

Value Added Capabilities, Custom Designs & Complete Solutions

LAPP products are available from
MARYLAND METRICS

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RFQ form: <http://mdmetric.com/rfq.htm>

Lapp Index Page: <http://mdmetric.com/elect/contents.htm>

SYSTEMS

21



Value Added Capabilities, Custom Designs & Complete Solutions

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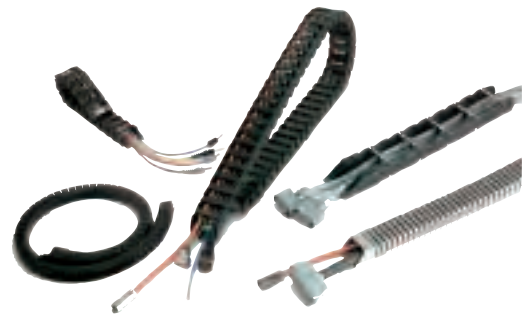
Populated Cable Tracks

Lapp Systems specializes in custom populated cable carriers and assemblies for use in automation and control systems. By combining engineered designs and only the highest-performance components, Lapp offers the complete turn-key solution. Higher volume OEM

requirements or one-off designs are built to withstand almost any industrial environment. Individual components from cables and strain reliefs, to fully connectorized cable assemblies and hose hookups are included to provide optimum performance and durability.

FEATURES

1. Overall cost savings
2. Longer flex life and reliability
3. Custom designs for each application
4. Performance warranty
5. Assembled by the experts in cable design



Populated Cable Tracks

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 track center mounted? _____
 5. If not center mounted, how much off center in inches? _____
 6. Type of equipment track is installed on: _____
 7. Number of cables and hoses in track: _____
 8. Operation speed (feet per second): _____
 9. Operation frequency (cycles per minute): _____
 10. Maximum available mounting width (inches): _____
 11. Maximum available mounting height (inches): _____
 12. Standard mounting bracket orientation is outside to outside; if other please specify: _____
 13. Environmental data; please check all that apply: _____

 Clean, dry indoor
 Chemical, Wet, or Chips
 High Temperature (>150°F)
 Outdoors
- Please describe any unusual environmental factors: _____

CARRIER CONTENTS

CABLES				HOSES			
#	Weight	O.D.	Min. Bend Radius	#	Weight	O.D.	Min. Bend Radius

Flex & Static Assemblies for Rockwell Automation Servo Drives

1 meter = 3.281 feet

***FOR 90 DEGREE VERSION ON MOTOR END: ADD "-R" TO LAPP PART #

***FOR EXTENSION ASSEMBLY (M-F): ADD "-E" TO LAPP PART #



MP SERIES MOTORS (230V) - POWER

LAPP P/N (FLEXING) (LENGTH IN FEET)	LAPP P/N (STATIC) (LENGTH IN FEET)	ROCKWELL P/N (STATIC) (LENGTH IN METERS)
73529XXX-16	63529XXX-16	2090-UXNPAMP-16SXX
73529XXX-16	63529XXX-16	2090-XXNPMP-16SXX
73529XXX-14	63529XXX-14	2090-UXNPAMP-14SXX
73529XXX-14	63529XXX-14	2090-XXNPMP-14SXX
73529XXX-10	63529XXX-14	2090-UXNPAMP-10SXX

MP SERIES MOTORS (460V) - POWER

LAPP P/N (FLEXING) (LENGTH IN FEET)	LAPP P/N (STATIC) (LENGTH IN FEET)	ROCKWELL P/N (STATIC) (LENGTH IN METERS)
73529XXX-16	63529XXX-16	2090-UXNPBMP-16SXX
73529XXX-16	63529XXX-16	2090-XXNPMP-16SXX
73529XXX-14	63529XXX-14	2090-UXNPBMP-14SXX
73529XXX-14	63529XXX-14	2090-XXNPMP-14SXX
73529XXX-10	63529XXX-14	2090-UXNPBMP-10SXX
73529XXX-8	63529XXX-8	2090-UXNPBMP-8SXXX

MP SERIES MOTORS (230/460V) - FEEDBACK

LAPP P/N (FLEXING) (LENGTH IN FEET)	LAPP P/N (STATIC) (LENGTH IN FEET)	ROCKWELL P/N (STATIC) (LENGTH IN METERS)
73528XXX	63528XXX	2090-UXNFBMP-SXX
73526XXX	63526XXX	2090-UXNFDMP-SXX
75926XXX	65926XXX	2090-XXNFMP-SXX

MP SERIES MOTORS (460V) 1394C-SJTXX-D (D29) - POWER

LAPP P/N (FLEXING) (LENGTH IN FEET)	LAPP P/N (STATIC) (LENGTH IN FEET)	ROCKWELL P/N (STATIC) (LENGTH IN METERS)
73529XXX-16	63529XXX-16	2090-CDNPBMP-16SXX
73529XXX-14	63529XXX-14	2090-CDNPBMP-14SXX
73529XXX-10	63529XXX-14	2090-CDNPBMP-10SXX
73529XXX-8	63529XXX-8	2090-CDNPBMP-8SXXX

Replace the XXX with the desired cable length in feet.

Flex & Static Assemblies for Rockwell Automation Servo Drives

1 meter = 3.281 feet

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***FOR EXTENSION ASSEMBLY (M-F): ADD "-E" TO LAPP PART #

MP SERIES MOTORS - 1394 (D29)

LAPP P/N (FLEXING) (LENGTH IN FEET)	LAPP P/N (STATIC) (LENGTH IN FEET)	ROCKWELL P/N (STATIC) (LENGTH IN METERS)
71100125-XXX	61100125-XXX	2090-CDNFDMP-SXX

MP SERIES MOTORS - ULTRA 3000/5000 1394 BRAKE

LAPP P/N (FLEXING) (LENGTH IN FEET)	LAPP P/N (STATIC) (LENGTH IN FEET)	ROCKWELL P/N (STATIC) (LENGTH IN METERS)
73524XXX	63524XXX	2090-UXNBMP-18SXX

N SERIES MOTORS - POWER

LAPP P/N (FLEXING) (LENGTH IN FEET)	LAPP P/N (STATIC) (LENGTH IN FEET)	ROCKWELL P/N (STATIC) (LENGTH IN METERS)
73507XXX	63507XXX	2090-UXNPNAN-16SXX
73507XXX	63507XXX	2090-XXNPN-16SXX

N SERIES MOTORS - FEEDBACK

LAPP P/N (FLEXING) (LENGTH IN FEET)	LAPP P/N (STATIC) (LENGTH IN FEET)	ROCKWELL P/N (STATIC) (LENGTH IN METERS)
73516XXX	63516XXX	2090-UXNFBN-SXX
73527XXX	63527XXX	2090-UXNFDN-SXX
75927XXX	65927XXX	2090-XXNFN-SXX

H SERIES MOTORS - POWER

LAPP P/N (FLEXING) (LENGTH IN FEET)	LAPP P/N (STATIC) (LENGTH IN FEET)	ROCKWELL P/N (STATIC) (LENGTH IN METERS)
73501XXX	63501XXX	2090-UXNPAH-16SXX
73501XXX	63501XXX	2090-XXNPH-16SXX

H/F SERIES MOTORS - POWER

LAPP P/N (FLEXING) (LENGTH IN FEET)	LAPP P/N (STATIC) (LENGTH IN FEET)	ROCKWELL P/N (STATIC) (LENGTH IN METERS)
73502XXX	63502XXX	2090-UXNPAHF-14SXX
73502XXX	63502XXX	2090-XXNPHF-14SXX
73503XXX	63503XXX	2090-UXNPAHF-10SXX
73506XXX	63506XXX	2090-UXNPAHF-8SXX

H/F SERIES MOTORS - FEEDBACK

LAPP P/N (FLEXING) (LENGTH IN FEET)	LAPP P/N (STATIC) (LENGTH IN FEET)	ROCKWELL P/N (STATIC) (LENGTH IN METERS)
73513XXX	63513XXX	2090-UXNFBHF-SXX
73525XXX	63525XXX	2090-UXNFDHF-SXX
75925XXX	65925XXX	2090-XXNFHF-SXX

Replace the XXX with the desired cable length in feet.

Flex & Static Assemblies for Rockwell Automation Servo Drives

1 meter = 3.281 feet

***FOR 90 DEGREE VERSION ON MOTOR END: ADD "-R" TO LAPP PART #

***FOR EXTENSION ASSEMBLY (M-F): ADD "-E" TO LAPP PART #

Y SERIES MOTORS - POWER

LAPP P/N (FLEXING) (LENGTH IN FEET)	LAPP P/N (STATIC) (LENGTH IN FEET)	ROCKWELL P/N (STATIC) (LENGTH IN METERS)
73505XXX	63505XXX	2090-UXNPAY-16SXX
73505XXX	63505XXX	2090-XXNPY-16SXX

Y SERIES MOTORS - FEEDBACK

LAPP P/N (FLEXING) (LENGTH IN FEET)	LAPP P/N (STATIC) (LENGTH IN FEET)	ROCKWELL P/N (STATIC) (LENGTH IN METERS)
73515XXX	63515XXX	2090-UXNFBY-SXX
73514XXX	63514XXX	2090-UXNFDY-SXX
75914XXX	65914XXX	2090-XXNFDY-SXX

MPF SERIES MOTORS - POWER

LAPP P/N (FLEXING) (LENGTH IN FEET)	LAPP P/N (STATIC) (LENGTH IN FEET)	ROCKWELL P/N (STATIC) (LENGTH IN METERS)
400270-16-XXX (W/ BRAKE)	300270-16-XXX (W/ BRAKE)	2090-XXNPMF-16SXX
400270-16NB-XXX (NO BRAKE)	300270-16NB-XXX (NO BRAKE)	
400270-14-XXX (W/ BRAKE)	300270-14-XXX (W/ BRAKE)	2090-XXNPMF-14SXX
400270-14NB-XXX (NO BRAKE)	300270-14NB-XXX (NO BRAKE)	
400270-10-XXX (W/ BRAKE)	300270-10-XXX (W/ BRAKE)	2090-XXNPMF-10SXX
400270-10NB-XXX (NO BRAKE)	300270-10NB-XXX (NO BRAKE)	

MPF SERIES MOTORS - FEEDBACK

LAPP P/N (FLEXING) (LENGTH IN FEET)	LAPP P/N (STATIC) (LENGTH IN FEET)	ROCKWELL P/N (STATIC) (LENGTH IN METERS)
400271-XXX	300271-XXX	2090-XXNFMF-SXX
400271-15P-XXX (W/ DRIVE CONN)	300271-15P-XXX (W/ DRIVE CONN)	

TL SERIES MOTORS - POWER

LAPP P/N (FLEXING) (LENGTH IN FEET)	LAPP P/N (STATIC) (LENGTH IN FEET)	ROCKWELL P/N (STATIC) (LENGTH IN METERS)
71529XXX-16	61529XXX-16	2090-XXNPT-16SXX
71529XXX-14	61529XXX-14	2090-XXNPT-14SXX

TL SERIES MOTORS - FEEDBACK

LAPP P/N (FLEXING) (LENGTH IN FEET)	LAPP P/N (STATIC) (LENGTH IN FEET)	ROCKWELL P/N (STATIC) (LENGTH IN METERS)
71528XXX	61528XXX	2090-XXNFT-SXX

TL SERIES MOTORS - BRAKE

LAPP P/N (FLEXING) (LENGTH IN FEET)	LAPP P/N (STATIC) (LENGTH IN FEET)	ROCKWELL P/N (STATIC) (LENGTH IN METERS)
500058-XXX	300058-XXX	2090-DANBT-SXX

Replace the XXX with the desired cable length in feet.

Accessories for Rockwell Automation Systems

Drive Accessories



For more information,
see Page 645

- Attachable, enclosed housing for drive to be mounted on industrial PC
- Provide direct access for uploading and downloading data to the industrial computer
- IP65 protection when not in use as drives can be susceptible to contaminants

Flexing DH485/ Ethernet Assemblies



Standard & Custom Lengths Available

See page 633 for more information

- Continuous-Flex cabling alternative for motion applications
- Pre-wired for convenient connection between devices and PLC's
- Unshielded, Shielded, or CAT5 connector options

Flexing DH+ Assemblies



Part #
500001-XXX

Standard & Custom Lengths Available

- Continuous-Flex cabling alternative for motion applications
- Pre-made assemblies configured with DB9's, 8P Mini DIN's, & 3P Headers
- Allows user to route such PLC interconnections directly to motion system
- Replace the XXX in the Lapp part number with the desired # of feet.

Flexing Control Net Assemblies



Part #
400551-XXX

Standard & Custom Lengths Available

- Continuous-Flex cabling alternative for motion applications
- Control Net is a popular protocol for control modules. Pre-wired assemblies are available with RG6 Connectors on one or both ends of flexing cable
- Users will be able to route direct connections through track in a motion system.
- Replace the XXX in the Lapp part number with the desired # of feet.

Flexing DeviceNet™ Assemblies



Standard & Custom Lengths Available

- Continuous-Flex cabling alternative for motion applications
- The DeviceNet™ 5P connector is available pre-wired with one of the many cables available from Lapp.
- Users will be able to route direct connections through track in a motion system

See page 621 for more information

OLFLEX® SERVO FX8 Assemblies

Servo Cable Assemblies for Highly Flexible Applications according to Siemens Standard 6FX-8002

Highly flexible servo motor and feedback cable assemblies designed for use in power chains, or cable track. Manufactured for optimum performance in industrial environments, these assemblies utilize a PUR-jacketed cable designed for oil and abrasion resistance. Usually

found in machine tools and as machine components of transfer and production lines, the OLFLEX® SERVO FX8 assemblies are 100% compatible with Siemens systems. Many types and configurations are available for quick delivery.



Part Number	Length in meters	Siemens Part Number for Harnessing	Lapp Cable Part Number	Siemens Cable Part Number	Cable Type & Color
70300767	5	6FX8002-2EQ10-1AF0	0027714	6FX8008-1BD51	Feedback-Green
70301567	10	6FX8002-2EQ10-1BA0	0027714	6FX8008-1BD51	Feedback-Green
70302367	15	6FX8002-2EQ10-1BF0	0027714	6FX8008-1BD51	Feedback-Green
70303167	20	6FX8002-2EQ10-1CA0	0027714	6FX8008-1BD51	Feedback-Green
70303967	25	6FX8002-2EQ10-1CF0	0027714	6FX8008-1BD51	Feedback-Green
70300778	5	6FX8002-5CA01-1AF0	0027724	6FX8008-1BB11	Motor-Orange
70301578	10	6FX8002-5CA01-1BA0	0027724	6FX8008-1BB11	Motor-Orange
70302378	15	6FX8002-5CA01-1BF0	0027724	6FX8008-1BB11	Motor-Orange
70303178	20	6FX8002-5CA01-1CA0	0027724	6FX8008-1BB11	Motor-Orange
70303978	25	6FX8002-5CA01-1CF0	0027724	6FX8008-1BB11	Motor-Orange
70300788	5	6FX8002-5DA01-1AF0	0027718	6FX8008-1BA11	Servo-Orange
70301588	10	6FX8002-5DA01-1BA0	0027718	6FX8008-1BA11	Servo-Orange
70302388	15	6FX8002-5DA01-1BF0	0027718	6FX8008-1BA11	Servo-Orange
70303188	20	6FX8002-5DA01-1CA0	0027718	6FX8008-1BA11	Servo-Orange
70303988	25	6FX8002-5DA01-1CF0	0027718	6FX8008-1BA11	Servo-Orange
70300753	5	6FX8002-2CA31-1AF0	0027714	6FX8008-1BD11	Feedback-Green
70301553	10	6FX8002-2CA31-1BA0	0027714	6FX8008-1BD11	Feedback-Green
70302353	15	6FX8002-2CA31-1BF0	0027714	6FX8008-1BD11	Feedback-Green
70303153	20	6FX8002-2CA31-1CA0	0027714	6FX8008-1BD11	Feedback-Green
70303953	25	6FX8002-2CA31-1CF0	0027714	6FX8008-1BD11	Feedback-Green
70300769	5	6FX8002-2CF02-1AF0	0027713	6FX8008-1BD41	Feedback-Green
70301569	10	6FX8002-2CF02-1BA0	0027713	6FX8008-1BD41	Feedback-Green
70302369	15	6FX8002-2CF02-1BF0	0027713	6FX8008-1BD41	Feedback-Green
70303169	20	6FX8002-2CF02-1CA0	0027713	6FX8008-1BD41	Feedback-Green
70303969	25	6FX8002-2CF02-1CF0	0027713	6FX8008-1BD41	Feedback-Green
70300759	5	6FX8002-2CB31-1AF0	0027717	6FX8008-1BD81	Feedback-Green
70301559	10	6FX8002-2CB31-1BA0	0027717	6FX8008-1BD81	Feedback-Green
70302359	15	6FX8002-2CB31-1BF0	0027717	6FX8008-1BD81	Feedback-Green
70303159	20	6FX8002-2CB31-1CA0	0027717	6FX8008-1BD81	Feedback-Green
70303959	25	6FX8002-2CB31-1CF0	0027717	6FX8008-1BD81	Feedback-Green
70391512	5	6FX8002-2EQ14-1AF0	0027724	6FX8008-1BD51	Feedback-Orange
70391522	10	6FX8002-2EQ14-1BA0	0027724	6FX8008-1BD51	Feedback-Orange
70391532	15	6FX8002-2EQ14-1BF0	0027724	6FX8008-1BD51	Feedback-Orange
70391542	20	6FX8002-2EQ14-1CA0	0027724	6FX8008-1BD51	Feedback-Orange
70391552	25	6FX8002-2EQ14-1CF0	0027724	6FX8008-1BD51	Feedback-Orange

OLFLEX® SERVO LK-INX Assemblies

Continuous Flex Servo Assemblies
according to Indramat Standard IKG & IKS

Assemblies according to INDRAMAT Standard IKG:
Motor Connection cables for power transmission systems



Assemblies according to INDRAMAT Standard IKS:
Feedback cables for signal transmission systems



Technical Data:

	Minimum Bending Radius:			Nominal Voltage:	
	IKG Standard- static:	6 x cable diameter		<u>IKG Standard</u>	
	IKS Standard- static:	5 x cable diameter		Supply Conductors	600/1000V
	Both Standards- flexing:	10 x cable diameter	<u>IKS Standard</u>		300V
	Temperature Range:			Test Voltage:	
	<u>IKG Standard</u>			<u>IKG Standard</u>	
	for flexing:	-30°C to +60°C		Power Cores	4000V
	for static:	-50°C to +80°C		Control Cores	500V
	<u>IKS Standard</u>		<u>IKS Standard</u>		500V
	for flexing:	-30°C to +80°C			
	for static:	-30°C to +90°C		Approvals:	
			<u>IKG Standard</u>		UL/CSA AWM 20234
			<u>IKS Standard</u>		UL/CSA AWM 20236

INDRAMAT Standard IKG

Part Number	Length in meters	INDRAMAT Type	Lapp Cable Part Number	Connector Side 1	Connector Side 2
70345476	10	IKG4009-010	7072403	INS0681/C03	INS0459/K02
70345479	10	IKG4006-010	7072403	INS0681/C03	INS0682/C03
70345502	10	IKG4090-010	7072406	INS0481/C04	INS0459/K04
70345503	10	IKG4087-010	7072406	INS0481/C04	INS0623/K04
70345528	10	IKG4186-010	7072409	INS0381/C16	INS0623/K16
70345541	10	IKG4020-010	7072403	INS0542/K01	INS0459/K02

INDRAMAT Standard IKS

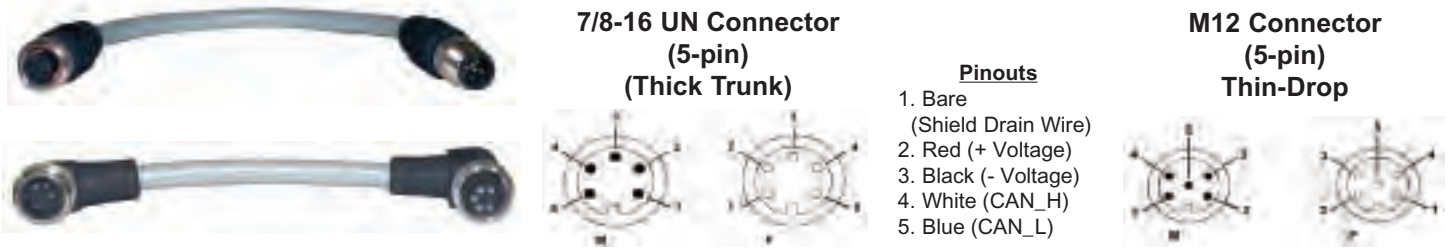
Part Number	Length in meters	INDRAMAT Type	Lapp Cable Part Number	Connector Side 1	Connector Side 2
70335583	10	IKS4374-010	7072401	INS0713/C01	INS0439/C01
70335584	10	IKS4376-010	7072401	INS0713/C01	INS0716/C01
70335595	10	IKS4103-010	7072401	INS0672/C01	INS0439/C01
70335636	10	IKS4001-010	7072414	INS0379/C01	INS0519/L01

Additional assemblies offered to complete the line. Call the factory for more information.

DeviceNet

BUS Cordsets, Receptacles, Tees

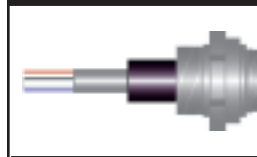

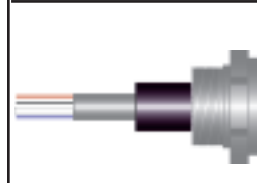
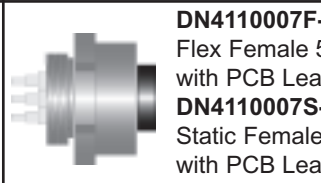
Flexing: These molded cordsets offer Trunk(Thick) and Drop(Thin) connectivity in a DeviceNet™ application. The DeviceNet™ network is an open low-level network that provides connections between simple industrial devices (such as sensors and actuators) and higher-level devices (such as PLC controllers and computers). Our flexing solutions offer the ability to connect in a motion system such as X,Y, Z motion equipment. The **Static** 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.



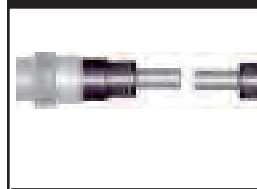



DeviceNet: Single Ended Cordsets with 7/8" Connectors

 <p>DN4110001F-XXX Flex Male Straight to Flying Leads DN4110001S-XXX Static Male Straight to Flying Leads</p>	 <p>DN4110002F-XXX Flex Male Right Angle Flying Leads DN4110002S-XXX Static Male Right Angle Flying Leads</p>
 <p>DN4110003F-XXX Flex Female Straight to Flying Leads DN4110003S-XXX Static Female Straight to Flying Leads</p>	 <p>DN4110004F-XXX Flex Female Right Angle to Flying Leads DN4110004S-XXX Static Female Right Angle to Flying Leads</p>

DeviceNet: Extension Ended Cordsets with Thick Panel Mount Receptacles

 <p>DN4110005F-XXX Flex Male 5-Pin 1/2" NPT Receptacle DN4110005S-XXX Static Male 5-Pin 1/2" NPT Receptacle</p>	 <p>DN4110051F-XXX Flex Male to Female Feed-Through Receptacle DN4110051S-XXX Static Male to Female Feed-Through Receptacle</p>
 <p>DN4110006F-XXX Flex Female 5-Pin 1/2" NPT Receptacle DN4110006S-XXX Static Female 5-Pin 1/2" NPT Receptacle</p>	 <p>DN4110007F-XXX Flex Female 5-Pin 1/2" NPT Housing Receptacle with PCB Leads DN4110007S-XXX Static Female 5-Pin 1/2" NPT Housing Receptacle with PCB Leads</p>

DeviceNet: Thick Trunk Extension Ended Cordsets


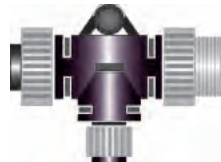

 <p>DN4110008F-XXX Flex Male Straight to Female Straight DN4110008S-XXX Static Male Straight to Female Straight</p>	 <p>DN4110010F-XXX Flex Male Right-Angle to Female Straight DN4110010S-XXX Static Male Right-Angle to Female Straight</p>
 <p>DN4110009F-XXX Flex Male Straight to Female Right-Angle DN4110009S-XXX Static Male Straight to Female Right-Angle</p>	 <p>DN4110011F-XXX Flex Male Right-Angle to Female Right-Angle DN4110011S-XXX Static Male Right-Angle to Female Right-Angle</p>

DeviceNet™ Cordsets are for Trunk applications. Replace the XXX with the desired cable length in feet.


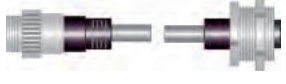
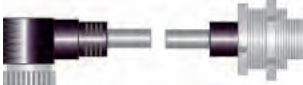

DeviceNet

BUS Cordsets, Receptacles, Tees




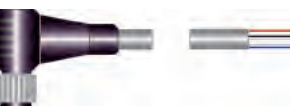
DeviceNet: Bus Drop Tees

 <p>DN4110012F Flex 7/8" Bus In/Out, 7/8" Drop (1 Male, 2 Female) DN4110012S Static 7/8" Bus In/Out, 7/8" Drop (1 Male, 2 Female)</p>	 <p>DN4110014F Flex 7/8" Bus In/Out, M12 Drop (1 Male, 2 Female) DN4110014S Static 7/8" Bus In/Out, M12 Drop (1 Male, 2 Female)</p>
 <p>DN4110013F Flex M12 Bus In/Out, M12 Drop (1 Male, 2 Female)</p>	<p>DN4110013S Static M12 Bus In/Out, M12 Drop (1 Male, 2 Female)</p>

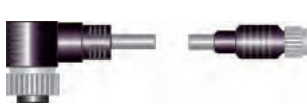
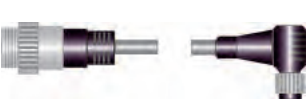
DeviceNet: Thick Back Panel Mount Trunk Extension Cordsets

 <p>DN4110015F-XXX Flex Female Straight to Male Back Panel Mount Receptacle DN4110015S-XXX Static Female Straight to Male Back Panel Mount Receptacle</p>	 <p>DN4110017F-XXX Flex Male Straight to Female Back Panel Mount Receptacle DN4110017S-XXX Static Male Straight to Female Back Panel Mount Receptacle</p>
 <p>DN4110016F-XXX Flex Female Right-Angle to Male Back Panel Mount Receptacle DN4110016S-XXX Static Female Right-Angle to Male Back Panel Mount Receptacle</p>	 <p>DN4110018F-XXX Flex Male Right-Angle to Female Back Panel Mount Receptacle DN4110018S-XXX Static Male Right-Angle to Female Back Panel Mount Receptacle</p>

DeviceNet: Thin Drop Single Ended Cordsets

 <p>DN4110019F-XXX Flex M12 Male Straight to Flying Leads DN4110019S-XXX Static M12 Male Straight to Flying Leads</p>	 <p>DN4110021F-XXX Flex M12 Female Straight to Flying Leads DN4110021S-XXX Static M12 Female Straight to Flying Leads</p>
 <p>DN4110020F-XXX Flex M12 Male Right-Angle to Flying Leads DN4110020S-XXX Static M12 Male Right-Angle to Flying Leads</p>	 <p>DN4110022F-XXX Flex M12 Female Right-Angle to Flying Leads DN4110022S-XXX Static M12 Female Right-Angle to Flying Leads</p>

DeviceNet: Thin Drop Single Extension Cordsets








 <p>DN4110027F-XXX Flex 7/8" Male Straight to M12 Female Straight DN4110027S-XXX Static 7/8" Male Straight to M12 Female Straight</p>	 <p>DN4110033F-XXX Flex 7/8" Female Right-Angle to M12 Male Straight DN4110033S-XXX Static 7/8" Female Right-Angle to M12 Male Straight</p>
 <p>DN4110028F-XXX Flex 7/8" Male Straight to M12 Female Right-Angle DN4110028S-XXX Static 7/8" Male Straight to M12 Female Right-Angle</p>	 <p>DN4110034F-XXX Flex 7/8" Female Right-Angle to M12 Male Right-Angle DN4110034S-XXX Static 7/8" Female Right-Angle to M12 Male Right-Angle</p>

DeviceNet™ Cordsets are for Trunk applications. Replace the XXX with the desired cable length in feet.

DeviceNet


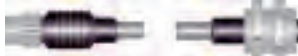

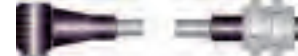
BUS Cordsets, Receptacles, Tees

DeviceNet: Thin Drop Single Extension Cordsets	
 <p>DN4110023F-XXX Flex M12 Male Straight to M12 Female Straight DN4110023S-XXX Static M12 Male Straight to M12 Female Straight</p>	 <p>DN4110029F-XXX Flex 7/8" Male Right-Angle to M12 Female Straight DN4110029S-XXX Static 7/8" Male Right-Angle to M12 Female Straight</p>
 <p>DN4110024F-XXX M12 Male Straight to M12 Female Right-Angle DN4110024S-XXX Static M12 Male Straight to M12 Female Right-Angle</p>	 <p>DN4110030F-XXX Flex 7/8" Male Right-Angle to M12 Female Right-Angle DN4110030S-XXX Static 7/8" Male Right-Angle to M12 Female Right-Angle</p>
 <p>DN4110025F-XXX Flex M12 Male Right-Angle to M12 Female Straight DN4110025S-XXX Static M12 Male Right-Angle to M12 Female Straight</p>	 <p>DN4110031F-XXX Flex 7/8" Female Straight to M12 Male Straight DN4110031S-XXX Static 7/8" Female Straight to M12 Male Straight</p>
 <p>DN4110026F-XXX Flex M12 Male Right-Angle to M12 Female Right-Angle DN4110026S-XXX Static M12 Male Right-Angle to M12 Female Right-Angle</p>	 <p>DN4110032F-XXX Flex 7/8" Female Straight to M12 Male Right-Angle DN4110032S-XXX Static 7/8" Female Straight to M12 Male Right-Angle</p>

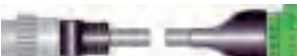





DeviceNet: M12 Thin Receptacles	
 <p>DN4110039F-XXX Flex M12 Female Back Mount Receptacle DN4110039S-XXX Static M12 Female Back Mount Receptacle</p>	 <p>DN4110043F-XXX Flex M12 Female to Male Feed-Through Receptacle DN4110043S-XXX Static M12 Female to Male Feed-Through Receptacle</p>
 <p>DN4110040F-XXX Flex M12 Male Back Mount Receptacle DN4110040S-XXX Static M12 Male Back Mount Receptacle</p>	 <p>DN4110044F-XXX Flex M12 Female Back Mount Receptacle with PCB Leads DN4110044S-XXX Static M12 Female Back Mount Receptacle with PCB Leads</p>
 <p>DN4110041F-XXX Flex M12 Female 1/2" NPT Receptacle DN4110041S-XXX Static M12 Female 1/2" NPT Receptacle</p>	 <p>DN4110045F-XXX Flex M12 Male Back Mount Receptacle with PCB Leads DN4110045S-XXX Static M12 Male Back Mount Receptacle with PCB Leads</p>
 <p>DN4110042F-XXX Flex M12 Male 1/2" NPT Receptacle</p>	<p>DN4110042S-XXX Static M12 Male 1/2" NPT Receptacle</p>

DeviceNet™ Cordsets are for Trunk applications. Replace the XXX with the desired cable length in feet.

DeviceNet: M12 Thin Back Panel Mount Extension Cordsets

 <p>DN4110035F-XXX Flex Female Straight to Male Back Panel Mount Receptacle DN4110035S-XXX Static Female Straight to Male Back Panel Mount Receptacle</p>	 <p>DN4110037F-XXX Flex Male Straight to Female Back Panel Mount Receptacle DN4110037S-XXX Static Male Straight to Female Back Panel Mount Receptacle</p>
 <p>DN4110036F-XXX Flex Female Right-Angle to Male Back Panel Mount Receptacle DN4110036S-XXX Static Female Right-Angle to Male Back Panel Mount Receptacle</p>	 <p>DN4110038F-XXX Flex Male Right-Angle to Female Back Panel Mount Receptacle DN4110038S-XXX Static Male Right-Angle to Female Back Panel Mount Receptacle</p>

DeviceNet: Thin Open Style Termination Cordsets

 <p>DN4110046F-XXX Flex 7/8" Male Straight to 5-Pin Terminal Connector DN4110046S-XXX Static 7/8" Male Straight to 5-Pin Terminal Connector</p>	 <p>DN4110049F-XXX Flex M12 Male Back Mount Receptacle to 5-Pin Terminal Connector DN4110049S-XXX Static M12 Male Back Mount Receptacle to 5-Pin Terminal Connector</p>
 <p>DN4110047F-XXX Flex 5-Pin Terminal Connector to Flying Leads DN4110047S-XXX Static 5-Pin Terminal Connector to Flying Leads</p>	 <p>DN4110050F-XXX Flex 7/8" Male Back Panel Mount Receptacle to 5-Pin Terminal Connector DN4110050S-XXX Static 7/8" Male Back Panel Mount Receptacle to 5-Pin Terminal Connector</p>
 <p>DN4110048F-XXX Flex M12 Male Straight to 5-Pin Terminal Connector DN4110048S-XXX Static M12 Male Straight to 5-Pin Terminal Connector</p>	 <p>DN4110050F-XXX Flex 7/8" Male Back Panel Mount Receptacle to 5-Pin Terminal Connector DN4110050S-XXX Static 7/8" Male Back Panel Mount Receptacle to 5-Pin Terminal Connector</p>

DeviceNet™ Cordsets are for Trunk applications. Replace the XXX with the desired cable length in feet.

ProfiBus

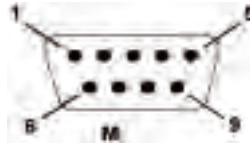
Flexing & Static Cordsets

Flexing: 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.

Static: When continuous flexing is not required, these cordsets offer long-lasting, reliable performance at a reduced cost.



DB9 D-Sub Connector



Pinouts

- 1&2. not used
- 3. Red (Bus - B)
- 4,5,6,&7. not used
- 8. Green (Bus - A)
- 9. not used

M12 Connector (5-pin)



Pinouts

- 1. 5 Vdc
- 2. Green (Bus - A)
- 3. Ground
- 4. Red (Bus - B)
- 5. Shield

ProfiBus: Single Ended Cordsets- M12 Euro to Flying Leads

  <p>PB4110100F-XXX Flex Straight Male M12 PB4110100S-XXX Static Straight Male M12</p>	  <p>PB4110101F-XXX Flex Right Angle Male M12 PB4110101S-XXX Static Right Angle Male M12</p>
  <p>PB4110102F-XXX Flex Straight Female M12 PB4110102S-XXX Static Straight Female M12</p>	  <p>PB4110103F-XXX Flex Right Angle Female M12 PB4110103S-XXX Static Right Angle Female M12</p>

ProfiBus: Extension: M12 Euro Male to Female Cordsets

  <p>PB4110104F-XXX Flex Straight Male M12-Straight Female M12 PB4110104S-XXX Static Straight Male M12-Straight Female M12</p>	  <p>PB4110105F-XXX Flex Straight Male M12- Right Angle Female M12 PB4110105S-XXX Static Straight Male M12- Right Angle Female M12</p>
  <p>PB4110106F-XXX Flex Right Angle Male M12 - Straight Female M12 PB4110106S-XXX Static Right Angle Male M12 - Straight Female M12</p>	  <p>PB4110107F-XXX Flex Right Angle Male M12- Right Angle Female M12 PB4110107S-XXX Static Right Angle Male M12- Right Angle Female M12</p>

ProfiBus: Panel Mount Receptacle with Jacketed Cable

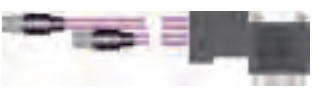

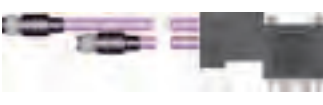

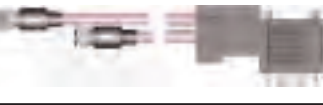
  <p>PB4110119F-XXX Flex Panel Mount Male Receptacle to Flying Leads PB4110119S-XXX Static Panel Mount Male Receptacle to Flying Leads</p>	  <p>PB4110120F-XXX Flex Female Panel Mount Receptacle to Flying Leads PB4110120S-XXX Static Female Panel Mount Receptacle to Flying Leads</p>
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Replace the XXX with the desired cable length in feet.







ProfiBus

Flexing & Static Cordsets

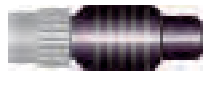


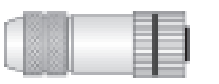



ProfiBus: Sub D Y-Cordsets: D'Sub to Two M12 Euro Connectors

	PB4110108F-XXX Flex 2X Straight Male M12-DB9 Node Connector PB4110108S-XXX Static 2X Straight Male M12-DB9 Node Connector		PB4110109F-XXX Flex 2x Right Angle Male M12-DB9 Node Connector PB4110109S-XXX Static 2x Right Angle Male M12-DB9 Node Connector
	PB4110110F-XXX Flex R2X Straight Female M12-DB9 Node Connector PB4110110S-XXX Static R2X Straight Female M12-DB9 Node Connector		PB4110111F-XXX Flex 2X Right Angle Female M12-DB9 Node Connector PB4110111S-XXX Static 2X Right Angle Female M12-DB9 Node Connector
	PB4110112F-XXX Flex Straight Male M12/ Straight Female M12- DB9 Node Conn PB4110112S-XXX Static Straight Male M12/ Straight Female M12- DB9 Connector		

ProfiBus: D'Sub to One M12 Euro Connector or Flying Leads

	PB4110113F-XXX Flex Straight Male M12- DB9 Master Connector PB4110113S-XXX Static Straight Male M12- DB9 Master Connector		PB4110114F-XXX Flex Right Angle Male M12- DB9 Master Connector PB4110114S-XXX Static Right Angle Male M12- DB9 Master Connector
	PB4110115F-XXX Flex Straight Female M12- DB9 Master Connector PB4110115S-XXX Static Straight Female M12- DB9 Master Connector		PB4110116F-XXX Flex Right Angle Female M12- DB9 Master Connector PB4110116S-XXX Static Right Angle Female M12- DB9 Master Connector
	PB4110117F-XXX Flex DB 9 Node Connector- Flying Leads PB4110117S-XXX Static DB 9 Node Connector- Flying Leads		PB4110118F-XXX Flex DB9 Master Connector- Flying Leads PB4110118S-XXX Static DB9 Master Connector- Flying Leads

ProfiBus: Accessories

	PB41100121 Male Terminating Resistor		PB4110122 Female Terminating Resistor
	PB41100123 Bus "Tee"		PB4110124 Female Field Wireable (M12)
	PB4110125 Male Field Wireable (M12)		PB4110126 DB9 Node Female Field Wireable
	PB4110127 DB9 Master Female Field Wireable		

Replace the XXX with the desired cable length in feet.

Pinouts- 4 Pair

1. Wht/Org (TRD0+)
2. Org (TRD0-)
3. Wht/Grn (Rx+)
4. Blue (TRD2+)
5. Wht/Blue (TRD2-)
6. Grn (TRD1-)
7. Wht/Brn (TRD3+)
8. Brn (TRD3-)

Female Female

Male Female

Male Male

Male Female

Male Male



C7-0002-XXX
RJ45 to RJ45 (two ended)
PUR Cable

C7-0003-XXX
RJ45 to RJ45 (two ended)
Zero Halogen Cable

C7-0005-XXX
RJ 45 (one ended)
PUR Cable

C7-0004-XXX
RJ 45 (one ended)
PVC Cable

C7-0006-XXX
RJ 45 (one ended)
Zero Halogen Cable

Remote Access Ports

Overview

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 insure proper component termination.

Before... "The Hard Way"

- Dangerous- Open Exposed Wire
- Safety Hazard
- Production Interruption

After.... "The Easy Way"

- Closed Panel
- Safe
- Production Continuity

UL E211786



PROTOCOL CROSS REFERENCE

DB9= DH+, DH485, Serial, RS232, Serial Mouse, PLC 5, M984
 DB15= PLC2
 DB15H= Video, VGA
 DB 25= RS232, Parallel, Printer, PLC3
 RJ45= DH485, SLC 500, Ethernet, Control Net, 10 Base T

6 Pos. Mini Din= Keyboard, Mouse, PS/2
 8 Pos. Mini Din= Data Highway=, Enhanced PLC5, SLC 5/04
 5 Pos. Din= AT Style Keyboard
 8 Pos. Din= SLC100
 3 Pos. Header= Data Highway+

Remote Access Ports

Standard Configurations

Ethernet



Part # 48-2S-3A-45C5S

HBE 48 Enclosure: Duplex AC Outlet, CAT 5 RJ 45 Coupler, & 3 Amp Circuit Breaker

RS232



Part # 16-1-9XP

HBE 16 Enclosure: Single AC Outlet & DB 9 Gender to Gender Coupler

Data Highway



Part # 24-1-3A-9XP-MD8P

HBE 24 Enclosure: Single AC Outlet, 3 Amp Circuit Breaker, DB 9 Gender to Gender Coupler, & 8 Position Mini Din Coupler



SLC 500 DH485

Part # 16-1-45CS

HBE 16 Enclosure: Single AC Outlet & Shielded RJ45 Coupler

DH+

Part # 16-1-MD8P

HBE 16 Enclosure: Single AC Outlet & 8 Position Mini Din Coupler



RS232



Part # 48-2S-3A-9XP

HBE 48 Enclosure: Duplex AC Outlet, 3 Amp Circuit Breaker, & DB 9 Gender to Gender Coupler

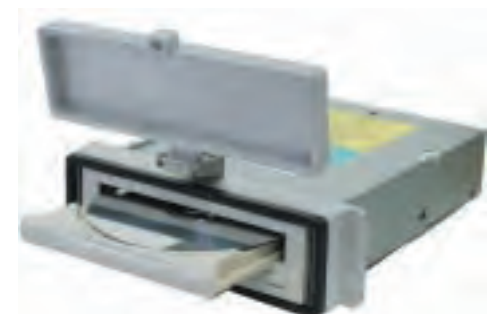
SLC 500



Part # 6-45T

HBE 6 Enclosure: RJ45 Connector with Terminal Block Interface

CD Rom Unit



Part # 10.9000NCDR

Custom Enclosure Bracket set for CD-ROM or 5 1/4" protocol

Many designs available for **IMMEDIATE** delivery.

Remote Access Ports

Standard Configurations

RS232



Part # 24-1-3A-9XP

HBE 24 Enclosure: Single AC Outlet, 3 Amp Circuit Breaker, DB 9 Gender to Gender Coupler

RS232



Part # 6-9XP

HBE 6 Enclosure: DB 9 Gender to Gender Coupler



Part # 24-35ND

Remote Access Port with 3.5" Disk Drive Assembly bracket without drive

Computer Port



Part # 10-2MD6P

HBE 10 Enclosure: 2- 6 Position Mini Din Coupler

Device Net



Part # 24-1-3A-5H

HBE 24 Enclosure: Single AC Outlet, 3 Amp Circuit Breaker, 5P Header

DH+



Part # 48-2S-3A-9XP-3H

HBE 48 Enclosure: Duplex AC Outlet, 3 Amp Circuit Breaker, DB 9 Gender to Gender Coupler, 3 Pos Header

USB 2.0 Interface



Part # 48-2S-3A-UFP

HBE 48 Enclosure: Duplex AC Outlet, 3 Amp Circuit Breaker & USB Interface Coupler

Select the gender of the D'subs.

Remote Access Ports

Standard Configurations

STANDARD REMOTE ACCESS PORTS

PART #:	DESCRIPTION:	INTERFACE PROTOCOLS:
6-11C	HBE 6 W/ RJ 11 COUPLER	MODEM INTFC
6-45CS	HBE 6 W/ RJ 45 SHIELDED COUPLER	DH485/ETHERNET/CONTROL NET/10 BASE T
10-1-45CS	HBE 10 W/ SINGLE AC OUTLET, RJ 45 SHIELDED COUPLER	DH485/ETHERNET/CONTROL NET/10 BASE T
10-1S-9MP	HBE 10 W/ SINGLE AC OUTLET (SLIM), DB 9 MALE TO MALE COUPLER	DH+/DH485/ASCII/DF1
16-9MP-MD6P	HBE 16 W/ DB 9 MALE TO MALE CPLR, 6 POS MINI DIN CPLR F-F	DH+
24-1-3A-MD6P	HBE 24 W/ SINGLE AC OUTLET, 3A CIRCUIT BRK, 6 POS MINI DIN CPLR F-F	DH+
24-1-45CS-9MP	HBE 24 W/ SINGLE AC OUTLET, RJ 45 SHIELDED CPLR, DB 9 MALE TO MALE COUPLER	DH+/DH485/ASCII/DF1/SERIAL/RS232/SERIAL MOUSE/ETHERNET/CONTROL NET/10 BASE T
32-2-3A-9FP	HBE 32 W/ DUPLEX AC OUTLET, 3A CIRCUIT BRK, DB 9 FEMALE TO FEMALE COUPLER	DH+/DH485/ASCII/DF1/SERIAL/RS232/SERIAL MOUSE
32-G2-9MP	HBE 32 W/ GFCI DUPLEX AC OUTLET, DB 9 MALE TO MALE COUPLER	DH+/DH485/ASCII/DF1/SERIAL/RS232/SERIAL MOUSE
32-2S-3A-45CS	HBE 32 W/ DUPLEX AC OUTLET (SCREW TERM), 3A CIRCUIT BRK, RJ 45 SHIELDED COUPLER	DH485/ETHERNET/CONTROL NET/10 BASE T
48-2S-29FP	HBE 48 W/ DUPLEX AC OUTLET (SCREW TERM), (2) DB9 FEM TO FEM COUPLERS	DH+/DH485/ASCII/DF1/SERIAL/RS232/SERIAL MOUSE
48-2S-3A-15FP	HBE 48 W/ DUPLEX AC OUTLET (SCREW TERM), 3A CIRCUIT BRK, DB 15 FEM TO FEM COUPLER	AB 9 SERIES - PLC-2 - GE FANUC SNP - SIEMENS CURRENT LOOP
48-2S-3A-25MP	HBE 48 W/ DUPLEX AC OUTLET (SCREW TERM), 3A CIRCUIT BRK, DB 25 MALE TO MALE COUPLER	PARALLEL DEVICE
48-2S-3A-MD6P	DUPLEX AC OUTLET, 3A CIRCUIT BRK, 6 PIN MIN DIN COUPLER	DH+
48-G2-9MP-45CS	GFCI DUPLEX AC OUTLET, DB 9 MALE TO MALE COUPLER, RJ 45 SHIELDED COUPLER	DH+/DH485/ASCII/DF1/SERIAL/RS232/SERIAL MOUSE/ETHERNET/CONTROL NET/10 BASE T

All ports are available with cable assemblies. Call factory for quote.

REMOTE ACCESS PORTS FOR PLC

PLC TYPE	RELATIVE PROTOCOLS	P/N W/ AC	P/N W/O AC
A-B PLC-5/10	· DB9F (PROGRAMMING TERMINAL) · 3P HEADER (DH+)	· 24-1-9FP-3H	· 16-9FP-3H
A-B PLC 5/12 & 5/15 & 5/25	· DB9F (PROGRAMMING TERMINAL) · 3P HEADER (DH+) · 3P HEADER (REMOTE I/O)	· 24-1-9FP-23H	· 16-9FP-23H
A-B PLC 5	· 8P MINI DIN (DH+) · 3P HEADER (DH+)	· 24-1-MD8P-3H	· 16-MD8P-3H
SLC 5/04	· 3P HEADER (DH+) · 8P MINI DIN (DH+) · DB9F (RS232/DH485)	· 24-1-3H-MD8P-9FP	· 16-3H-MD8P-9FP
SLC 5/03	· RJ45 (DH485) · DB9F (RS232/DH485)	· 24-1-45CS-9FP	· 16-45CS-9FP
SLC 5/02	· RJ45 (DH485)	· 16-1-45CS	· 6-45CS
SLC 5/01	· RJ45 (DH485)	· 16-1-45CS	· 6-45CS
SLC 500	· RJ45/TB INTFC (DH485)	· 16-1-45T	· 6-45T
A-B PANELVIEW 900	· DB9F (RS232)	· 16-1-9FP	· 6-9FP
A-B PANELVIEW 1200E/1400E	· DB9F (PROGRAMMING)	· 16-1-9FP	· 6-9FP
A-B CONTROL NET	· RJ45 (DH485)	· 16-1-45CS	· 6-45CS
A-B 1394	· DB9F (RS232)	· 16-1-9FP	· 6-9FP
A-B PLC 2	· DB15F	· 16-1-15FP	· 6-15FP
A-B DEVICE NET	· 5P HEADER	· 16-1-5H	· 10-5H
GE SNP	· DB9M	· 16-1-9MP	· 6-9MP
GE SNP	· DB15F	· 16-1-15FP	· 6-15FP
GE CNC	· PCR20M	· 16-1-20M	· 6-20M
SIEMENS CURRENT LOOP	· DB15F	· 16-1-15FP	· 6-15FP · 6-9FP
MODICON MODBUS	· DB9F	· 16-1-9FP	· 6-9MP
MODICON MODBUS + ALTERNATE NOTES	· DB9M TO APPLY DUPLEX TO APPLY CIRCUIT PROTECTION TO AC TO ADD CABLE ASSEMBLIES	· 16-1-9MP CHANGE PREFIX TO EITHER 32 OR 48 & CHANGE "1" TO "2" ADD 1A, 2A, 3A, 5A, OR 10A BETWEEN 1ST & 2ND P/N SEGMENTS ADD "-CXX (XX=LENGTH)	N/A N/A SAME

All ports are available with cable assemblies. Call factory for quote.



6-45CS

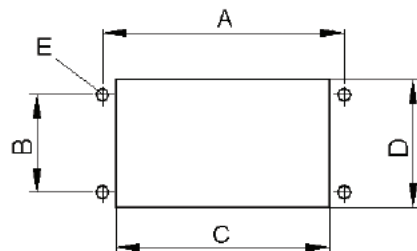
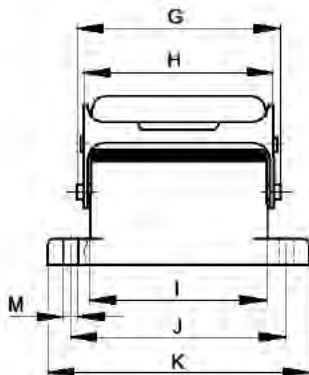
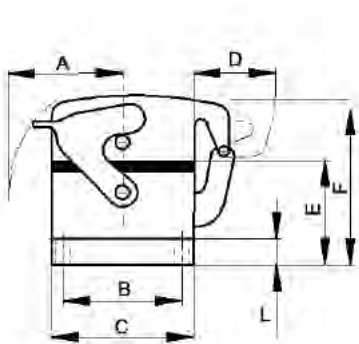


10-1-45CS

Remote Access Ports

Additional Information

PANEL MOUNT BASE DIMENSIONS



Series	A	B	C	D	E	F	G	H	I	J	K	L	M
HBE 6	44	32	43	25	27.8	44.8	74.8	70	60	70	80	4	4.3
HBE 10	50	32	43	25	27.8	44.8	91	88.5	73	83	93	4	4.3
HBE 16	50	32	43	25	27.8	44.8	111	109.5	93.3	103	113	4	4.3
HBE 24	50	32	43	25	27.8	44.8	138	136.5	120	130	140	4	4.3
HBE 32	57.7	65	90.2	17.8	32.7	45	112.8	105	88.3	110	124.3	6.2	4.85
HBE 48	105	70	90	30	39.5	56.5	152	139.5	132	148	165	10	7

Series	A	B	C	D	E
HBE 6	70	32	52.2	35	4.3
HBE 10	83	32	65.2	35	4.3
HBE 16	103	32	85.5	35	4.3
HBE 24	130	32	112.2	35	4.3
HBE 32	110	65	85.5	79	5.5
HBE 48	148	70	117	82	7

CABLE ASSEMBLY SUFFIX




Type	Gender	Length	P/N Adder	Gender	Length	P/N Adder
DB 9	M-M	5	C9M5	M-F	5	C9MF5
		10	C9M10		10	C9MF10
HDB15	M-M	5	CH15M5	M-F	5	CH15MFH5
		10	CH15M10		10	CH15MFH10
DB15	M-M	5	C15M5	M-F	5	C15MF5
		10	C15M10		10	C15MF10
DB25	M-M	5	C25M5	M-F	5	C25MF5
		10	C25M10		10	C25MF10
RJ 45	M-M	10	C45M10	M-M	20	C45M20
6P Mini Din	M-M	3	C6M3	M-M	6	C6M6
	M-M	10	C6M10			
8P Mini Din	M-M	3	C8M3	M-M	6	C8M3
	M-M	10	C8M10			
USB	M-M	3	CUM3	M-M	6	CUM6
	M-M	10	CUM10			
RJ45 CAT 5	M-M	10	C455M10			

Remote Access Ports

Custom Configurations

Section 1: Enclosures:

	<input checked="" type="checkbox"/> Description:	Part #:	<input checked="" type="checkbox"/> Description:	Part #:	<input checked="" type="checkbox"/> Description:	Part #:
	<input type="checkbox"/> HBE 6 Enclosure	6	<input type="checkbox"/> HBE 24 Enclosure	24	<input type="checkbox"/> CD-ROM Housing	10.9000
	<input type="checkbox"/> HBE 10 Enclosure	10	<input type="checkbox"/> HBE 32 Enclosure	32	* Note: Available in surface mount bases.	
	<input type="checkbox"/> HBE 16 Enclosure	16	<input type="checkbox"/> HBE 48 Enclosure	48		


Section 2: Components:

D'SUBMINIATURES


Qty:	<input checked="" type="checkbox"/> Description:	Part #:	Gender:	Termination:	Pass Through Configuration:
___	<input type="checkbox"/> DB 9 = DH+, DH 485, M984	9	<input type="checkbox"/> M <input type="checkbox"/> F	<input type="checkbox"/> T <input type="checkbox"/> S <input type="checkbox"/> P	_____
___	<input type="checkbox"/> DB 15= PLC 2	15	<input type="checkbox"/> M <input type="checkbox"/> F	<input type="checkbox"/> T <input type="checkbox"/> S <input type="checkbox"/> P	_____
___	<input type="checkbox"/> DB 15 High Density= Video, VGA	15H	<input type="checkbox"/> M <input type="checkbox"/> F	<input type="checkbox"/> T <input type="checkbox"/> S <input type="checkbox"/> P	_____
___	<input type="checkbox"/> DB 25= RS232, Parallel, Printer, PLC3	25	<input type="checkbox"/> M <input type="checkbox"/> F	<input type="checkbox"/> T <input type="checkbox"/> S <input type="checkbox"/> P	_____
___	<input type="checkbox"/> DB 37=	37	<input type="checkbox"/> M <input type="checkbox"/> F	<input type="checkbox"/> T <input type="checkbox"/> S <input type="checkbox"/> P	_____

Terminal Block Interface (T), Solder Cup (S), Pass-Through (P) (specify genders)


AC OUTLETS

	<input checked="" type="checkbox"/> Description:	Part #:
	<input type="checkbox"/> Single AC Outlet	1
	<input type="checkbox"/> Single AC Outlet Slim	1S
	<input type="checkbox"/> Single AC Plug	1M
	<input type="checkbox"/> Duplex AC Outlet	2
	<input type="checkbox"/> Duplex Outlet w/Screw Term	2S
	<input type="checkbox"/> GFCI: Ground Fault Circuit Interrupt	G2
<input type="checkbox"/> European Outlet	GAC	


PERIPHERAL DEVICES

	<input checked="" type="checkbox"/> Description:	Part #:
	<input type="checkbox"/> 3.5" Disk Drive Bracket with Drive	35DD
	<input type="checkbox"/> 3.5" Disk Drive Bracket without Drive	35ND
	<input type="checkbox"/> CD-Rom Bracket with drive	CDR
	<input type="checkbox"/> CD-Rom Bracket without drive	NCDR
	<input type="checkbox"/> Zip Drive Bracket with Drive	ZIPDD
	<input type="checkbox"/> Zip Drive Bracket without Drive	ZIPND
<input type="checkbox"/> 3.5" Disk Drive/ CD-Rom Drive	DD-CD	


MINI DIN COUPLERS

	<input checked="" type="checkbox"/> Description:	Part #:
	<input type="checkbox"/> 6 Pos Mini Din Coupler	MD6P
	<input type="checkbox"/> 8 Pos Mini Din= SLC5/04, Data Highway+, Enhanced PLC5	MD8P
	<input type="checkbox"/> Terminal Block Interface	T


CIRCUIT BREAKERS

	<input checked="" type="checkbox"/> Description:	Part #:
	<input type="checkbox"/> 1 Amp Circuit Breaker	1A
	<input type="checkbox"/> 2 Amp Circuit Breaker	2A
	<input type="checkbox"/> 3 Amp Circuit Breaker	3A
	<input type="checkbox"/> 5 Amp Circuit Breaker	5A

DIN COUPLERS

	<input checked="" type="checkbox"/> Description:	Part #:
	<input type="checkbox"/> 5 Pos Din Coupler= AT style keyboard	D5P
	<input type="checkbox"/> Terminal Block Interface	T


PHONE JACKS

	<input checked="" type="checkbox"/> Description:	Part #:
	<input type="checkbox"/> RJ 45 Coupler= DH 485, SLC 500 Ethernet, Control Net, 10 Base	45C
	<input type="checkbox"/> RJ 45 Shielded Coupler	45CS
	<input type="checkbox"/> RJ 45 CAT5	45C5
	<input type="checkbox"/> RJ 45 Shielded CAT5	45C5S
	<input type="checkbox"/> RJ 11 Coupler	11C
	<input type="checkbox"/> RJ 11 Shielded Coupler	11CS
<input type="checkbox"/> Terminal Block Interface	T	

LOCKS

	<input checked="" type="checkbox"/> Description:	Part #:
	<input type="checkbox"/> Electrical / Switch Lock	L
	<input type="checkbox"/> Cover Lock Out	LO

3 POSITION HEADER

	<input checked="" type="checkbox"/> Description:	Part #:
	<input type="checkbox"/> 3 Pos Header = Data Highway +	3H
	<input type="checkbox"/> 5 Pos Header	5H

FIBER OPTIC COUPLERS

<input type="checkbox"/> Fiber Optic Coupler: Specify type: _____

USB PORTS

<input type="checkbox"/> USB Port	UFP
-----------------------------------	-----

Other Components Available. Specify your requirements: _____

Cable Assemblies:

Ports may be ordered prewired with cable sets. Add CX to the end of the component part number which should be prewired. Replace the X with the desired cable length in feet. See previous page.

Part Numbers:

Section 1: Enclosure

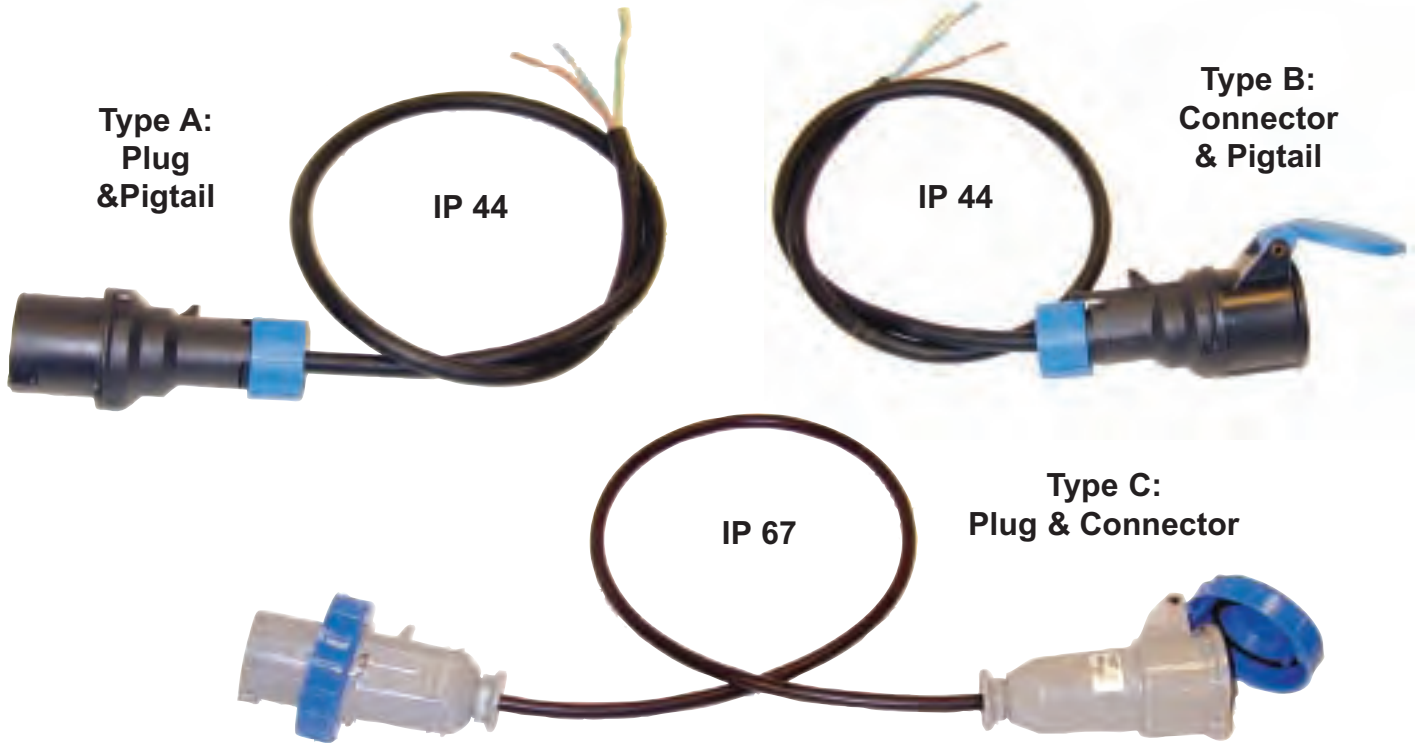
Section 2: Components and and Cable Assemblies

Example: HBE 48 Enclosure with Duplex AC Outlet, 25 Pos Male D'Sub with 10' of cable, 3 Amp Circuit Breaker (Part # 48-2-25MC10-3A)

Harmonized/ UL Cord Sets with IEC 60309 Pin & Sleeve Connectors

These pre-assembled and tested cable connector/cord sets are easy to order and stock. They speed initial installation and replacement, minimizing installation cost and downtime. They are available in several popular international and North American voltage and current configurations, and are typically ready for shipment within

a few days. In addition, these assemblies are available in other cable lengths and other configurations using any of our wide offering of EPIC® Pin & Sleeve connectors and cables. Please contact a representative with your specific requirements for a custom cord set.



IP 44: 250 Volt, 16 Amp, 3-wire (2+PE) Assembly

Type	Plug/Connector	Cable	Order No.
A	250V, 16A, 2+PE, 6H, Blue, IP 44	OLFLEX® POWER QUAD II, 3 x 1.5, PVC, OD: 8.4 mm	44-25016-Q2-15-PX-**
A	250V, 16A, 2+PE, 6H, Blue, IP 44	OLFLEX® POWER IX, 3 x 1.5, Neoprene, OD: 10.2 mm	44-25016-IX-15-PX-**
B	250V, 16A, 2+PE, 6H, Blue, IP 44	OLFLEX® POWER QUAD II, 3 x 1.5, PVC, OD: 8.4 mm	44-25016-Q2-15-CX-**
B	250V, 16A, 2+PE, 6H, Blue, IP 44	OLFLEX® POWER IX, 3x 1.5, Neoprene, OD: 10.2 mm	44-25016-IX-15-CX-**
C	250V, 16A, 2+PE, 6H, Blue, IP 44	OLFLEX® POWER QUAD II, 3 x 1.5, PVC, OD: 8.4 mm	44-25016-Q2-15-PC-**
C	250V, 16A, 2+PE, 6H, Blue, IP 44	OLFLEX® POWER IX, 3 x 1.5, Neoprene, OD: 10.2 mm	44-25016-IX-15-PC-**

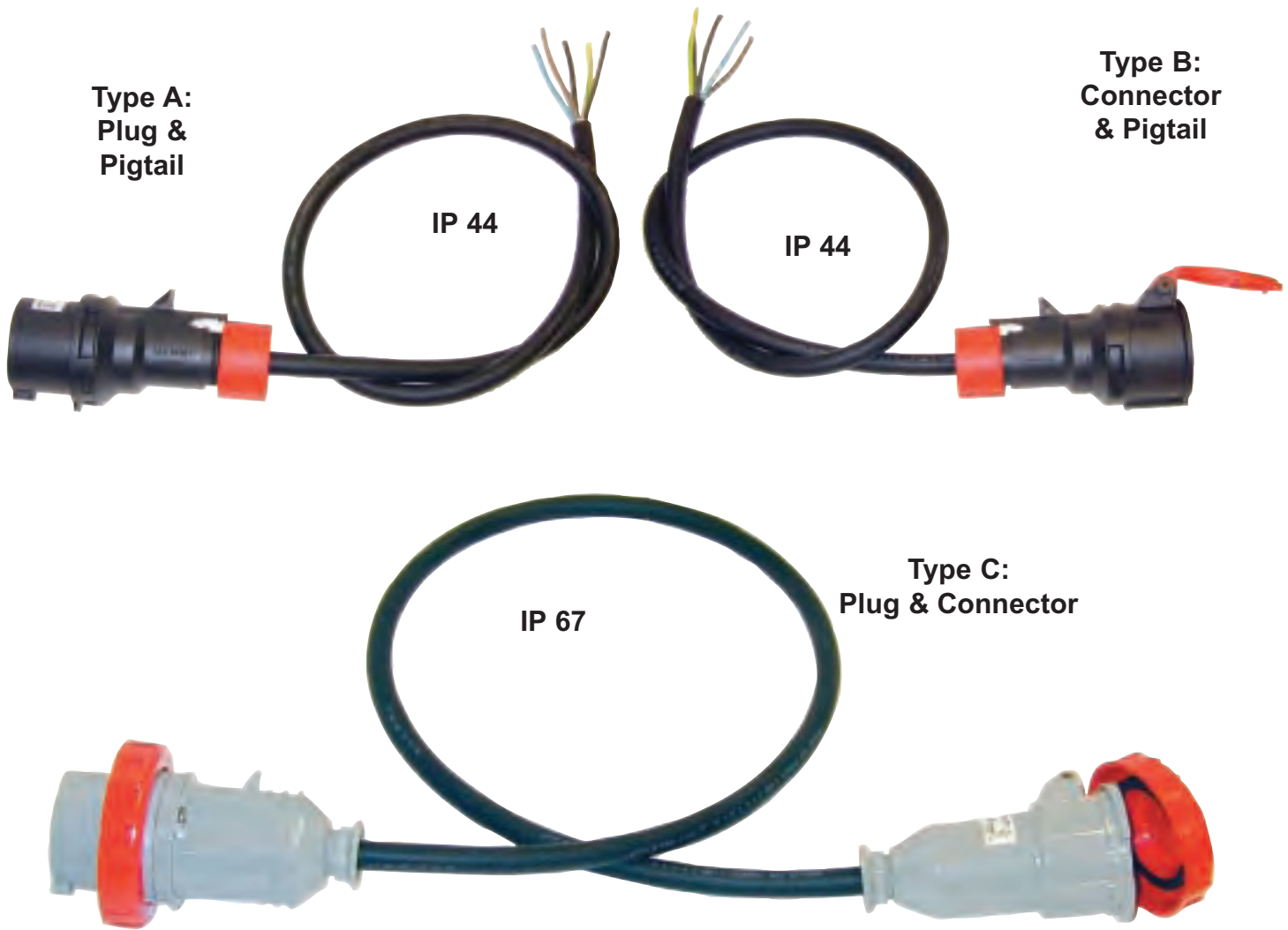
IP 67: 250 Volt, 16 Amp, 3-wire (2+PE) Assembly

Type	Plug/Connector	Cable	Order No.
A	250V, 16A, 2+PE, 6H, Blue, IP 67	OLFLEX® POWER QUAD II, 3 x 1.5, PVC, OD: 8.4 mm	67-25016-Q2-15-PX-**
A	250V, 16A, 2+PE, 6H, Blue, IP 67	OLFLEX® POWER IX, 3 x 1.5, Neoprene, OD: 10.25 mm	67-25016-IX-15-PX-**
B	250V, 16A, 2+PE, 6H, Blue, IP 67	OLFLEX® POWER QUAD II, 3 x 1.5, PVC, OD: 8.4 mm	67-25016-Q2-15-CX-**
B	250V, 16A, 2+PE, 6H, Blue, IP 67	OLFLEX® POWER IX, 3x 1.5, Neoprene, OD: 10.2 mm	67-25016-IX-15-CX-**
C	250V, 16A, 2+PE, 6H, Blue, IP 67	OLFLEX® POWER QUAD II, 3 x 1.5, PVC, OD: 8.4 mm	67-25016-Q2-15-PC-**
C	250V, 16A, 2+PE, 6H, Blue, IP 67	OLFLEX® POWER IX, 3 x 1.5, Neoprene, OD: 10.2 mm	67-25016-IX-15-PC-**

Note: Complete the Order Number by adding the final 2 digits to indicate assembly cable length. Use "10" for 10 feet, "15" for 15 feet, or "25" for 25 feet. Custom lengths and configurations are available, please consult with a representative.

For North American equivalent (UL), replace '25016' in the order number with '25020'

Harmonized/ UL Cord Sets with IEC 60309 Pin & Sleeve Connectors



IP 44: 380 - 415 Volt, 16 Amp, 5-wire (3+N+PE) Assembly

Type	Plug/Connector	Cable	Order No.
A	380 - 415V, 16A, 3+N+PE, 6H, Red, IP 44	OLFLEX® POWER IX, 5 x 1.5, Neoprene, OD: 13.1 mm	44-40016-IX-25-PX-**
B	380 - 415V, 16A, 3+N+PE, 6H, Red, IP 44	OLFLEX® POWER IX, 5 x 1.5, Neoprene, OD: 13.1 mm	44-40016-IX-25-CX-**
C	380 - 415V, 16A, 3+N+PE, 6H, Red, IP 44	OLFLEX® POWER IX, 5 x 1.5, Neoprene, OD: 13.1 mm	44-40016-IX-25-PC-**

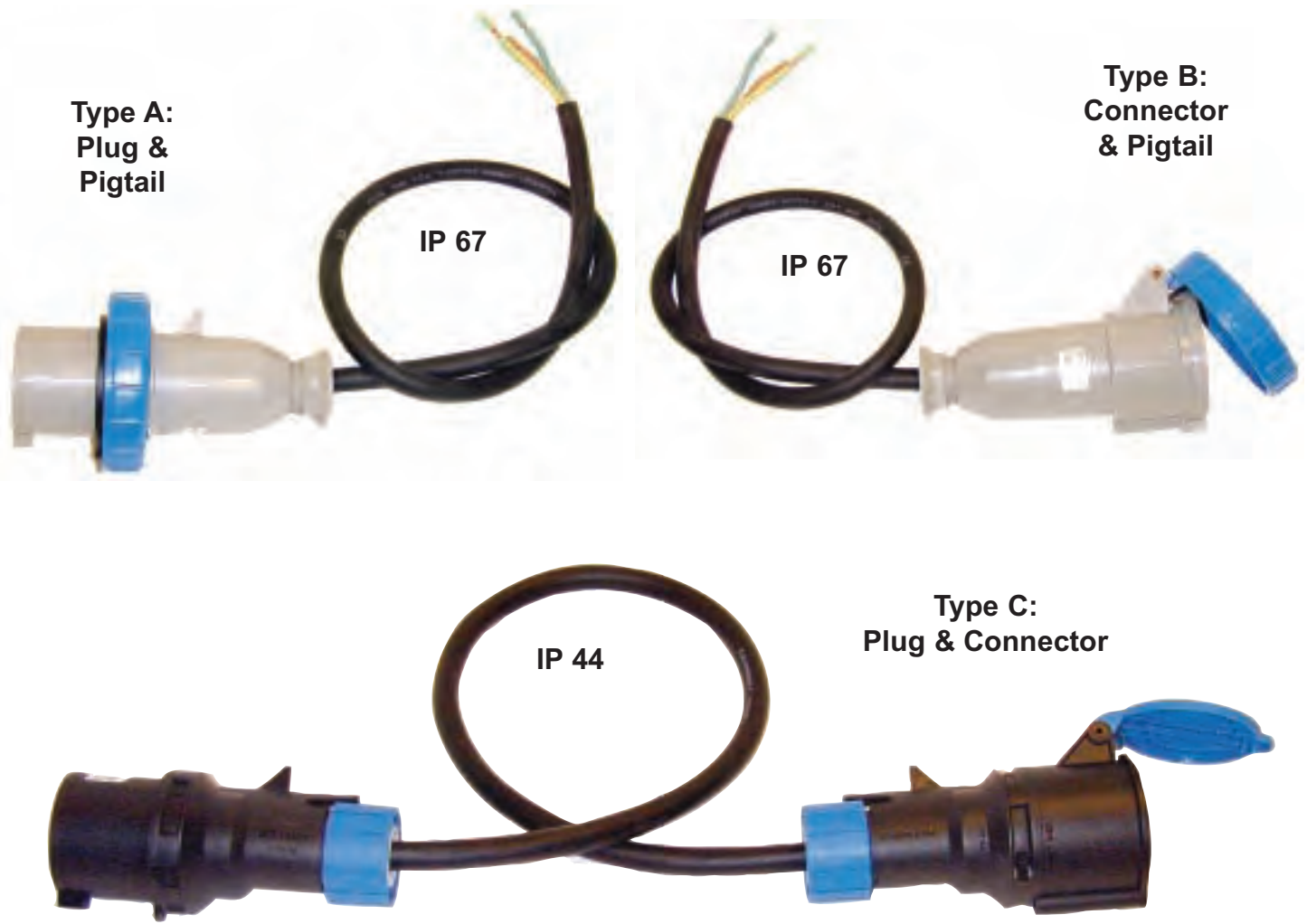
IP 67: 380 - 415 Volt, 16 Amp, 5-wire (3+N+PE) Assembly

Type	Plug/Connector	Cable	Order No.
A	380 - 415V, 16A, 3+N+PE, 6H, Red, IP 67	OLFLEX® POWER IX, 5 x 1.5, Neoprene, OD: 13.1 mm	67-40016-IX-25-PX-**
B	380 - 415V, 16A, 3+N+PE, 6H, Red, IP 67	OLFLEX® POWER IX, 5 x 1.5, Neoprene, OD: 13.1 mm	67-40016-IX-25-CX-**
C	380 - 415V, 16A, 3+N+PE, 6H, Red, IP 67	OLFLEX® POWER IX, 5 x 1.5, Neoprene, OD: 13.1 mm	67-40016-IX-25-PC-**

Note: Complete the Order Number by adding the final 2 digits to indicate assembly cable length. Use "10" for 10 feet, "15" for 15 feet, or "25" for 25 feet. Custom lengths and configurations are available, please consult with a representative.

For North American equivalent (UL), replace '40016' in the order number with '40020'.
Connector= 3ØY, 277/480V, 20A, 3+N+PE, 7H, Red

Harmonized/ UL Cord Sets with IEC 60309 Pin & Sleeve Connectors



IP 44: 250 Volt, 32 Amp, 3-wire (2+PE) Assembly

Type	Plug/Connector	Cable	Order No.
A	250V, 32A, 2+PE, 6H, Blue, IP 44	OLFLEX® POWER IX, 3 x 4, Neoprene, OD: 15.7 mm	44-25032-IX-40-PX-**
B	250V, 32A, 2+PE, 6H, Blue, IP 44	OLFLEX® POWER IX, 3 x 4, Neoprene, OD: 15.7 mm	44-25032-IX-40-CX-**
C	250V, 32A, 2+PE, 6H, Blue, IP 44	OLFLEX® POWER IX, 3 x 4, Neoprene, OD: 15.7 mm	44-25032-IX-40-PC-**

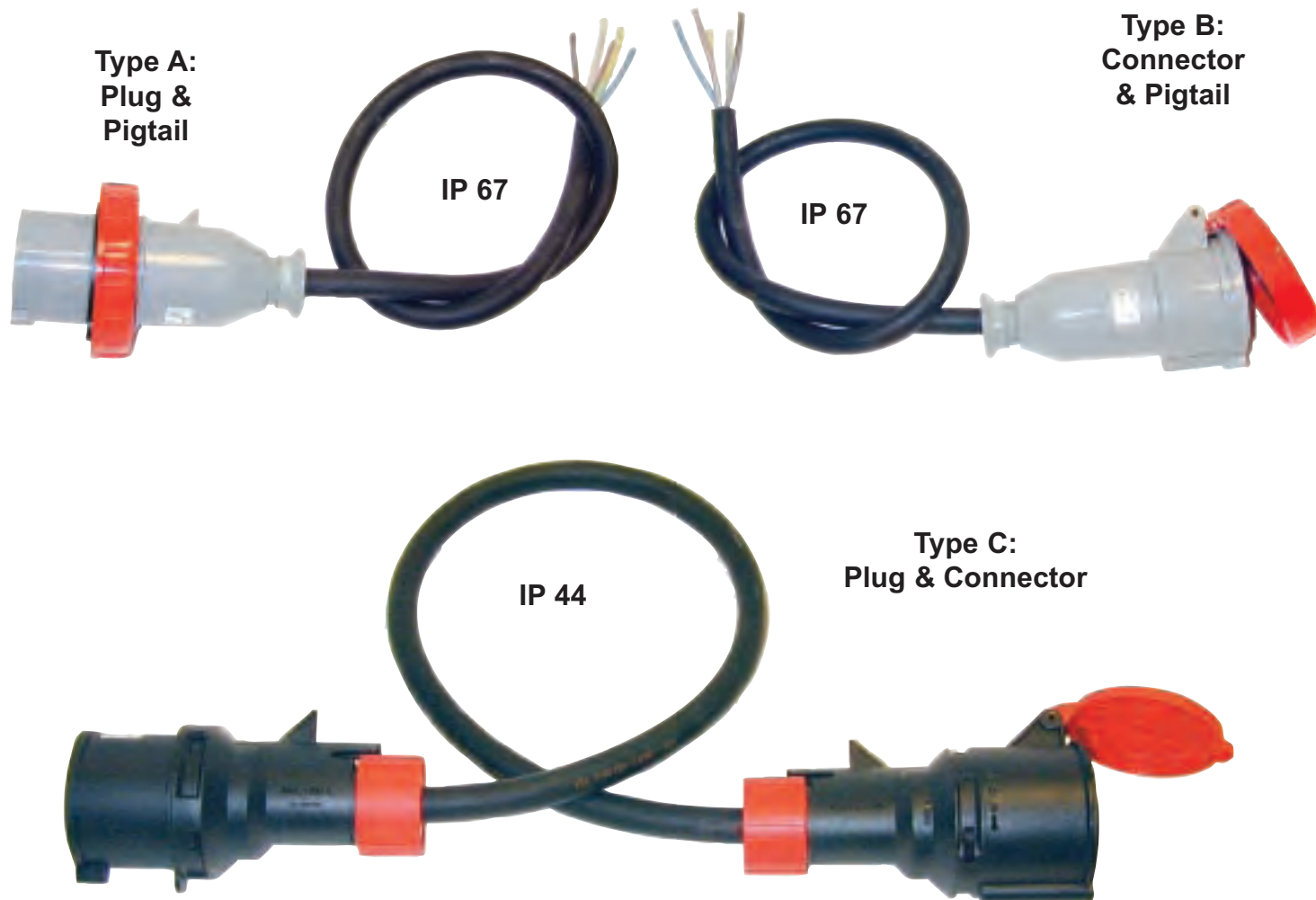
IP 67: 250 Volt, 32 Amp, 3-wire (2+PE) Assembly

Type	Plug/Connector	Cable	Order No.
A	250V, 32A, 2+PE, 6H, Blue, IP 67	OLFLEX® POWER IX, 3 x 4, Neoprene, OD: 15.7 mm	67-25032-IX-40-PX-**
B	250V, 32A, 2+PE, 6H, Blue, IP 67	OLFLEX® POWER IX, 3 x 4, Neoprene, OD: 15.7 mm	67-25032-IX-40-CX-**
C	250V, 32A, 2+PE, 6H, Blue, IP 67	OLFLEX® POWER IX, 3 x 4, Neoprene, OD: 15.7 mm	67-25032-IX-40-PC-**

Note: Complete the Order Number by adding the final 2 digits to indicate assembly cable length. Use "10" for 10 feet, "15" for 15 feet, or "25" for 25 feet. Custom lengths and configurations are available, please consult with a representative.

For North American equivalent (UL), replace '25032' in the order number with '25030'

Harmonized/ UL Cord Sets with IEC 60309 Pin & Sleeve Connectors



IP 44: 380 - 415 Volt, 32 Amp, 5-wire (3+N+PE) Assembly

Type	Plug/Connector	Cable	Order No.
A	380 - 415V, 32A, 3+N+PE, 6H, Red, IP 44	OLFLEX® POWER IX, 5 x 4, Neoprene, OD: 18.7 mm	44-40032-IX-40-PX-**
B	380 - 415V, 32A, 3+N+PE, 6H, Red, IP 44	OLFLEX® POWER IX, 5 x 4, Neoprene, OD: 18.7 mm	44-40032-IX-40-CX-**
C	380 - 415V, 32A, 3+N+PE, 6H, Red, IP 44	OLFLEX® POWER IX, 5 x 4, Neoprene, OD: 18.7 mm	44-40032-IX-40-PC-**

IP 67: 380 - 415 Volt, 32 Amp, 5-wire (3+N+PE) Assembly

Type	Plug/Connector	Cable	Order No.
A	380 - 415V, 32A, 3+N+PE, 6H, Red, IP 67	OLFLEX® POWER IX, 5 x 4, Neoprene, OD: 18.7 mm	67-40032-IX-40-PX-**
B	380 - 415V, 32A, 3+N+PE, 6H, Red, IP 67	OLFLEX® POWER IX, 5 x 4, Neoprene, OD: 18.7 mm	67-40032-IX-40-CX-**
C	380 - 415V, 32A, 3+N+PE, 6H, Red, IP 67	OLFLEX® POWER IX, 5 x 4, Neoprene, OD: 18.7 mm	67-40032-IX-40-PC-**

Note: Complete the Order Number by adding the final 2 digits to indicate assembly cable length. Use "10" for 10 feet, "15" for 15 feet, or "25" for 25 feet. Custom lengths and configurations are available, please consult with a representative.

For North American equivalent (UL), replace '40032' in the order number with '40030'.
Connector= 3ØY, 277/480V, 20A, 3+N+PE, 7H, Red

Custom Assemblies

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 can be created based on unique customer needs.



UL E192484 CSA 209964

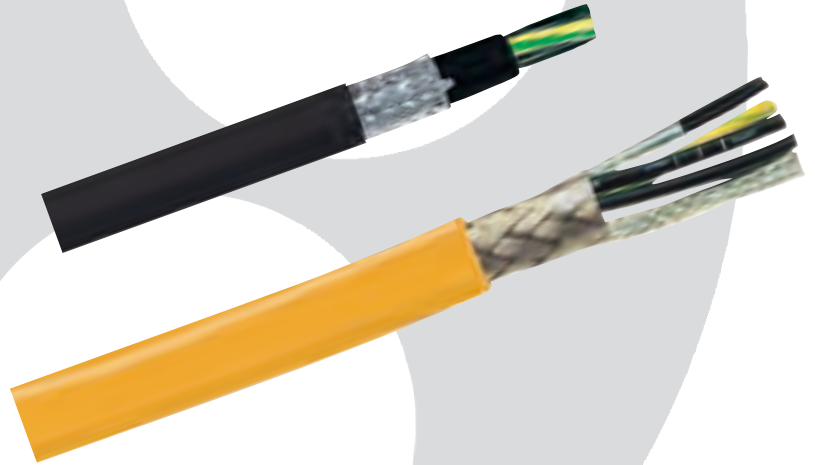
CUSTOM CABLE ASSEMBLY			
		Overall Assembly Length	
Connector A	Cable Length	Connector B	
Cable Type			
Housing (Hood/ Base): _____		Housing (Hood/ Base): _____	
Strain Relief: _____		Strain Relief: _____	
Insert: _____		Insert: _____	
CABLE SPECIFICATIONS			
Manufacturer: _____		Part # (Standard): _____	
		Cable Type: <input type="checkbox"/> Round Cable <input type="checkbox"/> Flat Cable	
TERMINATION <input type="checkbox"/> Screw <input type="checkbox"/> Crimp <input type="checkbox"/> Solder <input type="checkbox"/> Cage Clamp		Voltage: _____ Amperage: _____ Temperature: _____	
		Flexibility: _____ Color Code: _____ Jacket Color: _____	
CONDUCTORS		SHIELD TYPE	
# of Conductors: _____		<input type="checkbox"/> Mylar Shield <input type="checkbox"/> Braid Shield	
AWG Size: _____ O.D. (inches) _____		<input type="checkbox"/> Individual Shield <input type="checkbox"/> Unshielded	
		<input type="checkbox"/> Solid <input type="checkbox"/> Stranded	
		<input type="checkbox"/> Bare <input type="checkbox"/> Tinned	
ENVIRONMENT			
<input type="checkbox"/> NEMA 4 <input type="checkbox"/> NEMA 4X <input type="checkbox"/> NEMA 12 <input type="checkbox"/> IP 54 <input type="checkbox"/> IP 65 <input type="checkbox"/> IP 67 <input type="checkbox"/> Other: _____			
APPROVALS		REQUIREMENTS	
<input type="checkbox"/> UL <input type="checkbox"/> CSA <input type="checkbox"/> CE <input type="checkbox"/> None <input type="checkbox"/> Other _____		Conduit Type: _____ Ground Requirements: _____ Special Concerns (ex. Chemicals): _____	

Lapp Custom Cable Design Capabilities

With over 40 years of experience, Lapp can provide the cable solutions needed for the most demanding specifications!

Conductors:

- Bare Copper
- Tinned Plated Copper
- Nickel Plated Copper
- Water Blocked Strands
- Stainless Steel
- Flexible Stranding
- Thermocouple Alloys
- High Strength Alloys



Insulating and Jacket Materials

- PVC
- Nylon
- TPE/TPR
- Polyurethane
- Fluoropolymers
- Semi-Conductive
- Polyester
- Polyethylene
- Polypropylene
- PVC/Nylon
- Thermoplastic Blends

Shielding and Braids (Metal and Textile)

- Aluminum/Polyester Tape
- Tinned Plated Copper Braid
- Copper Covered Steel Braid
- Stainless Steel Braid
- Nylon
- Bare Copper Braids
- Nickel Plated Copper Braid
- Silver Plated Copper Braid
- Kevlar
- Fiberglass

Markets

- Robotics
- Transducers
- Geophysical
- Pendant & Reel
- Audio
- Instrumentation
- Custom Designs
- Control
- Lighting
- Tray Cable
- Entertainment
- Coil Cords
- Breather/ Vent Tubes
- Continuous Flex
- Sensors
- Medical/Dental
- Lead Wire
- Test and Measurement
- Thermocouples
- Automotive
- Industrial
- Shipboard
- Portable Cord
- Marine
- Elevator

Lapp Custom Design Questionnaire

Photocopy and fax to Lapp at 973-660-9330

CONTACT INFORMATION

Name: _____ Address: _____
Company: _____ City, State, Zip: _____
Phone: _____ Email: _____
Fax: _____

APPLICATION INFORMATION

(description of environment - i.e. oily, rugged, UV rays, chemicals, movement of cable, etc...)

Static: Continuous: Torsional: Bend Radius: _____

Acceleration: _____ Travel Distance: _____ Speed of Travel: _____

Additional Information:

CONDUCTORS

Element 1:	Element 2:
AWG: _____	AWG: _____
Stranding/Material: _____	Stranding/Material: _____
Insulation Material: _____	Insulation Material: _____
Coding: Number <input type="checkbox"/> Color <input type="checkbox"/>	Coding: Number <input type="checkbox"/> Color <input type="checkbox"/>
# of Conductors/Pairs: _____	# of Conductors/Pairs: _____

OVERALL SHIELDED TYPE

leave blank if not applicable

Foil: Yes <input type="checkbox"/> No <input type="checkbox"/>	Type: _____
Braid: Yes <input type="checkbox"/> No <input type="checkbox"/>	Type: _____
Spiral: Yes <input type="checkbox"/> No <input type="checkbox"/>	Type: _____
Are Drain wires required: Yes <input type="checkbox"/> No <input type="checkbox"/>	
Individual Shield: Yes <input type="checkbox"/> No <input type="checkbox"/>	
Jacket Material: _____	
Final OD Required: _____	
Comments:	

FINISHED PRODUCT REQUIREMENTS

Voltage: _____	Electricals: _____
Temperature: _____	Quantity: _____
Ratings: UL <input type="checkbox"/> _____	Date Required: _____
CSA <input type="checkbox"/> _____	

Marine and Underwater

Lapp Muller has successfully worked with many coastal and deep-sea engineering companies as well as oceanographical Research Institutes and O.E.M. providers of equipment to the offshore gas and oil industry. They provided both composite electrical and optical cables for many umbilicals to ship and submarine borne types for the French Navy, meeting their relevant specifications. These cables can be supplied as complete systems terminated with any preferred style of connector from galvanized, stainless steel to titanium types as either rigid or flexible assemblies dependent on customer specifications.



Harbor

Lapp Muller technology can be found in many containerized ports, where the need for mixed umbilical links within the winding cables is required.



Nuclear

Present for more than 30 years in the nuclear field, Lapp Muller SAS has equipped the first fuel assembly handling bridges of the waste processing plant of La Hague in France. Lapp Muller SAS has built its reputation by designing and manufacturing high performance cables using constructions and materials to meet the requirement of nuclear engineering cables.



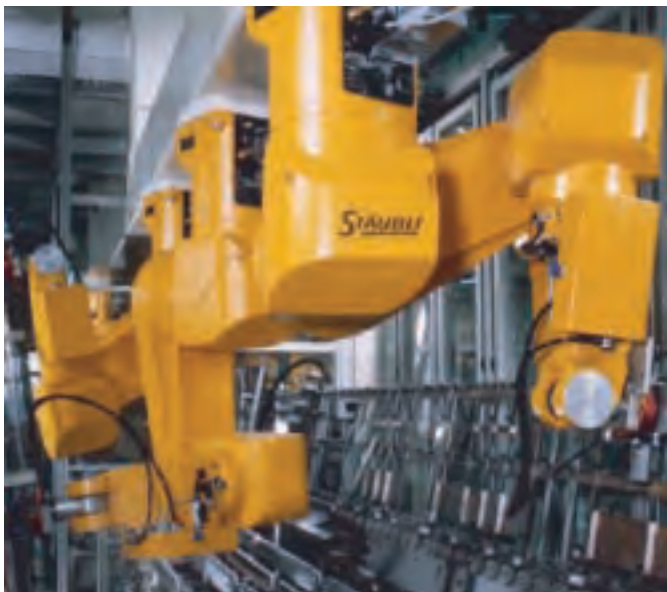
Oil and Gas

Lapp Muller cables have been used in many applications for both exploration as well as production on oil and gas platforms around the world. They can be found in day to day maintenance equipment to the actual positioning systems used for the location of platforms and pipelines to all important safety equipment. Additionally Lapp Muller cables can also be seen in valve control and monitoring equipment used for gas transportation.



Robotic & Automation

Lapp Muller has more than 25 successful years in robotic and chain carry-cable applications. Working in partnership with many companies supplying original equipment into the industrial sector with applications such as machine tools, robots and gantries integrating power lines, power/control, signal, servomotors and safety control systems. Lapp Muller's knowledge and expertise have seen the production of both hybrid and dynamic cable designs ideally suited to withstand the severe mechanical demands of continual and repeated bending as well as the harsh working environment where welding, molding and chemical processes take place.



Airport

Lapp Muller ultra flexible cables are to be found in many airside applications such as rollers on aerobridges and taxiway power-stations used to energize the aircraft's electrical systems when on the ground. Both the construction and materials used in these cables make them ideal to withstand both the harsh mechanical and chemical conditions that these applications demand.



Miscellaneous

Lapp Muller cables can also be found in many other industrial sectors such as medical, petrochemical, telecommunications, leisure and defense. Cables for applications such as silo control in agriculture, ski and chair lifts control in the leisure industry, safety systems used in large buildings from railway stations to municipal complexes. Due to their lightness and high mechanical specification, technologically advanced products such as Araline cables make them ultra competitive and ideal for these applications. In fact anywhere the need for integrity of the cables is paramount particularly because of safety demands or where severe environmental conditions are to be experienced Lapp Muller cables are to be found.

