Lapp Systems
Value-Added Custom Solutions

Lapp Systems

Value-Added Custom Solutions

VALUE-ADDED CUSTOM SOLUTIONS

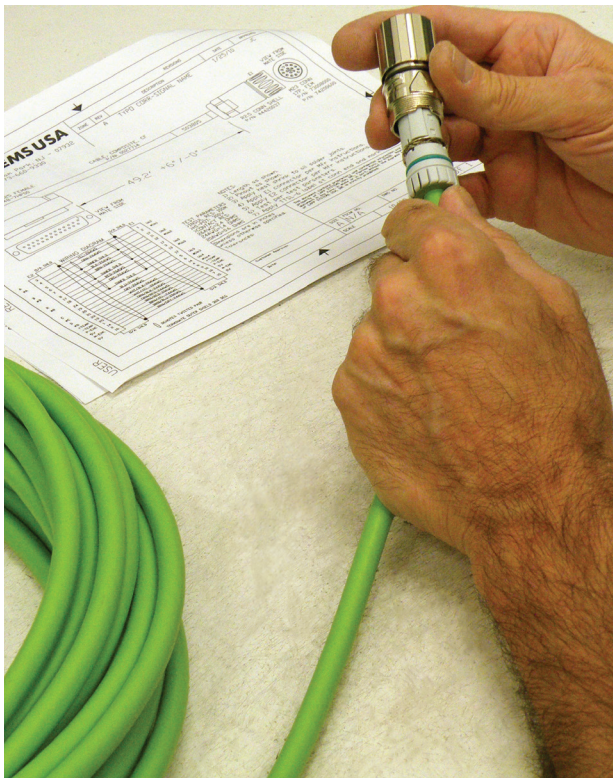
Custom Assemblies

Expect Excellence

Our engineers and skilled sales support team provide a turn-key solution to your specific application requirements, from design concept through prototype, production, and testing. As part of the world-wide Lapp Group, Lapp Systems has access to a large in-house cable, connector, and accessory inventory of our own manufactured products and will source components as required to meet your specifications. Our UL & CSA recognized facilities allow us to quickly, efficiently, and reliably address projects from the small and simple to the large and complex.

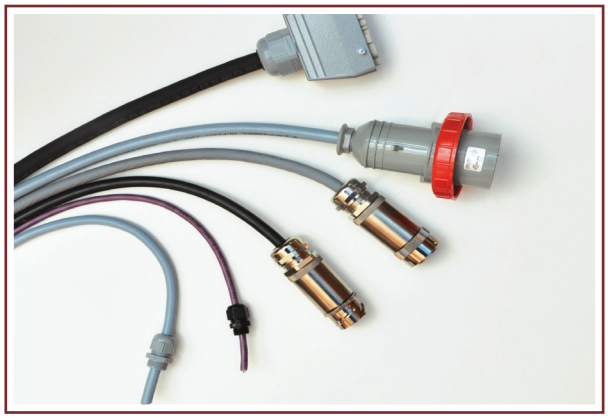
Lapp Systems provides customer assistance in the design and cost-effective assembly of servo and motor drive cables, wire harnesses, junction and control panels, control panel remote access ports, populated cable tracks, switch and emergency stop boxes, and non-standard industrial connector and harness products for special applications.

Our goal is to provide the entire solution for our customers. The burden of developing a concept, applying the engineering, and transitioning to production can be very taxing on company resources. Our engineering expertise and proactive assembly processes will enable a customer to conserve resources for other needs. We can review the interconnection needs, recommend connectivity solutions, provide concept drawings, quotations, final engineering drawings, and quality finished products. All the customer needs to do is provide either data or access and subsequently, a purchase order. It's as easy as that.



Lapp Systems Capabilities

- Compliant with IPC/WHMA-A-620, ISO 9001:2008 & RoHS
- Full engineering design
- Documentation including CAD drawings
- Wide range of insulation and jacket materials, including ability for custom cable design
- Thousands of connector options, including rectangular, circular, and pin & sleeve connectors
- 100% quality tested
- Connector overmolding capabilities in both standard and custom offerings
- Design and fabrication of populated cable track
- Complete range of interconnect options for remote access ports
- Assemblies can be UL recognized & CSA approved at customer request



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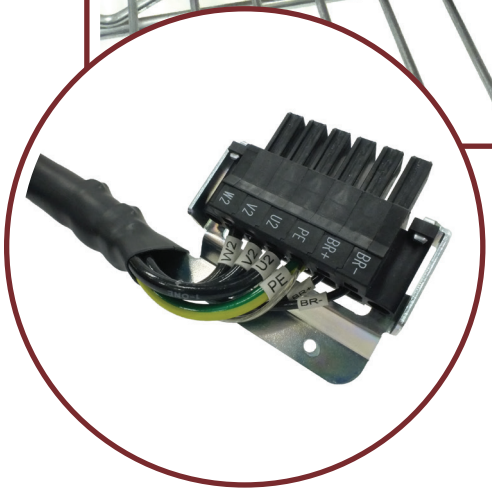
EPIC®
LAPP KABEL STUTTGART ÖLFLEX® TRAY II


W2
V2
U2
PE
BR+
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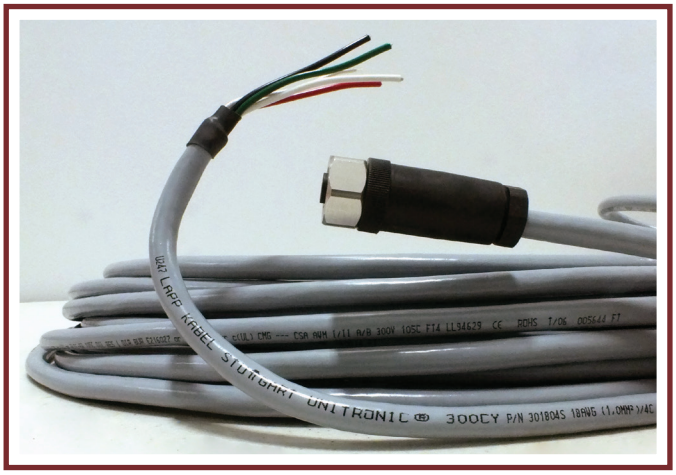
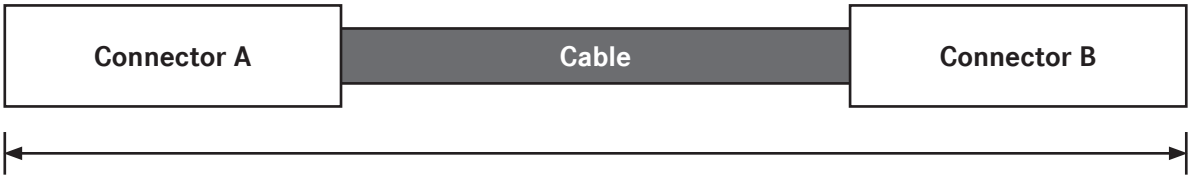

LAPP KABEL STUTTGART UNITRONIC® 300CY P/N 3018045

Custom Assemblies

Custom Assembly Order Form

Lapp Systems offers the complete custom cable assembly solution. Concept development, application engineering, and high-quality production are performed by a team of experts with over 40 years of experience in the industry. A variety of connectorization methods and types are offered to satisfy almost any application requirement. With the ability to use a wide array of hardware and component manufacturers, Lapp Systems can provide existing designs or new concepts and techniques based on customer needs. Use this form to design your assembly, or call us at 800-774-3539 and let the experts guide you with your custom design.

Assembly Specifications



Overall Assembly Length: _____

Connector A		Cable		Connector B	
Housing (hood/base):	_____	Cable type:	_____	Housing (hood/base):	_____
Strain relief:	_____	Cable length:	_____	Strain relief:	_____
Insert:	_____			Insert:	_____

Cable Specifications

Manufacturer: _____

Part number (standard): _____

Cable type:
☐ Round cable ☐ Flat cable

Cable Attributes

Voltage: _____
Amperage: _____
Temperature: _____

Flexibility: _____
Color code: _____
Jacket color: _____

Shield type:
☐ Foil shield ☐ Braid shield
☐ Individual shield ☐ Unshielded

Conductor Attributes

# of conductors: _____
AWG size: _____
# of pairs: _____
O.D. (in): _____

Conductor type:
☐ Solid copper ☐ Stranded copper
☐ Bare copper ☐ Tinned copper

Termination:
☐ Screw ☐ Crimp
☐ Solder ☐ Cage clamp

Environmental Rating

☐ NEMA 4 ☐ NEMA 4X ☐ NEMA 12 ☐ IP54 ☐ IP65 ☐ IP67 ☐ IP68 ☐ IP69K ☐ Other: _____

Approvals

☐ UL ☐ CSA
☐ CE ☐ None
☐ Other: _____

Requirements

Conduit type: _____
Ground requirements: _____
Special concerns (e.g., chemicals): _____

Fax completed order form to 973-660-9330 or email to sales@lappusa.com or your local Lapp representative.

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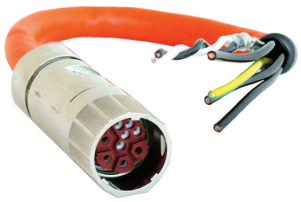
AB Assemblies for Rockwell Automation Motors

Feedback & Power Cable Assemblies for Flexing Applications




All raw cable is Lapp product; datasheets are available on our website or by contacting sales. Assembly drawings are available on our website.

Custom versions are available upon request.

Approvals

Cable Technical Data

Cable Type: see table below

Minimum Bend Radius:

- Feedback:	
- for stationary use:	
- cable P/N 812308:	10 x cable diameter
- cable P/N 602206TP:	8 x cable diameter
- for continuous flex:	12 x cable diameter
- Power:	
- for stationary use:	4 x cable diameter
- for continuous flex:	10 x cable diameter
- Power with brake:	
- for stationary use:	7.5 x cable diameter
- for continuous flex:	10 x cable diameter

Nominal Voltage:

- MP series:	
- Feedback:	300V (stationary)
	600V (continuous flex)
- Power/power with brake:	600V
- TLY series:	
- Feedback:	300V
- Power/power with brake:	600V

Connector Technical Data

Connector Type:

- for MP series motors:	M23 series Speedtec type M7 (M4 still available)
- for MPF series motors:	M23 series Speedtec type M7 (M4 still available)
- for TLY series motors:	Tyco CPC; tab-locking

Cable Construction

Motion Type	Application	Jacket Color	Jacket Material		Approvals	Cable Part Number
			Jacket	Insulation		
MP Series Motors						
Stationary	Feedback	Gray	PVC	PVC	UL/CSA CMG	602206TP
Stationary	Feedback	Gray	PVC	TPE	UL/CSA	812308
Stationary	Power	Black	PVC	PVC/Nylon	UL/CSA TC-ER	2216040, 2214040, 2210040
Stationary	Power with brake	Black	PVC	PVC/Nylon	UL/CSA TC-ER	7416048, 7414048, 7410044
Continuous Flex	Feedback	Green	TPE	PVC	UL/CSA CMG, PLTC*	812876*, 812872
Continuous Flex	Power/ Power with brake	Orange	TPE	PVC	UL/CSA TC-ER	812866, 812867, 812868, 812869, 812870, 812871
TLY Series Motors						
Stationary	Feedback	Gray	PVC	TPE	UL/CSA	812308
Stationary	Power	Black	PVC	PVC/Nylon	UL/CSA TC-ER	2216040
Stationary	Power with brake	Black	PVC	PVC/Nylon	UL/CSA TC-ER	7416048
Continuous Flex	Feedback	Black	PVC	PVC	UL/CSA CMG	812701
Continuous Flex	Power	Black	PVC	PVC	UL/CSA	891604CY
Continuous Flex	Power with brake	Orange	TPE	PVC	UL/CSA TC-ER	812866

* Lapp cable 812876 is PLTC.

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MP Series Motors

Motion Type	Lapp Part Number	Rockwell Part Number
Power		
Flexing	93577xxx-16	2090-CPWM7DF-16AFxx
Flexing	93547xxx-16	2090-CPWM4DF-16AFxx
Flexing	93577xxx-14	2090-CPWM7DF-14AFxx
Flexing	93547xxx-14	2090-CPWM4DF-14AFxx
Flexing	93577xxx-10	2090-CPWM7DF-10AFxx
Flexing	93547xxx-10	2090-CPWM4DF-10AFxx
Flexing	93577xxx-8	2090-CPWM7DF-8AFxx
Flexing	93547xxx-8	2090-CPWM4DF-8AFxx
Stationary	83577xxx-16	2090-CPWM7DF-16AAxx
Stationary	83547xxx-16	2090-CPWM4DF-16AAxx
Stationary	83577xxx-14	2090-CPWM7DF-14AAxx
Stationary	83547xxx-14	2090-CPWM4DF-14AAxx
Stationary	83577xxx-10	2090-CPWM7DF-10AAxx
Stationary	83547xxx-10	2090-CPWM4DF-10AAxx
Stationary	83577xxx-8	2090-CPWM7DF-8AAxx
Stationary	83547xxx-8	2090-CPWM4DF-8AAxx
Power with Brake		
Flexing	93579xxx-16	2090-CPBM7DF-16AFxx
Flexing	93549xxx-16	2090-CPBM4DF-16AFxx
Flexing	93579xxx-16E	2090-CPBM7E7-16AFxx
Flexing	93579xxx-14	2090-CPBM7DF-14AFxx
Flexing	93549xxx-14	2090-CPBM4DF-14AFxx
Flexing	93579xxx-14-E	2090-CPBM7E7-14AFxx
Flexing	93579xxx-10	2090-CPBM7DF-10AFxx
Flexing	93549xxx-10	2090-CPBM4DF-10AFxx
Flexing	93579xxx-10-E	2090-CPBM7E7-10AFxx
Flexing	93579xxx-8	2090-CPBM7DF-8AFxx
Flexing	93549xxx-8	2090-CPBM4DF-8AFxx
Flexing	93579xxx-8-E	2090-CPBM7EF-8AFxx
Stationary	83579xxx-16	2090-CPBM7DF-16AAxx
Stationary	83549xxx-16	2090-CPBM4DF-16AAxx
Stationary	83579xxx-14	2090-CPBM7DF-14AAxx
Stationary	83549xxx-14	2090-CPBM4DF-14AAxx
Stationary	83579xxx-10	2090-CPBM7DF-10AAxx
Stationary	83549xxx-10	2090-CPBM4DF-10AAxx
Stationary	83579xxx-8	2090-CPBM7DF-8AAxx
Stationary	83549xxx-8	2090-CPBM4DF-8AAxx
Feedback		
Flexing	93572xxx	2090-CFBM7DF-CEAFxx
Flexing	93574xxx	2090-CFBM7DD-CEAFxx
Flexing	93542xxx	2090-CFBM4DF-CEAFxx
Flexing	93572xxx-E	2090-CFBM7E7-CEAFxx
Flexing	93576xxx	2090-CFBM7DF-CDAFxx
Flexing	93578xxx	2090-CFBM7DD-CDAFxx
Flexing	93546xxx	2090-CFBM4DF-CDAFxx
Flexing	93576xxx-E	2090-CFBM7E7-CDAFxx
Stationary	83572xxx	2090-CFBM7DF-CEAAxx
Stationary	83574xxx	2090-CFBM7DD-CEAAxx
Stationary	83576xxx	2090-CFBM7DF-CDAAxx
Stationary	83546xxx	2090-CFBM4DF-CDAAxx

Replace “xxx” with desired cable length in feet.

TLY Series Motors

Motion Type	Lapp Part Number	Rockwell Part Number
Power		
Flexing	72505xxx	2090-CPWM6DF-16AFxx
Stationary	62505xxx	2090-CPWM6DF-16AAxx
Power with Brake		
Flexing	74505xxx	2090-CPBM6DF-16AAxx
Stationary	64505xxx	2090-CPBM6DF-16AAxx
Feedback		
Flexing	72515xxx	2090-CFBM6DD-CCAFxx
Flexing	72514xxx	2090-CFBM6DF-CBAFxx
Stationary	62515xxx	2090-CFBM6DD-CCAAxx
Stationary	62514xxx	2090-CFBM6DF-CBAAxx

Replace “xxx” with desired cable length in feet.

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AB Legacy Assemblies for Rockwell Automation Motors

Legacy Feedback & Power Cable Assemblies

Cable Construction

Jacket: Feedback: gray or black PVC
Power with brake: gray or black PVC (ÖLFLEX® 190 CY & ÖLFLEX® FD 890 CY); orange polyurethane or PVC (ÖLFLEX® SERVO cable)

Approvals

All raw cable is Lapp product; datasheets are available on our website or via sales. Assembly drawings are available on our website. All overmolded products are molded with UL 94 V-0 PVC.

Cable Technical Data

Cable Type:
- Feedback P/N: 812090, 812308, 812701, 892206TP, 602208TP
- Power/power with brake: ÖLFLEX® 190 CY, page 26; ÖLFLEX® FD 890 CY, page 61; ÖLFLEX® servo cables, pages 104, 109, 113, 115

Minimum Bend Radius:
- Feedback:
  - for stationary use:
    - Cable 812090, 812308: 10 x cable diameter
    - Cable 602208TP: 8 x cable diameter
  - for continuous flex:
    - Cable 812701: 12 x cable diameter
    - Cable 892206TP: 10 x cable diameter
- Power/power with brake: see specific cable catalog page

Nominal Voltage:
- Feedback: 300V
- Power/power with brake: 600V

Connector Technical Data

Connector Type:
- for MP series motors: ITT Cannon TNM; bayonet
- for MPF series motors: M23 series; threaded
- for N series motors: M26482 series; bayonet
- for H & F series motors: M5015 series; threaded
- for Y series motors: Tyco CPC black plastic; threaded
- for TL series motors: Tyco MATE-N-LOK, tab-locking

MP Series Motors

Motion Type	Lapp Part Number	Rockwell Part Number
Power: 230V		
Flexing	73529xxx-10	2090-UXNPAMP-10Sxx
Flexing	73529xxx-14	2090-UXNPAMP-14Sxx
Flexing	73529xxx-16	2090-UXNPAMP-16Sxx
Flexing	73529xxx-10	2090-XXNPMP-10Sxx
Flexing	73529xxx-14	2090-XXNPMP-14Sxx
Flexing	73529xxx-16	2090-XXNPMP-16Sxx
Stationary	63529xxx-10	2090-UXNPAMP-10Sxx
Stationary	63529xxx-14	2090-UXNPAMP-14Sxx
Stationary	63529xxx-16	2090-UXNPAMP-16Sxx
Stationary	63529xxx-10	2090-XXNPMP-10Sxx
Stationary	63529xxx-14	2090-XXNPMP-14Sxx
Stationary	63529xxx-16	2090-XXNPMP-16Sxx
Power: 460V		
Flexing	73529xxx-8	2090-UXNPBMP-8Sxx
Flexing	73529xxx-10	2090-UXNPBMP-10Sxx
Flexing	73529xxx-14	2090-UXNPBMP-14Sxx
Flexing	73529xxx-16	2090-UXNPBMP-16Sxx
Flexing	73529xxx-8	2090-XXNPMP-8Sxx
Flexing	73529xxx-10	2090-XXNPMP-10Sxx
Flexing	73529xxx-14	2090-XXNPMP-14Sxx
Flexing	73529xxx-16	2090-XXNPMP-16Sxx
Stationary	63529xxx-8	2090-UXNPBMP-8Sxx
Stationary	63529xxx-10	2090-UXNPBMP-10Sxx
Stationary	63529xxx-14	2090-UXNPBMP-14Sxx
Stationary	63529xxx-16	2090-UXNPBMP-16Sxx
Stationary	63529xxx-8	2090-XXNPMP-8Sxx
Stationary	63529xxx-10	2090-XXNPMP-10Sxx
Stationary	63529xxx-14	2090-XXNPMP-14Sxx
Stationary	63529xxx-16	2090-XXNPMP-16Sxx
Power: 460V 1394C-SJTXX-D (D29)		
Flexing	73529xxx-8	2090-CDNPBMP-8Sxx
Flexing	73529xxx-10	2090-CDNPBMP-10Sxx
Flexing	73529xxx-14	2090-CDNPBMP-14Sxx
Flexing	73529xxx-16	2090-CDNPBMP-16Sxx
Stationary	63529xxx-8	2090-CDNPBMP-8Sxx
Stationary	63529xxx-10	2090-CDNPBMP-10Sxx
Stationary	63529xxx-14	2090-CDNPBMP-14Sxx
Stationary	63529xxx-16	2090-CDNPBMP-16Sxx
Feedback: 230/460V		
Flexing	73528xxx	2090-UXNFBMP-Sxx
Flexing	73526xxx	2090-UXNFDMP-Sxx
Flexing	75926xxx	2090-XXNFMP-Sxx
Stationary	63528xxx	2090-UXNFBMP-Sxx
Stationary	63526xxx	2090-UXNFDMP-Sxx
Stationary	65926xxx	2090-XXNFMP-Sxx
1394 (D29)		
Flexing	71100125-xxx	2090-CDNFDMP-Sxx
Stationary	61100125-xxx	2090-CDNFDMP-Sxx
ULTRA 3000/5000 with 1394 Brake		
Flexing	73524xxx	2090-UXNBMP-18Sxx
Stationary	63524xxx	2090-UXNBMP-18Sxx

Replace "xxx" with desired cable length in feet.
For a 90° connector on the motor end, add "-R" to end of Lapp P/N.
For an extension assembly (male-female), add "-E" to end of Lapp P/N.

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AB Legacy Assemblies for Rockwell Automation Motors

H/F Series Motors

Motion Type	Lapp Part Number	Rockwell Part Number
Power		
Flexing	73502xxx	2090-UXNPAHF-14SXX
Flexing	73502xxx	2090-XXNPHF-14SXX
Flexing	73503xxx	2090-UXNPAHF-10SXX
Flexing	73506xxx	2090-UXNPAHF-8SXX
Stationary	63502xxx	2090-UXNPAHF-14SXX
Stationary	63502xxx	2090-XXNPHF-14SXX
Stationary	63503xxx	2090-UXNPAHF-10SXX
Stationary	63506xxx	2090-UXNPAHF-8SXX
Feedback		
Flexing	73513xxx	2090-UXNFBHF-SXX
Flexing	73525xxx	2090-UXNFDHF-SXX
Flexing	75925xxx	2090-XXNFHF-SXX
Stationary	63513xxx	2090-UXNFBHF-SXX
Stationary	63525xxx	2090-UXNFDHF-SXX
Stationary	65925xxx	2090-XXNFHF-SXX
Brake		
Flexing	73544xxx	–
Stationary	63544xxx	–

H Series Motors

Motion Type	Lapp Part Number	Rockwell Part Number
Power		
Flexing	73501xxx	2090-XXNPH-16Sxx
Stationary	63501xxx	2090-XXNPH-16Sxx

N Series Motors

Motion Type	Lapp Part Number	Rockwell Part Number (Stationary)
Power with Brake		
Flexing	73507xxx	2090-UXNPAN-16Sxx
Flexing	73507xxx	2090-XXNPN-16Sxx
Stationary	63507xxx	2090-UXNPAN-16Sxx
Stationary	63507xxx	2090-XXNPN-16Sxx
Feedback		
Flexing	73516xxx	2090-UXNFBN-Sxx
Flexing	73527xxx	2090-UXNFDN-Sxx
Flexing	75927xxx	2090-XXNFN-Sxx
Stationary	63516xxx	2090-UXNFBN-Sxx
Stationary	63527xxx	2090-UXNFDN-Sxx
Stationary	65927xxx	2090-XXNFN-Sxx
Brake		
Flexing	73534xxx	–
Stationary	63534xxx	–

TL Series Motors

Motion Type	Lapp Part Number	Rockwell Part Number
Power		
Flexing	71529xxx-16	2090-XXNPT-16Sxx
Flexing	71529xxx-16	2090-DANPT-16Sxx
Stationary	61529xxx-16	2090-XXNPT-16Sxx
Stationary	61529xxx-16	2090-DANPT-16Sxx
Feedback		
Flexing	71526xxx	Flying lead configuration
Flexing	71528xxx	2090-XXNFT-Sxx
Flexing	72528xxx	2090-DANFCT-Sxx
Stationary	61526xxx	Flying lead configuration
Stationary	61528xxx	2090-XXNFT-Sxx
Stationary	62528xxx	2090-DANFCT-Sxx
Brake		
Flexing	500058xxx	2090-DANBT-18Sxx
Stationary	300058xxx	2090-DANBT-18Sxx

For a 90° connector on the motor end, add "-R" to end of Lapp P/N.
For an extension assembly (male-female), add "-E" to end of Lapp P/N.

MPF Series Motors

Motion Type	Lapp Part Number	Rockwell Part Number
Power		
Flexing	400270-xxx-10	2090-XXNPMF-10Sxx
Flexing	400270-xxx-10NB	Without brake
Flexing	400270-xxx-14	2090-XXNPMF-14Sxx
Flexing	400270-xxx-14NB	Without brake
Flexing	400270-xxx-16	2090-XXNPMF-16Sxx
Flexing	400270-xxx-16NB	Without brake
Stationary	300270-xxx-10	2090-XXNPMF-10Sxx
Stationary	300270-xxx-10NB	Without brake
Stationary	300270-xxx-14	2090-XXNPMF-14Sxx
Stationary	300270-xxx-14NB	Without brake
Stationary	300270-xxx-16	2090-XXNPMF-16Sxx
Stationary	300270-xxx-16NB	Without brake
Feedback		
Flexing	400271-xxx-15P	With drive connector
Flexing	400271-xxx	2090-XXNFMF-SXX
Stationary	300271-xxx-15P	With drive connector
Stationary	300271-xxx	2090-XXNFMF-SXX

Y Series Motors

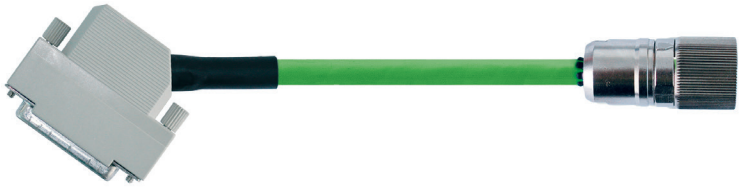
Motion Type	Lapp Part Number	Rockwell Part Number	Motion Type	Lapp Part Number	Rockwell Part Number
Power with Brake			**Feedback**		
Flexing	73505xxx	2090-UXNPAY-16Sxx	Flexing	73515xxx	2090-UXNFBN-Sxx
Flexing	73505xxx	2090-XXNPY-16Sxx	Flexing	73514xxx	2090-UXNFD4-Sxx
Stationary	63505xxx	2090-UXNPAY-16Sxx	Flexing	75914xxx	2090-XXNF4-Sxx
Stationary	63505xxx	2090-XXNPY-16Sxx	Stationary	63515xxx	2090-UXNFBY-Sxx
			Stationary	63514xxx	2090-UXNFDY-Sxx
			Stationary	65914xxx	2090-XXNFY-Sxx

Ultra 100/200 Series Motors

Motion Type	Lapp Part Number	Rockwell Part Number
F Series: Power with Brake & Feedback		
Flexing	71103xxx	9101-1383
Flexing	71121xxx	9101-1365
Stationary	61103xxx	9101-1383
Stationary	61121xxx	9101-1365
F/H Series: Power with Brake & Feedback		
Flexing	71101xxx	9101-1381
Flexing	71102xxx	9101-1382
Flexing	71106xxx	9101-1399
Flexing	71113xxx	9101-1366
Flexing	71118xxx	9101-2027
Stationary	61101xxx	9101-1381
Stationary	61102xxx	9101-1382
Stationary	61106xxx	9101-1399
Stationary	61113xxx	9101-1366
Stationary	61118xxx	9101-2027
N Series: Power with Brake & Feedback		
Flexing	71107xxx	9101-1467
Flexing	71116xxx	9101-1468
Flexing	71117xxx	9101-1474
Stationary	61107xxx	9101-1467
Stationary	61116xxx	9101-1468
Stationary	61117xxx	9101-1474
Y Series: Power with Brake & Feedback		
Flexing	71105xxx	9101-1385
Flexing	71114xxx	9101-1373
Flexing	71115xxx	9101-1375
Stationary	61105xxx	9101-1385
Stationary	61114xxx	9101-1373
Stationary	61115xxx	9101-1375

Replace "xxx" with desired cable length in feet.

Servo Assemblies acc. to SIEMENS® Standard 6FX 8002



Approvals

Custom configurations are available upon request.

Technical Data

Minimum Bend Radius:
- Power cable:
  - for continuous flex:
    - 16 - 6 AWG: 7.5 x cable diameter
    - 4 - 1 AWG: 10 x cable diameter
  - for stationary use: 4 x cable diameter
- Signal cable:
  - for continuous flex: 8 x cable diameter
  - for stationary use: 4 x cable diameter

Temperature Range:
- for continuous flex: -20°C to +60°C
- for stationary use: -50°C to +80°C

Nominal Voltage:
- Power cable, power conductors:
  - UL/CSA: 1000V
  - IEC: 600/1000V
- Power cables, control conductors:
  - UL/CSA: 1000V
  - IEC: 250V AC
- Signal cable:
  - UL/CSA: 30V AC/DC
  - IEC: 30V AC

Approvals:
UL: AWM 21223
AWM 20236
Canada: AWM I/II A/B FT1
Additional: Based on VDE specifications
CE & RoHS

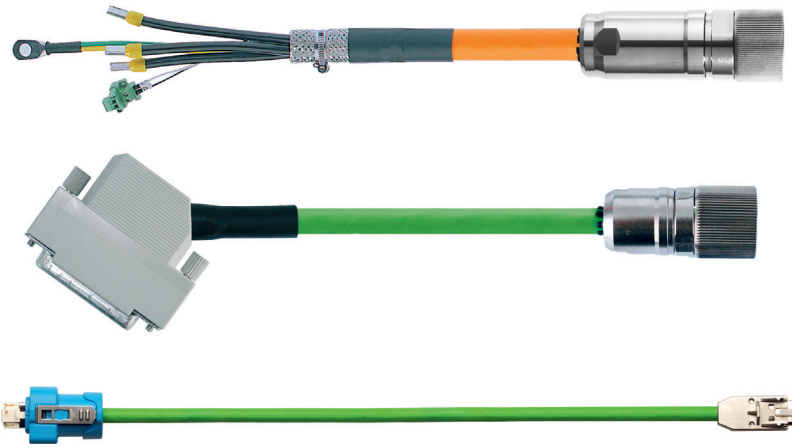
Lapp Part Number	SIEMENS® Part Number	Lapp Cable
Assemblies for Feedback		
335100xxx	6FX8002-1AD00-XXXX	00277131
335104xxx	6FX8002-1AD04-XXXX	00277131
335500xxx	6FX8002-2AD00-XXXX	00277131
335304xxx	6FX8002-2AD04-XXXX	00277131
335200xxx	6FX8002-2AH00-XXXX	00277131
335211xxx	6FX8002-2CA11-XXXX	00277111
335231xxx	6FX8002-2CA31-XXXX	00277141
335234xxx	6FX8002-2CA34-XXXX	00277141
335331xxx	6FX8002-2CB31-XXXX	00277171
335201xxx	6FX8002-2CF01-XXXX	00277131
335202xxx	6FX8002-2CF02-XXXX	00277131
335204xxx	6FX8002-2CF04-XXXX	00277131
335300xxx	6FX8002-2CG00-XXXX	00277111
335400xxx	6FX8002-2CH00-XXXX	00277131
335600xxx	6FX8002-2DC00-XXXX	see note
335310xxx	6FX8002-2DC10-XXXX	see note
335220xxx	6FX8002-2DC20-XXXX	see note
335210xxx	6FX8002-2EQ10-XXXX	00277141
335214xxx	6FX8002-2EQ14-XXXX	00277141
335421xxx	6FX8002-4AA21-XXXX	00277151

Lapp Part Number	SIEMENS® Part Number	Lapp Cable
Assemblies for Power		
335501xxx	6FX8002-5CA01-XXXX	0027784
335505xxx	6FX8002-5CA05-XXXX	0027784
335531xxx	6FX8002-5CA31-XXXX	0027785
335541xxx	6FX8002-5CA41-XXXX	0027786
335551xxx	6FX8002-5CA51-XXXX	0027787
335601xxx	6FX8002-5CS01-XXXX	0027784
335511xxx	6FX8002-5CS11-XXXX	0027785
Assemblies for Power with Brake		
335601xxx	6FX8002-5DA01-XXXX	0027790
335605xxx	6FX8002-5DA05-XXXX	0027790
335631xxx	6FX8002-5DA31-XXXX	0027791
335641xxx	6FX8002-5DA41-XXXX	0027791
335651xxx	6FX8002-5DA51-XXXX	0027793
335701xxx	6FX8002-5DS01-XXXX	0027790
335611xxx	6FX8002-5DS11-XXXX	0027791

* Replace "xxx" with the desired cable length in meters.
Note: Made with a special Lapp cable design. Specs are available upon request.

Servo Assemblies acc. to SIEMENS® Standard 6FX 5002

Approvals



Technical Data

Minimum Bend Radius:
- for flexible use: 12 x cable diameter
- for stationary use: 5 x cable diameter

Temperature Range:
- for flexible use: 0°C to +60°C
- for stationary use: -20°C to +60°C

Nominal Voltage:
- Power cable, power conductors:
  - UL/CSA: 1000V
  - IEC: 600/1000V
- Power cables, control conductors:
  - UL/CSA: 750V
  - IEC: 30V AC
- Signal cable:
  - UL/CSA: 30V AC/DC
  - IEC: 30V AC

Approvals:
UL: AWM 2570 (power)
AWM 2502 (signal)
Additional: Based on VDE specifications
CE & RoHS

Lapp Part Number	SIEMENS® Part Number	Lapp Cable	Lapp Part Number	SIEMENS® Part Number	Lapp Cable
Assemblies for Feedback			**Assemblies for Power**		
235100xxx	6FX5002-1AD00-XXXX	0025725	235501xxx	6FX5002-5CA01-XXXX	00257001
235104xxx	6FX5002-1AD04-XXXX	0025725	235505xxx	6FX5002-5CA05-XXXX	00257001
235500xxx	6FX5002-2AD00-XXXX	0025725	235531xxx	6FX5002-5CA31-XXXX	00257011
235304xxx	6FX5002-2AD04-XXXX	0025725	235514xxx	6FX5002-5CA41-XXXX	00257021
235200xxx	6FX5002-2AH00-XXXX	0025725	235551xxx	6FX5002-5CA51-XXXX	00257031
235211xxx	6FX5002-2CA11-XXXX	0025724	235601xxx	6FX5002-5CS01-XXXX	00257001
235231xxx	6FX5002-2CA31-XXXX	0025726	235511xxx	6FX5002-5CS11-XXXX	00257011
235234xxx	6FX5002-2CA34-XXXX	0025726	**Assemblies for Power with Brake**		
235201xxx	6FX5002-2CF01-XXXX	0025725	235601xxx	6FX5002-5DA01-XXXX	00257151
235202xxx	6FX5002-2CF02-XXXX	0025725	235605xxx	6FX5002-5DA05-XXXX	00257151
235204xxx	6FX5002-2CF04-XXXX	0025725	235631xxx	6FX5002-5DA31-XXXX	00257161
235300xxx	6FX5002-2CG00-XXXX	0025724	235641xxx	6FX5002-5DA41-XXXX	00257171
235400xxx	6FX5002-2CH00-XXXX	0025725	235651xxx	6FX5002-5DA51-XXXX	00257181
235600xxx	6FX5002-2DC00-XXXX	see note	235701xxx	6FX5002-5DS01-XXXX	00257151
235310xxx	6FX5002-2DC10-XXXX	see note	235611xxx	6FX5002-5DS11-XXXX	00257161
235220xxx	6FX5002-2DC20-XXXX	see note			
235210xxx	6FX5002-2EQ10-XXXX	0025726			
235214xxx	6FX5002-2EQ14-XXXX	0025726			

* Replace “xxx” with the desired cable length in meters.
Note: Made with a special Lapp cable design. Specs are available upon request.

Servo LK-INX Assemblies acc. to INDRAMAT® Standards

Assemblies acc. to INDRAMAT Standard IKG/RKL

Technical Data

Minimum Bend Radius:
- for stationary use: 6 x cable diameter
- for continuous flex: 10 x cable diameter

Temperature Range:
- for stationary use: -50°C to +80°C
- for continuous flex: -30°C to +60°C

Nominal Voltage:
- Power conductors:
  - UL/CSA: 1000V
  - IEC: 600/1000V
- Control conductors:
  - UL/CSA: 1000V
  - IEC: 250V AC

Approvals: UL: AWM 20234

Lapp Part Number	Length (m)	INDRAMAT Part Number	Lapp Cable
INDRAMAT Standard IKG			
70345476	10	IKG4009-010	7072403
70345503	10	IKG4087-010	7072406
70345521	10	IKG4163-010	7072408
70345522	10	IKG4170-010	7072408
70345541	10	IKG4020-010	7072403
70345542	10	IKG4018-010	7072403
70345543	10	IKG4016-010	7072403
70345545	10	IKG4050-010	7072404
INDRAMAT Standard RKL			
70410000	10	RKL4330-010	7072409
70392839	10	RKL4302-010	7072403
70410001	10	RKL4303-010	7072403

Listed part numbers are for 10m lengths. Other lengths are available.

Assemblies acc. to INDRAMAT Standard IKS/RKG

Technical Data

Minimum Bend Radius:
- for stationary use: 5 x cable diameter
- for continuous flex: 10 x cable diameter

Temperature Range:
- for stationary use: -30°C to +90°C
- for continuous flex: -30°C to +80°C

Nominal Voltage: 300V

Approvals: UL: AWM 20234

Lapp Part Number	Length (m)	INDRAMAT Part Number	Lapp Cable
INDRAMAT Standard IKS			
70335583	10	IKS4374-010	7072401
70335584	10	IKS4376-010	7072401
70335595	10	IKS4103-010	7072401
70665596	10	IKS4153-010	7072401
INDRAMAT Standard RKG			
70392984	10	RKG4200-010	7072401
70410002	10	RKG4201-010	7072401

Listed part numbers are for 10m lengths. Other lengths are available.

Servo Assemblies acc. to LENZE® Standard

Approvals

Technical Data

Minimum Bend Radius:
- for stationary use: 7.5 x cable diameter
- for continuous flex: 10 x cable diameter

Temperature Range:
- for stationary use: -25°C to +80°C
- for continuous flex: -5°C to +70°C

Nominal Voltage:
- Resolver & encoder cable:
  - UL/CSA: 300V
  - VDE: 30V
- Motor cable, power conductors:
  - UL/CSA: 600V
  - VDE: 600/1000V

Test Voltage:
- Resolver & encoder cable: 1500V
- Motor cable:
  - Power conductors: 4000V
  - Control conductors: 2000V

Approvals: UL: AWM 21165 (resolver/encoder cable, flexing); AWM 2464 (resolver/encoder cable, stationary); AWM 20940 (motor cable, flexing); AWM 2570 (motor cable, stationary)

Lapp Part Number	Application Type	Length (m)	Size / Number of Conductors	LENZE Assembly Part Number
Servo Cable				
74321272	Flexing	10	16 AWG/4c + (20 AWG/1pr)	EWLM-010GMS-015
74321426	Flexing	10	14 AWG/4c + (20 AWG/1pr)	EWLM-010GMS-025
74320320	Stationary	10	16 AWG/4c + (20 AWG/1pr)	EWLM-010GM-015
74320499	Stationary	10	14 AWG/4c + (20 AWG/1pr)	EWLM-010GM-025
70415002	Stationary	10	16 AWG/4c	EYP-0003-A-0100-M01-A00
Fan Cable				
74322629	Flexing	10	20 AWG/5c	EWLL-010GMS
70415001	Flexing	10	19 AWG/5c	EYL-0001-V-0100L02-J02
74322480	Stationary	10	20 AWG/5c	EWLL-010GM
Resolver Cable				
74323073	Flexing	10	3x(26 AWG/1pr) + (20 AWG/1pr)	EWLR-010GMS-T
70415005	Flexing	10	26 AWG/3c + 26 AWG/3pr	EYF-0020-A-0100-F01-S04
74320540	Stationary	10	3x(26 AWG/1pr) + (20 AWG/1pr)	EWLR-010GM-T
Encoder Cable				
74323672	Flexing	10	4x(26 AWG/1pr) + (18 AWG/1pr)	EWLE-010GMS-T
74323522	Stationary	10	4x(26 AWG/1pr) + (18 AWG/1pr)	EWLE-010GM-T

( ) = shielded pairs

Servo Assemblies acc. to SEW® Standard

Approvals

CE RoHS

Technical Data

Minimum Bend Radius:
- Power cable: 15 x cable diameter
- Signal cable: 15 x cable diameter

Temperature Range:
- Power cable: -10°C to +80°C
- Signal cable: -5°C to +70°C

Nominal Voltage:
- Power cable, power conductors:
  - UL: 600V
  - IEC: 750V
- Power cable, signal conductors:
  - UL: 600V
  - IEC: 350V
- Signal cable: 250V

Test Voltage:
- Power cable: 2000V
- Signal cable: 1500V

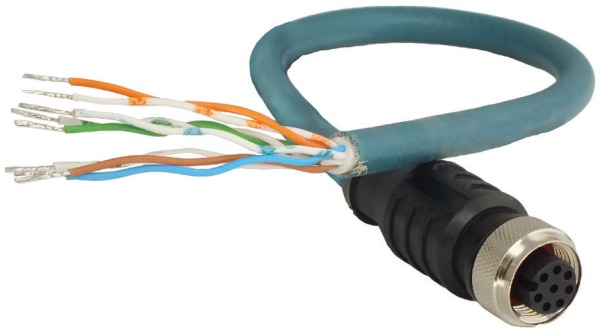
Approvals: UL: AWM 2587

Lapp Part Number	Application Type	Length (m)	Size / Number of Conductors	SEW Assembly Part Number
Power Cable				
70430251	Stationary	10	16 AWG/4c	05904544
70430250	Stationary	10	16 AWG/4c + 18 AWG/3c	13324853
Signal Cable				
70430252	Flexing	10	24 AWG/6pr	1995405
70430249	Stationary	10	24 AWG/6pr	13324535

Industrial Ethernet Cordsets

Technical Data

The use of both RJ45 and M12 connectors in Ethernet network protocols is common. Our continuous flex CAT.5e & CAT.6A cables offer a unique solution toward satisfying the stringent needs of motion systems, where a network connection has been integrated for program interface from remote locations. Our product offering supports both flexing and stationary industrial Ethernet requirements.



Available Configurations

- Single-Ended Cordsets: 4 Pair
- Extension Cordsets: 4 Pair
- Single-Ended Cordsets: 2 Pair
- Extension Cordsets: 2 Pair

Technical Data

Materials:

- Contact carrier:	
- M12:	Black thermoplastic polyurethane
- RJ45:	Polycarbonate
- Molded head:	
- M12, 8-position:	Black thermoplastic polyurethane*
- M12, 4-position D-code:	Blue-gray thermoplastic polyurethane*
- RJ45:	Black thermoplastic polyurethane*
- Contacts:	Gold-plated brass
- Coupling nut:	Nickel-plated brass
- Shield:	Copper braid or foil & copper braid
- Outer jacket:	Teal or green polyurethane
- Conductor insulation:	Polyethylene

Rated Current: 1.5A

Rated Voltage: 42V

Number of Conductors:

- M12 D-code & RJ45 shielded:	26 - 22 AWG/2pr, stranded or solid
- M12 8-pos. & RJ45S:	26 - 22 AWG/4pr, stranded or solid

Temperature Range: see specific cable catalog page

Protection Class:

- M12:	Meets NEMA 1, 3, 4, 6P & IEC IP67
- RJ45:	Meets NEMA 1, 3, 4, 6P & IEC IP20

Cable Type:

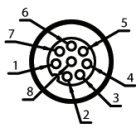
- for stationary use:	CAT.5e:	ETHERLINE® 2 Pair CAT.5e, page 243
		ETHERLINE® 4 Pair CAT.5e, page 250
	CAT.6A:	ETHERLINE® 4 Pair CAT.6A, page 253
- for continuous flex:	CAT.5e:	ETHERLINE® 2 Pair CAT.5e, page 244
		ETHERLINE® 4 Pair CAT.5e, page 251
	CAT.6A:	ETHERLINE® 4 Pair CAT.6A, page 254

* Color is typical, not standard

Pin Outs

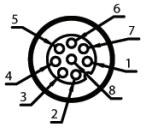
Ethernet M12 8-position, 4 Pair

Male



1 = White/Blue
2 = White/Brown
3 = Brown
4 = Orange (-TX)

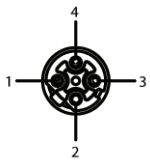
Female



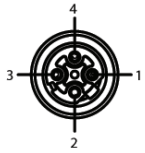
5 = White/Green (+RX)
6 = White/Orange (+TX)
7 = Blue
8 = Green (-RX)

Ethernet M12 4-position D-code, 2 Pair

Male



Female



1 = White/Orange (+TX)
2 = White/Green (+RX)
3 = Orange (-TX)
4 = Green (-RX)

Ethernet RJ45

RJ45 Shielded, 4 Pair

1 = White/Orange (+TX)
2 = Orange (-TX)
3 = White/Green (+RX)
4 = Blue
5 = White/Blue (-RX)
6 = Green
7 = White/Brown
8 = Brown

RJ45 Shielded, 2 Pair

1 = White/Orange (+TX)
2 = Orange (-TX)
3 = White/Green (+RX)
4 = N/C
5 = N/C
6 = Green (-RX)
7 = N/C

Photographs are not to scale and are not true representations of the products in question.
For current information go to our website. If not otherwise specified, all values relating to the product are nominal values.

Ethernet Single-Ended Cordsets: 4 Pair CAT.5e

8-Pos. M12 or 8-Wire RJ45 Connectors to Flying Leads

Connector 1 **Connector 2**

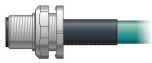
Male M12 Straight Connector

ETHERLINE® 4 Pair CAT.5e

Flying Leads

for stationary use: 2170300, page 249
for continuous flexing: 2170489, page 251

Male M12 Bulkhead



Female M12 Straight Connector

Female M12 Bulkhead

RJ45 Shielded Connector

90° M12 connectors are also available.

Connector 1	Connector 2	Stationary Cable	Continuous Flex Cable
Male M12 to Flying Leads			
Male M12 Straight	Flying Leads	C5E003S*	C5E003F*
Male M12 Bulkhead	Flying Leads	C5E010S*	C5E010F*
Female M12 Straight	Flying Leads	C5E004S*	C5E004F*
Female M12 Bulkhead	Flying Leads	C5E011S*	C5E011F*
RJ45 to Flying Leads			
RJ45 Shielded	Flying Leads	C5E002S*	C5E002F*

* Add cable length in meters to the end of the part number.

Ethernet Extension Cordsets: 4 Pair CAT.5e

8-Pos. M12 or 8-Wire RJ45 Connectors

Connector 1 **Connector 2**

Male M12 Straight Connector

ETHERLINE® 4 Pair CAT.5e

Male M12 Straight Connector

for stationary use: 2170300, page 250
for continuous flexing: 2170489, page 251

Female M12 Straight Connector

Female M12 Straight Connector

RJ45 Shielded Connector

RJ45 Shielded Connector

90° M12 connectors are also available.

Connector 1	Connector 2	Stationary Cable	Continuous Flex Cable
M12 to M12 Cordsets			
Male M12 Straight	Male M12 Straight	C5E005S*	C5E005F*
Male M12 Straight	Female M12 Straight	C5E007S*	C5E007F*
Female M12 Straight	Female M12 Straight	C5E006S*	C5E006F*

Connector 1	Connector 2	Stationary Cable	Continuous Flex Cable
M12 to RJ45 Cordsets			
Male M12 Straight	RJ45 Shielded	C5E008S*	C5E008F*
Female M12 Straight	RJ45 Shielded	C5E009S*	C5E009F*
RJ45 to RJ45 Cordsets			
RJ45 Shielded	RJ45 Shielded	C5E001S*	C5E001F*

* Add cable length in meters to the end of the part number.

Photographs are not to scale and are not true representations of the products in question.
For current information go to our website. If not otherwise specified, all values relating to the product are nominal values.

Ethernet Single-Ended Cordsets: 2 Pair CAT.5e

4-Pos. M12 D-coded or 4-Wire RJ45 Connectors to Flying Leads

Connector 1

Male M12 Straight Connector

Male M12 Bulkhead

Female M12 Straight Connector

Female M12 Bulkhead

RJ45 Shielded Connector

ETHERLINE® 2 Pair CAT.5e

for stationary use: 2170284, page 243
for continuous flexing: 2170289, page 244

Connector 2

Flying Leads

90° M12 connectors are also available.

Connector 1	Connector 2	Stationary Cable	Continuous Flex Cable
M12 to Flying Leads			
Male M12 Straight	Flying Leads	C5E103S*	C5E103F*
Male M12 Bulkhead	Flying Leads	C5E110S*	C5E110F*
Female M12 Straight	Flying Leads	C5E104S*	C5E104F*
Female M12 Bulkhead	Flying Leads	C5E111S*	C5E111F*
RJ45 to Flying Leads			
RJ45 Shielded	Flying Leads	C5E102S*	C5E102F*

* Add cable length in meters to the end of the part number.

Ethernet Extension Cordsets: 2 Pair CAT.5e

4-Pos. M12 D-coded or 4-Wire RJ45 Connectors

Connector 1

Male M12 Straight Connector

Female M12 Straight Connector

RJ45 Shielded Connector

ETHERLINE® 2 Pair CAT.5e

for stationary use: 2170284, page 242
for continuous flexing: 2170289, page 244

Connector 2

Male M12 Straight Connector

Female M12 Straight Connector

RJ45 Shielded Connector

90° M12 connectors are also available.

Connector 1	Connector 2	Stationary Cable	Continuous Flex Cable
M12 to M12 Cordsets			
Male M12 Straight	Male M12 Straight	C5E105S*	C5E105F*
Male M12 Straight	Female M12 Straight	C5E107S*	C5E107F*
Female M12 Straight	Female M12 Straight	C5E106S*	C5E106F*

Connector 1	Connector 2	Stationary Cable	Continuous Flex Cable
M12 to RJ45 Cordsets			
Male M12 Straight	RJ45 Shielded	C5E108S*	C5E108F*
Female M12 Straight	RJ45 Shielded	C5E109S*	C5E109F*
RJ45 to RJ45 Cordsets			
RJ45 Shielded	RJ45 Shielded	C5E101S*	C5E101F*

* Add cable length in meters to the end of the part number.

Photographs are not to scale and are not true representations of the products in question.
For current information go to our website. If not otherwise specified, all values relating to the product are nominal values.

Ethernet Single-Ended Cordsets: 4 Pair CAT.6A

8-Pos. M12 or 8-Wire RJ45 Connectors to Flying Leads

Connector 1 **Connector 2**

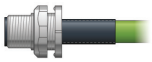
Male M12 Straight Connector

ETHERLINE® 4 Pair CAT.6A

Flying Leads

for stationary use: 2170464, page 253
for continuous flexing: 2170484, page 254

Male M12 Bulkhead



Female M12 Straight Connector

90° M12 connectors are also available.

Female M12 Bulkhead

RJ45 Shielded Connector

Connector 1	Connector 2	Stationary Cable (CAT.6A)	Continuous Flex Cable (CAT.6A)
M12 to Flying Leads			
Male M12 Straight	Flying Leads	C6A003S*	C6A003F*
Male M12 Bulkhead	Flying Leads	C6A010S*	C6A010F*
Female M12 Straight	Flying Leads	C6A004S*	C6A004F*
Female M12 Bulkhead	Flying Leads	C6A011S*	C6A011F*
RJ45 to Flying Leads			
RJ45 Shielded	Flying Leads	C6A002S*	C6A002F*

* Add cable length in meters to the end of the part number.

Ethernet Extension Cordsets: 4 Pair CAT.6A

8-Pos. M12 or 8-Wire RJ45 Connectors

Connector 1 **Connector 2**

Male M12 Straight Connector

ETHERLINE® 4 Pair CAT.6A

Male M12 Straight Connector

for stationary use: 2170464, page 253
for continuous flexing: 2170484, page 254

Female M12 Straight Connector

Female M12 Straight Connector

RJ45 Shielded Connector

RJ45 Shielded Connector

90° M12 connectors are also available.

Connector 1	Connector 2	Stationary Cable (CAT.6A)	Continuous Flex Cable (CAT.6A)	Connector 1	Connector 2	Stationary Cable (CAT.6A)	Continuous Flex Cable (CAT.6A)
M12 to M12 Cordsets				**M12 to RJ45 Cordsets**			
Male M12 Straight	Male M12 Straight	C6A005S*	C6A005F*	Male M12 Straight	RJ45 Shielded	C6A008S*	C6A008F*
Male M12 Straight	Female M12 Straight	C6A007S*	C6A007F*	Female M12 Straight	RJ45 Shielded	C6A009S*	C6A009F*
Female M12 Straight	Female M12 Straight	C6A006S*	C6A006F*	**RJ45 to RJ45 Cordsets**			
				RJ45 Shielded	RJ45 Shielded	C6A001S*	C6A001F*

* Add cable length in meters to the end of the part number.

Photographs are not to scale and are not true representations of the products in question.
For current information go to our website. If not otherwise specified, all values relating to the product are nominal values.

PROFINET Cordsets

Technical Data

These pre-tested molded cordsets utilize high quality continuous flex cable and integral molded strain relief. They are designed to provide interconnection between simple devices, such as sensors and actuators and high level devices, such as PLCs and computers, in high motion applications. When continuous flexing is not required, stationary cordsets offer long-lasting, reliable performance at a reduced cost.

Available Configurations

- Single-Ended Cordsets: 2 Pair
- Extension Ended Cordsets: 2 Pair

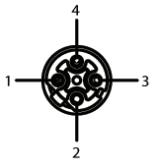
Technical Data

Materials:	
- Plug:	PBT (V-0 per UL 94)
- Coupling nut:	Nickel-plated brass
- Shield:	Foil & tinned copper braid
- Outer jacket:	Green polyurethane or PVC
- Conductor insulation:	Polyethylene
Rated Current:	
- PROFINET M12:	4A
- PROFINET RJ45:	1.5A
Rated Voltage:	
- PROFINET M12:	250V
- PROFINET RJ45:	42V
Number of Conductors:	22 AWG/2pr, stranded
Temperature Range:	see specific cable catalog page
Protection Class:	
- PROFINET M12:	IP67
- PROFINET RJ45:	IP20
Cable Type:	
- for stationary use:	ETHERLINE® 2 Pair CAT.5, page 243
- for continuous flexing:	ETHERLINE® 2 Pair CAT.5, page 244

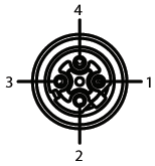
Pin Outs

PROFINET M12 D-coded

Male



Female



1 = Yellow (TD+)
2 = Orange (TD-)
3 = White (RD+)
4 = Blue (RD-)

PROFINET RJ45

RJ45 Shielded

1 = Yellow (TD+)
2 = Orange (TD-)
3 = White (RD+)
4 = N/C
5 = N/C
6 = Blue (RD-)
7 = N/C

Photographs are not to scale and are not true representations of the products in question.
For current information go to our website. If not otherwise specified, all values relating to the product are nominal values.

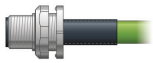
PROFINET Single-Ended Cordsets: 2 Pair CAT.5

4-Pos. M12 or 4-Wire RJ45 Connectors to Flying Leads

Connector 1

Male M12 Straight Connector

Male M12 Bulkhead



Female M12 Straight Connector

Female M12 Bulkhead

RJ45 Shielded Connector

ETHERLINE® 2 Pair CAT.5

Connector 2

Flying Leads

for stationary use: 2170886, page 243
for continuous flexing: 2170894, page 244

90° M12 connectors are also available.

Connector 1	Connector 2	Stationary Cable	Continuous Flex Cable
M12 to Flying Leads			
Male M12 Straight	Flying Leads	CPN003S*	CPN003F*
Male M12 Bulkhead	Flying Leads	CPN010S*	CPN010F*
Female M12 Straight	Flying Leads	CPN004S*	CPN004F*
Female M12 Bulkhead	Flying Leads	CPN011S*	CPN011F*
RJ45 to Flying Leads			
RJ45 Shielded	Flying Leads	CPN002S*	CPN002F*

* Add cable length in meters to the end of the part number.

PROFINET Extension Cordsets: 2 Pair CAT.5

4-Pos. M12 or 4-Wire RJ45 Connectors

Connector 1

Male M12 Straight Connector

Female M12 Straight Connector

RJ45 Shielded Connector

ETHERLINE® 2 Pair CAT.5

Connector 2

Male M12 Straight Connector

Female M12 Straight Connector

RJ45 Shielded Connector

for stationary use: 2170886, page 243
for continuous flexing: 2170894, page 244

90° M12 connectors are also available.

Connector 1	Connector 2	Stationary Cable	Continuous Flex Cable
M12 to M12 Cordsets			
Male M12 Straight	Male M12 Straight	CPN005S*	CPN005F*
Male M12 Straight	Female M12 Straight	CPN007S*	CPN007F*
Female M12 Straight	Female M12 Straight	CPN006S*	CPN006F*

Connector 1	Connector 2	Stationary Cable	Continuous Flex Cable
M12 to RJ45 Cordsets			
Male M12 Straight	RJ45 Shielded	CPN008S*	CPN008F*
Female M12 Straight	RJ45 Shielded	CPN009S*	CPN009F*
RJ45 to RJ45 Cordsets			
RJ45 Shielded	RJ45 Shielded	CPN001S*	CPN001F*

* Add cable length in meters to the end of the part number.

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For current information go to our website. If not otherwise specified, all values relating to the product are nominal values.

PROFIBUS Cordsets

Technical Data

These pre-tested molded cordsets utilize high-quality continuous flex cable and integral molded strain relief. They are designed to provide interconnection between simple devices such as sensors and actuators and high level devices such as PLCs and computers in high motion applications. When continuous flexing is not required, stationary cordsets offer long-lasting, reliable performance at a reduced cost.

Available Configurations

- Single-Ended Cordsets
- Extension Cordsets
- Panel Mount Receptacle Cordsets
- D-Sub Y-Cordsets
- D-Sub Cordsets

Approvals

Technical Data

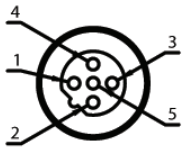
Materials:	
- Contact carrier:	Black PBT (V-0 per UL 94)
- Molded head:	Black thermoplastic polyurethane*
- Contacts:	Gold-plated brass
- Coupling nut:	Nickel-plated brass
- Shield:	Foil & tinned copper braid
- Outer jacket:	Violet PVC or polyurethane
- Conductor insulation:	Polyethylene
Rated Current:	4A
Rated Voltage:	250V
Number of Conductors:	24 or 22 AWG/2pr (shielded data pair)
Temperature Range:	
- PROFIBUS M12:	-40°C to +80°C
- PROFIBUS DB9:	0°C to +60°C
- Cable:	see specific cable catalog page
Protection Class:	
- PROFIBUS M12:	Meets NEMA 1, 3, 4, 6 & IEC IP67
- PROFIBUS DB:	Meets NEMA 1, 3, 4, 6, 13 & IEC IP67
- D9S:	IP20
Cable Type:	
- for stationary use:	UNITRONIC® BUS PB, page 168
- for continuous flex:	UNITRONIC® BUS PB FD, page 169

* Color is typical, not standard

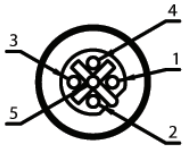
Pin Outs

PROFIBUS M12

Male



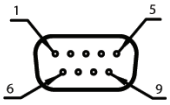
Female



1 = N/C
2 = Green (BUS_A)
3 = N/C
4 = Red (BUS_B)
5 = Bare (Shield)

PROFIBUS DB 9

Male



1 = N/C
2 = N/C
3 = Red (BUS_B)
4 = N/C
5 = N/C
6 = N/C
7 = N/C
8 = Green (BUS_A)
9 = N/C

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For current information go to our website. If not otherwise specified, all values relating to the product are nominal values.

PROFIBUS Single-Ended Cordsets

5-Pos. M12 Connectors to Flying Leads

Connector 1

Male M12 Straight Connector

Male M12 90° Connector

Female M12 Straight Connector

Female M12 90° Connector

UNITRONIC® BUS PB

Connector 2

Flying Leads

for stationary use: 2170219, page 168
for continuous flexing: 2170322, page 169

Connector 1	Connector 2	Stationary Cable	Continuous Flex Cable
Male M12 Cordsets			
Male M12 Straight	Flying Leads	PB4110100S*	PB4110100F*
Male M12 90°	Flying Leads	PB4110101S*	PB4110101F*
Female M12 Cordsets			
Female M12 Straight	Flying Leads	PB4110102S*	PB4110102F*
Female M12 90°	Flying Leads	PB4110103S*	PB4110103F*

* Add cable length in meters to the end of the part number.

PROFIBUS Extension Cordsets

5-Pos. M12 Connectors to 5-Pos. M12 Connectors

Connector 1

Male M12 Straight Connector

Male M12 90° Connector

Female M12 Straight Connector

Female M12 90° Connector

UNITRONIC® BUS PB

Connector 2

Male M12 Straight Connector

Male M12 90° Connector

Female M12 Straight Connector

Female M12 90° Connector

for stationary use: 2170219, page 168
for continuous flexing: 2170322, page 169

Connector 1	Connector 2	Stationary Cable	Continuous Flex Cable	Connector 1	Connector 2	Stationary Cable	Continuous Flex Cable
Male M12 to M12 Cordsets				**Female M12 to M12 Cordsets**			
Male M12 Straight	Male M12 Straight	PB4110128S*	PB4110128F*	Female M12 Straight	Male M12 Straight	PB4110104S*	PB4110104F*
Male M12 Straight	Male M12 90°	PB4110130S*	PB4110130F*	Female M12 Straight	Male M12 90°	PB4110106S*	PB4110106F*
Male M12 Straight	Female M12 Straight	PB4110132S*	PB4110132F*	Female M12 Straight	Female M12 Straight	PB4110134S*	PB4110134F*
Male M12 Straight	Female M12 90°	PB4110136S*	PB4110136F*	Female M12 Straight	Female M12 90°	PB4110138S*	PB4110138F*
Male M12 90°	Male M12 Straight	PB4110129S*	PB4110129F*	Female M12 90°	Male M12 Straight	PB4110105S*	PB4110105F*
Male M12 90°	Male M12 90°	PB4110131S*	PB4110131F*	Female M12 90°	Male M12 90°	PB4110107S*	PB4110107F*
Male M12 90°	Female M12 Straight	PB4110133S*	PB4110133F*	Female M12 90°	Female M12 Straight	PB4110135S*	PB4110135F*
Male M12 90°	Female M12 90°	PB4110137S*	PB4110137F*	Female M12 90°	Female M12 90°	PB4110139S*	PB4110139F*

* Add cable length in meters to the end of the part number.

PROFIBUS Panel Mount Receptacle Cordsets

5-Pos. M12 Panel Mount Bulkheads to Flying Leads

Connector 1

Male M12 Bulkhead

Female M12 Bulkhead

UNITRONIC® BUS PB

Connector 2

Flying Leads

for stationary use: 2170219, page 168
for continuous flexing: 2170322, page 169

Connector 1	Connector 2	Stationary Cable	Continuous Flex Cable	Connector 1	Connector 2	Stationary Cable	Continuous Flex Cable
Male M12 Cordsets				**Female M12 Cordsets**			
Male M12 Bulkhead	Flying Leads	PB4110119S*	PB4110119F*	Female M12 Bulkhead	Flying Leads	PB4110120S*	PB4110120F*

* Add cable length in meters to the end of the part number.

Photographs are not to scale and are not true representations of the products in question.
For current information go to our website. If not otherwise specified, all values relating to the product are nominal values.

PROFIBUS D-Sub Y-Cordsets

Two 5-Pos. M12 Connectors to 9-Pos. D-Sub Node Module

Connector 1/2

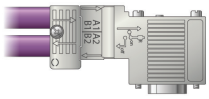
Male M12 Straight Connector

Male M12 90° Connector

Female M12 Straight Connector

Female M12 90° Connector

UNITRONIC® BUS PB
UNITRONIC® BUS PB



9-Pos. D-Sub Node Module

for stationary use: 2170219, page 168
for continuous flexing: 2170322, page 169

Connector 1	Connector 2	Stationary Cable	Continuous Flex Cable
2 Male M12 to D-Sub Node			
Male M12 Straight	Male M12 Straight	PB4110108S*	PB4110108F*
Male M12 Straight	Male M12 90°	PB4110149S*	PB4110149F*
Male M12 90°	Male M12 90°	PB4110109S*	PB4110109F*
2 Female M12 to D-Sub Node			
Female M12 Straight	Female M12 Straight	PB4110110S*	PB4110110F*
Female M12 Straight	Female M12 90°	PB4110150S*	PB4110150F*
Female M12 90°	Female M12 90°	PB4110111S*	PB4110111F*
1 Male/1 Female M12 to D-Sub Node			
Male M12 Straight	Female M12 Straight	PB4110112S*	PB4110112F*

* Add cable length in meters to the end of the part number.

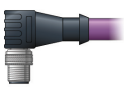
PROFIBUS D-Sub Y-Cordsets

Two 5-Pos. M12 Connectors to 9-Pos. D-Sub Straight Module

Connector 1/2

Male M12 Straight Connector

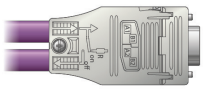
Male M12 90° Connector



Female M12 Straight Connector

Female M12 90° Connector

UNITRONIC® BUS PB
UNITRONIC® BUS PB



9-Pos. D-Sub Node Module

for stationary use: 2170219, page 168
for continuous flexing: 2170322, page 169

Connector 1	Connector 2	Stationary Cable	Continuous Flex Cable
2 Male M12 to D-Sub Straight			
Male M12 Straight	Male M12 Straight	PB4110158S*	PB4110158F*
Male M12 Straight	Male M12 90°	PB4110156S*	PB4110156F*
Male M12 90°	Male M12 90°	PB4110160S*	PB4110160F*
2 Female M12 to D-Sub Straight			
Female M12 Straight	Female M12 Straight	PB4110161S*	PB4110161F*
Female M12 Straight	Female M12 90°	PB4110157S*	PB4110157F*
Female M12 90°	Female M12 90°	PB4110162S*	PB4110162F*
1 Male/1 Female M12 to D-Sub Straight			
Male M12 Straight	Female M12 Straight	PB4110163S*	PB4110163F*

* Add cable length in meters to the end of the part number.

Photographs are not to scale and are not true representations of the products in question.
For current information go to our website. If not otherwise specified, all values relating to the product are nominal values.

PROFIBUS D-Sub Cordsets

5-Pos. M12 Connectors or Flying Leads to 9-Pos. D-Sub Terminator Modules

Connector 1

Male M12 Straight Connector

Male M12 90° Connector

Female M12 Straight Connector

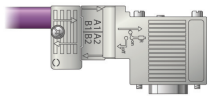
Female M12 90° Connector

Flying Leads

UNITRONIC® BUS PB

for stationary use: 2170219, page 168
for continuous flexing: 2170322, page 169

Connector 2



9-Pos. D-Sub Terminator Module

Connector 1	Connector 2	Stationary Cable	Continuous Flex Cable
M12 to D-Sub Terminator			
Male M12 Straight	D-Sub Terminator	PB4110141S*	PB4110141F*
Male M12 90°	D-Sub Terminator	PB4110142S*	PB4110142F*
Female M12 Straight	D-Sub Terminator	PB4110143S*	PB4110143F*
Female M12 90°	D-Sub Terminator	PB4110144S*	PB4110144F*
Flying Leads to D-Sub Terminator			
Flying Leads	D-Sub Terminator	PB4110140S*	PB4110140F*

* Add cable length in meters to the end of the part number.

PROFIBUS D-Sub Cordsets

5-Pos. M12 Connectors or Flying Leads to 9-Pos. D-Sub Master Modules

Connector 1

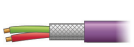
Male M12 Straight Connector

Male M12 90° Connector

Female M12 Straight Connector

Female M12 90° Connector

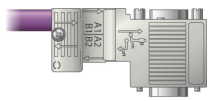
Flying Leads



UNITRONIC® BUS PB

for stationary use: 2170219, page 168
for continuous flexing: 2170322, page 169

Connector 2



9-Pos. D-Sub Master Module

Connector 1	Connector 2	Stationary Cable	Continuous Flex Cable
M12 to D-Sub Master			
Male M12 Straight	D-Sub Master	PB4110113S*	PB4110113F*
Male M12 90°	D-Sub Master	PB4110114S*	PB4110114F*
Female M12 Straight	D-Sub Master	PB4110115S*	PB4110115F*
Female M12 90°	D-Sub Master	PB4110116S*	PB4110116F*
Flying Leads to D-Sub Master			
Flying Leads	D-Sub Master	PB4110118S*	PB4110118F*

* Add cable length in meters to the end of the part number.

Photographs are not to scale and are not true representations of the products in question.
For current information go to our website. If not otherwise specified, all values relating to the product are nominal values.

PROFIBUS D-Sub Cordsets

5-Pos. M12 Connectors or Flying Leads to 9-Pos. D-Sub Node Modules

Connector 1

Male M12 Straight Connector

Male M12 90° Connector

Female M12 Straight Connector

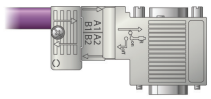
Female M12 90° Connector

Flying Leads

UNITRONIC® BUS PB

for stationary use: 2170219, page 168
for continuous flexing: 2170322, page 169

Connector 2



9-Pos. D-Sub Node Module

Connector 1	Connector 2	Stationary Cable	Continuous Flex Cable
M12 to D-Sub Node			
Male M12 Straight	D-Sub Node	PB4110145S*	PB4110145F*
Male M12 90°	D-Sub Node	PB4110146S*	PB4110146F*
Female M12 Straight	D-Sub Node	PB4110147S*	PB4110147F*
Female M12 90°	D-Sub Node	PB4110148S*	PB4110148F*
Flying Leads to D-Sub Node			
Flying Leads	D-Sub Node	PB4110117S*	PB4110117F*

* Add cable length in meters to the end of the part number.

PROFIBUS D-Sub Cordsets

5-Pos. M12 Connectors or Flying Leads to 9-Pos. D-Sub Straight Modules

Connector 1

Male M12 Straight Connector

Male M12 90° Connector

Female M12 Straight Connector

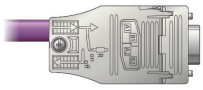
Female M12 90° Connector

Flying Leads

UNITRONIC® BUS PB

for stationary use: 2170219, page 168
for continuous flexing: 2170322, page 169

Connector 2



9-Pos. D-Sub Straight Module

Connector 1	Connector 2	Stationary Cable	Continuous Flex Cable
M12 to D-Sub Straight			
Male M12 Straight	D-Sub Straight	PB4110152S*	PB4110152F*
Male M12 90°	D-Sub Straight	PB4110153S*	PB4110153F*
Female M12 Straight	D-Sub Straight	PB4110154S*	PB4110154F*
Female M12 90°	D-Sub Straight	PB4110155S*	PB4110155F*
Flying Leads to D-Sub Straight			
Flying Leads	D-Sub Straight	PB4110151S*	PB4110151F*

* Add cable length in meters to the end of the part number.

Photographs are not to scale and are not true representations of the products in question.
For current information go to our website. If not otherwise specified, all values relating to the product are nominal values.

DeviceNet™ Cordsets

Technical Data

These molded cordsets offer Thick and Thin connectivity in a DeviceNet™ application. Our solutions offer the ability to connect in a motion system such as X-Y-Z motion equipment. The stationary versions offer the same functionality as the flexing in terms of connectivity but in a stationary environment. A conveyor system is a good example of use for this product.

Approvals*

* Thin cordsets are UL Recognized. UL Recognition for Thick cordsets is available upon request

Available Configurations

- Thick Single-Ended Cordsets
- Thick Panel Mount Receptacles
- Thick Extension Cordsets
- Thick Panel Mount Extension Cordsets
- Thin Single-Ended Cordsets
- Thin Extension Cordsets
- Thin Panel Mount Receptacles
- Thin Panel Mount Extension Cordsets
- Thin Open-Style Termination Cordsets

Technical Data

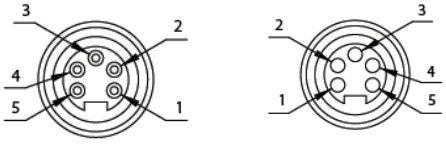
Materials:	
- Contact carrier:	Blue-gray thermoplastic polyurethane
- Molded head:	Blue-gray thermoplastic polyurethane*
- Contacts:	Gold-plated brass
- Coupling nut:	Nickel-plated brass
- Shield:	Foil (pairs) & overall tinned copper braid
- Outer jacket:	Gray PVC
- Conductor insulation:	
- for data:	Polyethylene
- for power:	PVC
Rated Current:	
- DeviceNet™ ⅞":	9A
- DeviceNet™ M12:	4A
Rated Voltage:	
- DeviceNet™ ⅞":	300V
- DeviceNet™ M12:	250V
Number of Conductors:	
- DeviceNet™ ⅞":	
- 6001:	14 AWG/2c + 18 AWG/2c + 18 AWG drain wire
- 4001:	15 AWG/2c + 18 AWG/2c + 18 AWG drain wire
- DeviceNet™ M12:	22 AWG/2c + 24 AWG/2c + 22 AWG drain wire
Temperature Range:	-20°C to +75°C
Protection Class:	Meets NEMA 1, 3, 4, 6, 13 & IEC IP67
Cable Type:	
- for stationary use:	UNITRONIC® BUS DeviceNet™ Gray, page 162
- for continuous flex:	UNITRONIC® BUS DeviceNet™ Gray, page 163

* Color is typical, not standard

Pin Outs

DeviceNet™ ⅞"

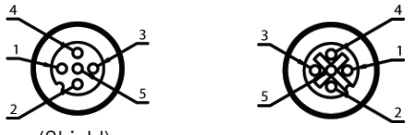
Male **Female**



1 = Bare (Shield)
2 = Red (+Voltage)
3 = Black (–Voltage)
4 = White (CAN_H)
5 = Blue (CAN_L)

DeviceNet™ M12

Male MALE M12 **Female** FEMALE M12



1 = Bare (Shield)
2 = Red (+Voltage)
3 = Black (–Voltage)
4 = White (CAN_H)
5 = Blue (CAN_L)

Photographs are not to scale and are not true representations of the products in question.
For current information go to our website. If not otherwise specified, all values relating to the product are nominal values.

DeviceNet™ Thick Single-Ended Cordsets

5-Pos. 7/8" Connectors to Flying Leads

Connector 1 **Connector 2**

Male 7/8" Straight Connector

UNITRONIC® DeviceNet™ THICK

Flying Leads

for stationary use: 4001, page 162
for continuous flexing: 6001, page 163

Male 7/8" 90° Connector

Female 7/8" Straight Connector

Female 7/8" 90° Connector

Connector 1	Connector 2	Stationary Cable	Continuous Flex Cable
Male 7/8" Cordsets			
Male 7/8" Straight	Flying Leads	DN4110001S*	DN4110001F*
Male 7/8" 90°	Flying Leads	DN4110002S*	DN4110002F*
Female 7/8" Cordsets			
Female 7/8" Straight	Flying Leads	DN4110003S*	DN4110003F*
Female 7/8" 90°	Flying Leads	DN4110004S*	DN4110004F*

* Add cable length in meters to the end of the part number.

DeviceNet™ Thick Panel Mount Receptacle Cordsets

5-Pos. 7/8" Panel Mount Bulkheads to Flying Leads

Connector 1 **Connector 2**

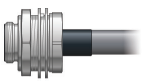
Male 7/8" Panel Mount

UNITRONIC® DeviceNet™ THICK

Flying Leads

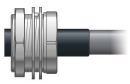
for stationary use: 4001, page 162
for continuous flexing: 6001, page 163

Male 7/8" Bulkhead



Female 7/8" Panel Mount

Female 7/8" Bulkhead



Connector 1	Connector 2	Stationary Cable	Continuous Flex Cable
Male 7/8" Cordsets			
Male 7/8" Panel Mount	Flying Leads	DN4110005S*	DN4110005F*
Male 7/8" Bulkhead	Flying Leads	DN4110097S*	DN4110097F*
Female 7/8" Cordsets			
Female 7/8" Panel Mount	Flying Leads	DN4110006S*	DN4110006F*
Female 7/8" Bulkhead	Flying Leads	DN4110098S*	DN4110098F*

* Add cable length in meters to the end of the part number.

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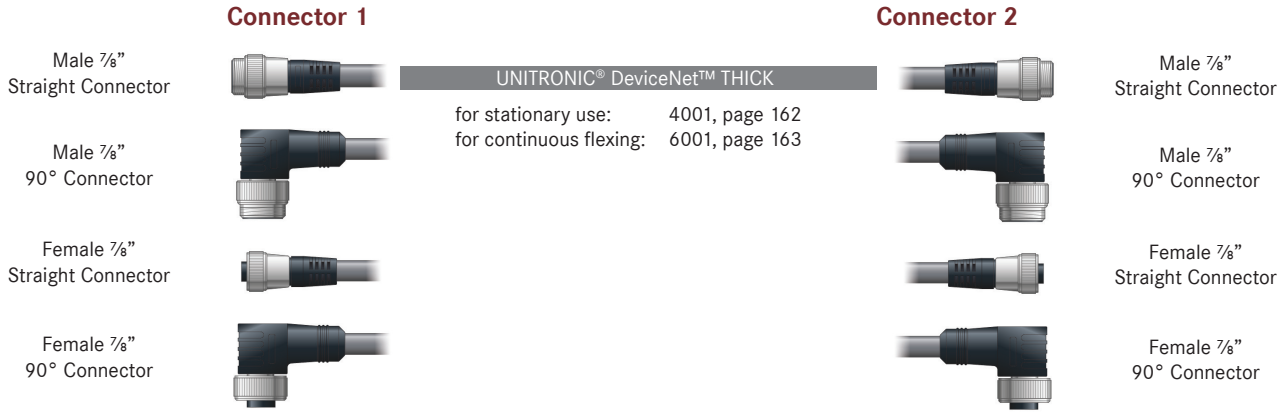
For current information go to our website. If not otherwise specified, all values relating to the product are nominal values.

DeviceNet™ Thick Extension Cordsets

5-Pos. 7/8" Connectors to 5-Pos. 7/8" Connectors

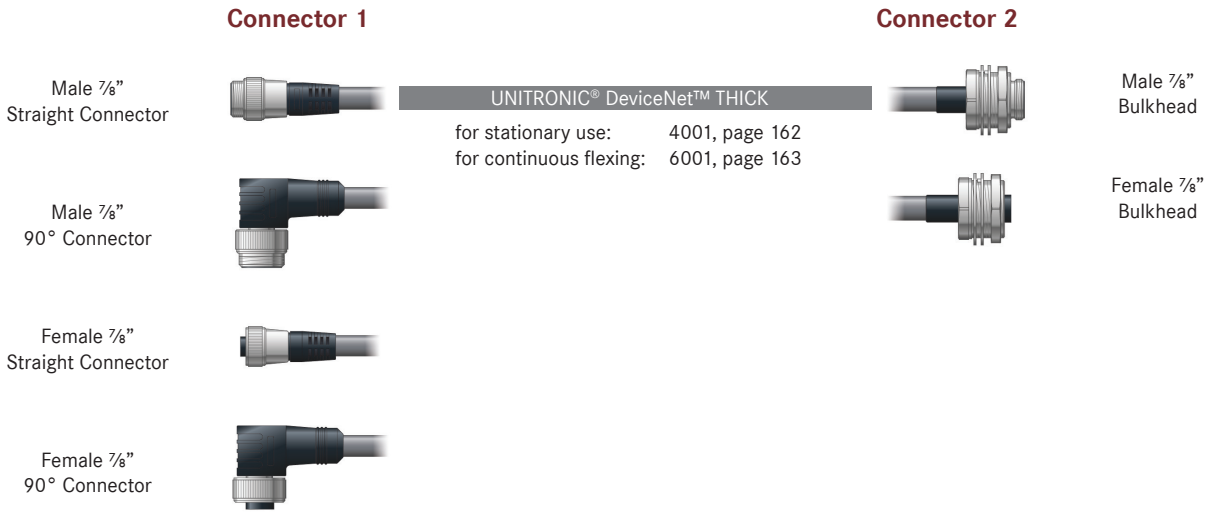


Connector 1	Connector 2	Stationary Cable	Continuous Flex Cable	Connector 1	Connector 2	Stationary Cable	Continuous Flex Cable
Male 7/8" to 7/8" Cordsets				**Female 7/8" to 7/8" Cordsets**			
Male 7/8" Straight	Male 7/8" Straight	DN4110052S*	DN4110052F*	Female 7/8" Straight	Female 7/8" Straight	DN4110055S*	DN4110055F*
Male 7/8" Straight	Male 7/8" 90°	DN4110053S*	DN4110053F*	Female 7/8" Straight	Female 7/8" 90°	DN4110056S*	DN4110056F*
Male 7/8" Straight	Female 7/8" Straight	DN4110008S*	DN4110008F*	Female 7/8" 90°	Female 7/8" 90°	DN4110057S*	DN4110057F*
Male 7/8" Straight	Female 7/8" 90°	DN4110009S*	DN4110009F*				
Male 7/8" 90°	Male 7/8" 90°	DN4110054S*	DN4110054F*				
Male 7/8" 90°	Female 7/8" Straight	DN4110010S*	DN4110010F*				
Male 7/8" 90°	Female 7/8" 90°	DN4110011S*	DN4110011F*				

* Add cable length in meters to the end of the part number.

DeviceNet™ Thick Panel Mount Extension Cordsets

5-Pos. 7/8" Connectors to 5-Pos. 7/8" Panel Mount Bulkheads



Connector 1	Connector 2	Stationary Cable	Continuous Flex Cable	Connector 1	Connector 2	Stationary Cable	Continuous Flex Cable
Male 7/8" to 7/8" Cordsets				**Female 7/8" to 7/8" Cordsets**			
Male 7/8" Straight	Male 7/8" Bulkhead	DN4110072S*	DN4110072F*	Female 7/8" Straight	Male 7/8" Bulkhead	DN4110015S*	DN4110015F*
Male 7/8" Straight	Female 7/8" Bulkhead	DN4110017S*	DN4110017F*	Female 7/8" Straight	Female 7/8" Bulkhead	DN4110078S*	DN4110078F*
Male 7/8" 90°	Male 7/8" Bulkhead	DN4110073S*	DN4110073F*	Female 7/8" 90°	Male 7/8" Bulkhead	DN4110016S*	DN4110016F*
Male 7/8" 90°	Female 7/8" Bulkhead	DN4110018S*	DN4110018F*	Female 7/8" 90°	Female 7/8" Bulkhead	DN4110079S*	DN4110079F*

* Add cable length in meters to the end of the part number.

Photographs are not to scale and are not true representations of the products in question.
For current information go to our website. If not otherwise specified, all values relating to the product are nominal values.

DeviceNet™ Thin Single-Ended Cordsets

5-Pos. M12 Connectors to Flying Leads

Connector 1 **Connector 2**

Male M12 Straight Connector

UNITRONIC® DeviceNet™ THIN

Flying Leads

for stationary use: 4002, page 162
for continuous flexing: 6002, page 163

Male M12 90° Connector

Female M12 Straight Connector

Female M12 90° Connector

Connector 1	Connector 2	Stationary Cable	Continuous Flex Cable
Male M12 Cordsets			
Male M12 Straight	Flying Leads	DN4110019S*	DN4110019F*
Male M12 90°	Flying Leads	DN4110020S*	DN4110020F*
Female M12 Cordsets			
Female M12 Straight	Flying Leads	DN4110021S*	DN4110021F*
Female M12 90°	Flying Leads	DN4110022S*	DN4110022F*

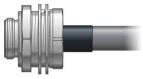
* Add cable length in meters to the end of the part number.

DeviceNet™ Thin Panel Mount Receptacle Cordsets

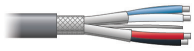
5-Pos. M12 Panel Mount Bulkheads to Flying Leads

Connector 1 **Connector 2**

Male ⅞" Bulkhead



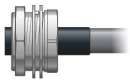
UNITRONIC® DeviceNet™ THIN



Flying Leads

for stationary use: 4002, page 162
for continuous flexing: 6002, page 163

Female ⅞" Bulkhead



Connector 1	Connector 2	Stationary Cable	Continuous Flex Cable
Male M12 Cordsets			
Male M12 Bulkhead	Flying Leads	DN4110040S*	DN4110040F*
Female M12 Cordsets			
Female M12 Bulkhead	Flying Leads	DN4110039S*	DN4110039F*

* Add cable length in meters to the end of the part number.

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For current information go to our website. If not otherwise specified, all values relating to the product are nominal values.

DeviceNet™ Thin Extension Cordsets

5-Pos. 7/8" Connectors to 5-Pos. M12 Connectors

Connector 1

Male 7/8" Straight Connector

Male 7/8" 90° Connector

Female 7/8" Straight Connector

Female 7/8" 90° Connector

UNITRONIC® DeviceNet™ THIN

for stationary use: 4002, page 162

for continuous flexing: 6002, page 163

Connector 2

Male M12 Straight Connector

Male M12 90° Connector

Female M12 Straight Connector

Female M12 90° Connector

Connector 1	Connector 2	Stationary Cable	Continuous Flex Cable	Connector 1	Connector 2	Stationary Cable	Continuous Flex Cable
Male 7/8" to M12 Cordsets				**Female 7/8" to M12 Cordsets**			
Male 7/8" Straight	Male M12 Straight	DN4110058S*	DN4110058F*	Female 7/8" Straight	Male M12 Straight	DN4110031S*	DN4110031F*
Male 7/8" Straight	Male M12 90°	DN4110061S*	DN4110061F*	Female 7/8" Straight	Male M12 90°	DN4110032S*	DN4110032F*
Male 7/8" Straight	Female M12 Straight	DN4110027S*	DN4110027F*	Female 7/8" Straight	Female M12 Straight	DN4110065S*	DN4110065F*
Male 7/8" Straight	Female M12 90°	DN4110028S*	DN4110028F*	Female 7/8" Straight	Female M12 90°	DN4110068S*	DN4110068F*
Male 7/8" 90°	Male M12 Straight	DN4110059S*	DN4110059F*	Female 7/8" 90°	Male M12 Straight	DN4110033S*	DN4110033F*
Male 7/8" 90°	Male M12 90°	DN4110062S*	DN4110062F*	Female 7/8" 90°	Male M12 90°	DN4110034S*	DN4110034F*
Male 7/8" 90°	Female M12 Straight	DN4110029S*	DN4110029F*	Female 7/8" 90°	Female M12 Straight	DN4110066S*	DN4110066F*
Male 7/8" 90°	Female M12 90°	DN4110030S*	DN4110030F*	Female 7/8" 90°	Female M12 90°	DN4110069S*	DN4110069F*

* Add cable length in meters to the end of the part number.

DeviceNet™ Thin Extension Cordsets

5-Pos. M12 Connectors to 5-Pos. M12 Connectors

Connector 1

Male M12 Straight Connector

Male M12 90° Connector

Female M12 Straight Connector

Female M12 90° Connector

UNITRONIC® DeviceNet™ THIN

for stationary use: 4002, page 162

for continuous flexing: 6002, page 163

Connector 2

Male M12 Straight Connector

Male M12 90° Connector

Female M12 Straight Connector

Female M12 90° Connector

Connector 1	Connector 2	Stationary Cable	Continuous Flex Cable	Connector 1	Connector 2	Stationary Cable	Continuous Flex Cable
Male M12 to M12 Cordsets				**Female M12 to M12 Cordsets**			
Male M12 Straight	Male M12 Straight	DN4110060S*	DN4110060F*	Female M12 Straight	Female M12 Straight	DN4110067S*	DN4110067F*
Male M12 Straight	Male M12 90°	DN4110063S*	DN4110063F*	Female M12 Straight	Female M12 90°	DN4110070S*	DN4110070F*
Male M12 Straight	Female M12 Straight	DN4110023S*	DN4110023F*	Female M12 90°	Female M12 90°	DN4110071S*	DN4110071F*
Male M12 Straight	Female M12 90°	DN4110024S*	DN4110024F*				
Male M12 90°	Male M12 90°	DN4110064S*	DN4110064F*				
Male M12 90°	Female M12 Straight	DN4110025S*	DN4110025F*				
Male M12 90°	Female M12 90°	DN4110026S*	DN4110026F*				

* Add cable length in meters to the end of the part number.

Photographs are not to scale and are not true representations of the products in question.
For current information go to our website. If not otherwise specified, all values relating to the product are nominal values.

DeviceNet™ Thin Panel Mount Extension Cordsets

5-Pos. 7/8" Connectors to 5-Pos. M12 Panel Mount Bulkheads

Connector 1

Male 7/8" Straight Connector

Male 7/8" 90° Connector

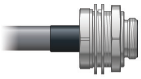
Female 7/8" Straight Connector

Female 7/8" 90° Connector

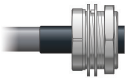
UNITRONIC® DeviceNet™ THIN

for stationary use: 4002, page 162
for continuous flexing: 6002, page 163

Connector 2



Male 7/8" Bulkhead



Female 7/8" Bulkhead

Connector 1	Connector 2	Stationary Cable	Continuous Flex Cable
Male 7/8" to M12 Cordsets			
Male 7/8" Straight	Male M12 Bulkhead	DN4110085S*	DN4110085F*
Male 7/8" Straight	Female M12 Bulkhead	DN4110091S*	DN4110091F*
Male 7/8" 90°	Male M12 Bulkhead	DN4110086S*	DN4110086F*
Male 7/8" 90°	Female M12 Bulkhead	DN4110092S*	DN4110092F*
Female 7/8" to M12 Cordsets			
Female 7/8" Straight	Male M12 Bulkhead	DN4110087S*	DN4110087F*
Female 7/8" Straight	Female M12 Bulkhead	DN4110093S*	DN4110093F*
Female 7/8" 90°	Male M12 Bulkhead	DN4110088S*	DN4110088F*
Female 7/8" 90°	Female M12 Bulkhead	DN4110094S*	DN4110094F*

* Add cable length in meters to the end of the part number.

DeviceNet™ Thin Panel Mount Extension Cordsets

5-Pos. M12 Connectors to 5-Pos. 7/8" Panel Mount Bulkheads

Connector 1

Male M12 Straight Connector

Male M12 90° Connector

Female M12 Straight Connector

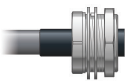
Female M12 90° Connector

UNITRONIC® DeviceNet™ THIN

for stationary use: 4002, page 162
for continuous flexing: 6002, page 163

Connector 2

Male 7/8" Bulkhead



Female 7/8" Bulkhead

Connector 1	Connector 2	Stationary Cable	Continuous Flex Cable
Male M12 to 7/8" Cordsets			
Male M12 Straight	Male 7/8" Bulkhead	DN4110074S*	DN4110074F*
Male M12 Straight	Female 7/8" Bulkhead	DN4110080S*	DN4110080F*
Male M12 90°	Male 7/8" Bulkhead	DN4110075S*	DN4110075F*
Male M12 90°	Female 7/8" Bulkhead	DN4110081S*	DN4110081F*
Female M12 to 7/8" Cordsets			
Female M12 Straight	Male 7/8" Bulkhead	DN4110076S*	DN4110076F*
Female M12 Straight	Female 7/8" Bulkhead	DN4110082S*	DN4110082F*
Female M12 90°	Male 7/8" Bulkhead	DN4110077S*	DN4110077F*
Female M12 90°	Female 7/8" Bulkhead	DN4110083S*	DN4110083F*

* Add cable length in meters to the end of the part number.

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DeviceNet™ Thin Panel Mount Extension Cordsets

5-Pos. M12 Connectors to 5-Pos. M12 Panel Mount Bulkheads

Connector 1

Male M12 Straight Connector

Male M12 90° Connector

Female M12 Straight Connector

Female M12 90° Connector

UNITRONIC® DeviceNet™ THIN

for stationary use: 4002, page 162
for continuous flexing: 6002, page 163

Connector 2

Male M12 Bulkhead

Female M12 Bulkhead

Connector 1	Connector 2	Stationary Cable	Continuous Flex Cable
Male M12 to M12 Cordsets			
Male M12 Straight	Male M12 Bulkhead	DN4110089S*	DN4110089F*
Male M12 Straight	Female M12 Bulkhead	DN4110037S*	DN4110037F*
Male M12 90°	Male M12 Bulkhead	DN4110090S*	DN4110090F*
Male M12 90°	Female M12 Bulkhead	DN4110038S*	DN4110038F*
Female M12 to M12 Cordsets			
Female M12 Straight	Male M12 Bulkhead	DN4110035S*	DN4110035F*
Female M12 Straight	Female M12 Bulkhead	DN4110095S*	DN4110095F*
Female M12 90°	Male M12 Bulkhead	DN4110036S*	DN4110036F*
Female M12 90°	Female M12 Bulkhead	DN4110096S*	DN4110096F*

* Add cable length in meters to the end of the part number.

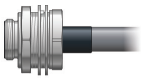
DeviceNet™ Thin Open Style Termination Cordsets

5-Pos. ⅞" or M12 Panel Mount Bulkheads to 5-Pos. Plug Header

Connector 1

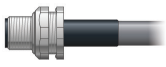
Male ⅞" Straight Connector

Male ⅞" Bulkhead

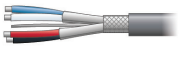


Male M12 Straight Connector

Male M12 Bulkhead



Flying Leads



UNITRONIC® DeviceNet™ THIN

for stationary use: 4002, page 162
for continuous flexing: 6002, page 163

Connector 2

Plug Header

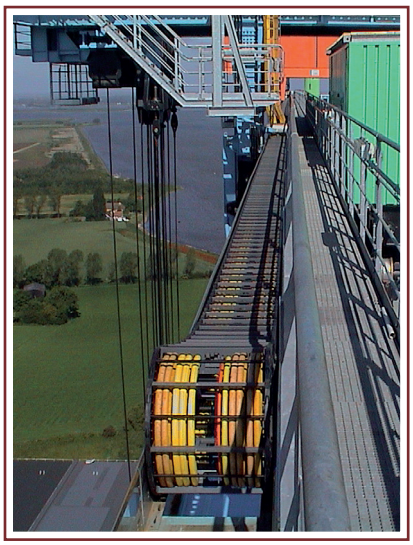
Connector 1	Connector 2	Stationary Cable	Continuous Flex Cable
Plug Header to ⅞" Cordsets			
Male ⅞" Straight	Plug Header	DN4110046S*	DN4110046F*
Male ⅞" Bulkhead	Plug Header	DN4110050S*	DN4110050F*
Plug Header to M12 Cordsets			
Male M12 Straight	Plug Header	DN4110048S*	DN4110048F*
Male M12 Bulkhead	Plug Header	DN4110049S*	DN4110049F*
Plug Header to Flying Leads			
Flying Leads	Plug Header	DN4110047S*	DN4110047F*

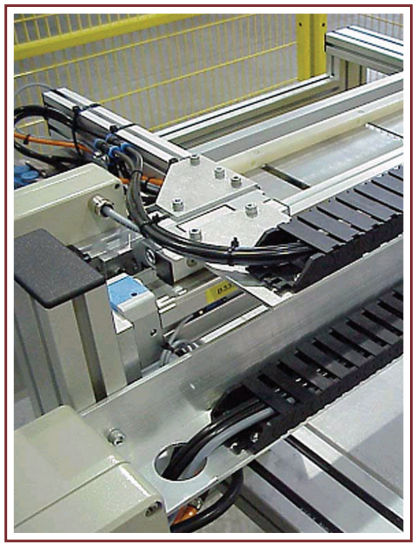
* Add cable length in meters to the end of the part number.

Photographs are not to scale and are not true representations of the products in question.
For current information go to our website. If not otherwise specified, all values relating to the product are nominal values.

Populated Cable Tracks

Lapp Systems Capabilities





Lapp Systems specializes in custom populated cable carriers and assemblies for use in the automation control and drive industries.

Research and collaboration with the major drive manufacturers has led to the development of connectorized cable assemblies for use with servo and VFD systems. These assemblies are custom designed by Lapp's team of experts to meet the unique demands of each application, from high flex to stationary. Custom cable carrier systems are also used in robotic and automation control applications, and feature ease of use and substantial time and cost savings, because material management and installation functions are performed by Lapp. As a result, system failures and downtime often caused by improper installation of products is eliminated, ensuring longer life and reliability in even the most demanding applications.

Additional benefits include factory testing, a performance warranty on the entire system, and fast delivery times.

Steps for design:

- Initial request-list of requirements
- Initial design
- Review design
- CAD drawing
- Approval for drawing
- 1st article

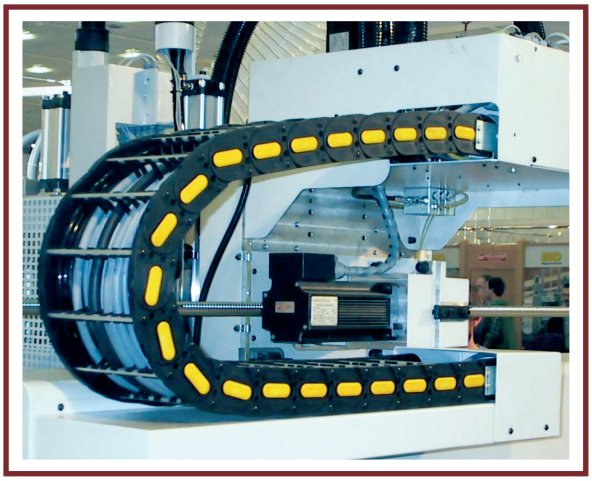
What can be included:

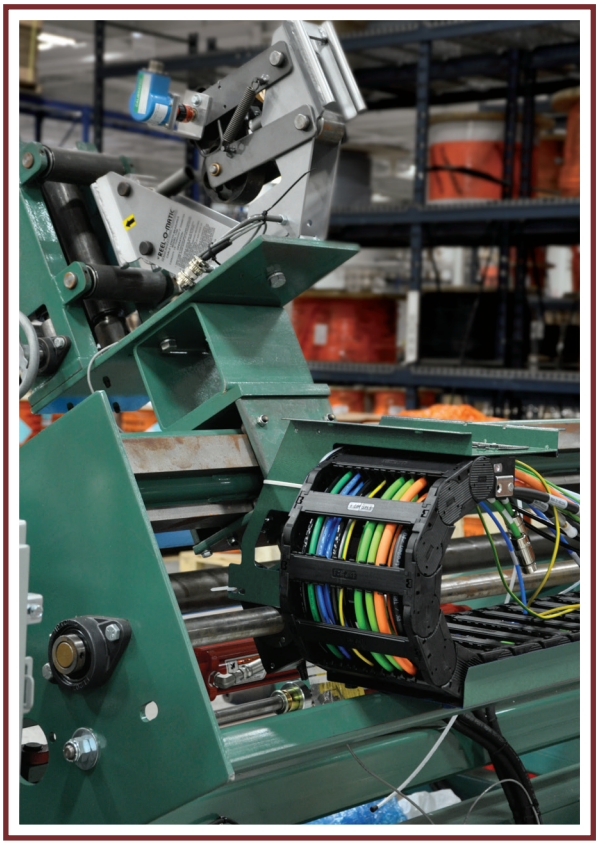
- Cables
- Connectors
- Hoses

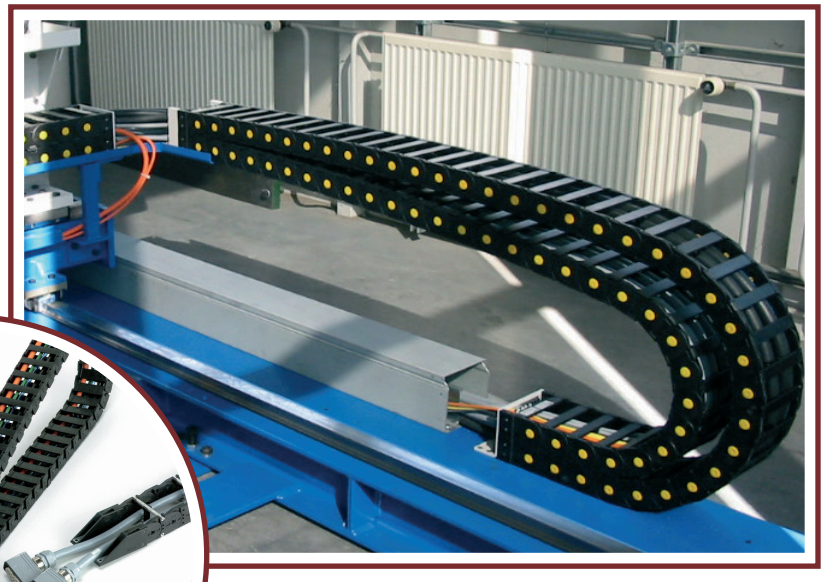
Why use Lapp?

- Overall cost savings
- Longer flex life and reliability
- Custom design for each application
- Performance warranty
- Assemblies by the experts in cable/connector design

Photographs are not to scale and are not true representations of the products in question.
For current information go to our website. If not otherwise specified, all values relating to the product are nominal values.







Populated Cable Tracks

Track Design Form

This form is designed to assist us in creating your custom populated track. Please complete as much of the form as possible and fax to 973-660-9330 or email to sales@lappusa.com or your local Lapp representative. The custom track order form is also available online at www.lappusa.com.

Track Specifications

1. Total length of existing track, if replacing: _____
2. Total distance traveled in one cycle: _____
3. Direction/orientation of travel (please check one):

   ☐ Horizontal ☐ Vertical ☐ Side-running
4. Is the track center mounted? _____
5. If not center mounted, how much off center (inches)? _____
6. Type of equipment track is installed on: _____
7. Number of cables and hoses in track: _____
8. Operation speed (feet per second): _____
9. Track acceleration (feet per second^2): _____
10. Operation frequency (cycles per minute): _____
11. Maximum available mounting width (inches): _____
12. Maximum available mounting height (inches): _____
13. Standard mounting bracket orientation is outside-to-outside. If other, please specify:

    _____
14. Environmental data (please check all that apply):

    ☐ Clean, dry indoors ☐ Chemical, wet, or chips ☐ High temperature: > 150°F ☐ Outdoors
15. Please describe any unusual environmental factors:

    _____

    _____

Carrier Contents

Quantity	Part Number	Weight	Outer Diameter	Min. Bend Radius	Quantity	Part Number	Weight	Outer Diameter	Min. Bend Radius
Cables					Hoses				

Remote Access Ports

Lapp Systems Capabilities

Lapp Systems provides the key to continued productivity with a complete line of Remote Access Ports. These ports allow for easy access to a PLC or industrial computer device without compromising safety. Many configurations are available for "standard" protocols while custom designs can be manufactured to suit any application. Pre-wired cable assemblies are also offered to ensure proper component termination.

Before... The Hard Way

- Dangerous open exposed wire
- Safety hazard
- Production interruption

After... The Easy Way

- Closed panel
- Safe
- Production continuity

OSHA, in conjunction with NFPA, defines safe work practices for employees working on or around live voltage. Personnel who have not been trained and certified and who are not wearing approved personal protective equipment shall not open panels over 50V DC to program a device within the panel.

Approvals

UL E211786

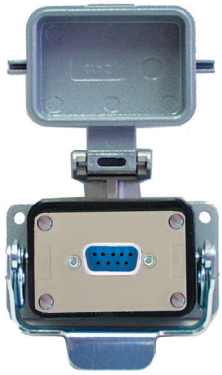
Remote access ports provide programming access without opening the panel to allow you to comply with:

- OSHA 29 CRF 1910.147
- NFPA 70E and NFPA 79 Electrical Machinery Safety
- Standard 2002 Edition, Sections 16.1.1 (6), 16.1.2

Standard and custom configurations are available.
These include: AC outlets, circuit breakers, DIN couplers, phone jacks, D-sub connectors, key lock switches, computer data storage devices, and just about any component that can fit in the available port housings.

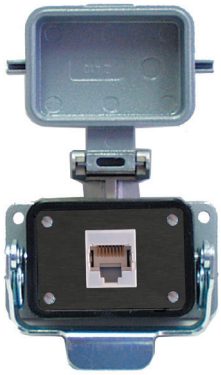
Remote Access Ports

Standard Configurations



Part Number: 6-9XP

EPIC® HB 6 enclosure
- DB 9 gender-to-gender coupler



Part Number: 6-45CS

EPIC® HB 6 enclosure
- RJ45 CAT.5e shielded coupler

Part Number: 10-1-45CS

EPIC® HB 10 enclosure
- Single AC outlet
- RJ45 CAT.5e shielded coupler

Part Number: 10-45CS-UABP

EPIC® HB 10 enclosure
- RJ45 CAT.5e shielded coupler
- USB A-B port

Part Number: 16-1-MD8P

EPIC® HB 16 enclosure
- Single AC outlet
- 8-position mini DIN coupler

Part Number: 16-1-9XP

EPIC® HB 16 enclosure
- Single AC outlet
- DB 9 gender-to-gender coupler

Standard and custom configurations are available.

Photographs are not to scale and are not true representations of the products in question.
For current information go to our website. If not otherwise specified, all values relating to the product are nominal values.

Remote Access Ports

Standard Configurations

Part Number: 24-1-3A-9XP-MD8P

EPIC® HB 24 enclosure
- Single AC outlet
- 3 amp circuit breaker
- DB 9 gender-to-gender coupler
- 8-position mini DIN coupler

Part Number: 24-1-3A-9XP

EPIC® HB 24 enclosure
- Single AC outlet
- 3 amp circuit breaker
- DB 9 gender-to-gender coupler

Part Number: 32-2-3A-9XP

EPIC® HB 32 enclosure
- Duplex AC outlet
- 3 amp circuit breaker
- DB 9 gender-to-gender coupler

Part Number: 32-G2-3A-45CS

EPIC® HB 32 enclosure
- GFCI outlet
- 3 amp circuit breaker
- RJ45 CAT.5e shielded coupler

Part Number: 109000NCDR

Custom enclosure bracket
- CD-ROM or 5¼" protocol

Standard and custom configurations are available.

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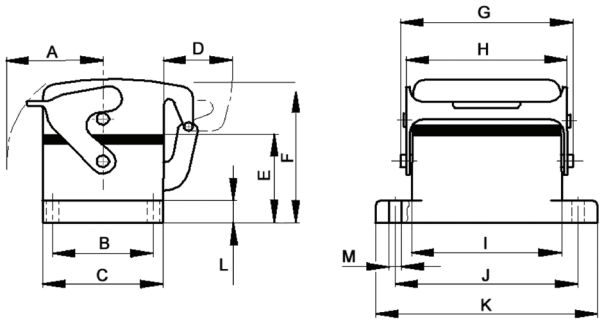
Remote Access Ports

Dimensional Data

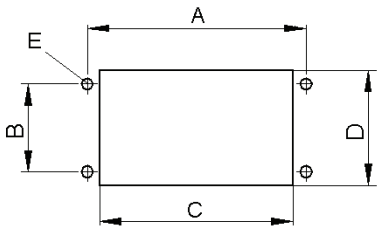
EPIC® HB Series Bases



All dimensions are in mm.

Series	A	B	C	D	E	F	G	H	I	J	K	L	M
HB 6	44.0	32	43.0	25.0	27.8	44.8	74.8	70.0	60.0	70.0	80.0	4.0	4.3
HB 10	50.0	32	43.0	25.0	27.8	44.8	91.0	88.5	73.0	83.0	93.0	4.0	4.3
HB 16	50.0	32	43.0	25.0	27.8	44.8	111.0	109.5	93.3	103.0	113.0	4.0	4.3
HB 24	50.0	32	43.0	25.0	27.8	44.8	138.0	136.5	120.0	130.0	140.0	4.0	4.3
HB 32	57.7	65	90.2	17.8	32.7	45.0	112.8	105.0	88.3	110.0	124.3	6.2	4.85
HB 48	105.0	70	90.0	30.0	39.5	56.5	152.0	139.5	132.0	148.0	165.0	10.0	7.0

EPIC® HB Series Panel Cut-outs



All dimensions are in mm.

Series	A	B	C	D	E
HB 6	70	32	52.2	35	4.3
HB 10	83	32	65.2	35	4.3
HB 16	103	32	85.5	35	4.3
HB 24	130	32	112.2	35	4.3
HB 32	110	65	85.5	76	5.5
HB 48	148	70	117.0	82	7.0

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Remote Access Ports

Custom Configuration Order Form

Enclosures

Listed components will be housed in an appropriately-sized EPIC® HB surface mount enclosure.

Part Number Construction

Assemble part number using the codes listed below.
Ports may be ordered pre-wired with cable sets. Add "C" to the end of the component code to be wired, followed by the desired cable length in feet.

Example: Part Number **48-1-25MC10-3A**
EPIC® HB 48 housing (**48**) + Single AC outlet (**1**) +
25-pos. male D-sub (**25M**) with 10 ft of cable (**C10**) +
3-amp circuit breaker (**3A**)

Components

Qty.	✔	Description	Code	Gender Front/Back	Termination	Pass-Through Configuration (specify genders)
D-subminiatures						
____	☐	DB 9	9	☐ M ☐ F	☐ T ☐ S ☐ P	_____
____	☐	DB 15	15	☐ M ☐ F	☐ T ☐ S ☐ P	_____
____	☐	DB 15 high density	15H	☐ M ☐ F	☐ T ☐ S ☐ P	_____
____	☐	DB 25	25	☐ M ☐ F	☐ T ☐ S ☐ P	_____
____	☐	DB 37	37	☐ M ☐ F	☐ T ☐ S ☐ P	_____

T: Terminal block interface **S**: Solder cup **P**: Pass-through

✔	Description	Code	✔	Description	Code	✔	Description	Code
Network Ports								
☐	RJ45 CAT.5e	45C	☐	RJ45 CAT.6	45C6	☐	RJ45 CAT.6A	45C6A
☐	RJ45 CAT.5e shielded	45CS	☐	RJ45 CAT.6 shielded	45C6S	☐	RJ45 CAT.6A shielded	45C6AS
			☐	RJ11 coupler	11C			

✔	Description	Code
Bus Connections (solder-terminated)		
☐	M12 male 8-position	M12M8
☐	M12 female 8-position	M12F8
☐	M12 male 4-position D-coded	M12M4
☐	M12 female 4-position D-coded	M12F4
☐	M12 male 5-position	M12M5
☐	M12 male 5-position	M12F5
☐	⅞" male 5-position	78M5
☐	⅞" female 5-position	78F5
AC Outlets		

☐	Single AC outlet	1
☐	Duplex outlet with screw termination	2S
☐	GFCI: Ground Fault Circuit Interrupt	G2
☐	European outlet	GAC
Mini DIN Couplers		

☐	6-position mini DIN coupler	MD6P
☐	8-position mini DIN coupler	MD8P
Peripheral Devices		

☐	CD-ROM bracket without drive	NCDR

✔	Description	Code
USB Ports (front-to-back)		

☐	USB A-A port	UAP
☐	USB A-B port	UABP
☐	USB B-A port	UBAP
☐	USB B-B port	UBP
Circuit Breakers		

☐	1-amp circuit breaker	1A
☐	2-amp circuit breaker	2A
☐	3-amp circuit breaker	3A
☐	5-amp circuit breaker	5A
Position Headers		

☐	3-position header	3H
☐	5-position header	5H
Firewire Component		
☐	Firewire	FW
Fiber Optic Coupler		
☐	Fiber optic coupler (specify type)	_____

Other components are available. Please specify your requirements: _____

Fax completed order form to 973-660-9330 or email to sales@lappusa.com or your local Lapp representative.