No. of conductors incl. ground	OD - Ø ca. mm	OD - Ø inches	Weight Lbs/Mft	Copper Lbs/Mft
	AWG 16 / 1.5 mm²				
111370	4	7.7	0.303	81.1	39
	AWG 14 / 2.5 mm²				
111371	4	9.3	0.366	95.8	64
	AWG 12 / 4 mm²				
111372	4	10.8	0.425	156.1	103
	AWG 10 / 6 mm²				
111373	4	12.9	0.508	219.8	155
	AWG 8 / 10 mm²				
111374	4	15.5	0.610	351.8	257
	AWG 6 / 16 mm²				
111375	4	18.8	0.740	663.3	411
	AWG 4 / 25 mm²				
111376	4	23.7	0.933	804.0	643
	AWG 2 / 35 mm²				
111377	4	26.6	1.041	1,239.5	901
	AWG 1 / 50 mm²				
111378	4	31.8	1.252	1,641.5	1,286

Lutze Superflex® Plus N PUR 0.6/1kV, Shielded

High Flexing Motor Cable 0.6/1kV, Shielded, Orange

halogen-free



Application

- High flexing Servo Motor, Motor and VFD Cable for C-tracks and applications with extremely rough operating conditions and oil exposure
- Compatible with all major brand C-tracks

Characteristics

- Superfine stranding per Class 6 for continuous moving applications
- TPE conductor insulation
- PUR jacket
- Highest level of resistance against cooling fluids, greases and oils
- Abrasion and hydrolysis resistant, low water absorption
- UV resistant
- Non-wicking fillers
- Silicone/Talc free
- RoHS compliant

Technical Data

Voltage	1000V UL AWM U ₀ /U 0.6/1kV
Temperature	Moving -25°C - +80°C Fixed -40°C - +80°C
Bending radius	Moving 10 x cable OD Fixed 6 x cable OD
Conductor marking	Black with white numbers and one green/yellow ground
Isolation resistance	Min 100MΩ x km
Approvals	UL/CSA/CE UL VW-1; CSA FT1 IEC 60332-1 Halogen free per DIN EN 50264-1, EN 50267-2-1, EN 60684-2, RoHS

Construction

- Bare copper super finely stranded per DIN VDE 0295 Class 6 or IEC 60228 Class 6
- TPE conductor insulation
- Tinned copper braid shield
- Extremely oil resistant orange PUR jacket

Part No.	Description No. of conductors incl. ground	OD - Ø ca. mm	OD - Ø inches	Weight Lbs/Mft	Copper Lbs/Mft
111460	AWG 16 / 1.5 mm ² 4	8.0	0.315	78.4	52
111461	AWG 14 / 2.5 mm ² 4	9.6	0.378	115.9	80
111462	AWG 12 / 4 mm ² 4	11.1	0.437	164.2	126
111463	AWG 10 / 6 mm ² 4	13.4	0.528	244.6	194
111464	AWG 8 / 10 mm ² 4	16.7	0.657	367.8	302
111465	AWG 6 / 16 mm ² 4	19.7	0.776	568.8	476
111466	AWG 4 / 25 mm ² 4	25.4	1.000	870.3	737
111467	AWG 2 / 35 mm ² 4	28.3	1.114	1,133.6	1,012
111468	AWG 1 / 50 mm ² 4	32.9	1.295	1,636.1	1,427

Lutze Superflex® PUR 0.6/1kV, Unshielded

High Flexing Single Conductor Motor Cable 0.6/1kV, Unshielded

halogen-free



Application

- Performance flexing cable, specifically suitable for machine and device construction for transport and conveyor technology
- As motor supply or ground conductor
- Optimally suited for C-tracks in extremely harsh operating conditions
- Compatible with all major brand C-tracks

Characteristics

- Flame-retardant, self-extinguishing
- Very good alternating bending strength
- Good pressure and roll-over resistance
- Superfine stranding per Class 6 for continuous moving applications
- TPE insulation with very high break through resistance
- PUR jacket for highest level of resistance against cooling fluids, greases and oils
- Abrasion and hydrolysis resistant, low water absorption
- UV resistant
- Silicone/Talc free
- RoHS compliant

Technical Data

Voltage	U ₀ /U 0.6/1kV
Test voltage	4000V
Temperature	Moving -25°C - +80°C Fixed -40°C - +80°C
Bending radius	Moving 7.5 x cable OD Fixed 4 x cable OD
Isolation resistance	Min 20MΩ x km
Approvals	UL/CSA/CE UL VW-1; CSA FT1 IEC 60332-1 RoHS

Construction

- Bare copper super finely stranded per DIN VDE 0295 class 6 or IEC 60228 class 6
- TPE insulation
- Extremely oil resistant black PUR jacket

Part No.	Description No. of conductors incl. ground	OD - Ø ca. mm	OD - Ø inches	Weight Lbs/Mft	Copper Lbs/Mft
111126	AWG8/01C / 1x10.00 mm ²	9.4	0.370	103	62
111127	AWG6/01C / 1x16.00 mm ²	10.6	0.417	141	99
111128	AWG4/01C / 1x25.00 mm ²	12.6	0.496	181	156
111129	AWG2/01C / 1x35.00 mm ²	13.9	0.547	248	218
111130	AWG1/01C / 1x50.00 mm ²	16.0	0.630	375	320
111131	AWG2/0/01C / 1x70.00 mm ²	18.8	0.740	529	432
111132	AWG3/0/01C / 1x95.00 mm ²	21.7	0.854	704	595
111133	AWG4/0/01C / 1x120.00 mm ²	24.0	0.945	878	804

Lutze Superflex® PUR 0.6/1kV, Shielded

High Flexing Single Conductor Motor Cable 0.6/1kV, Shielded

halogen-free



Application

- Performance flexing cable, specifically suitable for machine and device construction for transport and conveyor technology
- As motor supply or ground conductor
- Optimally suited for C-tracks in extremely harsh operating conditions
- Compatible with all major brand C-tracks

Characteristics

- Flame-retardant, self-extinguishing
- Very good alternating bending strength
- Good pressure and roll-over resistance
- Superfine stranding per Class 6 for continuous moving applications
- TPE insulation with very high break through resistance
- PUR jacket for highest level of resistance against cooling fluids, greases and oils
- Abrasion and hydrolysis resistant, low water absorption
- UV resistant
- Silicone/Talc free
- RoHS compliant

Technical Data

Voltage	U ₀ /U 0.6/1kV
Test Voltage	4000V
Temperature	Moving -25°C - +80°C Fixed -40°C - +80°C
Bending radius	Moving 7.5 x cable OD Fixed 4 x cable OD
Isolation resistance	Min 20MΩ x km
Approvals	UL/CSA/CE UL VW-1; CSA FT1 IEC 60332-1, RoHS

Construction

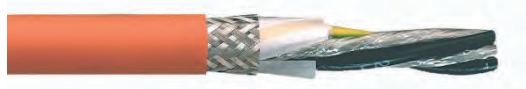
- Bare copper super finely stranded per DIN VDE 0295 Class 6 or IEC 60228 Class 6
- TPE insulation
- Tinned copper braid shield
- Extremely oil resistant black PUR jacket

Part No.	Description No. of conductors incl. ground	OD - Ø ca. mm	OD - Ø inches	Weight Lbs/Mft	Copper Lbs/Mft
111289	(AWG 8/01C) / (1x10.00 mm ²)	9.5	0.374	122	81
111290	(AWG 6/01C) / (1x16.00 mm ²)	11.0	0.433	167	121
111291	(AWG 4/01C) / (1x25.00 mm ²)	13.5	0.531	217	183
111292	(AWG 2/01C) / (1x35.00 mm ²)	15.1	0.594	303	250
111293	(AWG 1/01C) / (1x50.00 mm ²)	17.1	0.673	436	356
111294	(AWG 2/0/01C) / (1x70.00 mm ²)	20.1	0.791	599	473
111295	(AWG 3/0/01C) / (1x95.00 mm ²)	22.6	0.890	788	657
111296	(AWG 4/0/01C) / (1x120.00 mm ²)	25.6	1.008	973	884

Lutze Superflex® Plus (C) PUR 0.6/1kV, Shielded

High Flexing Composite Motor Cable with UL/CSA/CE/DESINA Approvals

halogen-free



Application

- High flexing multi-conductor cable for VFD and Motor applications with one or two control pairs such as Siemens and Indramat
- Designed for demanding C-track applications
- Compatible with all major brand C-tracks

Characteristics

- Superfine stranding per Class 6 for continuous moving applications
- TPE conductor insulation
- Reduced friction
- PUR jacket
- Low capacitance
- Highest level of resistance against cooling fluids, greases and oils
- Abrasion and hydrolysis resistant, low water absorption
- UV resistant
- Non-wicking fillers
- Silicone/Talc free
- RoHS compliant

Technical Data

Voltage	1000V UL AWM U ₀ /U 0.6/1kV
Temperature	Moving -25°C - +80°C Fixed -40°C - +80°C
Bending radius	Moving 10 x cable OD Fixed 6 x cable OD
Conductor marking	Black with white numbers and one green/yellow ground
Approvals	UL/CSA/CE UL VW-1; CSA FT1 IEC 60332-1 Halogen free per DIN EN 50264-1, EN 50267-2-1, EN 60684-2 RoHS

Construction

- Bare copper super finely stranded per DIN VDE 0295 Class 6 or IEC 60228 Class 6
- HGI insulation based on TPE
- Tinned copper braid shield
- Extremely oil resistant orange PUR jacket

WITH ONE CONTROL PAIR

Part No.	Description No. of conductors incl. ground	OD - Ø ca. mm	OD - Ø inches	Weight Lbs/Mft	Copper Lbs/Mft
111420	AWG 16 / 1.5 mm ² (4C/AWG 16 + 1 pair AWG 16))	10.5	0.413	140.7	91
111421	AWG 14 / 2.5 mm ² (4C/AWG 14 + 1 pair AWG 16))	12.1	0.476	157.5	117
111422	AWG 12 / 4 mm ² (4C/AWG 12 + 1 pair AWG 16))	13.6	0.535	214.4	170
111423	AWG 10 / 6 mm ² (4C/AWG 10 + 1 pair AWG 16))	15.5	0.614	288.1	230
111424	AWG 8 / 10 mm ² (4C/AWG 8 + 1 pair AWG 16))	18.3	0.720	455.6	338
111425	AWG 6 / 16 mm ² (4C/AWG 6 + 1 pair AWG 16))	21.4	0.843	576.2	517
111426	AWG 4 / 25 mm ² (4C/AWG 4 + 1 pair AWG 16))	25.7	1.012	914.6	771
111427	AWG 2 / 35 mm ² (4C/AWG 2 + 1 pair AWG 16))	29.9	1.177	1,259.6	1,052

WITH TWO CONTROL PAIRS

111271	AWG 16 / 1.5 mm ² (4C/AWG 16 + 2(TSP AWG 19))	12.5	0.492	170.9	109
111272	AWG 14 / 2.5 mm ² (4C/AWG 14 + 2(TSP AWG 19))	13.5	0.531	213.7	144
111280	AWG 12 / 4 mm ² (4C/AWG 12 + 2(TSP AWG 16))	16.0	0.630	304.2	227
111281	AWG 10 / 6 mm ² (4C/AWG 10 + 2(TSP AWG 16))	17.9	0.705	361.8	265
111282	AWG 8 / 10 mm ² (4C/AWG 8 + 2(TSP AWG 16))	19.8	0.780	492.5	399
111276	AWG 6 / 16 mm ² (4C/AWG 6 + 2(TSP AWG 16))	23.2	0.913	712.9	551

Lutze Superflex® Plus (C) PUR Kombi (Encoder), Shielded

High Flexing Composite Encoder Cable with UL/CSA/CE/DESINA Approvals

halogen-free



Application

- High flexing composite cable for continuous moving encoder applications, gantry robots, machine tools and plant construction
- Designed for demanding C-track applications
- Compatible with all major brand C-tracks

Characteristics

- Superfine stranding per Class 6 for continuous moving applications
- PUR jacket TPE conductor insulation for use in extremely harsh operating conditions
- Low capacitance
- Highest level of resistance against cooling fluids, greases and oils
- Abrasion and hydrolysis resistant, low water absorption
- UV resistant
- Non-wicking fillers
- Silicone/Talc free
- RoHS compliant

Technical Data

Voltage	300V UL AWM
Temperature	Moving -25°C - +80°C
	Fixed -40°C - +80°C
Bending radius	Moving 12 x cable OD
	Fixed 6 x cable OD
Conductor marking	DIN 47100 if not specified
Approvals	UL/CSA/CE
	UL VW-1; CSA FT1
	IEC 60332-1
	Halogen free per DIN EN 50264-1, EN 50267-2-1, EN 60684-2,
	RoHS

Construction

- Bare copper super finely stranded per DIN VDE 0295 Class 6 or IEC 60228 Class 6
- TPE insulation
- Tinned copper braid shield
- Extremely oil resistant orange or green PUR jacket

ORANGE JACKET

Part No.	Description No. of conductors incl. ground	OD - Ø ca. mm	OD - Ø inches	Weight Lbs/Mft	Copper Lbs/Mft
110941	(2x1.0 + 4x2x0.25) (2C/AWG 18 + 4TP AWG 24) 0.5: WH; BN 0.25: BN,GN; GY,PK; BU,VT; RD,BK	8.3	0.326	67	42
110940	(9x0.5) (9C/AWG 20)	8.8	0.346	83.8	40

GREEN JACKET

111455	(4x0.5 + 4x2x0.14) (4C/AWG 20 + 4TP AWG 26) 0.5: WH; BU; WH/GN; BN/GN 0.14: YE,VT; GY,PK; WH,GN; BN,GN	8.0	0.315	60.3	33
111456	(4x0.5 + 4x2x0.38) (4C/AWG 20 + 4TP AWG 21) 0.5: WH/BU; WH/BK; WH/RD; WH/YE 0.38: BK,BN; RD,OG; GN/YE; BU/VT	9.2	0.362	88.4	58
111457	(2x0.5+3x(2x0.14) + 4x0.23+4x0.14) (2C/AWG 20 + 3 TSP AWG 26 + 4C/AWG 24 + 4C/AWG 26) 0.5: BN/BU; BN/RD 0.23: GN/BK; GN/RD; BN/YE; BN/GY(0.14): BK,BN; RD,OG; YE,GN 0.14: BU; GY; WH,BK; WH,YE	10.3	0.405	102.5	62
111458	(2x0.5 + 3x(2x0.14) + 4x0.14) (2C/AWG 20 + 3 TSP AWG 26 + 4C/AWG 26) 0.5: BN/BU; BN/RD (0.14): BK,BN; RD,OG; YE,GN 0.14: BU; GY; WH,BK; WH,YE	8.5	0.334	81.7	41
111459	(2x(0.5) + 3x(2x0.14)) (2C/AWG 20 + 3 TSP AWG 26) 0.5: BK; RD 0.14: BK,BN; RD,OG; GN, YE	8.7	0.343	69.7	50

TP=Twisted Pair

TSP=Twisted Shielded Pair

Lutze Superflex® Tronic PUR, Unshielded

High Flexing Electronic Cable with UL/CSA/CE Approvals

halogen-free



Application

- Multi-conductor cable for robots, handling equipment, machine tools, C-tracks and applications with extremely rough operating conditions
- For the most demanding flexing applications such as C-tracks and linear flexing
- Compatible with all major brand C-tracks

Characteristics

- Superfine stranding per Class 6 for continuous moving applications
- PUR jacket and TPE conductor insulation for use in extremely harsh operating conditions
- Highest level of resistance against cooling fluids, greases and oils
- Abrasion and hydrolysis resistant, low water absorption
- Dry and wet conditions
- UV resistant
- Silicone/Talc free
- RoHS compliant

Technical Data

Voltage	300V UL AWM
Temperature	Moving -25°C - +80°C
	Fixed -40°C - +80°C
Bending radius	Moving 10 x cable OD
	Fixed 6 x cable OD
Conductor marking	Color coded per DIN EN 50334 or DIN 47100
Isolation resistance	Min 20MΩ x km
Approvals	UL/CSA/CE
	UL VW-1; CSA FT1
	IEC 60332-1
	Halogen free per DIN EN 50264-1, EN 50267-2-1, EN 60684-2,
	RoHS

Construction

- Bare copper super finely stranded per DIN VDE 0295 Class 6 or IEC 60228 Class 6
- TPE insulation
- Extremely oil resistant gray PUR jacket

Part No.	Description No. of conductors	OD - Ø ca. mm	OD - Ø inches	Weight Lbs/Mft	Copper Lbs/Mft
AWG 26 / 0.14 mm²					
117031	3x0.14	3.8	0.150	11	3
117034	7x0.14	5.0	0.197	19	7
117035	10x0.14	5.8	0.228	24	9
117027	15x0.14	6.2	0.244	33	14
117037	18x0.14	6.8	0.268	37	17
117038	25x0.14	8.1	0.319	55	23
AWG 24 / 0.25 mm²					
117040	3x0.25	4.0	0.157	14	5
117043	7x0.25	5.4	0.213	25	11
117044	10x0.25	6.2	0.244	33	16
117028	15x0.25	7.0	0.276	46	24
117046	18x0.25	7.5	0.295	53	29
117047	25x0.25	8.8	0.346	71	40
AWG 22 / 0.34 mm²					
117049	3x0.34	4.2	0.165	16	7
117052	7x0.34	5.7	0.224	30	15
117053	10x0.34	6.6	0.260	40	20
117029	15x0.34	7.5	0.295	56	30
117055	18x0.34	7.9	0.311	64	38
117056	25x0.34	9.3	0.366	86	52

Lutze Superflex® Tronic (C) PUR, Shielded

High Flexing Electronic Cable with UL/CSA/CE Approvals

halogen-free



Application

- Multi-conductor cable for robots, handling equipment, machine tools, C-tracks and applications with extremely rough operating conditions
- For the most demanding flexing applications such as C-tracks and linear flexing
- Compatible with all major brand C-tracks

Characteristics

- Superfine stranding per Class 6 for continuous moving applications
- PUR jacket and TPE conductor insulation for use in extremely harsh operating conditions
- Highest level of resistance against cooling fluids, greases and oils
- Abrasion and hydrolysis resistant, low water absorption
- Dry and wet conditions
- UV resistant
- Silicone/Talc free
- RoHS compliant

Technical Data

Voltage	300V UL AWM
Temperature	Moving -25°C - +80°C
	Fixed -40°C - +80°C
Bending radius	Moving 12 x cable OD
	Fixed 6 x cable OD
Conductor marking	Color coded per DIN EN 50334 or DIN 47100
Isolation resistance	Min 20MΩ x km
Approvals	UL/CSA/CE
	UL VW-1; CSA FT1
	IEC 60332-1
	Halogen free per DIN EN 50264-1, EN 50267-2-1, EN 60684-2,
	RoHS

Construction

- Bare copper super finely stranded per DIN VDE 0295 Class 6 or IEC 60228 Class 6
- TPE insulation
- Tinned copper braid shield
- Extremely oil resistant gray PUR jacket

Part No.	Description No. of conductors	OD - Ø ca. mm	OD - Ø inches	Weight Lbs/Mft	Copper Lbs/Mft
AWG 26 / 0.14 mm²					
117091	(3x0.14)	4.2	0.165	17	9
117094	(7x0.14)	5.4	0.213	27	15
117095	(10x0.14)	6.2	0.244	33	19
117122	(15x0.14)	6.9	0.272	44	27
117097	(18x0.14)	7.2	0.283	48	29
117098	(25x0.14)	8.5	0.335	63	38
AWG 24 / 0.25 mm²					
117100	(3x0.25)	4.4	0.173	20	11
117103	(7x0.25)	5.8	0.228	34	21
117104	(10x0.25)	6.6	0.260	43	28
117123	(15x0.25)	7.5	0.295	58	40
117106	(18x0.25)	7.9	0.311	65	43
117107	(25x0.25)	9.2	0.362	85	57
AWG 22 / 0.34 mm²					
117109	(3x0.34)	4.6	0.181	23	13
117112	(7x0.34)	6.1	0.240	39	25
117113	(10x0.34)	7.0	0.276	50	34
117124	(15x0.34)	7.9	0.311	68	50
117115	(18x0.34)	8.3	0.327	77	54
117116	(25x0.34)	9.8	0.386	107	77

Lutze Superflex® Tronic (C) PUR TP, Shielded

High Flexing Electronic Cable with UL/CSA/CE Approvals

halogen-free



Application

- Multi-conductor cable for robots, handling equipment, machine tools, C-tracks and applications with extremely rough operating conditions
- For the most demanding flexing applications such as C-tracks and linear flexing
- Compatible with all major brand C-tracks

Characteristics

- Superfine stranding per Class 6 for continuous moving applications
- PUR jacket and TPE conductor insulation for use in extremely harsh operating conditions
- Highest level of resistance against cooling fluids, greases and oils
- Abrasion and hydrolysis resistant, low water absorption
- Dry and wet conditions
- UV resistant
- Non-wicking fillers
- Silicone/Talc free
- RoHS compliant

Technical Data

Voltage	300V UL AWM
Temperature	Moving -25°C - +80°C Fixed -40°C - +80°C
Bending radius	Moving 12 x cable OD Fixed 6 x cable OD
Conductor marking	Color coded per DIN EN 50334 or DIN 47100
Isolation resistance	Min 20MΩ x km
Approvals	UL/CSA/CE UL VW-1; CSA FT1 IEC 60332-1 Halogen free per DIN EN 50264-1, EN 50267-2-1, EN 60684-2 RoHS

Part No.	Description No. of conductors	OD - Ø ca. mm	OD - Ø inches	Weight Lbs/Mft	Copper Lbs/Mft
AWG 24 / 0.25 mm²					
117170	(2x2x0.25) 2 TP AWG 24	6.3	0.248	38.9	15
117171	(3x2x0.25) 3 TP AWG 24	6.6	0.260	46.2	19
117172	(4x2x0.25) 4 TP AWG 24	6.8	0.268	50.9	23
117173	(5x2x0.25) 5 TP AWG 24	7.4	0.291	67.7	27
117177	(6x2x0.25) 6 TP AWG 24	8.1	0.319	84.4	32
117174	(8x2x0.25) 8 TP AWG 24	9.4	0.370	101.2	40
117175	(10x2x0.25) 10 TP AWG 24	10.5	0.413	121.9	53
117176	(12x2x0.25) 12 TP AWG 24	11.0	0.433	132.7	61

TP=Twisted Pair

Construction

- Bare copper super finely stranded per DIN VDE 0295 Class 6 or IEC 60228 Class 6
- TPE insulation
- Overall tinned copper braid shield
- Extremely oil resistant gray PUR jacket

Lutze Superflex® BUS (C) PUR, Shielded

High Flexing Bus Cable with UL/CSA/CE Approvals

halogen-free



Application

- High flexing Bus and Network cable for Profibus, DeviceNet and CAN Bus applications
- Designed for demanding C-track applications

Characteristics

- Superfine stranding for continuous moving applications
- PUR jacket for use in extremely harsh operating conditions
- Highest level of resistance against cooling fluids, greases and oils
- Abrasion and hydrolysis resistant, low water absorption
- UV resistant
- Silicone/Talc free
- RoHS compliant

Technical Data

Temperature	Moving	-20°C - +80°C
	Fixed	-40°C - +80°C
Bending radius	Moving	12 x cable OD
	Fixed	6 x cable OD
Approvals		UL/CSA/CE
		UL VW-1; CSA FT1
		IEC 60332-1
		Halogen free per DIN EN
		50264-1, EN 50267-2-1, EN
		60684-2
		RoHS

Construction

- Flexible superfine wire stranding
- Polyethylene (PE) conductor insulation
- Tinned copper braid shield
- Extremely oil resistant PUR jacket

Part No.	Description No. of conductors	OD - Ø ca. mm	OD - Ø inches	Weight Lbs/Mft
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Profibus

Impedance: 150 Ω ± 15%, Mutual capacitance: <30 pF/m

104265	(1x2x0.64 Ø) (1 pair AWG 24) RD, GN	8.0	0.315	37
104275	(3x0.75 + 1x2x0.64 Ø) (3C/AWG 19 + 1 pair AWG 24) GN/YE, BU, BK, RD, GN	9.8	0.386	97

Profibus FC (Insulation Displacement Connection)

Impedance: 150 Ω ± 15% , Mutual capacitance: <30 pF/m

104287	(1x2x0.64 Ø) (1 pair AWG 24) RD, GN	8.0	0.315	37
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DeviceNet™

Impedance: 120 Ω ± 10% , Mutual capacitance: <40 pF/m

104289	((2x0.34) + (2x0.22)) ((1 pair AWG 22) + (1 pair AWG 24)) BU, WH, RD, GN	6.8	0.268	57
104279	((2x1.5) + (2x0.75)) ((1 pair AWG 16) + (1 pair AWG 19)) BU, WH, RD, BK	11.9	0.469	144

CAN-BUS

Impedance: 100-120 Ω , Mutual capacitance: <60 pF/m

104270	(2x2x0.25) (2 pair AWG 24) WH, BN, GN, YE	6.0	0.236	39
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Lutze Superflex® Ethernet Network Cable (C) PUR, Shielded

High Flexing Ethernet Network Cable with UL/CSA/CE Approvals

halogen-free



Application

- High flexing industrial field network cable for fast ETHERNET applications
- Designed for demanding C-track applications
- Compatible with all major brand C-tracks

Characteristics

- Shielded for optimal data integrity in industrial environments
- Silicone/Talc free
- RoHS compliant

Technical Data

Impedance	100 Ω +/- 10% (1-100 MHz)
Loop Resistance	
AWG22/7	<110 Ω/km
AWG23/19	<130 Ω/km
AWG24/19	<155 Ω/km
AWG26/19	<280 Ω/km
Operating capacitance	< 50 pF/m
Nominal Voltage	250V
Test Voltage	1500V
Temperature	
Moving	-25°C - +80°C
fixed	-40°C - +80°C
Bending radius	
Fixed	6 x cable OD
Moving	12 x cable OD
Approvals	UL/CSA AWM CE UL VW-1; CSA FT1 IEC 60332-1 RoHS

Construction

- Bare copper conductor per AWG
- Polyolefin insulation
- Tinned copper braid > 85%
- Extremely oil resistant PUR jacket

Part No.	Description No. of conductors	OD - Ø ca. mm	OD - Ø inches	Weight Lbs/Mft	Copper Lbs/Mft
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CAT 5 100 MHz UL 300V AWM, Purple jacket

104245	(2 pair AWG 24/19) STAR QUAD WH/BN, GN/YE	6.1	0.240	43.6	25
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CAT 5e 100 MHz UL 300V AWM, Green jacket

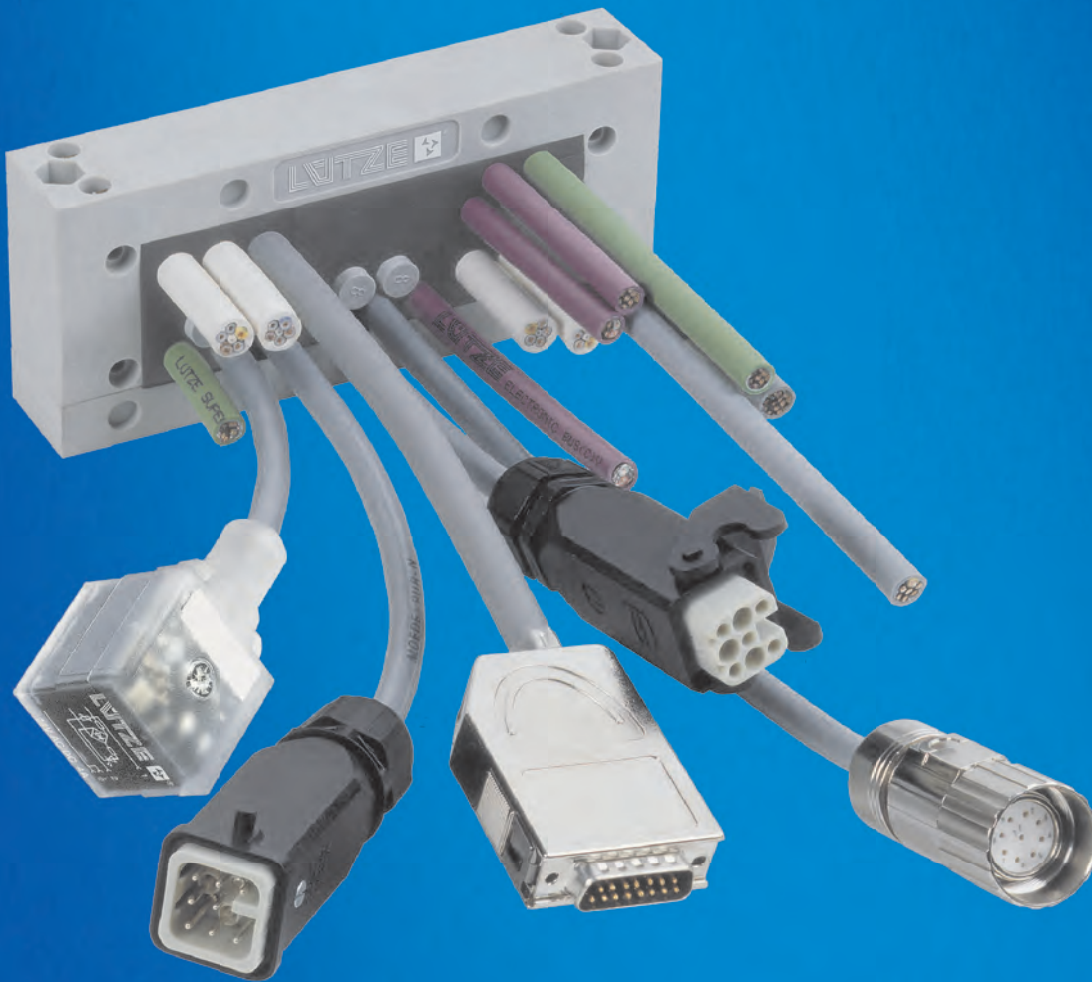
104337	(4 pair AWG 24/19) WH/BN, GN/YE, GY/PK, BU/RD	7.8	0.307	57	29
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ProfiNet Industrial Ethernet UL 30V AWM, Green Jacket

104303	(2x2xAWG22/7) StC	6.1	0.256	40.9	21
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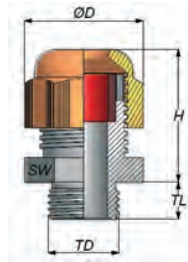
104304	(2x2xAWG23/19) StC	6.6	0.269	50.3	25
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Wire and Cable Management



Lutze TOP-T Fittings NPT

Plastic NPT



Characteristics:

- Integrated strain relief
- Wide sealing and clamping range
- Easy to install
- Temperature range -30°C - +80°C/
-22°F - +176°F
- Max temporary temperature
up to +150°C/+300°F
- Protection class IP68

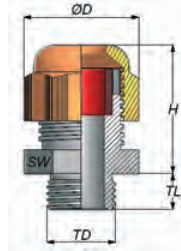
Fitting Specifications:

Connecting thread NPT
 Material Polyamide 6
 Seal Neoprene
 Color Black RAL 9005
 Gray RAL 7001

Part No.	Thread	Clamping Range Ø inch	Clamping Range Ø mm	TL mm	D/SW mm	TD mm	H mm
BLACK							
FPNPT38B	NPT 3/8"	0.197-0.394	5-10	15	22	16.5	28
FPNPT12B	NPT 1/2"	0.394-0.551	10-14	15	27	20.7	31
FPNPT34B	NPT 3/4"	0.511-0.709	13-18	15	33	25.9	35
FPNPT10B	NPT 1"	0.709-0.984	18-25	18	42	32.4	40
GRAY							
FPNPT38G	NPT 3/8"	0.197-0.394	5-10	15	22	16.5	28
FPNPT12G	NPT 1/2"	0.394-0.551	10-14	15	27	20.7	31
FPNPT34G	NPT 3/4"	0.511-0.709	13-18	15	33	25.9	35
FPNPT10G	NPT 1"	0.709-0.984	18-25	18	42	32.4	40
REDUCED CLAMPING RANGE							
FPNPT38B-R	NPT 3/8"	0.118-0.276	3-7	15	22	16.5	28
FPNPT12B-R	NPT 1/2"	0.276-0.472	7-12	15	27	20.7	31
FPNPT34B-R	NPT 3/4"	0.354-0.630	9-16	15	33	25.9	35
FPNPT10B-R	NPT 1"	0.472-0.787	12-20	18	42	32.4	40

Lutze TOP-T Fittings Pg

Plastic Pg



Characteristics:

- Integrated strain relief
- Wide sealing and clamping range
- Easy to install
- Temperature range -30°C - +80°C/
-22°F - +176°F
- Max temporary temperature
up to +150°C/+300°F
- Protection class IP68

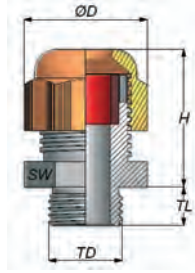
Fitting Specifications:

Connecting thread Pg as per DIN 40430
Material Polyamide 6
Seal Neoprene
Color Black RAL 9005
Gray RAL 7001

Part No.	Thread	Clamping Range Ø inch	Clamping Range Ø mm	TL mm	D/SW mm	TD mm	H mm
BLACK							
FPPG7B	Pg 7	0.118-0.256	3-6.5	8	15	13	22
FPPG9B	Pg 9	0.157-0.315	4-8	8	19	16	25
FPPG11B	Pg 11	0.197-0.394	5-10	8	22	19	28
FPPG13B	Pg 13.5	0.236-0.472	6-12	9	24	21	29
FPPG16B	Pg 16	0.394-0.551	10-14	10	27	23	31
FPPG21B	Pg 21	0.512-0.709	13-18	11	33	29	35
FPPG29B	Pg 29	0.709-0.984	18-25	11	42	37	40
FPPG36B	Pg 36	0.866-1.260	22-32	13	53	47	49
FPPG42B	Pg 42	1.181-1.496	30-38	13	60	54	49
FPPG48B	Pg 48	1.339-1.732	34-44	14	65	59	49
GRAY							
FPPG7G	Pg 7	0.118-0.256	3-6.5	8	15	13	22
FPPG9G	Pg 9	0.157-0.315	4-8	8	19	16	25
FPPG11G	Pg 11	0.197-0.394	5-10	8	22	19	28
FPPG13G	Pg 13.5	0.236-0.472	6-12	9	24	21	29
FPPG16G	Pg 16	0.394-0.551	10-14	10	27	23	31
FPPG21G	Pg 21	0.512-0.709	13-18	11	33	29	35
FPPG29G	Pg 29	0.709-0.984	18-25	11	42	37	40
FPPG36G	Pg 36	0.866-1.260	22-32	13	53	47	49
FPPG42G	Pg 42	1.181-1.496	30-38	13	60	54	49
FPPG48G	Pg 48	1.339-1.732	34-44	14	65	59	49
REDUCED CLAMPING RANGE							
FPPG7G-R	Pg 7	0.079-0.197	2-5	8	15	13	22
FPPG9G-R	Pg 9	0.079-0.236	2-6	8	19	16	25
FPPG11G-R	Pg 11	0.118-0.276	3-7	8	22	19	28
FPPG13G-R	Pg 13.5	0.197-0.354	5-9	9	24	21	29
FPPG16G-R	Pg 16	0.276-0.472	7-12	10	27	23	31
FPPG21G-R	Pg 21	0.354-0.630	9-16	11	33	29	35
FPPG29G-R	Pg 29	0.472-0.787	12-20	11	42	37	40
FPPG36G-R	Pg 36	0.787-1.024	20-26	13	53	47	49

Lutze TOP-T Fittings Metric

Plastic Metric



Characteristics:

- Integrated strain relief
- Wide sealing and clamping range
- Easy to install
- Manufactured according to EN 50262 requirements
- Temperature range -30°C - +80°C/
-22°F - +176°F
- Max temporary temperature up to +150°C/+300°F
- Protection class IP68

Fitting Specifications:

Connecting thread	Metric as per EN 60423
Material	Polyamide 6
Seal	Neoprene
Color	Black RAL 9005 Gray RAL 7001

Part No.	Thread	Clamping Range Ø inch	Clamping Range Ø mm	TL mm	D/SW mm	TD mm	H mm
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BLACK

FPM12B	M12x1.5	0.118-0.256	3-6.5	8	15	12	22
FPM16B	M16x1.5	0.197-0.394	5-10	10	22	16	28
FPM20B	M20x1.5	0.315-0.551	10-14	10	27	20	31
FPM25B	M25x1.5	0.512-0.709	13-18	10	33	25	35
FPM32B	M32x1.5	0.709-0.984	18-25	18	42	32	40
FPM40B	M40x1.5	0.866-1.260	22-32	18	53	40	49
FPM50B	M50x1.5	1.181-1.496	30-38	18	60	50	49
FPM63B	M63x1.5	1.339-1.732	34-44	18	65	63	49

GRAY

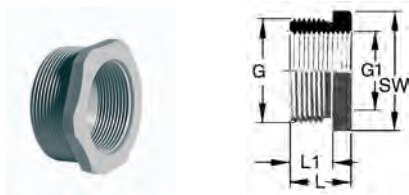
FPM12G	M12x1.5	0.118-0.256	3-6.5	8	15	12	22
FPM16G	M16x1.5	0.197-0.394	5-10	10	22	16	28
FPM20G	M20x1.5	0.315-0.551	10-14	10	27	20	31
FPM25G	M25x1.5	0.512-0.709	13-18	10	33	25	35
FPM32G	M32x1.5	0.709-0.984	18-25	18	42	32	40
FPM40G	M40x1.5	0.866-1.260	22-32	18	53	40	49
FPM50G	M50x1.5	1.181-1.496	30-38	18	60	50	49
FPM63G	M63x1.5	1.339-1.732	34-44	18	65	63	49

REDUCED CLAMPING RANGE

FPM12G-R	M12x1.5	0.079-0.197	2-5	8	15	12	22
FPM16G-R	M16x1.5	0.118-0.276	3-7	10	22	16	28
FPM20G-R	M20x1.5	0.276-0.472	7-12	10	27	20	31
FPM25G-R	M25x1.5	0.354-0.630	9-16	10	33	25	35
FPM32G-R	M32x1.5	0.472-0.787	12-20	18	42	32	40
FPM40G-R	M40x1.5	0.787-1.024	20-26	18	53	40	49
FPM50G-R	M50x1.5	0.984-1.220	25-31	18	60	50	49
FPM63G-R	M63x1.5	1.142-1.378	29-35	18	65	63	49

Lutze TOP-T Fittings Reducer and Enlarger

Plastic Metric Reducer and Pg Reducer



Metric Reducer Characteristics:

- Reduction of threaded or clearance holes to smaller thread size
- Temperature range -30°C - +100°C / -22°F - +212°F
- Material Polyamide PA6 GF30
- Internal/External thread Metric as per EN 60423
- Color Gray RAL 7035

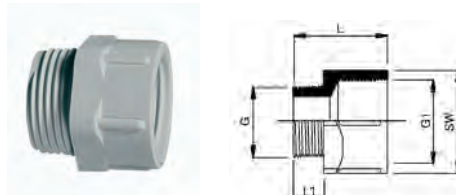
Pg Reducer Characteristics:

- Reduction of threaded or clearance holes to smaller thread size
- Temperature range -30°C - +100°C / -22°F - +212°F
- Material Polyamide PA6 GF30
- Internal/External thread Pg as per DIN 40430
- Color Gray RAL 7035

Pg Enlarger Characteristics:

- Enlarger of threaded or clearance holes to larger thread size
- Fiber glass reinforced
- Temperature range -30°C - +100°C / -22°F - +212°F
- Material Polyamide PA6 GF30
- Internal/External thread Pg as per DIN 40430
- Color Gray RAL 7035

Plastic Pg Enlarger



Part No.	Thread G	Thread G1	SW mm	L mm	L1 mm
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METRIC REDUCER

600550	M20x1.5	M12x1.5	24	12	8
600551	M20x1.5	M16x1.5	24	12	8
600553	M25x1.5	M16x1.5	32	14	8
600554	M25x1.5	M20x1.5	32	14	8
600557	M32x1.5	M20x1.5	36	16	10
600558	M32x1.5	M25x1.5	36	16	10
600561	M40x1.5	M25x1.5	46	16	10
600562	M40x1.5	M32x1.5	46	16	10
600565	M50x1.5	M32x1.5	55	18	12
600566	M50x1.5	M40x1.5	55	18	12

Pg REDUCER

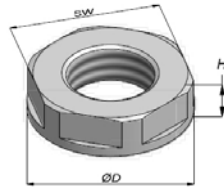
600607	Pg 13.5	Pg 9	24	9	6
600604	Pg 21	Pg 16	32	16	11
600605	Pg 29	Pg 21	39	18	12
600606	Pg 36	Pg 29	50	24	18

Pg ENLARGER

600351	Pg 7	Pg 9	19	20.5	8
600352	Pg 9	Pg 11	22	22.5	8
600353	Pg 11	Pg 13.5	24	24	8
600355	Pg 13.5	Pg 16	27	27	9
600356	Pg 16	Pg 21	33	29	9
600357	Pg 21	Pg 29	43	33	10
600358	Pg 29	Pg 36	50	38	10
600359	Pg 36	Pg 42	60	40	12.5

Lutze TOP-T Locknuts Plastic

Plastic NPT, Pg and Metric



Characteristics:

- Hexagonal locknut for secure tightening of plastic cable fittings and accessories
- Easy to install
- Temperature range -30°C - +80°C/
-22°F - +176°F
- Max temporary temperature up to +150°C/+300°F

Locknut Specifications:

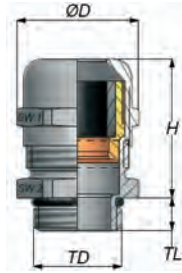
Material	Polyamide 6, 30% glass fiber reinforced
Color	Black RAL 9005 Gray RAL 7001

Please note the following specification change:
Locknuts with Flange design starting Spring 2010.
Flange is imprinted with locknut size for easy identification.

Part No.	Thread	ØD mm	SW mm	H mm
NPT BLACK				
LPNPT38B	NPT 3/8"	25	22	5
LPNPT12B	NPT 1/2"	30.5	27	5
LPNPT34B	NPT 3/4"	37.5	33	5
LPNPT10B	NPT 1"	46.5	47	6
NPT GRAY				
LPNPT38G	NPT 3/8"	25	22	5
LPNPT12G	NPT 1/2"	30.5	27	5
LPNPT34G	NPT 3/4"	37.5	33	5
LPNPT10G	NPT 1"	46.5	47	6
Pg BLACK				
LPPG7B	Pg 7	21	19	5
LPPG9B	Pg 9	24	22	5
LPPG11B	Pg 11	26	24	5
LPPG13B	Pg 13.5	29	27	6
LPPG16B	Pg 16	33	30	6
LPPG21B	Pg 21	39	36	7
LPPG29B	Pg 29	50	46	7
LPPG36B	Pg 36	66	60	8
LPPG42B	Pg 42	73	65	8
LPPG48B	Pg 48	78	70	8
Pg GRAY				
LPPG7G	Pg 7	21	19	5
LPPG9G	Pg 9	24	22	5
LPPG11G	Pg 11	26	24	5
LPPG13G	Pg 13.5	29	27	6
LPPG16G	Pg 16	33	30	6
LPPG21G	Pg 21	39	36	7
LPPG29G	Pg 29	50	46	7
LPPG36G	Pg 36	66	60	8
LPPG42G	Pg 42	73	65	8
LPPG48G	Pg 48	78	70	8
METRIC BLACK				
LPM12B	M12x1.5	19.5	18	5
LPM16B	M16x1.5	24.2	22	5
LPM20B	M20x1.5	28.6	26	6
LPM25B	M25x1.5	35.0	32	6
LPM32B	M32x1.5	46.1	41	7
LPM40B	M40x1.5	55.3	50	7
LPM50B	M50x1.5	66.1	60	8
LPM63B	M63x1.5	82.5	75	8
METRIC GRAY				
LPM12G	M12x1.5	19.5	18	5
LPM16G	M16x1.5	24.2	22	5
LPM20G	M20x1.5	28.6	26	6
LPM25G	M25x1.5	35.0	32	6
LPM32G	M32x1.5	46.1	41	7
LPM40G	M40x1.5	55.3	50	7
LPM50G	M50x1.5	66.1	60	8
LPM63G	M63x1.5	82.5	75	8

Lutze TOP-T Fittings NPT

Metal NPT



Characteristics:

- Integrated strain relief
- Anti-twist design
- Wide sealing and clamping range
- Easy to install
- Temperature range -40°C - +100°C / -40°F - +212°F
- Protection class IP68

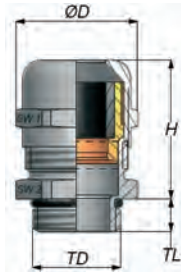
Fitting Specifications:

Design allows for shield termination
 Connecting thread NPT
 Material Brass, nickel plated
 Clamping insert Polyamide 6
 Sealing ring Neoprene
 O-ring NBR

Part No.	Thread	Clamping Range Ø inch	Clamping Range Ø mm	TL mm	SW1 mm	SW2 mm	H mm
NPT							
FMNPT38	NPT 3/8"	0.157-0.315	4-8	11.5	20	20	23
FMNPT12	NPT 1/2"	0.236-0.472	6-12	13	22	22	25.5
FMNPT34	NPT 3/4"	0.512-0.709	13-18	13	30	30	34
FMNPT10	NPT 1"	0.709-0.984	18-25	13	40	43	43

Lutze TOP-T Fittings Pg

Metal Pg



Characteristics:

- Integrated strain relief
- Anti-twist design
- Wide sealing and clamping range
- Easy to install
- Temperature range
-40°C-+100°C
-40°F-+212°F
- Protection class
IP68

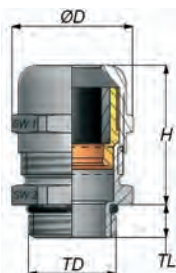
Fitting Specifications:

Connecting thread	Pg as per DIN 40430
Material	Brass, nickel plated
Clamping insert	Polyamide 6
Sealing ring	Neoprene
O-ring	NBR

Part No.	Thread	Clamping Range Ø inch	Clamping Range Ø mm	TL mm	SW1 mm	SW2 mm	H mm
Pg							
FMPG7	Pg 7	0.118-0.256	3-6.5	6	14	14	21.8
FMPG9	Pg 9	0.157-0.315	4-8	6	17	17	22.6
FMPG11	Pg 11	0.197-0.394	5-10	6	20	20	25.3
FMPG13	Pg 13.5	0.236-0.472	6-12	6.5	22	22	24.1
FMPG16	Pg 16	0.394-0.551	10-14	6.5	24	24	27.5
FMPG21	Pg 21	0.512-0.709	13-18	7.2	30	30	31.2
FMPG29	Pg 29	0.709-0.984	18-25	8	40	40	39.3
FMPG36	Pg 36	0.866-1.260	22-32	9	50	50	47.2
FMPG42	Pg 42	1.181-1.496	30-38	12	58	58	47.7
FMPG48	Pg 48	1.339-1.732	34-44	14	64	64	52.0
LONG THREAD							
FMPG7-L	Pg 7	0.118-0.256	3-6.5	10	14	14	21.8
FMPG9-L	Pg 9	0.157-0.315	4-8	10	17	17	22.6
FMPG11-L	Pg 11	0.197-0.394	5-10	10	20	20	25.3
FMPG13-L	Pg 13.5	0.236-0.472	6-12	10	22	22	24.1
FMPG16-L	Pg 16	0.394-0.551	10-14	10	24	24	27.5
FMPG21-L	Pg 21	0.512-0.709	13-18	12	30	30	31.2
FMPG29-L	Pg 29	0.709-0.984	18-25	12	40	40	39.3

Lutze TOP-T Fittings Metric

Metal Metric



Characteristics:

- Integrated strain relief
- Anti-twist design
- Wide sealing and clamping range
- Easy to install
- Temperature range -40°C - +100°C / -40°F - +212°F
- Protection class IP68

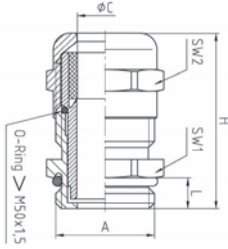
Fitting Specifications:

Connecting thread	Metric as per EN 60423
Material	Brass, nickel plated
Clamping insert	Polyamide 6
Sealing ring	Neoprene
O-ring	NBR

Part No.	Thread	Clamping Range Ø inch	Clamping Range Ø C	TL mm	SW1 mm	SW2 mm	H mm
METRIC							
FMM12	M12x1.5	0.118-0.256	3-6.5	6	14	14	21.5
FMM16	M16x1.5	0.157-0.315	4-8	7	17	18	23
FMM20	M20x1.5	0.236-0.472	6-12	8	22	22	24.3
FMM25	M25x1.5	0.394-0.551	10-14	8	24	27	27.6
FMM32	M32x1.5	0.512-0.709	13-18	9	30	34	31.2
FMM40	M40x1.5	0.709-0.984	18-25	9	40	43	38.5
FMM50	M50x1.5	0.866-1.260	22-32	9	50	55	47.3
FMM63	M63x1.5	1.339-1.732	34-44	14	64	68	50.3
LONG THREAD							
FMM12-L	M12x1.5	0.118-0.256	3-6.5	12	14	14	21.5
FMM16-L	M16x1.5	0.157-0.315	4-8	12	17	18	23
FMM20-L	M20x1.5	0.236-0.472	6-12	12	22	22	24.3
FMM25-L	M25x1.5	0.394-0.551	10-14	12	24	27	27.6
FMM32-L	M32x1.5	0.512-0.709	13-18	15	30	34	31.2
FMM40-L	M40x1.5	0.709-0.984	18-25	15	40	43	38.5
FMM50-L	M50x1.5	0.866-1.260	22-32	15	50	55	47.3
FMM63-L	M63x1.5	1.339-1.732	34-44	18	64	68	50.3

Lutze TOP-T Fittings Metric EMC

Metal Metric EMC (Electro Magnetic Compatibility)



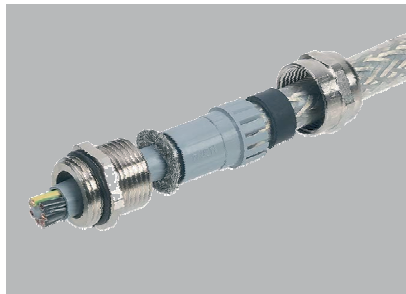
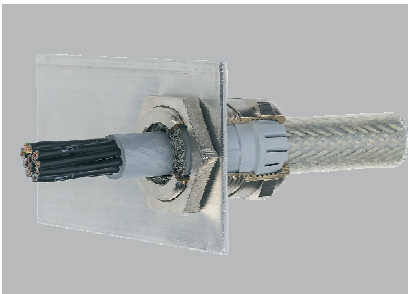
Characteristics:

- For shielded cable
- Integrated strain relief
- Anti-twist design
- Wide sealing and clamping range
- Easy to install
- Temperature range -20°C - +100°C / +14°F - +212°F
- Protection class IP68

Fitting Specifications:

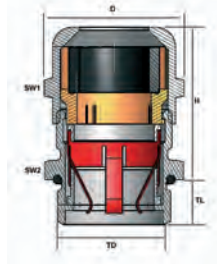
Connecting thread	Metric as per EN 60423
Dome nut	Brass CuZn39Pb3, nickel plated
Clamping insert	Polyamide PA6 V-2
Sealing ring	Polychloroprene-Nitrile rubber CR/NBR
Gland body	Brass CuZn39Pb3, nickel plated
O-ring	NBR

Part No.	Thread A	Clamping Range Ø inch	Clamping Range Ø mm	L mm	SW1 mm	SW2 mm	H mm
EMC							
FMM12-C	M12x1.5	0.118-0.236	3-6	5	14	14	25
FMM16-C	M16x1.5	0.197-0.354	5-9	5	17	17	30
FMM20-C	M20x1.5	0.354-0.512	9-13	6	22	22	33.5
FMM25-C	M25x1.5	0.433-0.630	11-16	7	27	27	36.5
FMM32-C	M32x1.5	0.551-0.827	14-21	8	34	34	38
FMM40-C	M40x1.5	0.748-1.063	19-27	8	43	43	41
FMM50-C	M50x1.5	0.945-1.378	24-35	9	55	55	49.5



Lutze TOP-T Fittings Metric EMC2

Metal Metric EMC2 (Electro Magnetic Compatibility), Quick Installation



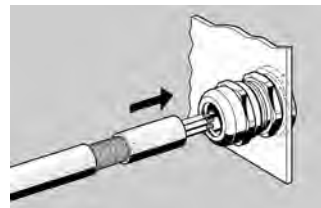
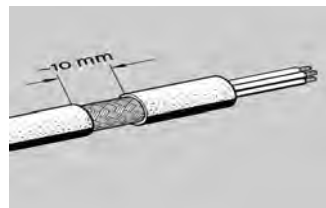
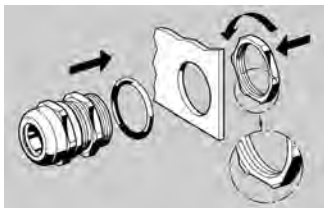
Characteristics:

- Adapts to different size cable shields
- 360° shield termination
- Integrated strain relief
- Wide sealing and clamping range
- Fast and easy to install
- Temperature range: -40°C - +100°C / -40°F - +212°F
- Protection class: IP68

Fitting Specifications:

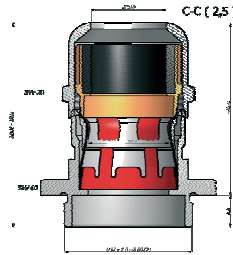
Connecting thread	Metric as per EN 60423
Material	Brass, nickel plated
Clamping insert	Polyamide 6
Sealing ring	Neoprene
O-ring	NBR

Part No.	Thread	Clamping Range Ø Inches	Clamping Range Ø mm	TL mm	SW1 mm	SW2 mm	H mm
EMC2							
FMM12-C2	M12x1.5	0.118-0.256	3-6.5	6	14	14	21.5
FMM16-C2	M16x1.5	0.197-0.394	5-10	7	20	20	25.3
FMM20-C2	M20x1.5	0.236-0.472	6-12	8	22	22	26.5
FMM25-C2	M25x1.5	0.433-0.669	11-17	8	27	27	32.7
FMM32-C2	M32x1.5	0.590-0.827	15-21	8	34	34	36.3
FMM40-C2	M40x1.5	0.748-1.102	19-28	9	43	43	44.5
FMM50-C2	M50x1.5	1.063-1.496	27-38	9	58	58	51.5
FMM63-C2	M63x1.5	1.339-1.732	34-44	14	64	68	52.9



Lutze TOP-T Fittings Metric EMC V

Metal Metric EMC V (Electro Magnetic Compatibility), Quick Installation, Vibration Proof



Characteristics:

- Adapts to different size cable shields
- 360° shield termination
- Integrated strain relief
- Wide sealing and clamping range
- Easy insertion of the cable from either side of the fitting
- Easy installation without any damage to the cable braid thanks to rotating contact fingers
- Large contact surfaces allow for low contact resistance even on loosely woven cable braids as the contact surfaces do not push in between the braid wires.
- Proper shield contact guaranteed even in applications with vibration, e.g., wind turbine and transportation.
- Temperature range -40°C - +100°C / -40°F - +212°F
- Protection class IP68

Part No.	Thread	Clamping Range Ø inch	Clamping Range Ø mm	TL mm	SW1 mm	SW2 mm	H mm
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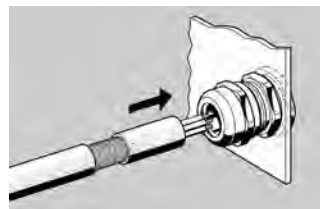
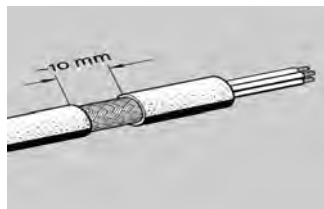
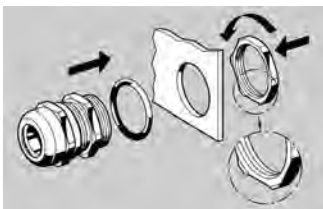
EMCV

FMM20-CV	M20x1.5	0.236-0.472	6-12	8	24	24	38
FMM25-CV	M25x1.5	0.433-0.669	10-18	8	30	30	42
FMM32-CV	M32x1.5	0.639-0.984	16-25	9	40	40	50
FMM40-CV	M40x1.5	0.866-1.269	22-32	9	50	50	57
FMM50-CV	M50x1.5	1.181-1.496	30-38	9	58	60	67
FMM63-CV	M63x1.5	1.338-1.732	34-44	14	68	64	69

Fitting Specifications:

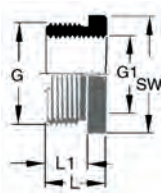
Connecting thread	Metric as per EN 60423
Material	Brass, nickel plated
Clamping insert	Polyamide 6
Sealing ring	Neoprene
O-ring	NBR

NPT thread also available through special order.



Lutze TOP-T Fittings Reducer

Metal Pg and Metric Reducer



Pg Reducer Characteristics:

- Reduction of threaded or clearance holes to smaller thread size
- Temperature range -30°C - +100°C / -22°F - +212°F
- Reduction Brass, nickel plated
- Internal/External thread Pg as per DIN 40430

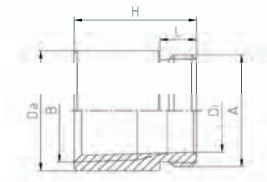
Metric Reducer Characteristics:

- Reduction of threaded or clearance holes to smaller thread size
- Temperature range -30°C - +100°C / -22°F - +212°F
- Reduction Brass, nickel plated
- Internal/External thread Metric as per EN 60423

Part No.	Thread G	Thread G1	SW mm	L mm	L1 mm
Pg					
600400	Pg 9	Pg 7	17	8.5	6
600411	Pg 11	Pg 7	20	8.5	6
600401	Pg 11	Pg 9	20	8.5	6
600408	Pg 13.5	Pg 9	22	9	6.5
600402	Pg 13.5	Pg 11	22	9	6.5
600409	Pg 16	Pg 9	24	9.5	6.5
600410	Pg 16	Pg 11	24	9.5	6.5
600403	Pg 16	Pg 13.5	24	9.5	6.5
600413	Pg 21	Pg 11	30	10	7
600414	Pg 21	Pg 13.5	30	10	7
600404	Pg 21	Pg 16	30	10	7
600407	Pg 29	Pg 16	39	11.5	8
600405	Pg 29	Pg 21	39	11.5	8
600412	Pg 36	Pg 21	50	12.5	9
600406	Pg 36	Pg 29	50	12.5	9
600416	Pg 42	Pg 36	57	14	10
METRIC					
600220	M16x1.5	M12x1.5	18	8.5	6.0
600221	M20x1.5	M12x1.5	24	9	6.5
600222	M20x1.5	M16x1.5	24	9	6.5
600223	M25x1.5	M16x1.5	28	10	7
600224	M25x1.5	M20x1.5	28	10	7
600225	M32x1.5	M20x1.5	34	11.5	8
600226	M32x1.5	M25x1.5	34	11.5	8
600227	M40x1.5	M25x1.5	45	11.5	8
600228	M40x1.5	M32x1.5	45	11.5	8
600229	M50x1.5	M32x1.5	55	14	10
600230	M50x1.5	M40x1.5	55	14	10

Lutze TOP-T Fittings Adapter

Metric to NPT Adapters



Adapter METRIC to NPT Characteristics:

- Adapter from metric to NPT thread
- Temperature range up to +200°C/ +392°F
- Adapter Brass CuZn39Pb3, nickel-plated
- External thread Metric as per EN 60423
- Internal thread NPT

Part No.	Thread A	Thread B	L mm	H mm	Da mm	Di mm
METRIC TO NPT						
AMM16-12	M16x1.5	NPT 1/2"	6.5	25	24	11
AMM20-12	M20x1.5	NPT 1/2"	6.5	25	24	15
AMM25-34	M25x1.5	NPT 3/4"	7	28	30	18
AMM32-34	M32x1.5	NPT 3/4"	8	26	37	23
AMM32-10	M32x1.5	NPT 1"	8	33	38	27

Lutze TOP-T Locknuts Metal

Metal Pg, Metric and EMC Metric



Characteristics:

- Hexagonal locknut for secure tightening of cable fittings and accessories
- Temperature range up to +200°C/+392°F

Locknut Specifications:

Material Brass, nickel plated

Part No.	Thread	Ø D mm	SW mm	H mm
Pg				
LMPG7	Pg 7	16.5	15	2.8
LMPG9	Pg 9	19.8	18	2.8
LMPG11	Pg 11	23.1	21	3
LMPG13	Pg 13.5	25.3	23	3
LMPG16	Pg 16	28.6	26	3
LMPG21	Pg 21	35.2	32	3.5
LMPG29	Pg 29	45.1	41	4.0
LMPG36	Pg 36	56.1	51	5.0
LMPG42	Pg 42	66.0	60	5.0
LMPG48	Pg 48	70.4	64	5.5

Due to tapered NPT thread, we recommend using plastic locknuts with metal NPT fittings if locknut is required.

METRIC				
Part No.	Thread	Ø D mm	SW mm	H mm
LMM12	M12x1.5	16.5	15	2.8
LMM16	M16x1.5	20.9	19	3.0
LMM20	M20x1.5	26.4	24	3.5
LMM25	M25x1.5	33	30	4.0
LMM32	M32x1.5	39.6	36	5.0
LMM40	M40x1.5	50.6	46	5.0
LMM50	M50x1.5	66	60	5.0
LMM63	M63x1.5	77	70	6.0

EMC Cutting Teeth Metric:

- For secure tightening of EMC cable fittings
- To cut through paint layers or powder coatings ensuring optimal contact
- Increased vibration resistance

EMC - CUTTING TEETH METRIC				
Part No.	Thread	Ø D mm	SW mm	H mm
600460	M12x1.5	16.5	15	4.5
600461	M16x1.5	20.9	19	4.5
600462	M20x1.5	26.4	24	5.5
600463	M25x1.5	33	30	5.5
600464	M32x1.5	39.7	36	5.5
600465	M40x1.5	50.6	46	6.0
600466	M50x1.5	66	60	6.0

Lutze TOP-T Fittings Accessories

Multihole Insert TPE Pg, Metric, NPT



Characteristics:

- Multiple hole insert for two or more cables in one fitting
- Replaces the existing rubber insert to offer multiple hole installation
- Suitable for plastic and metal fittings
- Solid inserts can be drilled to suit any application
- Minimum quantity 100 pcs/package

Insert Specifications:

Material TPE

Part No.	Fits Size Pg	Fits Size Metric	Fits Size NPT	Outer- Ø mm	Number of Cables x Ø mm
600626	Pg 9			10	2 x 3.0
600627	Pg 9			10	4 x 3.0
600541	Pg 9			10	0 x 0.0
600628	Pg 11	M16	3/8"	13	2 x 4.0
600629	Pg 11	M16	3/8"	13	2 x 4.5
600635	Pg 11	M16	3/8"	13	3 x 4.0
600636	Pg 11	M16	3/8"	13	3 x 5.0
600542	Pg 11	M16	3/8"	13	0 x 0.0
600638	Pg 13.5	M20		15	2 x 4.5
600639	Pg 13.5	M20		15	2 x 5.0
600640	Pg 13.5	M20		15	2 x 6.0
600637	Pg 13.5	M20		15	3 x 4.0
600630	Pg 13.5	M20		15	3 x 5.0
600543	Pg 13.5	M20		15	0 x 0.0
600641	Pg 16	M25	1/2"	17	2 x 4.0
600644	Pg 16	M25	1/2"	17	2 x 6.0
600631	Pg 16	M25	1/2"	17	3 x 4.0
600643	Pg 16	M25	1/2"	17	3 x 5.0
600646	Pg 16	M25	1/2"	17	4 x 6.0
600633	Pg 16	M25	1/2"	17	5 x 4.0
600544	Pg 16	M25	1/2"	17	0 x 0.0
600645	Pg 16	M25	1/2"	17	3 x 6.0
600647	Pg 16	M25	1/2"	17	3 x 6.5
600642	Pg 16	M25	1/2"	17	4 x 4.0
600632	Pg 16	M25	1/2"	17	4 x 5.0
600648	Pg 21	M32	3/4"	22	2 x 7.0
600651	Pg 21	M32	3/4"	22	2 x 8.0
600653	Pg 21	M32	3/4"	22	2 x 9.0
600649	Pg 21	M32	3/4"	22	3 x 7.0
600652	Pg 21	M32	3/4"	22	3 x 8.0
600634	Pg 21	M32	3/4"	22	4 x 7.0
600545	Pg 21	M32	3/4"	22	0 x 0.0
600656	Pg 29		1"	29.5	5 x 8.5
600654	Pg 29		1"	29.5	6 x 5.0
600655	Pg 29		1"	29.5	8 x 5.0
600546	Pg 29		1"	29.5	0 x 0.0

Lutze Fittings Cablefix

Cablefix



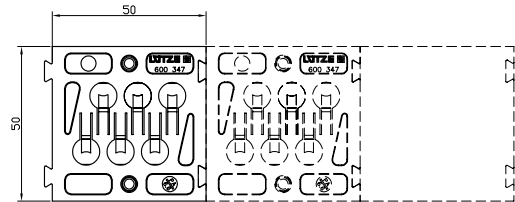
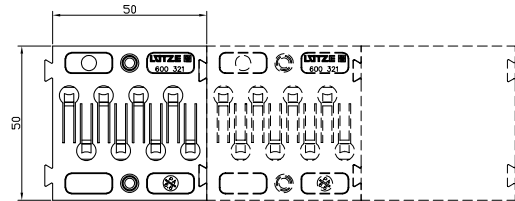
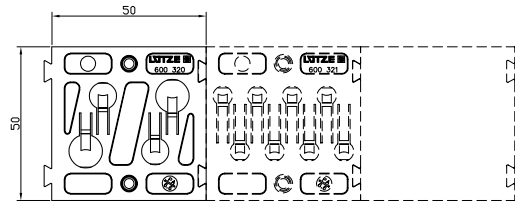
Characteristics:

- Integrated strain relief in one direction
- Easy to install: cable pushes easily into position, locks itself and it can no longer be pulled out unless the clamp is released
- An integrated seal protects up to IP55
- Individual cables can be easily loosened and replaced for troubleshooting, maintenance or retrofitting
- Mix & Match: interlocking seal allows for any combination of the three different cablefix versions to custom fit it to your application
- Blanking plugs are supplied to seal unused holes

Fitting Specifications:

Material	Polyamide PA
Temperature range	-30°C - +70°C / 22°F - +212°F
Halogen-free	Yes
Burning behavior	Polyamide plate according to UL 94 V2
Silicone free	Yes
Enclosure wall thickness	maximum 3 mm
Protection class	IP55
Seal	NBR60 oil resistant

Part No.	Type	Dimensions (WxHxD) mm	Cut out W x H mm	Number of Cables x Cable Ø mm
600320	1xB/V	50.0 x 50.0 x 10.0	46 x 46	2 x 6.1-8.8 + 2 x 7.8-10.7
600321	1xS/A	50.0 x 50.0 x 10.0	46 x 46	8 x 3.8-6.3
600347	1xST	50.0 x 50.0 x 10.0	46 x 46	6 x 6.3-8.9



Lutze Cablefix Vario

Modular Strain Relief System, with plastic or aluminum frame for cable assemblies



Characteristics:

- Frame material
- Protection class

Polished Aluminum or Polyamide 66 (GF30) IP65

Small (VK) Insert

Characteristics:

- Material
- Temperature range
- Resistance

TPE
-40°C - +135°C,
-40°F - +275°F
UV, ozone, oils and fuels,
acids and dyes, solvents
and salt water

Large (VG) Insert

Characteristics:

- Material
- Temperature range
- Resistance

TPE
-40 - +135°C,
-40°F - +275°F
UV, ozone, oils and fuels,
acids and dyes, solvents
and salt water

Blanking Plug

Characteristics:

- Material

PA6 (GF15)
Gray

Part No.	Frame Type	Dimensions WxHxD in mm	No. of Small VK Inserts	No. of Large VG Inserts
PLASTIC				
606050	KKLR1	136 x 71 x 30	4	2
606051	KKLR2	164 x 71 x 30	6	3
ALUMINUM				
606001	AKLR1	108 x 68 x 30	4	2
606002	AKLR2	148 x 68 x 30	6	3
606004	AKLR4	148 x 108 x 30	12	6
606005	AKLR5	188 x 78 x 30	8	4
606007	AKLR7	188 x 118 x 30	16	8

Part No.	Type Small VK	Clamping Range mm	No of Holes
606150	VK0	SOLID	0
606151	VK4	4 – 4.5	14
606152	VK5	4.5 – 5.5	8
606153	VK6	5.5 – 6.5	8
606154	VK7	6.5 – 7.5	5
606155	VK8	7.5 – 8.5	5
606156	VK9	8.5 – 9.5	3
606157	VK10	9.5 – 10.5	3
606158	VK12	10.5 – 12.5	2
606159	VK14	12.5 – 14.5	2
606160	VK16	14.5 – 16.5	2

Part No.	Type Large VG	Clamping Range mm	No of Holes
606200	VG0	SOLID	0
606201	VG18	16.5 – 18.5	2
606202	VG20	18.5 – 20.5	1
606203	VG22	20.5 – 22.5	1
606204	VG24	22.5 – 24.5	1
606205	VG26	24.5 – 26.5	1
606206	VG28	26.5 – 28.5	1
606207	VG30	28.5 – 30.5	1
606208	VG32	30.5 – 32.5	1
606209	VG34	32.5 – 34.5	1

Part No.	Fits Insert Part No.	Type	Outer Dia. mm	Length mm
606250	606151	BL4	4	30
606251	606152	BL5	5	30
606252	606153	BL6	6	30
606253	606154	BL7	7	30
606254	606155	BL8	8	30
606255	606156	BL9	9	30
606256	606157	BL10	10	30
606257	606158	BL12	12	30
606258	606159	BL14	14	30
606259	606160	BL16	16	30
606260	606201	BL18	18	30

Lutze Cablefix Vario

Assembly of Modular Strain Relief System



1. Choose aluminum or plastic frame.

The Cablefix Vario features outstanding material characteristics for harsh industrial environments and a high sealing protection of IP65. Every frame ships with an included drill pattern for proper mounting to the cabinet. The plastic frames are made of reinforced polyamide 66 with brass support. The aluminum version is made entirely of solid polished aluminum. Cablefix Vario offers strain relief options for cable ranges from 4.5 to 34.5 mm in diameter. The versatile system is ideal for installations and retrofitting, and offers proper strain relief for already connectorized cables. This is a great advantage over conventional solutions with standard cable fittings.



2. Choose appropriate inserts for the selected frame.

Example:

606050 can hold either

- 4 inserts type VK or
- 2 inserts type VG
- 2 VK inserts replace 1 VG insert

VK small	VK small	VG large	VG large	VG large	VK small
VK small	VK small				VK small



- The tongue and groove design makes combining different inserts quick and easy.
- The slotted design allows easy installation by sliding the assembled cables in from the side.



3. Select appropriately sized blanking plugs for unused holes.

Once all unused holes are plugged, the system provides a protection rating IP65. The rubber components do not require the use of grease, which is advantageous over other similar systems.

The advantages at a glance:

- Minimum space requirement
- Simple insertion of rubber inserts due to tongue and groove design
- Very versatile
- Allows future expansion
- Ideal for retrofitting of existing cabinets

Lutze Network Connectivity Products

Industrial Network Connector, Patch Box and Receptacle Connector

Application

- Industrial Ethernet connectivity

Characteristics

- Ethernet connector for industrial environments
- ProfiNet compatible category 5 style connector
- Office Ethernet compatible
- Shield termination
- Field mounting capability

Technical Data

Temperature	-40°C - +70°C
Overall length	52.6 mm / 2.07 inches
Fits cable ODs	6.1 to 6.9 mm / 0.24 to 0.27 inches

Industrial Connector



Part No.	Description	IP Class	Connector	Color
722100	Qualified for field bus system Profinet, SERCOS 3, Ethercat Ethernet/IP, Powerlink, VARAN	20	RJ45-M 8 pol. Cat.5e	black
722101	Qualified for field bus system Profinet, SERCOS 3, Ethercat Ethernet/IP, Powerlink, VARAN	20	RJ45-M 4 pol. Cat.5e Profinet	black

Application

- Industrial Ethernet connectivity

Characteristics

- RJ45 pass through
- Category 5e
- Gold-plated 8 data pin connection
- Attached plastic cap

Technical Data

Temperature	-25°C - +70°C
IP Rating	IP65 closed, IP20 connected
Dimensions (DxD)	29.5 mm x 29 mm

RJ45 Receptacle Connector for front mounting 22.5 mm



Part No.	Description	IP Class	Connector	Color
491075	Receptacle Connector	65 (closed) 20 (connected)	RJ45 F/F 8/8 Cat.6	gray
492075	Receptacle Connector	65 (closed) 20 (connected)	RJ45 F/F 8/8 Cat.5e	gray

Lutze Technical Overview

Conversion Guide

mm ²	AWG	Ampacity at +30°C Ambient temperature	Metric measurement	US (Imperial) measurement
0.05	30	1	1 millimeter (mm)	0.03937"
0.08	28	1	1 centimeter (cm)	0.3937"
0.14	26	2	1 meter (m)	3.28 ft
0.25	24	4.5	1 kilometer (km)	3,280 ft
0.34	22	6	1 kilogram (kg)	2.2 lbs
0.5	20	7.5	1 gram (g)	0.0353 ounces
0.75	19	12	-40°C	-40°F
1	18	15	-20°C	-4°F
1.5	16	16.5	+80°C	+176°F
2.5	14	22	+90°C	+194°F
4	12	30		
6	10	38		
10	8	53		
16	6	72		
25	4	94		
35	2	118		
50	1	142		
54	1/0	-		
70	2/0	181		
95	3/0	219		
120	4/0	253		
150	300 MCM	335		
185	350 MCM	382		
240	500 MCM	453		
300	600 MCM	504		

The values shown are guidelines in simplified form for multi-conductor cables. It is recommended to consult the NEC codebook for local requirements on ampacity ratings.

(Reference: NEC Article 310, EN 60204 part 1/IEC 204-1, VDE 0298 part 4)

Jacket/Insulation		Max Temp. °C	Abrasion resistance	Oil resistance	Weather resistance
Polyurethane	PUR	80	++	++	++
Polyvinylchloride	PVC	90	+	+	+
Thermoplastic Elastomere	TPE	90	++	++	+
HGI Thermoplastic Elastomere	HGI	90	++	++	++
Polyethylene	PE	80	0	0	0

All values shown are guidelines. Values may not meet NEC requirements. Please check your local code requirements.

Lutze Technical Overview

Conductor Marking According to DIN 47100

No. Base/ring colors	No. Base/ring colors	No. Base/ring colors	No. Base/ring colors
1 white WH	16 yellow/brown	31 green/blue	46 brown
2 brown BN	17 white/grey	32 yellow/blue	47 green
3 green GN	18 grey/brown	33 green/red	48 yellow
4 yellow YE	19 white/pink	34 yellow/red	49 grey
5 grey GY	20 pink/brown	35 green/black	50 pink
6 pink PK	21 white/blue	36 yellow/black	51 blue
7 blue BU	22 brown/blue	37 grey/blue	52 red
8 red RD	23 white/red	38 pink/blue	53 black
9 black BK	24 brown/red	39 grey/red	54 violet
10 violet VT	25 white/black	40 pink/red	55 grey/pink
11 grey/pink	26 brown/black	41 grey/black	56 red/blue
12 red/blue	27 grey/green	42 pink/black	57 white/green
13 white/green	28 yellow/grey	43 blue/black	58 brown/green
14 brown/green	29 pink/green	44 red/black	59 white/yellow
15 white/yellow	30 yellow/pink	45 white	60 yellow/brown
			61 white/grey

Lutze Technical Overview

Conductor Structure according to DIN VDE 0295/IEC 60228

Cross section mm	Finely stranded conductor class 5 VDE 0295	Superfine strand conductor class 6 VDE 0295
0.14		18x0.10
0.25	14x0.15	32x0.10
0.34	19x0.15	42x0.10
0.38	12x0.20	21x0.15
0.50	16x0.20	28x0.15
0.75	24x0.20	42x0.15
1.00	32x0.20	56x0.15
1.50	30x0.25	84x0.15
2.50	50x0.25	140x0.15
4	56x0.30	224x0.15
6	84x0.30	192x0.20
10	80x0.40	320x0.20
16	128x0.40	512x0.20
25	200x0.40	800x0.20
35	280x0.40	1120x0.20
50	400x0.40	705x0.30
70	356x0.50	990x0.30
95	485x0.50	1340x0.30
120	614x0.50	1690x0.30
150	765x0.50	2123x0.30
185	944x0.50	1470x0.40
240	1225x0.50	1905x0.40
300	1530x0.50	2385x0.40

The number of strands is non-binding and may vary slightly to meet specified wire resistance. The VDE 0296 determines only the maximum diameter of the single wire that is required for compliance with the maximum wire resistance at 20°C.

Simplified Motor and VFD Cable Selection by Horsepower (HP)

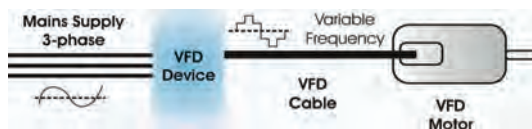
Lutze Cable Part#	AWG	230V-3Ø	460V-3 Ø	575V-3 Ø
A1161604	16 AWG	3 HP	10 HP	10 HP
A1161404	14 AWG	5 HP	10 HP	15 HP
A1161204	12 AWG	7 HP	15 HP	20 HP
A1161004	10 AWG	10 HP	20 HP	30 HP
A1160804	8 AWG	15 HP	30 HP	40 HP
A1160604	6 AWG	20 HP	40 HP	50 HP
A1160404	4 AWG	25 HP	50 HP	60 HP
A1160204	2 AWG	40 HP	75 HP	100 HP

*All values given are calculated based on NEC 310.16 and are de-rated. For actual amperage consult your Motor/Drive manual and your local code restrictions. This guideline is simplified in order to select cable sizes. This document has no legal meaning, the interpretation of the NEC code has to be verified by the Authority Having Jurisdiction (AHJ).

Lutze VFD and Motor Cable improved with Semi-Conductive Layer

A Variable-Frequency Drive (VFD) is a device designed for alteration of a motor's rotational speed by changing the frequency and the voltage of the electrical power supplied to it. In this manner, the rotational speed can be adjusted within a wide range from standstill to above the nominal rotation speed at 60 hertz.

The second main feature of a VFD is that it offers motor torque control. To avoid overload of the motor the torque has to decrease when running the motor at higher speeds and vice versa. In VFD applications the constant frequency of 60 hertz in a sinusoidal waveform is altered into a variable frequency as shown in the Illustration.

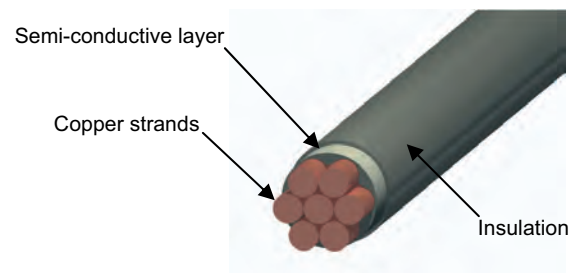


The use of VFD technology poses high demands on the cable connecting the motor to the drive. Standard motor cable for fixed-speed operation does not meet the requirements of VFD applications, thus causing operating malfunctions and may result in premature cable failure.

High switching frequencies and harmonic waves cause high capacitive charging current and overvoltage spike problems within the cable that connects the drive to the motor. These problems put tremendous stress on VFD cables and the stress even increases further the longer the distance between drive and motor. Another stress factor is called "corona discharge effect".

Standard insulated conductors have very small gaps between the conductor and its insulation material caused by the irregular surface of stranded conductors. This can lead into an uncontrolled corona discharge across these gaps and break down the insulation over time. This problem is well known in medium voltage applications.

VFD applications can cause spikes up to 2000V, close to medium voltage applications. A way to improve the durability of the insulation is to extrude a layer of semi-conductive material over the stranded conductor to smoothen out the surface and get a perfectly cylindrical shaped conductor. Then the insulation is applied over the smooth surface to avoid air gaps altogether.



Lutze is now using this technology and provides you with a better and more durable cable for your VFD and motor applications while maintaining one of the most flexible and round cables in the marketplace. Our existing Motor & Drive cable A116 and A117 series is being updated with a semi-conductive layer and we started transitioning to the new design with production in May 2009. Please refer to the overview of the specification improvements.

Lutze Technical Overview

NFPA 79, 2007 Edition

NFPA 79 is the electrical standard for Industrial Machinery in the USA. A number of significant updates were implemented in the 2007 edition. The NFPA 79 is a code published by the National Fire Protection Agency, the same Agency that publishes the National Electric Code (a.k.a. NEC or NFPA 70) every three years.

The NFPA 79 has special provisions addressing safe wiring practices for industrial machinery such as machine tools. Chapter 12 of the NFPA 79 addresses cables and cords for use with industrial machinery.

Article 12.2.7.3 enforces a significant change as it specifically prohibits the use of AWM (Appliance Wiring Material) style cable “unless it is part of a listed assembly”.

NFPA 79 requires listed types to be used. These cables carry a NRTL listed logo such as the “UL listed” logo. It should be noted that cables can have dual- or multi ratings and carry both marks, UL recognized and UL listed along with other marks, the listing will prevail.

Permitted:   

Appliance Wiring Material is regulated by UL 758 and carry the recognized logo:

Not permitted:  

UL recognized cable is not permitted for field wiring per the NFPA 79 – 2007 edition unless it is part of a listed assembly.

In most cases the AHJ (Authority Having Jurisdiction) decides whether or not the NFPA 79 applies. The AHJ usually is the organization or individual that approves the equipment and can be the owner/operator of equipment, the insurance company or the inspector itself. The NFPA 79 is not a law but a standard which can be written into law by each state. At the moment the state of Ohio has written the NFPA 2007 edition into its state law. Six other states are investigating to implement this new standard as well. When it is written into law the compliance with NFPA 79 is no longer an option: it is mandatory.

Lutze offers listed types with MTW, TC-ER, PLTC and CM marks. Cables with these markings are considered listed types and are permitted to be used in NFPA 79 compliant applications.

Lutze Technical Overview

Thread Tables for Lutze Cable Fittings - NPT, Pg, Metric

NPT	Pitch mm	Outside Diameter mm	Number of Threads per Unit Length	Clearance Hole mm
NPT 3/8"	1.411	17.055	18	17.0
NPT 1/2"	1.814	21.223	14	22
NPT 3/4"	1.814	26.568	14	29
NPT 1"	2.208	33.227	11.5	33.5

Pg to DIN 40430	Pitch mm	Outside Diameter mm	Core Diameter mm	Clearance Hole mm
Pg7	1.270	12.5	11.28	12.7
Pg9	1.410	15.2	13.86	15.4
Pg11	1.410	18.6	17.26	18.8
Pg13	1.410	20.4	19.06	20.7
Pg16	1.410	22.5	21.16	22.8
Pg21	1.588	28.3	26.78	28.6
Pg29	1.588	37.0	35.48	37.4
Pg36	1.588	47.0	45.48	47.5
Pg42	1.588	54.0	52.48	54.5
Pg48	1.588	59.3	57.78	59.8

Metric to EN 60423	Pitch mm	Outside Diameter mm	Core Diameter mm	Clearance Hole mm
M12x1.5	1.5	12	10.5	12.2
M16x1.5	1.5	16	14.5	16.2
M20x1.5	1.5	20	18.5	20.2
M25x1.5	1.5	25	23.5	25.2
M32x1.5	1.5	32	30.5	32.2
M40x1.5	1.5	40	38.5	40.2
M50x1.5	1.5	50	48.5	50.2
M63x1.5	1.5	63	61.5	63.2

Lutze Technical Overview

Torque Recommendations for Lutze Cable Fittings - Plastic and Metal Dome Nuts

Nominal Size	Recommended Torque in Nm Plastic	Recommended Torque in Nm Metal
NPT 3/8"	2.5	4.5
NPT 1/2"	3.0	5
NPT 3/4"	5.0	7.0
NPT 1"	5.0	7.0
Pg7	2.5	6.25
Pg9	3.75	6.25
Pg11	3.75	6.25
Pg13.5	3.75	6.25
Pg16	5.0	7.5
Pg21	7.5	10.0
Pg29	7.5	10.0
Pg36	7.5	10.0
Pg42	7.5	10.0
Pg48	7.5	10.0
M12x1.5	1.0	5
M16x1.5	2.5	5
M20x1.5	4.0	7.5
M25x1.5	6.0	10
M32x1.5	7.0	15
M40x1.5	7.5	18
M50x1.5	8.0	20
M63x1.5	9.0	20

The specified values are recommended for achieving the protection class IP68 at 5 bar. Please choose the suitable torque for the material and cable application. The actual crush resistance of each cable must be considered. The values shown are for reference only.

Protection Class Designation according to EN 60529

The protection of electrical equipment through corresponding enclosure is specified with code letters and code numbers. This protection class designation consists of the letters "IP" and two code numbers from 0 to 8. The first code number stands for the protection against contact and foreign substances, the second number specifies the degree of protection against water.

The higher the respective code number is, the higher the offered protection. The protection class for each product is specified in the respective technical information.

For example:

IP 65	Code letter IP	IP	
	First code number	6	corresponds to: Protection against entrance of dust
	Second code number	5	corresponds to: Protection against sprayed water

For protection against contact and foreign substances

First code number	Protection scope designation	Explanation
0	No protection	No special protection of persons from accidental contact with standing or moving parts under voltage. No protection of the equipment against entry of solid foreign substances.
1	1 Protection against foreign substances > 50 mm	Protection against accidental contact of large area surfaces of standing and internally moving parts under voltage, e.g. with the hand, but no protection against intentional access to these parts. Protection against entry of solid foreign substances with a diameter larger than 50 mm.
2	Protection against foreign substances > 12 mm voltage	Protection against contact by the fingers of standing or internally moving parts under voltage. Protection against entry of solid foreign substances with a diameter larger than 12 mm.
3	Protection against foreign substances > 2.5 mm tools	Protection against contact of standing or internally moving parts under voltage with, wires or similar of a thickness larger than 2.5 mm. Protection against entry of solid foreign substances with a diameter larger than 2.5 mm.
4	Protection against foreign substances > 1 mm	Protection against contact of standing or internally moving parts under voltage with tools, wires or similar of a thickness larger than 1 mm. Protection against entry of solid foreign substances with a diameter larger than 1 mm.
5	Protection against dust accumulation	Full protection against contact of standing or internally moving parts under voltage moving parts under voltage. Protection against dust accumulation. The entry of dust is not fully prevented but the dust may not enter in such quantities that the functioning is impaired.
6	Protection against dust accumulation	Full protection against contact of standing or internally moving parts under voltage moving parts under voltage. Protection against entry of dust.

For water protection

Second code number	Protection scope designation	Explanation
0	No protection	No special protection.
1	Protection against vertically falling dripping water	Water drops that fall vertically may not have any damaging effect.
2	Protection against dripping water falling at an angle	Water drops that fall at an arbitrary angle of up to 15° to vertical may not have any damaging effect.
3	Protection against sprayed water	Water that falls in an arbitrary angle up to 60° to vertical may not have a damaging effect.
4	Protection against splashed water	Water that is splashed from all directions against the equipment may not have a damaging effect.
5	Protection against water projected from a nozzle	Water projected from a nozzle that is aimed at the equipment from all directions may not have any damaging effect.
6	Protection against flooding	Water may not enter into the equipment in damaging amounts during temporary flooding (e.g. by heavy seas)
7	Protection against immersion	Water may not enter in damaging amounts if the equipment is immersed in water for the defined pressure and time conditions.
8	Protection against submersion	Water may not enter in damaging amounts if the equipment is submerged in water for the defined pressure and indefinite amount of time.

Lutze Fittings Selection Chart for Flexible Cables

Part#	Plastic NPT	Plastic Pg	Plastic Metric	Metal NPT	Metal Pg	Metal Metric	Part#	Plastic NPT	Plastic Pg	Plastic Metric	Metal NPT	Metal Pg	Metal Metric
104247	FPNPT38	FPPG7	FPM12	FMNPT38	FMPG7	FMM12	108441A	FPNPT10	FPPG29	FPM40	FMNPT10	FMPG36	FMM50
104264	FPNPT38	FPPG9	FPM16	FMNPT38	FMPG9	FMM16	A1032402	FPNPT38	FPPG7	FPM12	FMNPT38	FMPG7	FMM12
104280	FPNPT38	FPPG9	FPM16	FMNPT38	FMPG9	FMM16	A1032403	FPNPT38	FPPG7	FPM12	FMNPT38	FMPG7	FMM12
104281	FPNPT12	FPPG16	FPM20	FMNPT12	FMPG16	FMM25	A1032404	FPNPT38	FPPG7	FPM12	FMNPT38	FMPG7	FMM12
104293	FPNPT38	FPPG11	FPM16	FMNPT12	FMPG11	FMM20	A1032406	FPNPT38	FPPG7	FPM12	FMNPT38	FMPG7	FMM12
104301	FPNPT38	FPPG7	FPM12	FMNPT38	FMPG7	FMM12	A1032408	FPNPT38	FPPG7	FPM12	FMNPT38	FMPG7	FMM12
104307	FPNPT38	FPPG7	FPM12	FMNPT38	FMPG7	FMM12	A1032410	FPNPT38	FPPG7	FPM12	FMNPT38	FMPG7	FMM12
104331	FPNPT38	FPPG9	FPM16	FMNPT38	FMPG9	FMM16	A1032415	FPNPT38	FPPG9	FPM16	FMNPT38	FMPG9	FMM16
104335	FPNPT38	FPPG7	FPM12	FMNPT38	FMPG7	FMM12	A1032420	FPNPT38	FPPG9	FPM16	FMNPT38	FMPG9	FMM16
104336	FPNPT38	FPPG9	FPM16	FMNPT38	FMPG9	FMM16	A1032425	FPNPT38	FPPG11	FPM16	FMNPT12	FMPG11	FMM20
104338	FPNPT38	FPPG7	FPM12	FMNPT38	FMPG7	FMM12	A1132402	FPNPT38	FPPG7	FPM12	FMNPT38	FMPG7	FMM12
104339	FPNPT38	FPPG9	FPM16	FMNPT38	FMPG9	FMM16	A1132403	FPNPT38	FPPG7	FPM12	FMNPT38	FMPG7	FMM12
104344	FPNPT38	FPPG9	FPM16	FMNPT38	FMPG9	FMM16	A1132404	FPNPT38	FPPG7	FPM12	FMNPT38	FMPG7	FMM12
108350A	FPNPT38	FPPG7	FPM12	FMNPT38	FMPG7	FMM12	A1132406	FPNPT38	FPPG7	FPM12	FMNPT38	FMPG7	FMM12
108351A	FPNPT38	FPPG7	FPM12	FMNPT38	FMPG7	FMM12	A1132408	FPNPT38	FPPG7	FPM12	FMNPT38	FMPG7	FMM12
108352A	FPNPT38	FPPG9	FPM16	FMNPT38	FMPG9	FMM16	A1132410	FPNPT38	FPPG9	FPM16	FMNPT38	FMPG9	FMM16
108353A	FPNPT38	FPPG11	FPM16	FMNPT12	FMPG11	FMM20	A1132415	FPNPT38	FPPG9	FPM16	FMNPT38	FMPG9	FMM16
108354A	FPNPT12	FPPG13	FPM20	FMNPT12	FMPG13	FMM20	A1132420	FPNPT38	FPPG11	FPM16	FMNPT12	FMPG11	FMM20
108355A	FPNPT12	FPPG16	FPM20	FMNPT34	FMPG16	FMM25	A1132425	FPNPT38	FPPG11	FPM16	FMNPT12	FMPG11	FMM20
108356A	FPNPT34	FPPG21	FPM25	FMNPT34	FMPG21	FMM32	A1160204	N/A	FPPG36	FPM50	N/A	FMPG42	N/A
108357A	FPNPT38	FPPG9	FPM16	FMNPT38	FMPG9	FMM16	A1160404	N/A	FPPG36	FPM40	N/A	FMPG36	FMM50
108358A	FPNPT38	FPPG9	FPM16	FMNPT38	FMPG9	FMM16	A1160604	FPNPT10	FPPG29	FPM32	FMNPT10	FMPG29	FMM40
108359A	FPNPT38	FPPG9	FPM16	FMNPT38	FMPG9	FMM16	A1160804	FPNPT10	FPPG29	FPM32	FMNPT10	FMPG29	FMM40
108360A	FPNPT38	FPPG11	FPM16	FMNPT12	FMPG11	FMM20	A1161004	FPNPT34	FPPG21	FPM25	FMNPT34	FMPG21	FMM32
108361A	FPNPT12	FPPG13	FPM20	FMNPT12	FMPG13	FMM20	A1161204	FPNPT12	FPPG16	FPM20	FMNPT34	FMPG16	FMM25
108362A	FPNPT12	FPPG16	FPM20	FMNPT34	FMPG16	FMM25	A1161404	FPNPT12	FPPG13	FPM20	FMNPT12	FMPG13	FMM20
108363A	FPNPT34	FPPG21	FPM25	FMNPT34	FMPG21	FMM32	A1161604	FPNPT12	FPPG13	FPM20	FMNPT12	FMPG13	FMM20
108372A	FPNPT38	FPPG13	FPM16	FMNPT38	FMPG9	FMM16	A1161804	FPNPT38	FPPG11	FPM16	FMNPT12	FMPG11	FMM20
108373A	FPNPT38	FPPG9	FPM16	FMNPT38	FMPG9	FMM16	A1170204	N/A	FPPG42	FPM63	N/A	FMPG42	FMM63
108374A	FPNPT38	FPPG11	FPM16	FMNPT12	FMPG11	FMM20	A1170404	N/A	FPPG36	FPM50	N/A	FMPG36	FMM50
108375A	FPNPT12	FPPG13	FPM20	FMNPT12	FMPG13	FMM20	A1170604	N/A	FPPG36	FPM40	N/A	FMPG36	FMM50
108376A	FPNPT12	FPPG16	FPM20	FMNPT34	FMPG16	FMM25	A1170804	FPNPT10	FPPG29	FPM32	FMNPT10	FMPG29	FMM40
108377A	FPNPT34	FPPG21	FPM25	FMNPT34	FMPG21	FMM32	A1171004	FPNPT10	FPPG29	FPM32	FMNPT10	FMPG29	FMM40
108378A	FPNPT34	FPPG21	FPM32	FMNPT34	FMPG21	FMM40	A1171204	FPNPT34	FPPG21	FPM25	FMNPT34	FMPG21	FMM32
108379A	FPNPT10	FPPG29	FPM40	FMNPT10	FMPG29	FMM40	A1171404	FPNPT34	FPPG21	FPM25	FMNPT34	FMPG21	FMM32
108380A	FPNPT38	FPPG11	FPM16	FMNPT12	FMPG11	FMM20	A1171604	FPNPT12	FPPG16	FPM20	FMNPT34	FMPG16	FMM25
108381A	FPNPT38	FPPG11	FPM16	FMNPT12	FMPG11	FMM20	A1211404	FPNPT12	FPPG13	FPM20	FMNPT12	FMPG13	FMM20
108382A	FPNPT12	FPPG16	FPM20	FMNPT12	FMPG13	FMM20	A1211405	FPNPT12	FPPG13	FPM20	FMNPT12	FMPG13	FMM20
108383A	FPNPT12	FPPG16	FPM25	FMNPT34	FMPG16	FMM25	A1211407	FPNPT12	FPPG16	FPM25	FMNPT34	FMPG16	FMM25
108384A	FPNPT34	FPPG21	FPM25	FMNPT34	FMPG21	FMM32	A1211603	FPNPT38	FPPG11	FPM16	FMNPT12	FMPG11	FMM20
108385A	FPNPT10	FPPG29	FPM32	FMNPT10	FMPG29	FMM40	A1211604	FPNPT38	FPPG11	FPM16	FMNPT12	FMPG11	FMM20
108386A	FPNPT10	FPPG29	FPM40	FMNPT10	FMPG29	FMM50	A1211605	FPNPT38	FPPG11	FPM16	FMNPT12	FMPG11	FMM20
108387A	FPNPT10	FPPG29	FPM32	FMNPT10	FMPG29	FMM40	A1211607	FPNPT12	FPPG13	FPM20	FMNPT12	FMPG13	FMM20
108388A	FPNPT10	FPPG36	FPM32	FMNPT10	FMPG29	FMM40	A1211612	FPNPT34	FPPG21	FPM25	FMNPT34	FMPG21	FMM32
108389A	FPNPT34	FPPG21	FPM32	FMNPT34	FMPG21	FMM32	A1211618	FPNPT34	FPPG21	FPM25	FMNPT34	FMPG21	FMM32
108391A	FPNPT38	FPPG9	FPM16	FMNPT38	FMPG13	FMM16	A1211625	FPNPT34	FPPG29	FPM32	FMNPT10	FMPG29	FMM40
108392A	FPNPT12	FPPG13	FPM20	FMNPT12	FMPG13	FMM20	A1211802	FPNPT38	FPPG9	FPM16	FMNPT38	FMPG9	FMM16
108393A	FPNPT12	FPPG16	FPM25	FMNPT34	FMPG16	FMM25	A1211803	FPNPT38	FPPG9	FPM16	FMNPT38	FMPG9	FMM16
108401A	FPNPT38	FPPG7	FPM12	FMNPT38	FMPG7	FMM12	A1211804	FPNPT38	FPPG11	FPM16	FMNPT12	FMPG11	FMM20

Lutze Fittings Selection Chart for Flexible Cables

Part#	Plastic NPT	Plastic Pg	Plastic Metric	Metal NPT	Metal Pg	Metal Metric	Part#	Plastic NPT	Plastic Pg	Plastic Metric	Metal NPT	Metal Pg	Metal Metric
A1211805	FPNPT38	FPPG11	FPM16	FMNPT12	FMPG13	FMM20	A3080404	N/A	FPPG36	FPM40	N/A	FMPG36	FMM50
A1211807	FPNPT12	FPPG11	FPM20	FMNPT12	FMPG13	FMM20	A3080604	FPNPT10	FPPG29	FPM32	FMNPT10	FMPG29	FMM40
A1211812	FPNPT12	FPPG16	FPM20	FMNPT34	FMPG16	FMM25	A3080605	FPNPT10	FPPG29	FPM32	FMNPT10	FMPG29	FMM40
A1211818	FPNPT34	FPPG21	FPM25	FMNPT34	FMPG21	FMM32	A3080804	FPNPT10	FPPG29	FPM32	FMNPT10	FMPG29	FMM40
A1211825	FPNPT34	FPPG21	FPM25	FMNPT34	FMPG21	FMM32	A3080805	FPNPT10	FPPG29	FPM32	FMNPT10	FMPG29	FMM40
A1212003	FPNPT38	FPPG9	FPM16	FMNPT38	FMPG9	FMM16	A3081004	FPNPT34	FPPG21	FPM25	FMNPT34	FMPG21	FMM32
A1212004	FPNPT38	FPPG11	FPM16	FMNPT12	FMPG11	FMM20	A3081005	FPNPT34	FPPG21	FPM25	FMNPT34	FMPG21	FMM32
A1212005	FPNPT38	FPPG11	FPM16	FMNPT12	FMPG11	FMM20	A3081203	FPNPT38	FPPG11	FPM16	FMNPT12	FMPG11	FMM20
A1212007	FPNPT38	FPPG11	FPM16	FMNPT12	FMPG11	FMM20	A3081204	FPNPT12	FPPG13	FPM20	FMNPT12	FMPG13	FMM20
A1212012	FPNPT12	FPPG13	FPM20	FMNPT12	FMPG13	FMM20	A3081205	FPNPT12	FPPG16	FPM20	FMNPT34	FMPG16	FMM25
A1212018	FPNPT12	FPPG16	FPM20	FMNPT34	FMPG16	FMM25	A3081207	FPNPT34	FPPG21	FPM25	FMNPT34	FMPG21	FMM32
A1212025	FPNPT34	FPPG21	FPM25	FMNPT34	FMPG21	FMM32	A3081403	FPNPT38	FPPG13	FPM16	FMNPT12	FMPG11	FMM20
A1241204	FPNPT12	FPPG16	FPM20	FMNPT34	FMPG16	FMM25	A3081404	FPNPT38	FPPG11	FPM16	FMNPT12	FMPG11	FMM20
A1241404	FPNPT38	FPPG11	FPM16	FMNPT12	FMPG11	FMM20	A3081405	FPNPT12	FPPG13	FPM20	FMNPT12	FMPG13	FMM20
A1241407	FPNPT12	FPPG13	FPM20	FMNPT12	FMPG13	FMM20	A3081407	FPNPT12	FPPG13	FPM20	FMNPT12	FMPG13	FMM20
A1241412	FPNPT34	FPPG21	FPM25	FMNPT34	FMPG21	FMM32	A3081409	FPNPT12	FPPG16	FPM20	FMNPT34	FMPG16	FMM25
A1241603	FPNPT38	FPPG9	FPM16	FMNPT38	FMPG9	FMM16	A3081412	FPNPT34	FPPG21	FPM25	FMNPT34	FMPG21	FMM32
A1241604	FPNPT38	FPPG9	FPM16	FMNPT38	FMPG9	FMM16	A3081418	FPNPT10	FPPG29	FPM32	FMNPT10	FMPG29	FMM40
A1241605	FPNPT38	FPPG11	FPM16	FMNPT12	FMPG11	FMM20	A3081425	FPNPT10	FPPG29	FPM32	FMNPT10	FMPG29	FMM40
A1241607	FPNPT38	FPPG11	FPM16	FMNPT12	FMPG11	FMM20	A3081602	FPNPT38	FPPG11	FPM16	FMNPT38	FMPG9	FMM16
A1241612	FPNPT12	FPPG13	FPM20	FMNPT12	FMPG13	FMM20	A3081603	FPNPT38	FPPG11	FPM16	FMNPT12	FMPG11	FMM20
A1241618	FPNPT34	FPPG21	FPM25	FMNPT34	FMPG21	FMM32	A3081604	FPNPT38	FPPG11	FPM16	FMNPT12	FMPG11	FMM20
A1241625	FPNPT34	FPPG21	FPM32	FMNPT34	FMPG21	FMM32	A3081605	FPNPT38	FPPG11	FPM16	FMNPT12	FMPG11	FMM20
A1241803	FPNPT38	FPPG7	FPM12	FMNPT38	FMPG7	FMM12	A3081607	FPNPT12	FPPG13	FPM20	FMNPT12	FMPG13	FMM20
A1241804	FPNPT38	FPPG9	FPM16	FMNPT38	FMPG9	FMM16	A3081609	FPNPT12	FPPG13	FPM20	FMNPT12	FMPG16	FMM20
A1241805	FPNPT38	FPPG9	FPM16	FMNPT38	FMPG9	FMM16	A3081612	FPNPT12	FPPG16	FPM25	FMNPT34	FMPG16	FMM25
A1241807	FPNPT38	FPPG11	FPM16	FMNPT12	FMPG11	FMM20	A3081618	FPNPT34	FPPG21	FPM25	FMNPT34	FMPG21	FMM32
A1241812	FPNPT12	FPPG13	FPM20	FMNPT12	FMPG13	FMM20	A3081625	FPNPT10	FPPG29	FPM32	FMNPT10	FMPG29	FMM40
A1241818	FPNPT12	FPPG16	FPM25	FMNPT34	FMPG16	FMM25	A3081802	FPNPT38	FPPG9	FPM16	FMNPT38	FMPG9	FMM16
A1241825	FPNPT34	FPPG21	FPM25	FMNPT34	FMPG21	FMM32	A3081803	FPNPT38	FPPG9	FPM16	FMNPT38	FMPG9	FMM16
A3032002	FPNPT38	FPPG7	FPM12	FMNPT38	FMPG7	FMM12	A3081804	FPNPT38	FPPG11	FPM16	FMNPT12	FMPG11	FMM20
A3032003	FPNPT38	FPPG7	FPM12	FMNPT38	FMPG7	FMM12	A3081805	FPNPT38	FPPG11	FPM16	FMNPT12	FMPG11	FMM20
A3032004	FPNPT38	FPPG7	FPM12	FMNPT38	FMPG7	FMM12	A3081807	FPNPT38	FPPG11	FPM16	FMNPT12	FMPG11	FMM20
A3032006	FPNPT38	FPPG7	FPM12	FMNPT38	FMPG7	FMM12	A3081812	FPNPT12	FPPG16	FPM20	FMNPT34	FMPG16	FMM25
A3032008	FPNPT38	FPPG9	FPM16	FMNPT38	FMPG9	FMM16	A3081818	FPNPT34	FPPG21	FPM25	FMNPT34	FMPG21	FMM32
A3032010	FPNPT38	FPPG11	FPM16	FMNPT12	FMPG11	FMM20	A3081825	FPNPT34	FPPG21	FPM25	FMNPT34	FMPG21	FMM32
A3032015	FPNPT38	FPPG13	FPM20	FMNPT12	FMPG13	FMM20	A3081841	FPNPT10	FPPG29	FPM32	FMNPT10	FMPG29	FMM40
A3032020	FPNPT38	FPPG16	FPM20	FMNPT34	FMPG16	FMM25	A3081850	FPNPT10	FPPG29	FPM32	FMNPT10	FMPG29	FMM40
A3032025	FPNPT12	FPPG16	FPM20	FMNPT34	FMPG16	FMM25	A3091004	FPNPT34	FPPG21	FPM25	FMNPT34	FMPG21	FMM32
A3032202	FPNPT38	FPPG7	FPM12	FMNPT38	FMPG7	FMM12	A3091203	FPNPT12	FPPG13	FPM20	FMNPT12	FMPG13	FMM20
A3032203	FPNPT38	FPPG7	FPM12	FMNPT38	FMPG7	FMM12	A3091204	FPNPT12	FPPG13	FPM20	FMNPT12	FMPG13	FMM20
A3032204	FPNPT38	FPPG7	FPM12	FMNPT38	FMPG7	FMM12	A3091205	FPNPT12	FPPG16	FPM20	FMNPT34	FMPG16	FMM25
A3032206	FPNPT38	FPPG7	FPM12	FMNPT38	FMPG7	FMM12	A3091403	FPNPT38	FPPG11	FPM16	FMNPT12	FMPG11	FMM20
A3032208	FPNPT38	FPPG7	FPM12	FMNPT38	FMPG7	FMM12	A3091404	FPNPT12	FPPG13	FPM20	FMNPT12	FMPG13	FMM20
A3032210	FPNPT38	FPPG9	FPM16	FMNPT38	FMPG9	FMM16	A3091405	FPNPT12	FPPG13	FPM20	FMNPT12	FMPG13	FMM20
A3032215	FPNPT38	FPPG9	FPM16	FMNPT38	FMPG9	FMM16	A3091407	FPNPT12	FPPG16	FPM20	FMNPT34	FMPG16	FMM25
A3032220	FPNPT38	FPPG11	FPM16	FMNPT12	FMPG11	FMM20	A3091412	FPNPT34	FPPG21	FPM25	FMNPT34	FMPG21	FMM32
A3032225	FPNPT38	FPPG13	FPM20	FMNPT12	FMPG13	FMM20	A3091603	FPNPT38	FPPG11	FPM16	FMNPT12	FMPG11	FMM20
A3080203	N/A	FPPG36	FPM40	N/A	FMPG36	FMM50	A3091604	FPNPT38	FPPG11	FPM16	FMNPT12	FMPG11	FMM20
A3080204	N/A	FPPG42	FPM50	N/A	FMPG42	FMM63	A3091605	FPNPT12	FPPG13	FPM20	FMNPT12	FMPG13	FMM20

Lutze Fittings Selection Chart for Flexible Cables

Part#	Plastic NPT	Plastic Pg	Plastic Metric	Metal NPT	Metal Pg	Metal Metric	Part#	Plastic NPT	Plastic Pg	Plastic Metric	Metal NPT	Metal Pg	Metal Metric
A3091607	FPNPT12	FPPG13	FPM20	FMNPT12	FMPG13	FMM20	A3211803	FPNPT38	FPPG9	FPM16	FMNPT38	FMPG9	FMM16
A3091612	FPNPT12	FPPG16	FPM25	FMNPT34	FMPG16	FMM25	A3211805	FPNPT38	FPPG11	FPM16	FMNPT12	FMPG11	FMM20
A3091618	FPNPT34	FPPG21	FPM25	FMNPT34	FMPG21	FMM32	A3211807	FPNPT38	FPPG11	FPM16	FMNPT12	FMPG11	FMM20
A3091625	FPNPT34	FPPG29	FPM32	FMNPT10	FMPG29	FMM40	A3211812	FPNPT12	FPPG16	FPM20	FMNPT34	FMPG16	FMM25
A3091803	FPNPT38	FPPG9	FPM16	FMNPT38	FMPG9	FMM16	A3211818	FPNPT34	FPPG16	FPM25	FMNPT34	FMPG21	FMM32
A3091804	FPNPT38	FPPG11	FPM16	FMNPT12	FMPG11	FMM20	A3211825	FPNPT34	FPPG21	FPM25	FMNPT34	FMPG21	FMM32
A3091805	FPNPT38	FPPG11	FPM16	FMNPT12	FMPG11	FMM20	A3220103	N/A	FPPG42	FPM50	N/A	FMPG42	FMM63
A3091807	FPNPT38	FPPG13	FPM16	FMNPT12	FMPG11	FMM20	A3220204	N/A	FPPG42	FPM50	N/A	FMPG42	FMM63
A3091812	FPNPT12	FPPG16	FPM20	FMNPT34	FMPG16	FMM25	A3220404	N/A	FPPG36	FPM40	N/A	FMPG36	FMM50
A3091818	FPNPT34	FPPG21	FPM25	FMNPT34	FMPG21	FMM32	A3220604	FPNPT10	FPPG29	FPM32	FMNPT10	FMPG29	FMM40
A3091825	FPNPT34	FPPG21	FPM25	FMNPT34	FMPG21	FMM32	A3220804	FPNPT10	FPPG29	FPM32	FMNPT10	FMPG29	FMM40
A3132002	FPNPT38	FPPG7	FPM12	FMNPT38	FMPG7	FMM12	A3220805	FPNPT10	FPPG36	FPM32	FMNPT10	FMPG29	FMM40
A3132003	FPNPT38	FPPG7	FPM12	FMNPT38	FMPG7	FMM12	A3221004	FPNPT34	FPPG21	FPM25	FMNPT34	FMPG21	FMM32
A3132004	FPNPT38	FPPG9	FPM16	FMNPT38	FMPG9	FMM16	A3221005	FPNPT34	FPPG21	FPM25	FMNPT34	FMPG21	FMM32
A3132006	FPNPT38	FPPG11	FPM16	FMNPT12	FMPG11	FMM20	A3221203	FPNPT38	FPPG11	FPM16	FMNPT12	FMPG11	FMM25
A3132008	FPNPT38	FPPG11	FPM16	FMNPT12	FMPG11	FMM20	A3221204	FPNPT12	FPPG13	FPM20	FMNPT12	FMPG13	FMM20
A3132010	FPNPT38	FPPG13	FPM20	FMNPT12	FMPG13	FMM20	A3221205	FPNPT12	FPPG16	FPM20	FMNPT34	FMPG16	FMM25
A3132015	FPNPT38	FPPG16	FPM20	FMNPT34	FMPG16	FMM25	A3221207	FPNPT34	FPPG21	FPM25	FMNPT34	FMPG21	FMM32
A3132020	FPNPT38	FPPG16	FPM20	FMNPT34	FMPG16	FMM25	A3221403	FPNPT38	FPPG11	FPM16	FMNPT12	FMPG11	FMM20
A3132025	FPNPT12	FPPG21	FPM25	FMNPT34	FMPG21	FMM32	A3221404	FPNPT38	FPPG11	FPM16	FMNPT12	FMPG11	FMM20
A3132202	FPNPT38	FPPG7	FPM12	FMNPT38	FMPG7	FMM12	A3221405	FPNPT12	FPPG13	FPM20	FMNPT12	FMPG13	FMM20
A3132203	FPNPT38	FPPG7	FPM12	FMNPT38	FMPG7	FMM12	A3221407	FPNPT12	FPPG13	FPM20	FMNPT12	FMPG13	FMM20
A3132204	FPNPT38	FPPG7	FPM12	FMNPT38	FMPG7	FMM12	A3221409	FPNPT34	FPPG16	FPM20	FMNPT34	FMPG16	FMM25
A3132206	FPNPT38	FPPG7	FPM12	FMNPT38	FMPG7	FMM12	A3221412	FPNPT34	FPPG21	FPM25	FMNPT34	FMPG21	FMM32
A3132208	FPNPT38	FPPG9	FPM16	FMNPT38	FMPG9	FMM16	A3221603	FPNPT38	FPPG11	FPM16	FMNPT12	FMPG11	FMM20
A3132210	FPNPT38	FPPG9	FPM16	FMNPT38	FMPG9	FMM16	A3221604	FPNPT38	FPPG13	FPM16	FMNPT12	FMPG11	FMM20
A3132215	FPNPT38	FPPG11	FPM16	FMNPT12	FMPG11	FMM20	A3221605	FPNPT38	FPPG11	FPM16	FMNPT12	FMPG11	FMM20
A3132220	FPNPT38	FPPG11	FPM16	FMNPT12	FMPG11	FMM20	A3221607	FPNPT12	FPPG13	FPM20	FMNPT12	FMPG13	FMM20
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A3142004	FPNPT38	FPPG11	FPM16	FMNPT12	FMPG11	FMM20	A3221618	FPNPT34	FPPG21	FPM25	FMNPT34	FMPG21	FMM32
A3142008	FPNPT38	FPPG11	FPM16	FMNPT12	FMPG11	FMM20	A3221625	FPNPT10	FPPG29	FPM32	FMNPT10	FMPG29	FMM40
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A3142016	FPNPT12	FPPG16	FPM20	FMNPT34	FMPG16	FMM25	A3221804	FPNPT38	FPPG11	FPM16	FMNPT12	FMPG11	FMM20
A3142204	FPNPT38	FPPG7	FPM12	FMNPT38	FMPG7	FMM12	A3221805	FPNPT38	FPPG11	FPM16	FMNPT12	FMPG11	FMM20
A3142208	FPNPT38	FPPG9	FPM16	FMNPT38	FMPG9	FMM16	A3221807	FPNPT38	FPPG11	FPM16	FMNPT12	FMPG11	FMM20
A3142212	FPNPT38	FPPG11	FPM16	FMNPT12	FMPG11	FMM20	A3221812	FPNPT12	FPPG16	FPM20	FMNPT12	FMPG16	FMM25
A3142216	FPNPT38	FPPG11	FPM16	FMNPT12	FMPG11	FMM20	A3221818	FPNPT34	FPPG16	FPM25	FMNPT34	FMPG21	FMM32
A3211203	FPNPT12	FPPG13	FPM20	FMNPT12	FMPG13	FMM20	A3221825	FPNPT34	FPPG21	FPM25	FMNPT34	FMPG21	FMM32
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A3211407	FPNPT12	FPPG16	FPM20	FMNPT34	FMPG16	FMM25	A3251612	FPNPT10	FPPG21	FPM25	FMNPT34	FMPG21	FMM32
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A3211603	FPNPT38	FPPG11	FPM16	FMNPT12	FMPG11	FMM20	A3251625	FPNPT10	FPPG29	FPM32	FMNPT10	FMPG29	FMM40
A3211605	FPNPT12	FPPG13	FPM20	FMNPT12	FMPG13	FMM20	A3251803	FPNPT38	FPPG9	FPM16	FMNPT12	FMPG9	FMM16
A3211607	FPNPT12	FPPG13	FPM20	FMNPT12	FMPG13	FMM20	A3251807	FPNPT38	FPPG11	FPM16	FMNPT12	FMPG11	FMM20
A3211612	FPNPT12	FPPG16	FPM20	FMNPT34	FMPG16	FMM25	A3251812	FPNPT12	FPPG16	FPM20	FMNPT34	FMPG16	FMM25
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A3391204	31	A61804	24	FMPG29	52	FPPG21G-R	47	LPNPT34G	50		
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New Product - New Solution!



Lutze Thermoflex Solar UL



- Photovoltaic wire listed per UL 4703 and designed for photovoltaic panel wiring
- Designed to meet new North American electrical code requirements per NEC 2008 edition.
- Very flexible, therefore easy to install
- Insulation and jacket is easily removable
- RoHS & REACH compliant

Part No.	Conductor Size
A11401	AWG 14
A11201	AWG 12
A11001	AWG 10
A10801	AWG 8
A10601	AWG 6
A10401	AWG 4
A10201	AWG 2

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LUTZE 
Systematic Technology

Lutze Product Overview

Cable Solutions

Flexible and continuous flexing cables for machine control and power distribution applications. Wire management for industrial automation.



Cabinet Solutions

Lutze LSC Wiring System saves space, time and cost. LSC is an aluminum frame that replaces the traditional back panel and wire duct for mounting and wiring of electrical components in a control enclosure. LSC shortens wiring times and improves heat dissipation.



Automation Solutions

Lutze offers din rail mountable compact power supplies, industrial Ethernet switches, and intelligent circuit protection with the Lutze LOCC-Box.



Transportation Solutions

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