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ÖLFLEX® CONNECT

Systems solutions made by LAPP

With ÖLFLEX® CONNECT, we completed the step from component supplier to system supplier, offering complete solutions from a single source – from specialized cable assemblies and industry-standard servo connections to complex high-speed drag chain systems. We are constantly expanding our engineering, production and assembly capacities around the world.

ÖLFLEX® CONNECT

Systems solutions made by LAPP

ÖLFLEX® CONNECT CABLES

For over 30 years, LAPP's dedicated and highly qualified team of engineers, technicians, sales, and service personnel have been developing customized assembled cable solutions – from the design phase to prototyping to production and quality control. Our comprehensive inventory of cables, connectors, and accessories enables us to respond quickly and flexibly to your requirements, and we will source additional components as required to meet your specifications. As a member of the UL Client Data Program, LAPP is able to address your project quickly, efficiently, and reliably address projects from the small and simple to the large and complex.

Cable solutions from A to Z
LAPP produces different cables for CNC machinery, switch boxes, control cabinets, and electrical assemblies. Our product range encompasses single- and multi-conductor cables and EMC-shielded cables, all of which can be fitted with a wide selection of crimp contacts, connectors, and housings for your specific application.

The team at LAPP is committed to provide the entire solution for you, our customers. Developing a concept, application engineering, and executing in production can be a very complex task for your team. Our engineering expertise and assembly processes will enable you to apply your resources for other needs. The LAPP team will review interconnection needs, recommend connectivity solutions, provide concept drawings, quotations, final engineering drawings, and quality finished products. You only need to provide information, access to your knowledgeable project team, and a purchase order.

ÖLFLEX® CONNECT services

- **Cable cut to specifications**
- **Stripping**
- **Crimping**
- **Heat shrinking**
- **Markings** (labels, sleeves, marking rings, packing, stainless steel marking)
- **Cable printing**
- **Crimp force monitoring**
- **Push-pull test**
- **Resistance test**
- **Overmolding**

No capital expenditure

You will not need to invest in your own production facilities. Instead, leverage LAPP's equipment and tools.

Less operating expenditure

Benefit from a simplified supplier base. LAPP supplies you with everything related to cable assemblies from a single source.

Reduced inventory

No stocks of connectors, cables, conduits, and hoses. No component scrap or cutting waste.

Highest scalability

With LAPP's extensive inventory you're poised to respond to increases in demand.

Technical expertise

Make use of LAPP's expert technicians and their extensive knowledge of cabling technology.

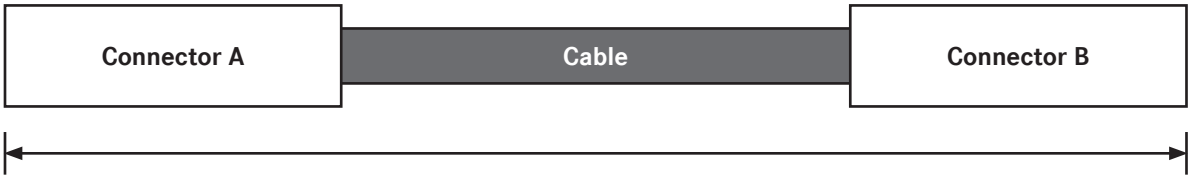
Uncompromising brand quality

High quality products for maximum reliability and safety.

Custom assembly order form

ÖLFLEX® CONNECT offers the complete custom cable assembly solution. Concept development, application engineering, and high-quality production are performed by a team of experts with over 50 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 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: _____ OD (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	**Requirements**	
☐ UL ☐ CSA ☐ CE ☐ none ☐ other: _____	Conduit type: _____ Ground requirements: _____ Special concerns (e.g., chemicals): _____	

ÖLFLEX® CONNECT SERVO

As a leading manufacturer of assembled servo cable systems, LAPP offers all of the major industry standards for use in a variety of areas in industrial machinery and drive systems. With international manufacturing excellence, we produce the assemblies in our own facilities across the world.

Whether your application requires a cost-effective servo solution for basic applications, something specially designed for flexing applications, or a servo solution designed for highly dynamic operation, LAPP offers the right solution for every requirement. All of our servo cables are put through their paces at our UL Client Test Data Center with the application site in mind, ensuring maximum quality, reliability, and operational safety.

for Rockwell Automation® motors

according to SIEMENS® standard

according to INDRAMAT® standard

according to LENZE® & SEW® standards

Uncompromising quality

Tested to all standard approval tests and to additional tests in our laboratory.

Strong design heritage

More than 50 years of technology leadership in cables and connectors.

Multi-brand availability

One stop shop for all major servo brands.

Availability at short notice

For components and servo cables of all performance classes

Fastest response

Thanks to our deep expertise in connectivity technology, we can develop customized solutions quickly

Maximum flexibility

High volume customized special products for project business.

AB assemblies for Rockwell Automation® motors

Feedback & power cable assemblies




All raw cable is LAPP product. Cable datasheets are available on our website or by contacting sales. Custom versions are available upon request.

For part numbers, replace “xxx” with desired cable length in feet.

Approvals

For approvals, inquire with our factory: 800-774-3539

Motion type	Application	Jacket color	Jacket material	Nominal voltage	Approvals
MP series motors					
stationary	feedback	gray	PVC	300V	UL/CSA CMG
stationary	feedback	gray	PVC	300V	UL/CSA
stationary	power	black	TPE	600V	UL/CSA TC-ER
stationary	power with brake	black	TPE	600V	UL/CSA TC-ER
continuous flex	feedback	green	TPE	600V	UL/CSA CMG, PLTC*
continuous flex	power/power with brake	orange	TPE	600V	UL/CSA TC-ER
TLY series motors					
stationary	feedback	gray	PVC	300V	UL/CSA
stationary	power	black	TPE	600V	UL/CSA TC-ER
stationary	power with brake	black	TPE	600V	UL/CSA TC-ER
continuous flex	feedback	black	PVC	300V	UL/CSA CMG
continuous flex	power	black	PVC	600V	UL/CSA
continuous flex	power with brake	orange	TPE	600V	UL/CSA TC-ER
VP series motors					
stationary	power/power with brake & feedback	orange	PVC	1000V/300V	UL/c(UL) Recognized, CE
continuous flex	power/power with brake & feedback	orange	PUR	1000V/300V	UL/c(UL) Recognized, CE

* LAPP cable 812876 is PLTC

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

Motion type	LAPP part number	Rockwell part number
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

* PLTC rated
Highlighted part numbers are stocked in lengths of 10, 30 & 50 ft.

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

Motion type	LAPP part number	Rockwell part number
Feedback		
flexing	72515xxx	2090-CFBM6DD-CCAFxx
flexing	72514xxx	2090-CFBM6DF-CBAFxx
stationary	62515xxx	2090-CFBM6DD-CCAAxx
stationary	62514xxx	2090-CFBM6DF-CBAAxx

VP series motors

Motion type	LAPP part number	Rockwell part number
Power with brake & feedback		
flexing	53519xxx-16	2090-CSBM1DF-18AFxx
flexing	53519xxx-14	2090-CSBM1DF-14AFxx
flexing	53519xxx-10	2090-CSBM1DF-10AFxx
flexing	53519xxx-16E	2090-CSBM1E1-18AFxx
flexing	53519xxx-14E	2090-CSBM1E1-14AFxx
flexing	53519xxx-10E	2090-CSBM1E1-10AFxx
flexing	54519xxx-16	2090-CSBM1DG-18AFxx
flexing	54519xxx-14	2090-CSBM1DG-14AFxx
flexing	54519xxx-10	2090-CSBM1DG-10AFxx
flexing	53513xxx-16	2090-CSBM1DE-18AFxx
flexing	53513xxx-14	2090-CSBM1DE-14AFxx
flexing	53513xxx-10	2090-CSBM1DE-10AFxx
stationary	43519xxx-16	2090-CSBM1DF-18AAxx
stationary	43519xxx-14	2090-CSBM1DF-14AAxx
stationary	43519xxx-10	2090-CSBM1DF-10AAxx
stationary	44519xxx-16	2090-CSBM1DG-18AAxx
stationary	44519xxx-14	2090-CSBM1DG-14AAxx
stationary	44519xxx-10	2090-CSBM1DG-10AAxx
stationary	43513xxx-16	2090-CSBM1DE-18AAxx
stationary	43513xxx-14	2090-CSBM1DE-14AAxx
stationary	43513xxx-10	2090-CSBM1DE-10AAxx

Motion type	LAPP part number	Rockwell part number
Power & feedback		
flexing	53517xxx-16	2090-CSWM1DF-18AFxx
flexing	53517xxx-14	2090-CSWM1DF-14AFxx
flexing	53517xxx-10	2090-CSWM1DF-10AFxx
flexing	53517xxx-16E	2090-CSWM1E1-18AFxx
flexing	53517xxx-14E	2090-CSWM1E1-14AFxx
flexing	53517xxx-10E	2090-CSWM1E1-10AFxx
flexing	54517xxx-16	2090-CSWM1DG-18AFxx
flexing	54517xxx-14	2090-CSWM1DG-14AFxx
flexing	54517xxx-10	2090-CSWM1DG-10AFxx
flexing	53512xxx-16	2090-CSBW1DE-18AFxx
flexing	53512xxx-14	2090-CSWM1DE-14AFxx
flexing	53512xxx-10	2090-CSWM1DE-10AFxx
stationary	43517xxx-16	2090-CSWM1DF-18AAxx
stationary	43517xxx-14	2090-CSWM1DF-14AAxx
stationary	43517xxx-10	2090-CSWM1DF-10AAxx
stationary	44517xxx-16	2090-CSWM1DG-18AAxx
stationary	44517xxx-14	2090-CSWM1DG-14AAxx
stationary	44517xxx-10	2090-CSWM1DG-10AAxx
stationary	43512xxx-16	2090-CSWM1DE-18AAxx
stationary	43512xxx-14	2090-CSWM1DE-14AAxx
stationary	43512xxx-10	2090-CSWM1DE-10AAxx

AB legacy assemblies for Rockwell Automation® motors

Legacy feedback & power cable assemblies

All raw cable is LAPP product. Cable datasheets are available on our website or by contacting sales. All overmolded products are molded with UL 94 V-0 PVC.

For part numbers, replace “xxx” with desired cable length in feet.

Approvals

For approvals, inquire with our factory: 800-774-3539

Motion type	Application	Jacket color	Material		Nominal voltage	Approvals
			jacket	insulation		
stationary	feedback	gray	PVC	TPE	300V	UL/CSA
stationary	feedback (1394 series only)	gray	PVC	PVC	300V	UL/CSA CMG
stationary	power	gray	PVC	PVC/nylon	600V	UL/CSA
stationary	power/power with brake (MPF series only)	orange	PVC	polypropylene	600V	UL/CSA
continuous flex	feedback	gray	PVC	TPE	300V	UL/CSA
continuous flex	feedback (1394 series only)	gray	PVC	PVC	300V	UL/CSA
continuous flex	power	black	PVC	PVC	600V	UL/CSA
continuous flex	power/power with brake (MPF series only)	orange	PUR	polypropylene	600V	UL/CSA

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

Motion type	LAPP part number	Rockwell part number
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

For a 90° connector on the motor end, add “-R” to end of LAPP P/N
Highlighted part numbers are stocked in lengths of 30 & 50 ft.

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

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	–

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.

Y series motors

Motion type	LAPP part number	Rockwell part number
Power with brake		
flexing	73505xxx	2090-UXNPAY-16Sxx
flexing	73505xxx	2090-XXNPY-16Sxx
stationary	63505xxx	2090-UXNPAY-16Sxx
stationary	63505xxx	2090-XXNPY-16Sxx
Feedback		
flexing	73515xxx	2090-UXNFBN-Sxx
flexing	73514xxx	2090-UXNFD4-Sxx
flexing	75914xxx	2090-XXNF4-Sxx
stationary	63515xxx	2090-UXNFBY-Sxx
stationary	63514xxx	2090-UXNFDY-Sxx
stationary	65914xxx	2090-XXNFY-Sxx

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	–

Ultra 100/200 series motors

Motion type	LAPP part number	Rockwell part number
F series: power/brake & feedback		
flexing	71103xxx	9101-1383
flexing	71121xxx	9101-1365
stationary	61103xxx	9101-1383
stationary	61121xxx	9101-1365
F/H series: power/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

Motion type	LAPP part number	Rockwell part number
N series: power/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/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

Servo assemblies according to SIEMENS® standard 6FX 8002

Approvals

For approvals, inquire with our factory: 800-774-3539.

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 cable, 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	*
335310xxx	6FX8002-2DC10-XXXX	*
335220xxx	6FX8002-2DC20-XXXX	*
335210xxx	6FX8002-2EQ10-XXXX	00277141
335214xxx	6FX8002-2EQ14-XXXX	00277141
335421xxx	6FX8002-4AA21-XXXX	00277151
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
335702xxx	6FX8002-5CS06-XXXX	0027784
335703xxx	6FX8002-5CS16-XXXX	0027785
335704xxx	6FX8002-5CS26-XXXX	0027784
335705xxx	6FX8002-5CS36-XXXX	0027785

LAPP part number	SIEMENS® part number	LAPP cable
335706xxx	6FX8002-5CS46-XXXX	0027786
335707xxx	6FX8002-5CS56-XXXX	0027787
335708xxx	6FX8002-5CS66-XXXX	0027788
335709xxx	6FX8002-5CN06-XXXX	0027784
335710xxx	6FX8002-5CN16-XXXX	0027785
335711xxx	6FX8002-5CN26-XXXX	0027784
335712xxx	6FX8002-5CN36-XXXX	0027785
335713xxx	6FX8002-5CN46-XXXX	0027786
335714xxx	6FX8002-5CN56-XXXX	0027787
335715xxx	6FX8002-5CN66-XXXX	0027788
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
335716xxx	6FX8002-5DS06 -XXXX	0027790
335717xxx	6FX8002-5DS16 -XXXX	0027791
335718xxx	6FX8002-5DS26 -XXXX	0027790
335719xxx	6FX8002-5DS36 -XXXX	0027791
335720xxx	6FX8002-5DS46 -XXXX	0027792
335721xxx	6FX8002-5DS56 -XXXX	0027793
335722xxx	6FX8002-5DS66 -XXXX	0027794
335723xxx	6FX8002-5DN06 -XXXX	0027790
335724xxx	6FX8002-5DN16 -XXXX	0027791
335725xxx	6FX8002-5DN26 -XXXX	0027790
335726xxx	6FX8002-5DN36 -XXXX	0027791
335727xxx	6FX8002-5DN46 -XXXX	0027792
335728xxx	6FX8002-5DN56 -XXXX	0027793
335729xxx	6FX8002-5DN66 -XXXX	0027794

* Made with special LAPP cable design. Specs are available upon request.
For part number, replace "xxx" with the desired cable length in meters. Custom configurations are available upon request.

Servo assemblies according to SIEMENS® standard 6FX 5002

Approvals

For approvals, inquire with our factory: 800-774-3539.

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

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

Nominal voltage:
- power cable, power conductors:
  - UL/CSA: 1000V
  - IEC: 600/1000V
- power cable, control conductors:
  - UL/CSA: 750V
  - IEC: 30V AC
- signal cable:
  - UL/CSA: 30V AC/DC
  - IEC: 30V AC

LAPP part number	SIEMENS® part number	LAPP cable
Assemblies for feedback		
235100xxx	6FX5002-1AD00-XXXX	0025725
235104xxx	6FX5002-1AD04-XXXX	0025725
235500xxx	6FX5002-2AD00-XXXX	0025725
235304xxx	6FX5002-2AD04-XXXX	0025725
235200xxx	6FX5002-2AH00-XXXX	0025725
235211xxx	6FX5002-2CA11-XXXX	0025724
235231xxx	6FX5002-2CA31-XXXX	0025726
235234xxx	6FX5002-2CA34-XXXX	0025726
235201xxx	6FX5002-2CF01-XXXX	0025725
235202xxx	6FX5002-2CF02-XXXX	0025725
235204xxx	6FX5002-2CF04-XXXX	0025725
235300xxx	6FX5002-2CG00-XXXX	0025724
235400xxx	6FX5002-2CH00-XXXX	0025725
235600xxx	6FX5002-2DC00-XXXX	*
235310xxx	6FX5002-2DC10-XXXX	*
235220xxx	6FX5002-2DC20-XXXX	*
235210xxx	6FX5002-2EQ10-XXXX	0025726
235214xxx	6FX5002-2EQ14-XXXX	0025726
Assemblies for power		
235501xxx	6FX5002-5CA01-XXXX	00257001
235505xxx	6FX5002-5CA05-XXXX	00257001
235531xxx	6FX5002-5CA31-XXXX	00257011
235514xxx	6FX5002-5CA41-XXXX	00257021
235551xxx	6FX5002-5CA51-XXXX	00257031
235601xxx	6FX5002-5CS01-XXXX	00257001
235511xxx	6FX5002-5CS11-XXXX	00257011
335730xxx	6FX5002-5CS06-XXXX	00257001
335731xxx	6FX5002-5CS16-XXXX	00257011
335732xxx	6FX5002-5CS26-XXXX	00257001
335733xxx	6FX5002-5CS36-XXXX	00257011
335734xxx	6FX5002-5CS46-XXXX	00257021

LAPP part number	SIEMENS® part number	LAPP cable
335735xxx	6FX5002-5CS56-XXXX	00257031
335736xxx	6FX5002-5CS66-XXXX	0025704
335737xxx	6FX5002-5CN06-XXXX	00257001
335738xxx	6FX5002-5CN16-XXXX	00257011
335739xxx	6FX5002-5CN26-XXXX	00257001
335740xxx	6FX5002-5CN36-XXXX	00257011
335741xxx	6FX5002-5CN46-XXXX	00257021
335742xxx	6FX5002-5CN56-XXXX	00257031
335743xxx	6FX5002-5CN66-XXXX	0025704
Assemblies for power with brake		
235606xxx	6FX5002-5DA01-XXXX	00257151
235605xxx	6FX5002-5DA05-XXXX	00257151
235631xxx	6FX5002-5DA31-XXXX	00257161
235641xxx	6FX5002-5DA41-XXXX	00257171
235651xxx	6FX5002-5DA51-XXXX	00257181
235701xxx	6FX5002-5DS01-XXXX	00257151
235611xxx	6FX5002-5DS11-XXXX	00257161
335744xxx	6FX5002-5DS06 -XXXX	00257001
335745xxx	6FX5002-5DS16 -XXXX	00257011
335746xxx	6FX5002-5DS26 -XXXX	00257001
335747xxx	6FX5002-5DS36 -XXXX	00257011
335748xxx	6FX5002-5DS46 -XXXX	00257021
335749xxx	6FX5002-5DS56 -XXXX	00257031
335750xxx	6FX5002-5DS66 -XXXX	0025704
335751xxx	6FX5002-5DN06 -XXXX	00257001
335752xxx	6FX5002-5DN16 -XXXX	00257011
335753xxx	6FX5002-5DN26 -XXXX	00257001
335754xxx	6FX5002-5DN36 -XXXX	00257011
335755xxx	6FX5002-5DN46 -XXXX	00257021
335756xxx	6FX5002-5DN56 -XXXX	00257031
335757xxx	6FX5002-5DN66 -XXXX	0025704

* Made with special LAPP cable design. Specs are available upon request.
For part number, replace “xxx” with the desired cable length in meters. Custom configurations are available upon request.

Servo LK-INX assemblies according to INDRAMAT® standards

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

LAPP part number	Length m	INDRAMAT part number	LAPP cable
INDRAMAT standard RKL			
70392839	10	RKL4302-010	7072403
70410001	10	RKL4303-010	7072403
70410000	10	RKL4330-010	7072409

INDRAMAT standard IKS/RKG

Technical data

Minimum bend radius:
- for stationary use: 5 x cable diameter
- for continuous flex: 10 x cable diameter

Nominal voltage: 300V

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

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
70335596	10	IKS4153-010	7072401

LAPP part number	Length m	INDRAMAT part number	LAPP cable
INDRAMAT standard RKG			
70392984	10	RKG4200-010	7072401
70410002	10	RKG4201-010	7072401

Listed part numbers are for 10m lengths. Other lengths are available; call 800-774-3539.

Servo assemblies according 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:
- resolver & encoder cable: AWM 21165 (flexing)
  AWM 2464 (stationary)
- motor cable: AWM 20940 (flexing)
  AWM 2570 (stationary)

LAPP part number	Application type	Length m	Construction ( ) = shielded	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

Listed part numbers are for 10m lengths. Other lengths are available; call 800-774-3539.

Servo assemblies according 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

Test voltage:
- power cable: 2000V
- signal cable: 1500V

Nominal voltage:
- power cable, power conductors:
  - UL: 600V
  - IEC: 750V
- power cable, signal conductors:
  - UL: 600V
  - IEC: 350V
- signal cable: 250V

Approvals: UL: AWM 2587

LAPP part number	Application type	Length m	Construction	SEW assembly part number
Power cable				
70430251	stationary	10	16 AWG/4c	05904544
70430250	stationary	10	16 AWG/4c + 18 AWG/3c	13324853

LAPP part number	Application type	Length m	Construction	SEW assembly part number
Signal cable				
70430252	flexing	10	24 AWG/6pr	1995405
70430249	stationary	10	24 AWG/6pr	13324535

Listed part numbers are for 10m lengths. Other lengths are available; call 800-774-3539.

ÖLFLEX® CONNECT CHAIN

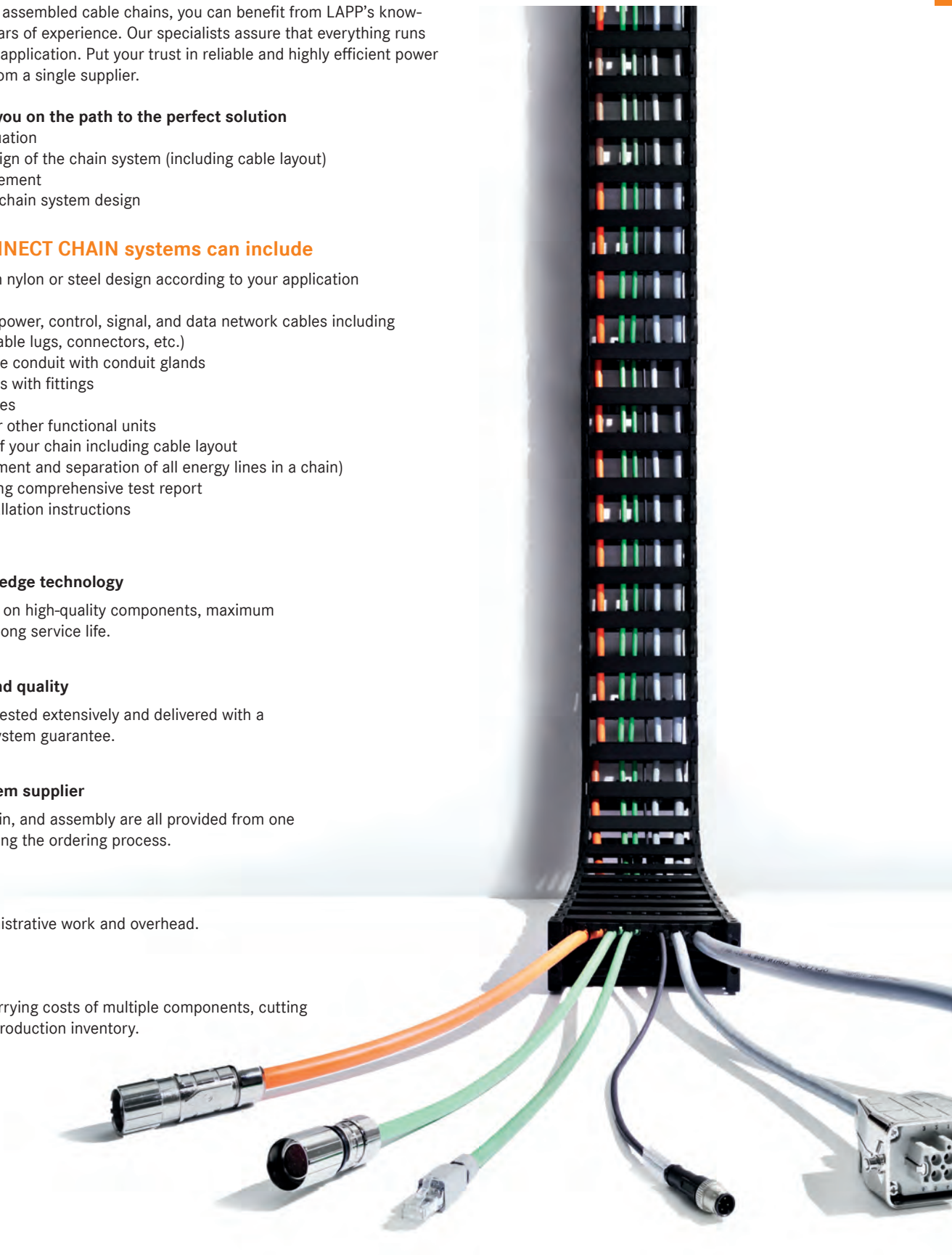
When it comes to assembled cable chains, you can benefit from LAPP's know-how and many years of experience. Our specialists assure that everything runs perfectly for your application. Put your trust in reliable and highly efficient power chain solutions from a single supplier.

We accompany you on the path to the perfect solution

- Technical evaluation
- Initial CAD design of the chain system (including cable layout)
- Project management
- Completion of chain system design

ÖLFLEX® CONNECT CHAIN systems can include

- Cable chains in nylon or steel design according to your application requirements
- Highly flexible power, control, signal, and data network cables including accessories (cable lugs, connectors, etc.)
- Protective cable conduit with conduit glands
- Hydraulic hoses with fittings
- Pneumatic hoses
- Towing arms or other functional units
- CAD drawing of your chain including cable layout (optimal placement and separation of all energy lines in a chain)
- Testing including comprehensive test report
- Individual installation instructions



Reliable cutting-edge technology

LAPP prides itself on high-quality components, maximum functionality and long service life.

Guaranteed brand quality

Our systems are tested extensively and delivered with a comprehensive system guarantee.

Competent system supplier

Components, chain, and assembly are all provided from one source, streamlining the ordering process.

Less effort

You reduce administrative work and overhead.

Cost savings

Less inventory carrying costs of multiple components, cutting scrap costs and production inventory.

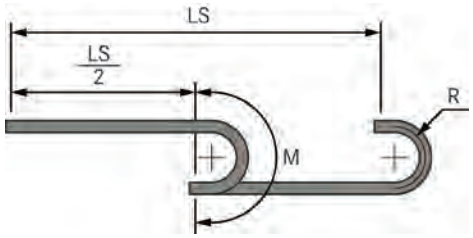
ÖLFLEX® CONNECT CHAIN design form

This form is designed to assure LAPP designs and delivers the right populated cable chain for your application.
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 chain order form is also available online at **lappusa.lappgroup.com/nc/systems/populated-tracks/custom-cable-track.html**.

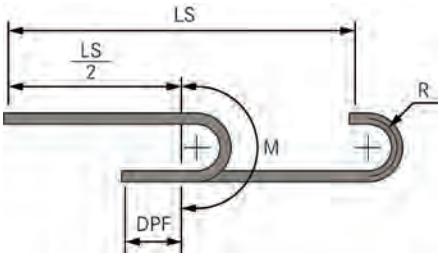
Chain dimensions

1. Total length of existing chain, if replacing: _____
2. Total distance traveled in one cycle (LS): _____
3. Is the chain center mounted? (dia. 1) _____
4. If not center mounted, how much off-center? (DPF, see dia. 2) _____ in.

dia. 1:



dia. 2:

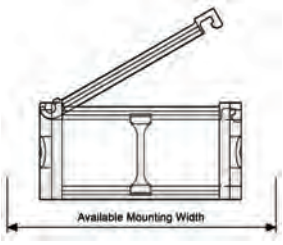


5. Direction/orientation of travel (please check one):

☐ horizontal _____ ☐ vertical ☐ side-running

6. Bend radius: _____ in.
7. Maximum available mounting width on the machine/equipment (dia. 3 (in)): _____ in.
8. Maximum available mounting height on the machine/equipment (dia. 4 (in)): _____ in.

dia. 3:



_____

dia. 4:

9. Standard mounting bracket orientation is outside-to-outside. If other, please specify:

_____

Chain specifications

10. Number of cables and hoses in chain: _____

Quantity	Part number	Weight lbs/ft	Outer diameter in	Min. bend radius in	Length from moving end ft	Length from fixed end ft
Cables						
Hoses						

11. Operation speed: _____ ft/s

12. Chain acceleration: _____ ft/s²

13. Operation frequency: _____ cycles/min

Chain environment

14. Type of equipment chain is installed on: _____

15. Environmental data (please check all that apply):

☐ clean, dry indoors ☐ chemical, wet, or chips ☐ high temperature: > 150°F ☐ outdoors

16. Please describe any unusual environmental factors:

_____

_____

Industrial Ethernet cordsets

The use of both RJ45 and M12 connectors in Ethernet network protocols is common. LAPP continuous flex CAT.5e & CAT.6A cables offer a unique solution for the demanding needs of motion systems, where a network connection has been integrated for program interface from remote locations. LAPP's 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

Material:

- contact carrier:	
- M12:	thermoplastic polyurethane; black
- RJ45:	polycarbonate
- molded head:	
- M12, 8-position:	thermoplastic polyurethane; black*
- M12, 4-position D-code:	thermoplastic polyurethane; blue-gray*
- RJ45:	thermoplastic polyurethane; black*
- contacts:	gold-plated brass
- coupling nut:	nickel-plated brass
- shield:	copper braid or foil & copper braid
- outer jacket:	polyurethane; teal or green
- conductor insulation:	polyethylene

* color is typical, not standard

Temperature range: see specific cable catalog page

Rated voltage: 42V
- cable: 1000 (not for power applications)

Rated current: 1.5A

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

Protection class:

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

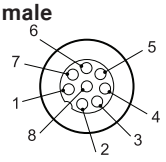
Cable type:

- for stationary use:	CAT.5e:	ETHERLINE® 2 pair CAT.5e, page 237 ETHERLINE® 4 pair CAT.5e, page 244
	CAT.6A:	ETHERLINE® 4 pair CAT.6A, page 247
- continuous flex:	CAT.5e:	ETHERLINE® 2 pair CAT.5e, page 238 ETHERLINE® 4 pair CAT.5e, page 245
	CAT.6A:	ETHERLINE® 4 pair CAT.6A, page 248

Pin outs

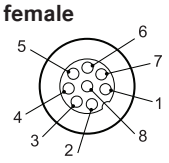
Ethernet M12 8-position, 4 pair

male



1 = white/blue
2 = white/brown
3 = brown
4 = orange (-TX)

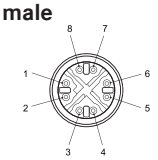
female



5 = white/green (+RX)
6 = white/orange (+TX)
7 = blue
8 = green (-RX)

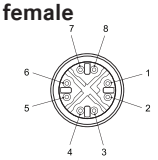
Ethernet M12 X-coded, 4 pair

male



1 = white/orange (+TX)
2 = orange (-TX)
3 = white/green (+RX)
4 = green (-RX)

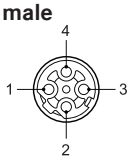
female



5 = white/brown
6 = brown
7 = white/blue
8 = blue

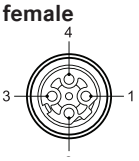
Ethernet M12 D-coded, 2 pair

male



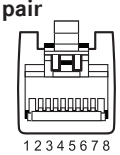
1 = white/orange (+TX)
2 = white/green (+RX)
3 = orange (-TX)
4 = green (-RX)

female



Ethernet RJ45 shielded

4 pair



1 = white/orange (+TX)
2 = orange (-TX)
3 = white/green (+RX)
4 = blue
5 = white/blue
6 = green (-RX)
7 = white/brown
8 = brown

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
8 = N/C

Ethernet single-ended cordsets: 4 pair CAT.5e

8-pos. M12 or 8-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® 4 pair CAT.5e

connector 2

flying leads

Cable type	Part number	Page
stationary	2170300	244
continuous flexing	2170489	245

90° M12 connectors are also available

Connector 1	Connector 2	Part number stationary	Part number continuous flex
M12 to flying leads			
male M12 straight	flying leads	C5E003Sxx	C5E003Fxx
male M12 bulkhead	flying leads	C5E010Sxx	C5E010Fxx
female M12 straight	flying leads	C5E004Sxx	C5E004Fxx
female M12 bulkhead	flying leads	C5E011Sxx	C5E011Fxx
RJ45 to flying leads			
RJ45 shielded	flying leads	C5E002Sxx	C5E002Fxx

For part number, replace “xx” with the desired cable length in meters

Ethernet extension cordsets: 4 pair CAT.5e

8-pos. M12 or 8-wire RJ45 connectors

connector 1

male M12 straight connector

female M12 straight connector

RJ45 shielded connector

ETHERLINE® 4 pair CAT.5e

connector 2

male M12 straight connector

female M12 straight connector

RJ45 shielded connector

Cable type	Part number	Page
stationary	2170300	244
continuous flexing	2170489	245

Connector 1	Connector 2	Part number stationary	Part number continuous flex
M12 to M12			
male M12 straight	male M12 straight	C5E005Sxx	C5E005Fxx
male M12 straight	female M12 straight	C5E007Sxx	C5E007Fxx
female M12 straight	female M12 straight	C5E006Sxx	C5E006Fxx

For part number, replace “xx” with the desired cable length in meters
90° M12 connectors are also available

Connector 1	Connector 2	Part number stationary	Part number continuous flex
M12 to RJ45			
male M12 straight	RJ45 shielded	C5E008Sxx	C5E008Fxx
female M12 straight	RJ45 shielded	C5E009Sxx	C5E009Fxx
RJ45 to RJ45			
RJ45 shielded	RJ45 shielded	C5E001Sxx	C5E001Fxx

Ethernet single-ended cordsets: 2 pair CAT.5e

4-pos. M12 D-coded or 4-wire RJ45 connectors to flying leads

connector 1

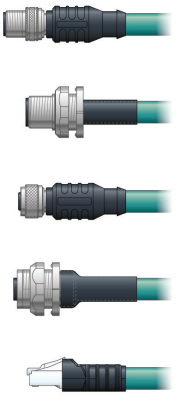
male M12 straight connector

male M12 bulkhead

female M12 straight connector

female M12 bulkhead

RJ45 shielded connector



ETHERLINE® 2 Pair CAT.5e

connector 2

flying leads

Cable type	Part number	Page
stationary	2170284	237
continuous flexing	2170289	238

Connector 1	Connector 2	Part number stationary	Part number continuous flex
M12 to flying leads			
male M12 straight	flying leads	C5E103Sxx	C5E103Fxx
male M12 bulkhead	flying leads	C5E110Sxx	C5E110Fxx
female M12 straight	flying leads	C5E104Sxx	C5E104Fxx
female M12 bulkhead	flying leads	C5E111Sxx	C5E111Fxx
RJ45 to flying leads			
RJ45 shielded	RJ45 to RJ25	C5E102Sxx	C5E102Fxx

For part number, replace “xx” with the desired cable length in meters
90° M12 connectors are also available

Ethernet extension cordsets: 2 Pair CAT.5e

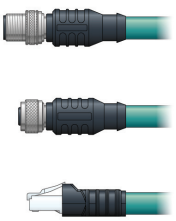
4-pos. M12 D-coded or 4-wire RJ45 connectors

connector 1

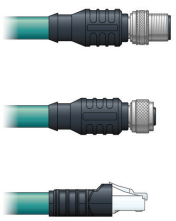
male M12 straight connector

female M12 straight connector

female M12 straight connector



ETHERLINE® 2 Pair CAT.5e



connector 2

male M12 straight connector

female M12 straight connector

RJ45 shielded connector

Cable type	Part number	Page
stationary	2170284	237
continuous flexing	2170289	238

Connector 1	Connector 2	Part number stationary	Part number continuous flex
M12 to M12			
male M12 straight	male M12 straight	C5E105Sxx	C5E105Fxx
male M12 straight	female M12 straight	C5E107Sxx	C5E107Fxx
female M12 straight	female M12 straight	C5E106Sxx	C5E106Fxx

For part number, replace “xx” with the desired cable length in meters
90° M12 connectors are also available

Connector 1	Connector 2	Part number stationary	Part number continuous flex
M12 to RJ45			
male M12 straight	RJ45 shielded	C5E108Sxx	C5E108Fxx
female M12 straight	RJ45 shielded	C5E109Sxx	C5E109Fxx
RJ45 to RJ45			
RJ45 shielded	flying leads	C5E101Sxx	C5E101Fxx

Ethernet single-ended cordsets: 4 pair CAT.6A

8-pos. M12 or 8-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® 4 Pair CAT.6A

connector 2

flying leads

Cable type	Part number	Page
stationary	2170464	247
continuous flexing	2170484	248

Connector 1	Connector 2	Part number stationary	Part number continuous flex
M12 to flying leads			
male M12 straight	flying leads	C6A003Sxx	C6A003Fxx
male M12 bulkhead	flying leads	C6A010Sxx	C6A010Fxx
female M12 straight	flying leads	C6A004Sxx	C6A004Fxx
female M12 bulkhead	flying leads	C6A011Sxx	C6A011Fxx
RJ45 to flying leads			
RJ45 shielded	flying leads	C6A002Sxx	C6A002Fxx

For part number, replace “xx” with the desired cable length in meters
90° M12 connectors are also available

Ethernet extension cordsets: 4 pair CAT.6A

8-pos. M12 or 8-wire RJ45 connectors

connector 1

male M12 straight connector

female M12 straight connector

RJ45 shielded connector

ETHERLINE® 4 Pair CAT.6A

connector 2

male M12 straight connector

female M12 straight connector

RJ45 shielded connector

Cable type	Part number	Page
stationary	2170464	247
continuous flexing	2170484	248

Connector 1	Connector 2	Part number stationary	Part number continuous flex
M12 to M12			
male M12 straight	male M12 straight	C6A005Sxx	C6A005Fxx
male M12 straight	female M12 straight	C6A007Sxx	C6A007Fxx
female M12 straight	female M12 straight	C6A006Sxx	C6A006Fxx

For part number, replace “xx” with the desired cable length in meters
90° M12 connectors are also available

Connector 1	Connector 2	Part number stationary	Part number continuous flex
M12 to RJ45			
male M12 straight	RJ45 shielded	C6A008Sxx	C6A008Fxx
female M12 straight	RJ45 shielded	C6A009Sxx	C6A009Fxx
RJ45 to RJ45			
RJ45 shielded	RJ45 shielded	C6A001Sxx	C6A001Fxx

PROFINET® cordsets

These pre-tested molded cordsets utilize high quality continuous flex cable and integral molded strain relief. For motion applications, these cordsets are designed to provide interconnection between simple devices (sensors and actuators) and high level devices (PLCs and computers). Stationary cordsets offer long-lasting, reliable performance at reduced costs when continuous flexing is not required.

Available configurations

- single-ended cordsets: 2 pair
- extension cordsets: 2 pair

Technical data

Material:

- plug:	PBT (V-0 per UL 94)
- coupling nut:	nickel-plated brass
- shield:	foil & tinned copper braid
- outer jacket:	polyurethane or PVC; green
- conductor insulation:	polyethylene

Temperature range:	see specific cable catalog page

Rated voltage:

- PROFINET M12:	250V
- PROFINET RJ45:	42V
- cable:	(not for power applications)
- for stationary use:	600V UL/AWM
- for continuous flexing:	100V

Rated current:

- PROFINET M12:	4A
- PROFINET RJ45:	1.5A

Number of conductors:	22 AWG/2pr, stranded

Protection class:

- PROFINET M12:	IP67
- PROFINET RJ45:	IP20

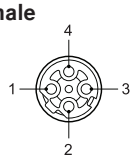
Cable type:

- for stationary use:	ETHERLINE® 2 pair CAT.5, page 237
- for continuous flexing:	ETHERLINE® 2 pair CAT.5, page 238

Pin outs

PROFINET M12 D-coded, 2 pair

male



female

1 = yellow (TD+)
2 = orange (TD-)
3 = white (RD+)
4 = blue (RD-)

PROFINET RJ45 shielded

2 pair

1 = yellow (TD+)
2 = orange (TD-)
3 = white (RD+)
4 = N/C
5 = N/C
6 = blue (RD-)
7 = N/C
8 = N/C

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

Cable type	Part number	Page
stationary	2170886	237
continuous flexing	2170894	238

Connector 1	Connector 2	Part number stationary	Part number continuous flex
M12 to flying leads			
male M12 straight	flying leads	CPN003Sxx	CPN003Fxx
male M12 bulkhead	flying leads	CPN010Sxx	CPN010Fxx
female M12 straight	flying leads	CPN004Sxx	CPN004Fxx
female M12 bulkhead	flying leads	CPN011Sxx	CPN011Fxx
RJ45 to flying leads			
RJ45 shielded	flying leads	CPN002Sxx	CPN002Fxx

For part number, replace “xx” with the desired cable length in meters
90° M12 connectors are also available

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

Cable type	Part number	Page
stationary	2170886	237
continuous flexing	2170894	238

Connector 1	Connector 2	Part number stationary	Part number continuous flex
M12 to M12			
male M12 straight	male M12 straight	CPN005Sxx	CPN005Fxx
male M12 straight	female M12 straight	CPN007Sxx	CPN007Fxx
female M12 straight	female M12 straight	CPN006Sxx	CPN006Fxx

For part number, replace “xx” with the desired cable length in meters
90° M12 connectors are also available

Connector 1	Connector 2	Part number stationary	Part number continuous flex
M12 to RJ45			
male M12 straight	RJ45 shielded	CPN008Sxx	CPN008Fxx
female M12 straight	RJ45 shielded	CPN009Sxx	CPN009Fxx
RJ45 to RJ45			
RJ45 shielded	RJ45 shielded	CPN001Sxx	CPN001Fxx

PROFIBUS® cordsets

These pre-tested molded cordsets utilize high-quality continuous flex cable and integral molded strain relief. For motion applications, these cordsets are designed to provide interconnection between simple devices (sensors and actuators) and high level devices (PLCs and computers). Stationary cordsets offer long-lasting, reliable performance at reduced costs when continuous flexing is not required.

Available configurations

- single-ended cordsets
- extension cordsets
- panel mount receptacle cordsets
- D-Sub Y-cordsets
- D-Sub cordsets

Technical data

Material:

- contact carrier:	PBT; black (V-0 per UL 94)
- molded head:	thermoplastic polyurethane; black*
- contacts:	gold-plated brass
- coupling nut:	nickel-plated brass
- shield:	foil & tinned copper braid
- outer jacket:	PVC or polyurethane; violet
- conductor insulation:	polyethylene

* color is typical, not standard

Temperature range:

- PROFIBUS M12:	-40°C to +80°C
- PROFIBUS DB9:	0°C to +60°C
- cable:	see specific cable catalog page

Rated voltage: 250V

Rated current: 4A

Number of conductors: 24 or 22 AWG/2pr (shielded data pair)

Protection class:

- PROFIBUS M12:	IP67 NEMA 1, 3, 4, 6
- PROFIBUS DB:	IP67 NEMA 1, 3, 4, 6, 13
- D9S:	IP20

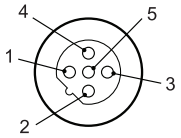
Cable type:

- for stationary use:	UNITRONIC® BUS PB, page 173
- for continuous flex:	UNITRONIC® BUS PB FD, page 174

Pin outs

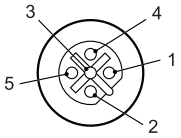
PROFIBUS M12

male

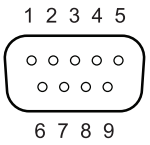


1 = N/C
2 = green (BUS_A)
3 = N/C
4 = red (BUS_B)
5 = bare (shield)

female



PROFIBUS DB 9



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

Approvals

For approvals, inquire with our factory: 800-774-3539.

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

Cable type	Part number	Page
stationary	2170219	173
continuous flexing	2170322	174

Connector 1	Connector 2	Part number	
		stationary	continuous flex
M12 to flying leads			
male M12 straight	flying leads	PB4110100Sxx	PB4110100Fxx
male M12 90°	flying leads	PB4110101Sxx	PB4110101Fxx
female M12 straight	flying leads	PB4110102Sxx	PB4110102Fxx
female M12 90°	flying leads	PB4110103Sxx	PB4110103Fxx

For part number, replace “xx” with the desired cable length in meters

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

Cable type	Part number	Page
stationary	2170219	173
continuous flexing	2170322	174

Connector 1	Connector 2	Part number	
		stationary	continuous flex
male M12 straight	male M12 straight	PB4110128Sxx	PB4110128Fxx
male M12 straight	male M12 90°	PB4110129Sxx	PB4110129Fxx
male M12 straight	female M12 straight	PB4110104Sxx	PB4110104Fxx
male M12 straight	female M12 90°	PB4110105Sxx	PB4110105Fxx
male M12 90°	male M12 90°	PB4110131Sxx	PB4110131Fxx

Connector 1	Connector 2	Part number	
		stationary	continuous flex
male M12 90°	female M12 straight	PB4110106Sxx	PB4110106Fxx
male M12 90°	female M12 90°	PB4110107Sxx	PB4110107Fxx
female M12 straight	female M12 straight	PB4110134Sxx	PB4110134Fxx
female M12 straight	female M12 90°	PB4110135Sxx	PB4110135Fxx
female M12 90°	female M12 90°	PB4110139Sxx	PB4110139Fxx

For part number, replace “xx” with the desired cable length in meters

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

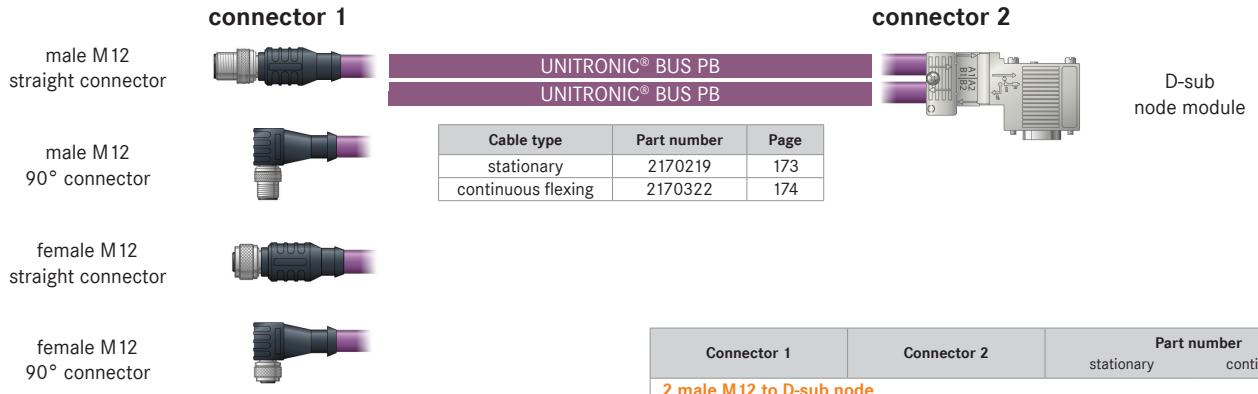
Cable type	Part number	Page
stationary	2170219	173
continuous flexing	2170322	174

Connector 1	Connector 2	Part number	
		stationary	continuous flex
male M12 bulkhead	flying leads	PB4110119Sxx	PB4110119Fxx
female M12 bulkhead	flying leads	PB4110120Sxx	PB4110120Fxx

For part number, replace “xx” with the desired cable length in meters

PROFIBUS® D-sub Y-cordsets

Two 5-pos. M12 connectors to 9-pos. D-sub node module



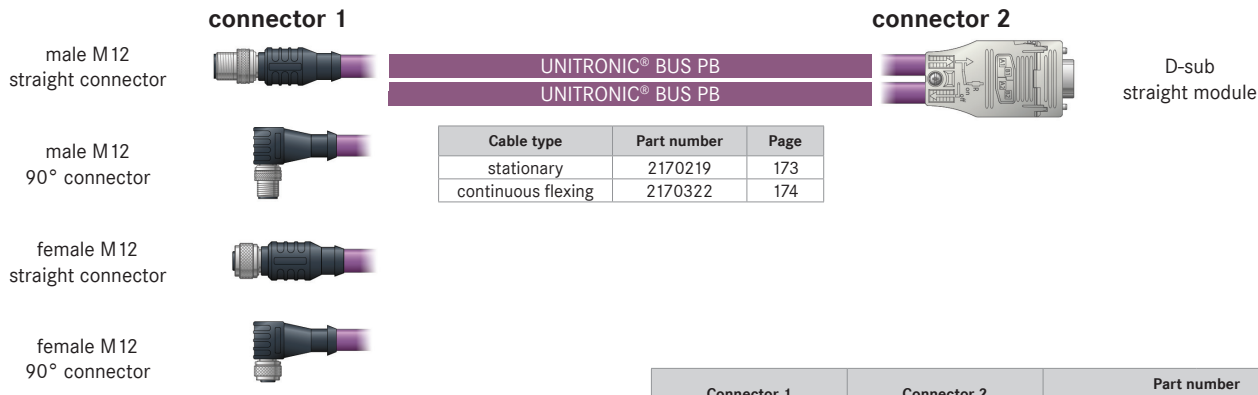
Cable type	Part number	Page
stationary	2170219	173
continuous flexing	2170322	174

Connector 1	Connector 2	Part number stationary	Part number continuous flex
2 male M12 to D-sub node			
male M12 straight	male M12 straight	PB4110108Sxx	PB4110108Fxx
male M12 straight	male M12 90°	PB4110149Sxx	PB4110149Fxx
male M12 90°	male M12 90°	PB4110109Sxx	PB4110109Fxx
2 female M12 to D-sub node			
female M12 straight	female M12 straight	PB4110110Sxx	PB4110110Fxx
female M12 straight	female M12 90°	PB4110150Sxx	PB4110150Fxx
female M12 90°	female M12 90°	PB4110111Sxx	PB4110111Fxx
1 male/1 female M12 to D-sub node			
male M12 straight	female M12 straight	PB4110112Sxx	PB4110112Fxx

For part number, replace “xx” with the desired cable length in meters

PROFIBUS® D-sub Y-cordsets

Two 5-pos. M12 connectors to 9-pos. D-sub straight module



Cable type	Part number	Page
stationary	2170219	173
continuous flexing	2170322	174

Connector 1	Connector 2	Part number stationary	Part number continuous flex
2 male M12 to D-sub straight			
male M12 straight	male M12 straight	PB4110158Sxx	PB4110158Fxx
male M12 straight	male M12 90°	PB4110156Sxx	PB4110156Fxx
male M12 90°	male M12 90°	PB4110160Sxx	PB4110160Fxx
2 female M12 to D-sub straight			
female M12 straight	female M12 straight	PB4110161Sxx	PB4110161Fxx
female M12 straight	female M12 90°	PB4110157Sxx	PB4110157Fxx
female M12 90°	female M12 90°	PB4110162Sxx	PB4110162Fxx
1 male/1 female M12 to D-sub straight			
male M12 straight	female M12 straight	PB4110163Sxx	PB4110163Fxx

For part number, replace “xx” with the desired cable length in meters

PROFIBUS® D-sub cordsets

5-pos. M12 connectors or flying leads to 9-pos. D-sub terminator module

connector 1

male M12 straight connector

male M12 90° connector

female M12 straight connector

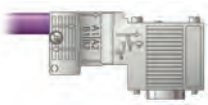
female M12 90° connector

flying leads

UNITRONIC® BUS PB

Cable type	Part number	Page
stationary	2170219	173
continuous flexing	2170322	174

connector 2



D-sub terminator module

Connector 1	Connector 2	Part number stationary	Part number continuous flex
M12 to D-sub terminator			
male M12 straight	D-sub terminator	PB4110141Sxx	PB4110141Fxx
male M12 90°	D-sub terminator	PB4110142Sxx	PB4110142Fxx
female M12 straight	D-sub terminator	PB4110143Sxx	PB4110143Fxx
female M12 90°	D-sub terminator	PB4110144Sxx	PB4110144Fxx
Flying leads to D-sub terminator			
flying leads	D-sub terminator	PB4110140Sxx	PB4110140Fxx

For part number, replace “xx” with the desired cable length in meters

PROFIBUS® D-sub cordsets

5-pos. M12 connectors or flying leads to 9-pos. D-sub master module

connector 1

male M12 straight connector

male M12 90° connector

female M12 straight connector

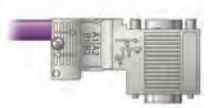
female M12 90° connector

flying leads

UNITRONIC® BUS PB

Cable type	Part number	Page
stationary	2170219	173
continuous flexing	2170322	174

connector 2



D-sub master module

Connector 1	Connector 2	Part number stationary	Part number continuous flex
M12 to D-Sub Master			
male M12 straight	D-sub master	PB4110113Sxx	PB4110113Fxx
male M12 90°	D-sub master	PB4110114Sxx	PB4110114Fxx
female M12 straight	D-sub master	PB4110115Sxx	PB4110115Fxx
female M12 90°	D-sub master	PB4110116Sxx	PB4110116Fxx
Flying leads to D-sub master			
flying leads	D-sub master	PB4110118Sxx	PB4110118Fxx

For part number, replace “xx” with the desired cable length in meters.

PROFIBUS® D-sub cordsets

5-pos. M12 connectors or flying leads to 9-pos. D-sub node module

connector 1

male M12 straight connector

male M12 90° connector

female M12 straight connector

female M12 90° connector

flying leads

UNITRONIC® BUS PB

Cable type	Part number	Page
stationary	2170219	173
continuous flexing	2170322	174

connector 2

D-sub node module

Connector 1	Connector 2	Part number stationary	Part number continuous flex
M12 to D-sub node			
male M12 straight	D-sub node	PB4110145Sxx	PB4110145Fxx
male M12 90°	D-sub node	PB4110146Sxx	PB4110146Fxx
female M12 straight	D-sub node	PB4110147Sxx	PB4110147Fxx
female M12 90°	D-sub node	PB4110148Sxx	PB4110148Fxx
Flying leads to D-sub node			
flying leads	D-sub node	PB4110117Sxx	PB4110117Fxx

For part number, replace “xx” with the desired cable length in meters.

PROFIBUS® D-sub cordsets

5-pos. M12 connectors or flying leads to 9-pos. D-sub straight module

connector 1

male M12 straight connector

male M12 90° connector

female M12 straight connector

female M12 90° connector

flying leads

UNITRONIC® BUS PB

Cable type	Part number	Page
stationary	2170219	173
continuous flexing	2170322	174

connector 2

D-sub straight module

Connector 1	Connector 2	Part number stationary	Part number continuous flex
M12 to D-sub straight			
male M12 straight	D-sub straight	PB4110152Sxx	PB4110152Fxx
male M12 90°	D-sub straight	PB4110153Sxx	PB4110153Fxx
female M12 straight	D-sub straight	PB4110154Sxx	PB4110154Fxx
female M12 90°	D-sub straight	PB4110155Sxx	PB4110155Fxx
Flying leads to D-sub straight			
flying leads	D-sub straight	PB4110151Sxx	PB4110151Fxx

For part number, replace “xx” with the desired cable length in meters.

DeviceNet™ cordsets

These molded cordsets offer Thick and Thin connectivity in a DeviceNet™ application. LAPP 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 for an environment when continuous flexing is not required. Conveyor systems are a popular application for these cordsets.

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

Material:

- contact carrier:	thermoplastic polyurethane; blue-gray
- molded head:	thermoplastic polyurethane; blue-gray*
- contacts:	gold-plated brass
- coupling nut:	nickel-plated brass
- shield:	foil (pairs) & overall tinned copper braid
- outer jacket:	PVC; gray
- conductor insulation:	
- for data:	polyethylene
- for power:	PVC

* color is typical, not standard

Temperature range: -20°C to +75°C

Rated voltage:

- DeviceNet™ 7/8":	300V
- DeviceNet™ M12:	250V

Rated current:

- DeviceNet™ 7/8":	9A
- DeviceNet™ M12:	4A

Number of conductors:

- DeviceNet™ 7/8":	incl. 18 AWG drain wire
- 6001:	14 AWG/1pr + 18 AWG/1pr
- 4001:	15 AWG/1pr + 18 AWG/1pr
- DeviceNet™ M12:	22 AWG/1pr + 24 AWG/1pr + 22 AWG drain wire

Protection class: meets NEMA 1, 3, 4, 6, 13 & IEC IP67

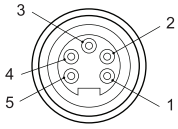
Cable type:

- for stationary use:	UNITRONIC® BUS DeviceNet™ Gray, page 167
- for continuous flex:	UNITRONIC® BUS DeviceNet™ FD Gray, page 168

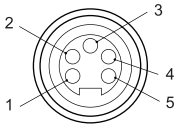
Pin outs

DeviceNet™ 7/8"

male



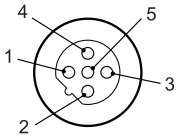
female



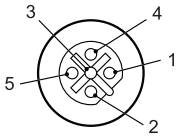
1 = bare (shield)
2 = red (+ voltage)
3 = black (– voltage)
4 = white (CAN_H)
5 = blue (CAN_L)

DeviceNet™ M12

male



female



1 = bare (shield)
2 = red (+ voltage)
3 = black (– voltage)
4 = white (CAN_H)
5 = blue (CAN_L)

Approvals

For approvals, inquire with our factory: 800-774-3539.

DeviceNet™ thick single-ended cordsets

5-pos. ⅞" connectors to flying leads

connector 1

male ⅞" straight connector

male ⅞" 90° connector

female ⅞" straight connector

female ⅞" 90° connector

UNITRONIC® DeviceNet™ THICK

connector 2

flying leads

Cable type	Part number	Page
stationary	4001	167
continuous flexing	6001	168

Connector 1	Connector 2	Part number	
		stationary	continuous flex
male ⅞" straight	flying leads	DN4110001Sxx	DN4110001Fxx
male ⅞" 90°	flying leads	DN4110002Sxx	DN4110002Fxx
female ⅞" straight	flying leads	DN4110003Sxx	DN4110003Fxx
female ⅞" 90°	flying leads	DN4110004Sxx	DN4110004Fxx

For part number, replace “xx” with the desired cable length in meters

DeviceNet™ thick panel mount receptacle cordsets

5-pos. ⅞" panel mount bulkheads to flying leads

connector 1

male ⅞" panel mount

male ⅞" bulkhead

female ⅞" panel mount

female ⅞" bulkhead

UNITRONIC® DeviceNet™ THICK

connector 2

flying leads

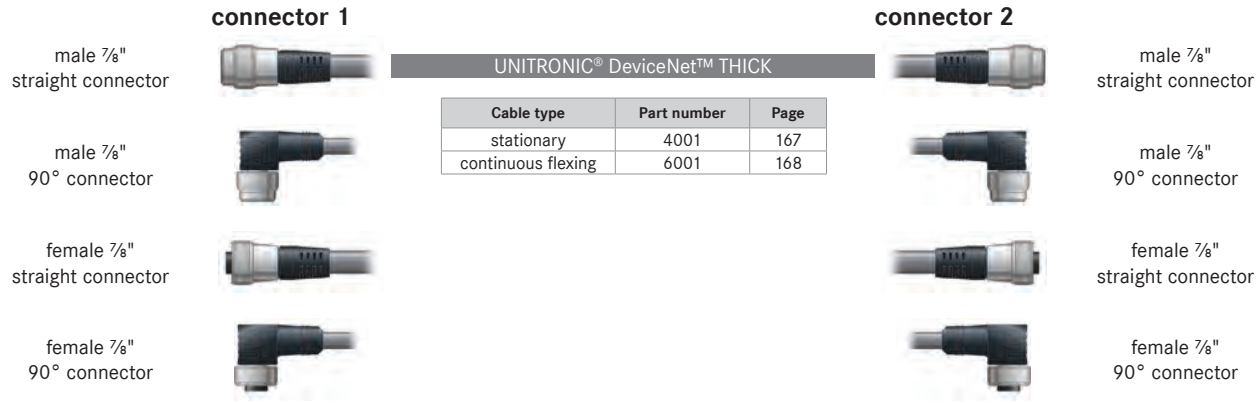
Cable type	Part number	Page
stationary	4001	167
continuous flexing	6001	168

Connector 1	Connector 2	Part number	
		stationary	continuous flex
male ⅞" panel mount	flying leads	DN4110005Sxx	DN4110005Fxx
male ⅞" bulkhead	flying leads	DN4110097Sxx	DN4110097Fxx
female ⅞" panel mount	flying leads	DN4110006Sxx	DN4110006Fxx
female ⅞" bulkhead	flying leads	DN4110098Sxx	DN4110098Fxx

For part number, replace “xx” with the desired cable length in meters

DeviceNet™ thick extension cordsets

5-pos. 7/8" connectors to 5-pos. 7/8" connectors



Cable type	Part number	Page
stationary	4001	167
continuous flexing	6001	168

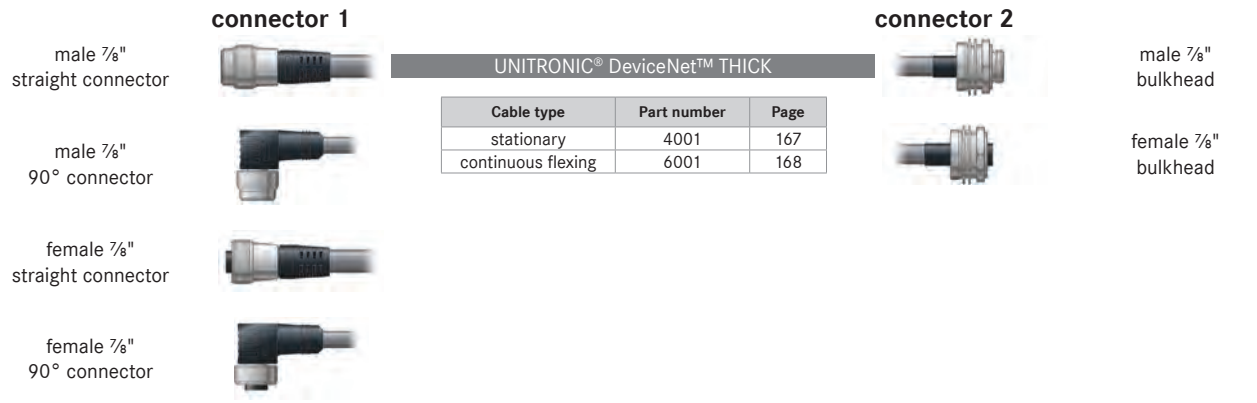
Connector 1	Connector 2	Part number stationary	Part number continuous flex
male 7/8" straight	male 7/8" straight	DN4110052Sxx	DN4110052Fxx
male 7/8" straight	male 7/8" 90°	DN4110053Sxx	DN4110053Fxx
male 7/8" straight	female 7/8" straight	DN4110008Sxx	DN4110008Fxx
male 7/8" straight	female 7/8" 90°	DN4110009Sxx	DN4110009Fxx
male 7/8" 90°	male 7/8" 90°	DN4110054Sxx	DN4110054Fxx

Connector 1	Connector 2	Part number stationary	Part number continuous flex
male 7/8" 90°	female 7/8" straight	DN4110010Sxx	DN4110010Fxx
male 7/8" 90°	female 7/8" 90°	DN4110011Sxx	DN4110011Fxx
female 7/8" straight	female 7/8" straight	DN4110055Sxx	DN4110055Fxx
female 7/8" straight	female 7/8" 90°	DN4110056Sxx	DN4110056Fxx
female 7/8" 90°	female 7/8" 90°	DN4110057Sxx	DN4110057Fxx

For part number, replace "xx" with the desired cable length in meters

DeviceNet™ thick panel mount extension cordsets

5-pos. 7/8" connectors to 5-pos. 7/8" panel mount bulkheads



Cable type	Part number	Page
stationary	4001	167
continuous flexing	6001	168

Connector 1	Connector 2	Part number stationary	Part number continuous flex
male 7/8" straight	male 7/8" bulkhead	DN4110072Sxx	DN4110072Fxx
male 7/8" straight	female 7/8" bulkhead	DN4110017Sxx	DN4110017Fxx
male 7/8" 90°	male 7/8" bulkhead	DN4110073Sxx	DN4110073Fxx
male 7/8" 90°	female 7/8" bulkhead	DN4110018Sxx	DN4110018Fxx

Connector 1	Connector 2	Part number stationary	Part number continuous flex
female 7/8" straight	male 7/8" bulkhead	DN4110015Sxx	DN4110015Fxx
female 7/8" straight	female 7/8" bulkhead	DN4110078Sxx	DN4110078Fxx
female 7/8" 90°	male 7/8" bulkhead	DN4110016Sxx	DN4110016Fxx
female 7/8" 90°	female 7/8" bulkhead	DN4110079Sxx	DN4110079Fxx

For part number, replace "xx" with the desired cable length in meters

DeviceNet™ thin 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® DeviceNet™ THIN

connector 2

flying leads

Cable type	Part number	Page
stationary	4002	167
continuous flexing	6002	168

Connector 1	Connector 2	Part number	
		stationary	continuous flex
male M12 straight	flying leads	DN4110019Sxx	DN4110019Fxx
male M12 90°	flying leads	DN4110020Sxx	DN4110020Fxx
female M12 straight	flying leads	DN4110021Sxx	DN4110021Fxx
female M12 90°	flying leads	DN4110022Sxx	DN4110022Fxx

For part number, replace “xx” with the desired cable length in meters

DeviceNet™ thin panel mount receptacle cordsets

5-pos. M12 panel mount bulkheads to flying leads

connector 1

male M12 bulkhead

female M12 bulkhead

UNITRONIC® DeviceNet™ THIN

connector 2

flying leads

Cable type	Part number	Page
stationary	4002	167
continuous flexing	6002	168

Connector 1	Connector 2	Part number	
		stationary	continuous flex
male M12 bulkhead	flying leads	DN4110040Sxx	DN4110040Fxx
female M12 bulkhead	flying leads	DN4110039Sxx	DN4110039Fxx

For part number, replace “xx” with the desired cable length in meters

DeviceNet™ thin extension cordsets

5-pos. ⅞" connectors to 5-pos. M12 connectors

connector 1

male ⅞" straight connector

male ⅞" 90° connector

female ⅞" straight connector

female ⅞" 90° connector

UNITRONIC® DeviceNet™ THIN

Cable type	Part number	Page
stationary	4002	167
continuous flexing	6002	168

connector 2

male M12 straight connector

male M12 90° connector

female M12 straight connector

female M12 90° connector

Connector 1	Connector 2	Part number stationary	Part number continuous flex
male ⅞" straight	male M12 straight	DN4110058Sxx	DN4110058Fxx
male ⅞" straight	male M12 90°	DN4110061Sxx	DN4110061Fxx
male ⅞" straight	female M12 straight	DN4110027Sxx	DN4110027Fxx
male ⅞" straight	female M12 90°	DN4110028Sxx	DN4110028Fxx
male ⅞" 90°	male M12 straight	DN4110059Sxx	DN4110059Fxx
male ⅞" 90°	male M12 90°	DN4110062Sxx	DN4110062Fxx
male ⅞" 90°	female M12 straight	DN4110029Sxx	DN4110029Fxx
male ⅞" 90°	female M12 90°	DN4110030Sxx	DN4110030Fxx

Connector 1	Connector 2	Part number stationary	Part number continuous flex
female ⅞" straight	male M12 straight	DN4110031Sxx	DN4110031Fxx
female ⅞" straight	male M12 90°	DN4110032Sxx	DN4110032Fxx
female ⅞" straight	female M12 straight	DN4110065Sxx	DN4110065Fxx
female ⅞" straight	female M12 90°	DN4110068Sxx	DN4110068Fxx
female ⅞" 90°	male M12 straight	DN4110033Sxx	DN4110033Fxx
female ⅞" 90°	male M12 90°	DN4110034Sxx	DN4110034Fxx
female ⅞" 90°	female M12 straight	DN4110066Sxx	DN4110066Fxx
female ⅞" 90°	female M12 90°	DN4110069Sxx	DN4110069Fxx

For part number, replace “xx” with the desired cable length in meters

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

Cable type	Part number	Page
stationary	4002	167
continuous flexing	6002	168

connector 2

male M12 straight connector

male M12 90° connector

female M12 straight connector

female M12 90° connector

Connector 1	Connector 2	Part number stationary	Part number continuous flex
male M12 straight	male M12 straight	DN4110060Sxx	DN4110060Fxx
male M12 straight	male M12 90°	DN4110063Sxx	DN4110063Fxx
male M12 straight	female M12 straight	DN4110023Sxx	DN4110023Fxx
male M12 straight	female M12 90°	DN4110024Sxx	DN4110024Fxx
male M12 90°	male M12 90°	DN4110064Sxx	DN4110064Fxx

Connector 1	Connector 2	Part number stationary	Part number continuous flex
male M12 90°	female M12 straight	DN4110025Sxx	DN4110025Fxx
male M12 90°	female M12 90°	DN4110026Sxx	DN4110026Fxx
female M12 straight	female M12 straight	DN4110067Sxx	DN4110067Fxx
female M12 straight	female M12 90°	DN4110070Sxx	DN4110070Fxx
female M12 90°	female M12 90°	DN4110071Sxx	DN4110071Fxx

For part number, replace “xx” with the desired cable length in meters

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

Cable type	Part number	Page
stationary	4002	167
continuous flexing	6002	168

connector 2

male M12 bulkhead

female M12 bulkhead

Connector 1	Connector 2	Part number stationary	Part number continuous flex
male 7/8" straight	male M12 bulkhead	DN4110085Sxx	DN4110085Fxx
male 7/8" straight	female M12 bulkhead	DN4110091Sxx	DN4110091Fxx
male 7/8" 90°	male M12 bulkhead	DN4110086Sxx	DN4110086Fxx
male 7/8" 90°	female M12 bulkhead	DN4110092Sxx	DN4110092Fxx
female 7/8" straight	male M12 bulkhead	DN4110087Sxx	DN4110087Fxx
female 7/8" straight	female M12 bulkhead	DN4110093Sxx	DN4110093Fxx
female 7/8" 90°	male M12 bulkhead	DN4110088Sxx	DN4110088Fxx
female 7/8" 90°	female M12 bulkhead	DN4110094Sxx	DN4110094Fxx

For part number, replace "xx" with the desired cable length in meters

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

Cable type	Part number	Page
stationary	4002	167
continuous flexing	6002	168

connector 2

male 7/8" bulkhead

female 7/8" bulkhead

Connector 1	Connector 2	Part number stationary	Part number continuous flex
male M12 straight	male 7/8" bulkhead	DN4110074Sxx	DN4110074Fxx
male M12 straight	female 7/8" bulkhead	DN4110080Sxx	DN4110080Fxx
male M12 90°	male 7/8" bulkhead	DN4110075Sxx	DN4110075Fxx
male M12 90°	female 7/8" bulkhead	DN4110081Sxx	DN4110081Fxx
female M12 straight	male 7/8" bulkhead	DN4110076Sxx	DN4110076Fxx
female M12 straight	female 7/8" bulkhead	DN4110082Sxx	DN4110082Fxx
female M12 90°	male 7/8" bulkhead	DN4110077Sxx	DN4110077Fxx
female M12 90°	female 7/8" bulkhead	DN4110083Sxx	DN4110083Fxx

For part number, replace "xx" with the desired cable length in meters

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

Cable type	Part number	Page
stationary	4002	167
continuous flexing	6002	168

connector 2

male M12 bulkhead

female M12 bulkhead

Connector 1	Connector 2	Part number stationary	Part number continuous flex
male M12 straight	male M12 bulkhead	DN4110089Sxx	DN4110089Fxx
male M12 straight	female M12 bulkhead	DN4110037Sxx	DN4110037Fxx
male M12 90°	male M12 bulkhead	DN4110090Sxx	DN4110090Fxx
male M12 90°	female M12 bulkhead	DN4110038Sxx	DN4110038Fxx
female M12 straight	male M12 bulkhead	DN4110035Sxx	DN4110035Fxx
female M12 straight	female M12 bulkhead	DN4110095Sxx	DN4110095Fxx
female M12 90°	male M12 bulkhead	DN4110036Sxx	DN4110036Fxx
female M12 90°	female M12 bulkhead	DN4110096Sxx	DN4110096Fxx

For part number, replace “xx” with the desired cable length in meters

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

Cable type	Part number	Page
stationary	4002	167
continuous flexing	6002	168

connector 2

plug header

Connector 1	Connector 2	Part number stationary	Part number continuous flex
⅞" to plug header			
male ⅞" straight	plug header	DN4110046Sxx	DN4110046Fxx
male ⅞" bulkhead	plug header	DN4110050Sxx	DN4110050Fxx
M12 to plug header			
male M12 straight	plug header	DN4110048Sxx	DN4110048Fxx
male M12 bulkhead	plug header	DN4110049Sxx	DN4110049Fxx
Flying leads to plug header			
flying leads	plug header	DN4110047Sxx	DN4110047Fxx

For part number, replace “xx” with the desired cable length in meters

Remote access ports

ÖLFLEX® CONNECT 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.

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.

Standard remote access port configurations

6-9XP

6-45CS

10-1-45CS

10-45CS-UABP

16-1-MD8P

16-1-9XP

24-1-3A-9XP-MD8P

24-1-3A-9XP

32-2-3A-9XP

32-G2-3A-45CS

Part number	EPIC® HB enclosure	Components
6-9XP	HB 6	• DB 9 gender-to-gender coupler
6-45CS	HB 6	• RJ45 CAT.5e shielded coupler
10-1-45CS	HB 10	• single AC outlet • RJ45 CAT.5e shielded coupler
10-45CS-UABP	HB 10	• USB A-B port • RJ45 CAT.5e shielded coupler
16-1-MD8P	HB 16	• single AC outlet • 8-position mini DIN coupler
16-1-9XP	HB 16	• single AC outlet • DB 9 gender-to-gender coupler

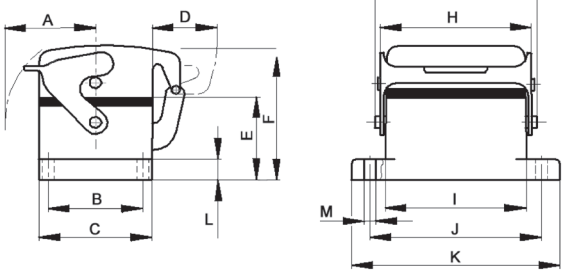
Other standard and custom configurations are also available

Part number	EPIC® HB enclosure	Components
24-1-3A-9XP-MD8P	HB 24	• single AC outlet • 3A circuit breaker • DB 9 gender-to-gender coupler • 8-position mini DIN coupler
24-1-3A-9XP	HB 24	• single AC outlet • 3A circuit breaker • DB 9 gender-to-gender coupler
32-2-3A-9XP	HB 32	• duplex AC outlet • 3A circuit breaker • DB 9 gender-to-gender coupler
32-G2-3A-45CS	HB 32	• GFCI outlet • 3A circuit breaker • RJ45 CAT.5e shielded coupler

Dimensional data

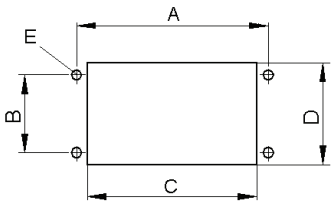
EPIC® HB series bases & panel cut outs

EPIC® HB bases



Series	A mm	B mm	C mm	D mm	E mm	F mm	G mm	H mm	I mm	J mm	K mm	L mm	M mm
HB 6	44.0	32.0	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	32.0	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	32.0	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	32.0	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	65.0	90.2	17.8	32.7	45.0	112.8	105.0	88.3	110.0	124.3	6.2	4.9
HB 48	105.0	70.0	90.0	30.0	39.5	56.5	152.0	139.5	132.0	148.0	165.0	10.0	7.0

EPIC® HB panel cut outs



Series	A mm	B mm	C mm	D mm	E mm
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

Custom remote access port order form

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

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**) + 3A circuit breaker (**3A**)

	Qty.	✔	Description	Code	Gender front	Gender 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

	✔	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:

_____

_____

_____

_____

_____