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Features

- Cables that meet the requirements of EN 50170 for communication up to 12 MBAUD
- PLTC rated cable (CSA FT4)
- Oil RES II and sunlight resistant
- M12 reverse keyed connectors
- Up to 4 Amp and 250 Volt rated
- IP67/IP69K rated



Cordsets

Turck offers a complete line of molded PROFIBUS-DP cordsets to facilitate network installation, resulting in a faster start-up and fewer wiring errors. The bus and drop cables are specially designed foil-shielded, high-flex cables with very low inductance and capacitance to minimize propagation delay time. PROFIBUS-DP cables consist of a shielded and twisted data pair with a bare drain wire.

In most cases, connections of the bus cable to the stations are made using 5-pin reverse-key Eurofast® (M12) connectors. A variety of stations are also available that support D9 type connections. Power for most stations is provided through one or two 5-pin Minifast® (7/8-16 UN) connectors.

Turck cordsets for the PROFIBUS-DP system are available in standard lengths. Please contact your local sales representative to order custom lengths.

Communication Rate/Cycle Time

PROFIBUS-DP specifications define multiple transmission speeds ranging from 9.6 Kbaud to 12 Mbaud. All nodes on a network must communicate at the same rate.

The complete cycle time of a PROFIBUS-DP system is affected by several factors:

- Number of nodes being scanned
- Amount of data produced and consumed by the nodes
- Network communication rate
- Cycle time of the control program

All of these factors must be considered when calculating the cycle time of a particular network.

Maximum Ratings

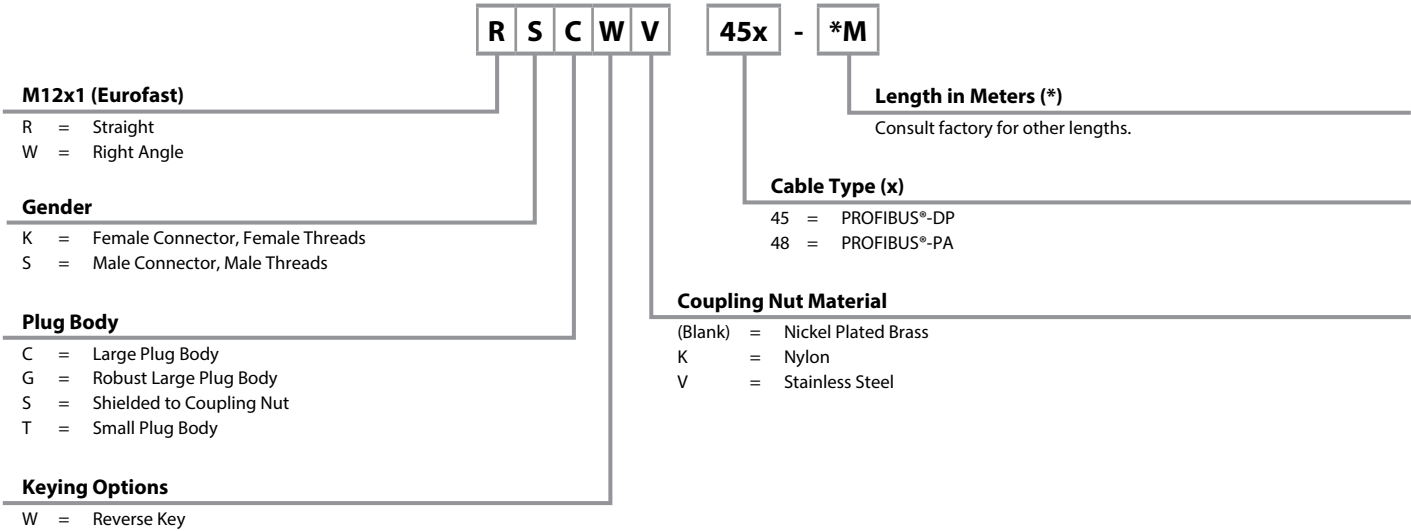
The PROFIBUS-DP bus uses a trunkline/dropline topology. The trunk is the main communication cable and requires the appropriate RS-485 termination at both ends of the trunk. Terminating resistors are available as plug-in Eurofast modules or can be built into the D9 connectors. The length of the trunk depends on the communication rate. Drops or branches off the trunk are allowed, but are greatly limited as the communication rate increases. The table shows the maximum ratings for a trunk at different communication rates.

Communication Rate	Max. Segment Length
9.6 kbps	1200 m
19.2 kbps	1200 m
93.75 kbps	1200 m
187.5 kbps	1000 m
500 kbps	400 m
1.5 Mbps	200 m
12 Mbps	100 m

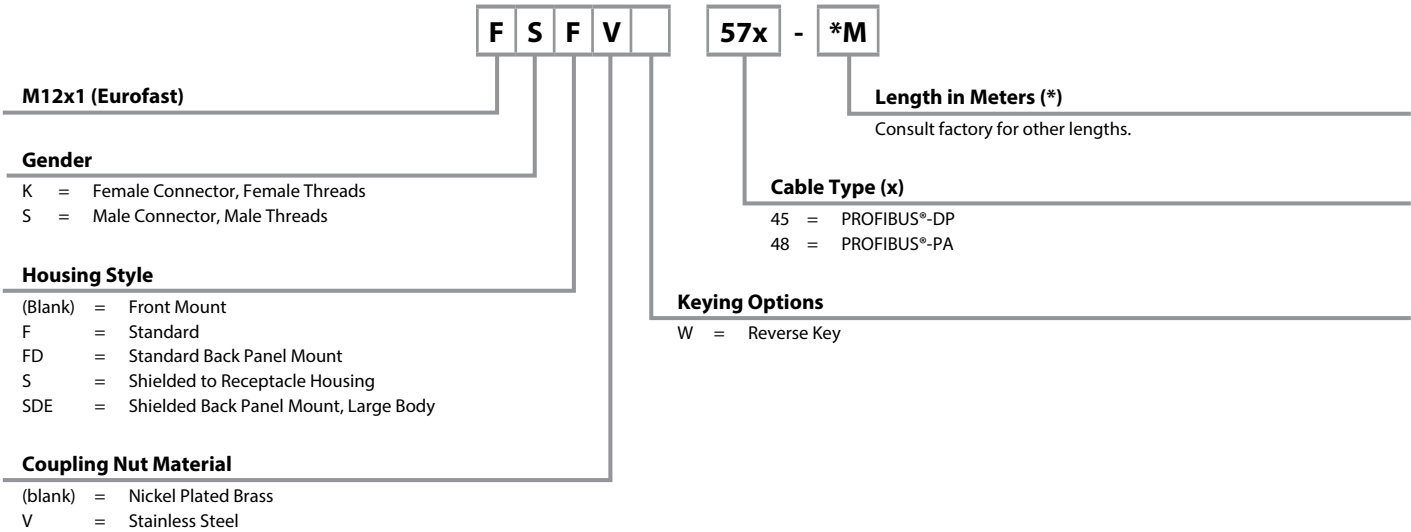
PROFIBUS® –DP Physical Media Connectivity

Eurofast® Cordset Part Number Key

Part Number Keys are to assist in IDENTIFICATION ONLY. Consult factory for catalog items not identified.

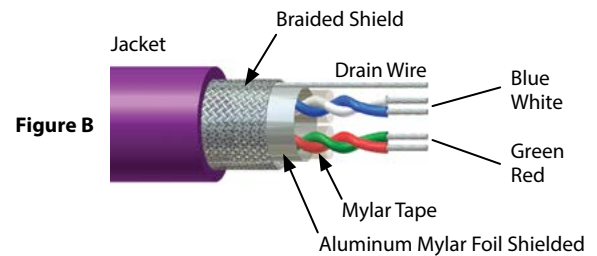
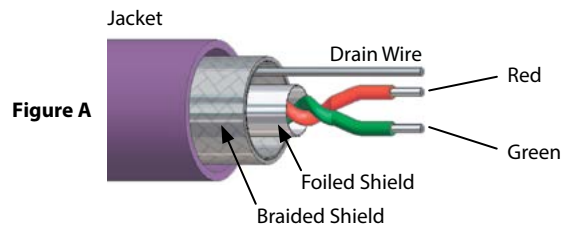


Eurofast Receptacle Part Number Key



PROFIBUS-DP, Cable Specifications

- Cable that meets the requirements of EN50170-2-2:1996 for communications up to 12 Mbaud



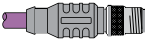
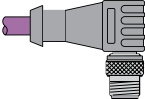
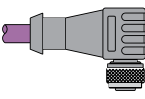
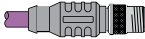
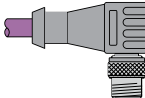
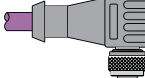
Baud Rate (k baud)	9.6	19.2	93.75	187.5	500	1500	1200
Maximum Trunk Length	1200 meters	1200 meters	1200 meters	1000 meters	400 meters	200 meters	100 meters

Type	Approvals	Data Pair		2nd Data Pair		Outer Jacket	Shields	Bulk Cable Part Number / Weight/300 M
		AWG Color Code	Characteristic Impedance @ 1 MHz/Insulation	AWG Color Code	Characteristic Impedance @ 1 MHz/Insulation	Material Color Nominal O.D.	Type Drain Wire	
455 80 °C 300 V	UL PLTC-ER DB CSA CMX-OUTDOOR-CMG AWM I/II A/B, FT 4	2X22 AWG RD/GN	150 Ohms HDPE	None	n/a	PVC, VIOLET, 8.5 mm (.335 in)	Foil/braid, 22 AWG	RB50672-*M, 63 lbs.
456 80 °C 300 V	UL recognized AWM CSA AWM I/II A/B, FT 1	2X22 AWG RD/GN	150 Ohms HDPE	None	n/a	TPU, VIOLET, 7.9 mm (.310 in)	Foil/braid, 22 AWG	RB50683-*M, 45 lbs.
457 80 °C 600 V	UL recognized AWM VW-1	2X22 AWG RD/GN Solid	150 Ohms HDPE	None	n/a	TPU, VIOLET, 7.8 mm (.305 in)	Foil/braid	RB50708-*M, 39 lbs.
458 80 °C 300 V	UL recognized AWM CSA AWM I/II A/B, FT 1	2X22 AWG RD/GN	150 Ohms HDPE	None	n/a	TPU, PLUM, 8.5 mm (.335 in)	Foil/braid, 22 AWG	RB50692-*M, 52 lbs. Flexlife®
4511 80 °C 300 V	UL PLTC CSA CMX-OUTDOOR-CMG AWM I/II A/B, FT 4	2X22 AWG RD/GN	150 Ohms HDPE	None	n/a	PVC, VIOLET, 8.5 mm (.335 in)	Foil/braid, 22 AWG	RB50881-*M, 58 lbs. Flexlife
4515 80 °C 600 V	IEC-60332-3 IEC-60754-1 EN 50267-2-2	2X22 AWG RD/GN	150 Ohms HDPE	None	n/a	TPU, VIOLET, 7.9 mm (.310 in) Halogen-free	Foil/braid, 22 AWG	RB51225-*M, 41 lbs.
590 80 °C 300 V	UL recognized AWM CSA AWM I/II A/B, FT 1	2X22 AWG RD/GN	150 Ohms HDPE	2X22 AWG BU/WT	150 Ohms HDPE	PVC, VIOLET, 8.4 mm (.330 in)	Foil/braid, 22 AWG	RB51057-*M, 52 lbs.

* Indicates length in meters.
Standard spool lengths are 30, 75, 100, 150, 200, 225, 300 meters. Consult factory for other lengths.

PROFIBUS® –DP Physical Media Connectivity

PROFIBUS-DP, (M12x1) Eurofast® Cable and Cordset Selection Matrix

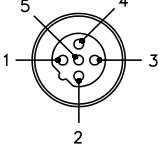
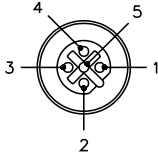
		Eurofast (Male)		Eurofast (Female)	
		 RSSW	 WSSW	 RKSW	 WKSW
 Bare		RSSW 45x-*M	WSSW 45x-*M	RKSW 45x-*M	WKSW 45x-*M
Eurofast (Male)	 RSSW	RSSW RSSW 45x-*M	RSSW WSSW 45x-*M	RSSW RKSW 45x-*M	RSSW WKSW 45x-*M
	 WSSW		WSSW WSSW 45x-*M	WSSW RKSW 45x-*M	WSSW WKSW 45x-*M
Eurofast (Female)	 RKSW			RKSW RKSW 45x-*M	RKSW WKSW 45x-*M
	 WKSW				WKSW WKSW 45x-*M

See page P8 for dimensional drawings.

- * Indicates length in meters.
 - x Indicates cable type.
- Standard cable lengths are 1, 2, 4, 6, 8, 10, 15, and in +5 meter increments from there. Consult factory for other lengths.
For stainless steel coupling nuts change part number RSSW...RSSWV.

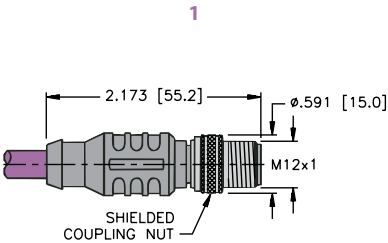
We reserve the right to make technical alterations without prior notice.

Pinouts

Eurofast	45 series pinout	59 series pinout	Eurofast
Male			Female
	1. N/C 2. Green (TxD) 3. N/C 4. Red (RxD) 5. Bare (Shield Drain Wire)	1. Blue (TxD_1) 2. Green (TxD) 3. White (RxD_1) 4. Red (RxD) 5. Bare (Shield Drain Wire)	

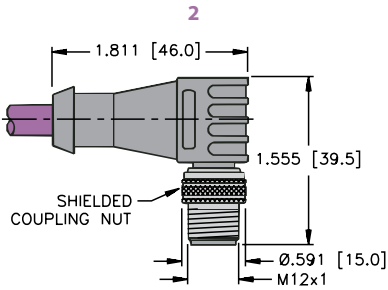
Specifications

Overmold:	TPU	Protection:	NEMA 1, 3, 4, 6P and IEC IP 68
Coupling Nut:	Nickel Plated CuZn or Stainless Steel	Rated Voltage:	250 V
Contact Carrier:	TPU or POM (Nylon)	Rated Current:	4 A
Contacts:	Gold Plated CuZn	Ambient Temperature:	-40 °C to +75 °C (-22 °F to +167 °F)



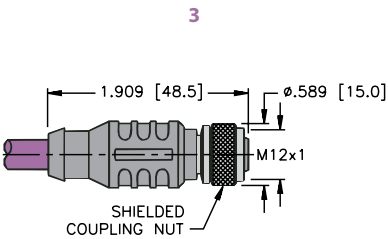
RSSW ..

Page P6



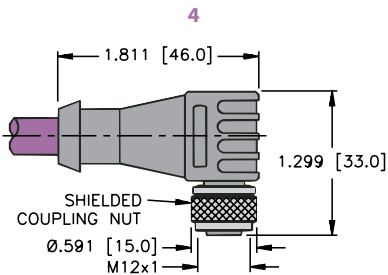
WSSW ..

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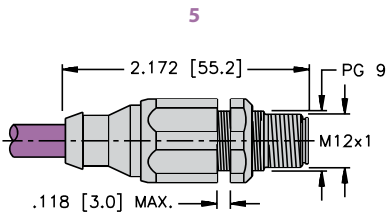
RKSX ..

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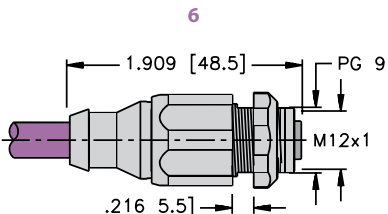
WKSX ..

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FSSDWE ..

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FKSDWE ..

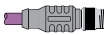
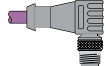
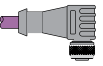
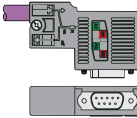
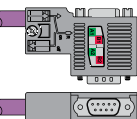
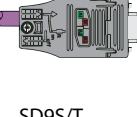
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We reserve the right to make technical alterations without prior notice.

PROFIBUS®-DP Connectivity

PROFIBUS® –DP Physical Media Connectivity

PROFIBUS-DP, (M12x1) Eurofast® Cable and Cordset Selection Matrix

			Eurofast						
			Male		Female		Male	Female	
				1 	2 	3 	4 	5 	6 
			Bare	RSSW	WSSW	RKSW	WKSX	FSSDWE	FKSDWE
9-Pin Sub D Connector	Terminator	 D9S/T	D9S/T 45x-*M	RSSW D9S/T 45x-*M	WSSW D9S/T 45x-*M	RKSW D9S/T 45x-*M	WKSX D9S/T 45x-*M	FSSDWE D9S/T 45x-*M	FKSDWE D9S/T 45x-*M
	Master	 D9SM/T	D9SM/T 45x-*M	RSSW D9SM/T 45x-*M	WSSW D9SM/T 45x-*M	RKSW D9SM/T 45x-*M	WKSX D9SM/T 45x-*M	FSSDWE D9SM/T 45x-*M	FKSDWE D9SM/T 45x-*M
		 SD9S/T	SD9S/T 45x-*M	RSSW SD9S/T 45x-*M	WSSW SD9S/T 45x-*M	RKSW SD9S/T 45x-*M	WKSX SD9S/T 45x-*M	FSSDWE SD9S/T 45x-*M	FKSDWE SD9S/T 45x-*M

See page P8 and P11 for dimensional drawings.

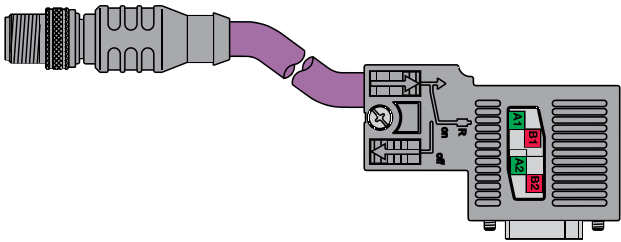
* Indicates length in meters.

x Indicates cable type.

Standard cable lengths are 1, 2, 4, 6, 8, 10, 15, and in +5 meter increments from there. Consult factory for other lengths.

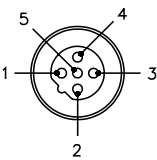
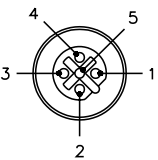
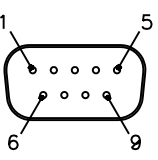
For stainless steel coupling nuts change part number RSSW...RSSWV.

Extension Example:



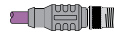
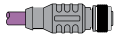
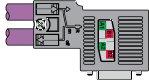
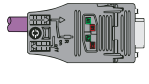
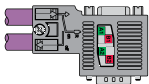
RSSW D9S/T 455-0.3M

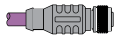
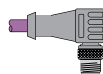
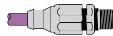
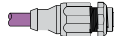
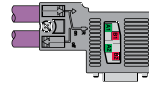
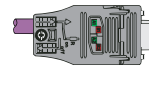
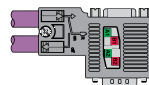
Pinouts

Eurofast	45 series pinout	Eurofast	D9	D9 pinout
Male		Female	Male	
	1. N/C 2. Green (TxD) 3. N/C 4. Red (Rx/D) 5. Bare (Shield Drain Wire)			1 = N/C 2 = N/C 3 = RD (RXD) 4 = N/C 5 = N/C 6 = N/C 7 = N/C 8 = GN (TXD) 9 = N/C

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PROFIBUS-DP, (M12x1) Eurofast® Cable and Cordset Selection Matrix

		Eurofast						
			Male		Female		Male	Female
			1 	2 	3 	4 	5 	6 
		Bare	RSSW	WSSW	RKSW	WKSW	FSSDWE	FKSDWE
Node	 D9S	D9S 45x-*M	RSSW D9S RSSW 45x-*M-*M	WSSW D9S WSSW 45x-*M-*M	RKSW D9S RKSW 45x-*M-*M	WKSW D9S WKSW 45x-*M-*M	FSSDWE D9S FSSDWE 45x-*M-*M	FKSDWE D9S FKSDWE 45x-*M-*M
Straight	 SD9S	SD9S 45x-*M	RSSW SD9S RSSW 45x-*M-*M	WSSW SD9S WSSW 45x-*M-*M	RKSW SD9S RKSW 45x-*M-*M	WKSW SD9S WKSW 45x-*M-*M	FSSDWE SD9S FSSDWE 45x-*M-*M	FKSDWE SD9S FKSDWE 45x-*M-*M
	 D9SM	D9SM 45x-*M	RSSW D9SM RSSW 45x-*M	WSSW D9SM WSSW 45x-*M-*M	RKSW D9SM RKSW 45x-*M-*M	WKSW D9SM WKSW 45x-*M-*M	FSSDWE D9SM FSSDWE 45x-*M-*M	FKSDWE D9S FKSDWE 45x-*M-*M

		Eurofast						
			Male	Female	Male	Female	Male	Female
			1 	3 	2 	4 	5 	6 
		Bare	RSSW	RKSW	WSSW	WKSW	FSSDWE	FKSDWE
Node	10 	D9S 45x-*M	RSSW D9S RKSW 45x-*M-*M		WSSW D9S WKSW 45x-*M-*M		FSSDWE D9S FKSDWE 45x-*M-*M	
	D9S							
Straight	11 	SD9S 45x-*M	RSSW SD9S RKSW 45x-*M-*M		WSSW SD9S WKSW 45x-*M-*M		FSSDWE SD9S FKSDWE 45x-*M-*M	
	SD9S							
	12 	D9SM 45x-*M	RSSW D9SM RKSW 45x-*M-*M		WSSW D9SM WKSW 45x-*M-*M		FSSDWE D9SM FKSDWE 45x-*M-*M	
	D9SM							

See page P8 and P11-P12 for dimensional drawings.

* Indicates length in meters.

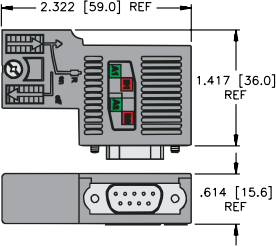
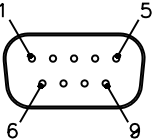
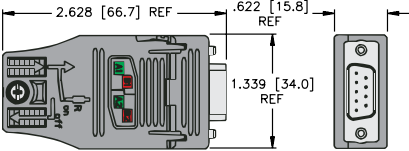
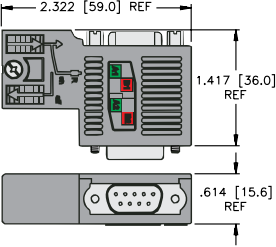
x Indicates cable type.

Standard cable lengths are 1, 2, 4, 6, 8, 10, 15, and in +5 meter increments from there. Consult factory for other lengths.
For stainless steel coupling nuts change part number RSSW...RSSWV.

PROFIBUS® –DP Physical Media Connectivity

PROFIBUS-DP, Field Wireable D9 Connectors

- Provides connection to Master or Node in the field
- Maximum Cable O.D. is 8.5 mm

Housing Style	Part Number	Features	Pinout	
	Connector,PDP,D9S	-25 °C to +80 °C, right angle, terminating switch	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	Male
	Connector,PDP,SD9S	-25 °C to +80 °C, straight, terminating switch		
	Connector,PDP,D9SM	-25 °C to +80 °C, right angle, master, terminating switch		

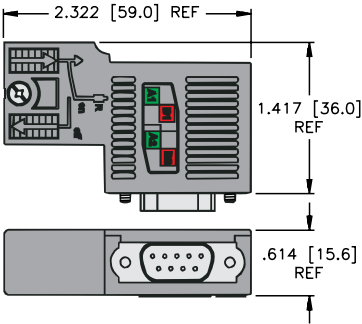
We reserve the right to make technical alterations without prior notice.

PROFIBUS-DP, Field Wireable D9 Connectors

Specifications - (D9)

Terminating Switch:	Yes	Rated Current:	5 mA
Protection:	IEC IP 20	Temperature Rating:	-25 °C to +60 °C
Rated Voltage:	4.75-5.25 VDC	*Max. Cable diameter: 8.5 mm	

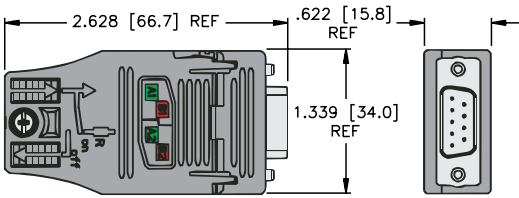
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Connector, PDP, D9S

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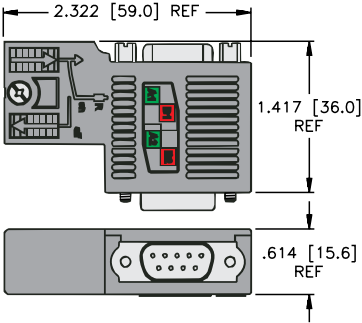
11



Connector, PDP, SD9S

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12



Connector, PDP, D9SM

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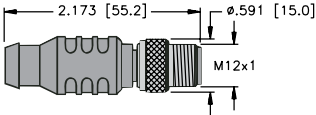
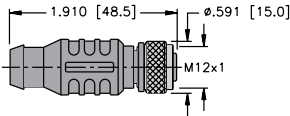
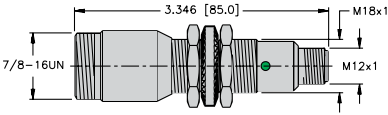
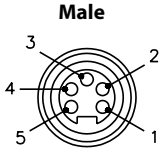
PROFIBUS®-DP Connectivity

PROFIBUS® –DP Physical Media Connectivity

PROFIBUS-DP, Terminating Resistors

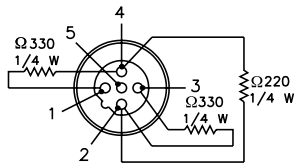
- Terminating Resistors stabilize and minimize reflections on the Bus Line
- A Terminating Resistor is required at the beginning and end of the Main Bus Line



Housing Style	Part Number	Features	Pinout	
	RSSW 45-TR	Nickel plated brass, 250 V, 4 A, -40 °C to +75 °C, internal resistor, male Eurofast connector, reverse keyed	1. N/C 2. GN 3. N/C 4. RD 5. BARE	See Below
	RKSX 45-TR	Nickel plated brass, 250 V, 4 A, -40 °C to +75 °C, internal resistor, female Eurofast connector, reverse keyed	1. N/C 2. GN 3. N/C 4. RD 5. BARE	See Below
	PDP-TRA	Nickel plated brass, 250 V, 4 A, -40 °C to +75 °C, active terminating resistor, external power supply Minifast® and Eurofast connector, LED signal for power status	1. N/C 2. BUS_A 3. N/C 4. BUS_B 5. N/C	See Below
			1. N/C 2. GND 3. N/C 4. UI=24 VDC 5. N/C	Male 

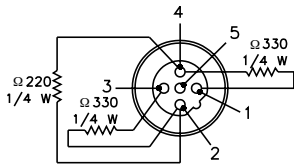
We reserve the right to make technical alterations without prior notice.

Pinout Diagram, RSSW 45-TR



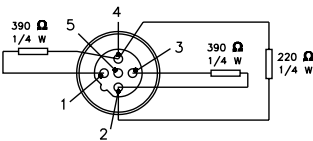
Eurofast Male Connector

Pinout Diagram, RKSX 45-TR



Eurofast Female Connector

Pinout Diagram, PDP-TRA



Eurofast Male Connector

PROFIBUS-DP, Circuit Board Connectors and OEM Receptacles

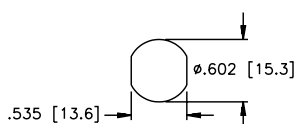
- Provides (M12x1) Eurofast® Connection to Field Devices



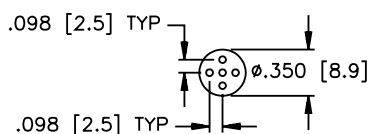
Housing Style	Female Part Number	Male Part Number	Features	Pinout
FKFDW 45.. 	FKFDW 45-PCB	FSFDW 45-PCB	Nickel plated CuZn or stainless Steel, 250 V, 4 A, -40 °C to +75 °C, male Eurofast PCB pins	Female
FSFDW 45.. 				
FKFDLW 45.. 	FKFDLW 45	FSFDLW 45	Nickel plated CuZn or stainless Steel, 250 V, 4 A, -40 °C to +75 °C, male Eurofast solder cups	1. N/C 2. GN 3. N/C 4. RD 5. BARE
FSFDLW 45.. 				
WFSW 45.. 		WFSW 45-PCB	Nickel plated CuZn or stainless Steel, 250 V, 4 A, -40 °C to +75 °C, male Eurofast right angle PCB pins	Male

Standard housing material is nickel plated brass "FKFD .."; "FKFDV .." indicates 316 stainless steel.

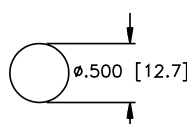
Panel Cutout FKFD ... FSFD



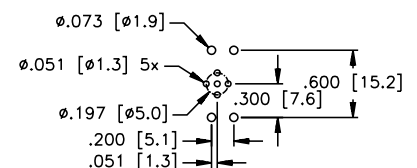
Board Layout (reference only) FKFD ... FSFD



Panel Cutout WFS



Board Layout (reference only) WFS



PROFIBUS® –DP Physical Media Connectivity

PROFIBUS-DP, Circuit Board Connectors and OEM Receptacles

- Provides (M12x1) Eurofast® Connection to Field Devices

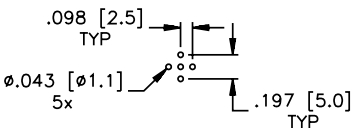


Housing Style	Female Part Number	Male Part Number	Features	Pinout
FKW 45 PCB KIT FSW 45 PCB KIT	FKW 45-PCB KIT	FSW 45-PCB KIT	Nickel plated CuZn or stainless steel, 250 V, 4 A, -30 °C to +75 °C, male Eurofast with mounting kit, reverse key	Female
FK 45 PCB FSW 45 PCB	FK 45-PCB	FSW 45-PCB	Nickel plated CuZn or stainless steel, 250 V, 4 A, -30 °C to +75 °C, male Eurofast, reverse key	Male

We reserve the right to make technical alterations without prior notice.

Standard housing material is nickel plated brass "FKFD .."; "FKFDV .." indicates 316 stainless steel.

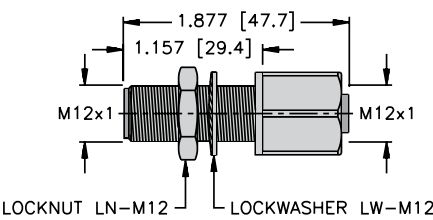
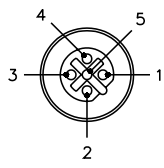
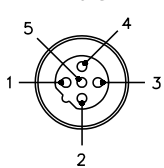
Board Layout (reference only)
FK ... FS



PROFIBUS-DP, Eurofast® Feed Through Receptacle

- Provides Bulkhead Panel Mount Connection



Housing Style	Part Number	Features	Pinout
	FKW FSW 45/M12	Nickel plated brass or stainless steel, 250 V, 4 A, -40 °C to +75 °C, straight male/female connector, for pre-molded reverse keyed Eurofast cables	Female  Male 

For stainless steel change part number to FKVV FSWV 45/M12

We reserve the right to make technical alterations without prior notice.

PROFIBUS®-DP Connectivity

PROFIBUS® –DP Physical Media Connectivity

PROFIBUS-DP, Eurofast® Bus Tees

- Creates a Branch from the Main Bus Line



Housing Style	Part Number	Features	Wiring Diagrams
	RКСW 2RSSW 45/CM	TPU, Nickel plated brass, 250 V, 4 A, -40 °C to +75 °C, male Eurofast drop connector, fully shielded Eurofast tee, passive termination	
	VB2-FSW/FKW/FSW 45	TPU, Nickel plated brass, 250 V, 4 A, -40 °C to +75 °C, Y Junction, fully shielded Eurofast connectors	

We reserve the right to make technical alterations without prior notice.

Pinouts

Eurofast	
Male	Female

PROFIBUS-DP, Eurofast® Field Wireable Connectors with Labels

- Allows for Quick Connection when Pre-Molded Cables not available
- Available for Male and Female connectors
- Color Coded Wire Connection for PROFIBUS-DP



Housing Style	Female Part Number	Male Part Number	Features	Pinout
FKFD 57 PCB FKFD 57 PCB FKFD 57 PCB FKFD 57 PCB	BMWS 8151-8.5/PDP	BMSWS 8151-8.5/PDP	Nickel plated brass, PG 9 cable gland, accepts 4-9 mm cable diameter, screw terminals, accepts up to 18 AWG conductors 85 °C, 125 V, 4 A, mates with reverse key, 5-pin cordsets and receptacles, metal, fully shielded	Female
	BMWS 8251-8.5/PDP	BMSWS 8251-8.5/PDP	Nickel plated brass, PG 9 cable gland, accepts 4-9 mm cable diameter, screw terminals, accepts up to 18 AWG conductors 85 °C, 125 V, 4 A, mates with reverse key, 5-pin cordsets and receptacles, metal, fully shielded	Male

We reserve the right to make technical alterations without prior notice.

PROFIBUS®–DP Connectivity

Cordsets	P22
Receptacles	P24
Terminating resistors	P30
Tees	P31
Field Wireables	P33

Features

- Cable that meets the requirements of ISA/SP 50 and PROFIBUS-PA requirements for Type A Cable
- All cables are rated -40 °C to +105 °C and are sunlight resistant
- Available in 3-wire versions with a device ground or 2-wire versions
- PLTC and ITC listed (CSA FTA)
- Exposed Run (ER) and Direct Burial listed
- IP67 Rated



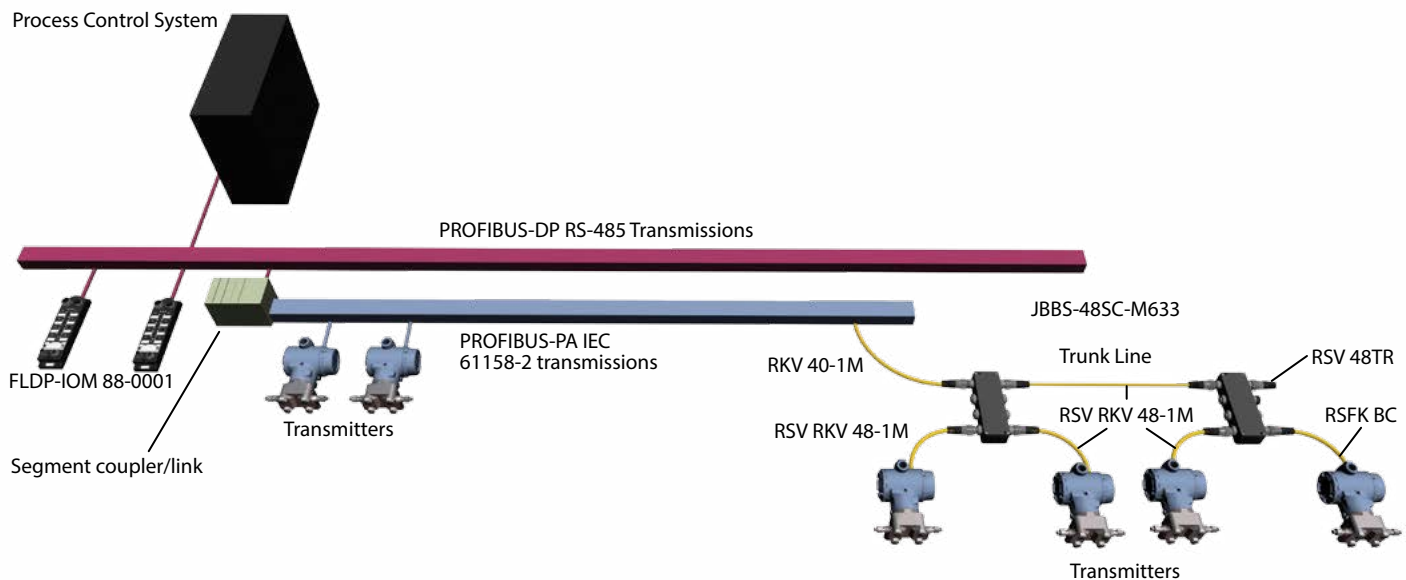
PROFIBUS-PA Overview

PROFIBUS-PA (Process Automation) uses synchronous transfer mode technology, as defined in IEC 61158-2, to communicate between field devices and the RS 485 backbone of PROFIBUS®-DP. A segment coupler, or gateway is installed to bridge PROFIBUS-DP with PROFIBUS-PA. Otherwise, the protocols are identical, allowing transparent communication between general purpose automation systems and decentralized field devices.

PROFIBUS-PA is a master-slave bus. Transmitters used in the process industry are typically slave devices or passive stations which only communicate at the request of the master.

General Layout Topologies

The topology for PROFIBUS-DP is a linear bus. Branching can be accomplished with repeaters or, in the case of PROFIBUS-PA, this can be accomplished with the segment couplers. The PROFIBUS-PA topology follows the physical layer as defined in ISA SP50.02. Daisy chain or star topologies are allowed.

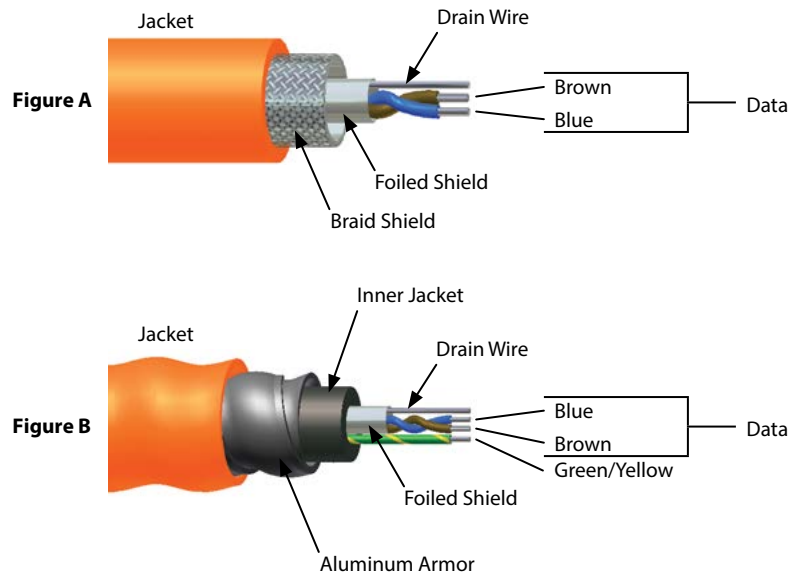


PROFIBUS-PA, Cable Specifications

- Cable that meets the requirements of ISA/SP50 and PROFIBUS-PA requirements for Type A Cable
- All Cables are rated -40 °C to +105 °C and are Sunlight Resistant
- Available in 3-wire versions with a Device Ground or 2-wire versions

Type A Cable Specifications

- Temperature range: -40 °C to +105 °C
- UV Resistant
- PLTC and ITC Listed (CSA FT4)
- Exposed Run (ER) and Direct Buried (DB) Listed
- Maximum Attenuation at 1.25 f_r (39 kHz) = 3.0 dB/km
- Characteristic Impedance 100 Ω ± 10 Ω @ 31.25 KHz
- Capacitance: 20 pF/Ft nominal
- Inductance: 0.22 μH/Ft. nominal
- Conductor Cross-sectional area (wire size) = nominal 0.75 mm² (#18 AWG) or 1.5 mm² (#16 AWG)
- Shield Coverage =100 %



Type	Approvals	Data Pair		Device Ground	Outer Jacket	Shields	Bulk Cable Part Number / Weight/300 M
		AWG Color Code	DCR (/1000 feet) Insulation	AWG Color Code	Material Color Nominal O.D.	Type Drain Wire	
483 105 °C, 600 V	c(UL) 1309 MS, ITC-ER DB, CIC/TC, FT1 FT4	2X18 AWG BU/BN	7.06 Ohms XLPE	None	PVC, ORANGE, 8.5 mm (.335 in)	Foil/braid, 20 AWG	RB50785-*M, 66 lbs.
483B 105 °C, 600 V	c(UL) 1309 MS, ITC-ER DB, CIC/TC, FT1 FT4	2X18 AWG BU/BN	7.06 Ohms XLPE	None	PVC, BLUE, 8.5 mm (.335 in)	Foil/braid, 20 AWG	RB50786-*M, 66 lbs.
482A 105 °C, 300 V	UL ITC-ER DB CSA ACIC HL-ABCD, FT1 FT4	2X18 AWG BU/BN	7.06 Ohms XLPE	18 AWG, GN-YE	PVC, ORANGE, 15.6 mm (.615 in)	Foil/armor, 20 AWG	RB50929-*M, 184 lbs.
482BA 105 °C, 300 V	UL ITC-ER DB CSA ACIC HL-ABCD, FT1 FT4	2X18 AWG BU/BN	7.06 Ohms XLPE	18 AWG, GN-YE	PVC, BLUE, 15.6 mm (.615 in)	Foil/armor, 20 AWG	RB50803-*M, 184 lbs. Flexlife
483BK 105 °C, 600 V	c(UL) 1309 MS, ITC-ER DB, CIC/TC, FT1 FT4	2X18 AWG BU/BN	7.06 Ohms XLPE	None	PVC, BLACK 8.5 mm (.335 in)	Foil/braid, 20 AWG	RB50860-*M, 66 lbs.

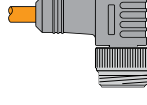
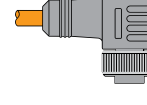
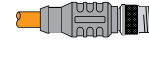
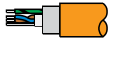
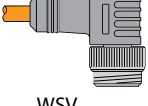
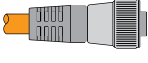
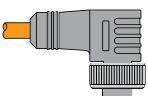
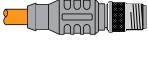
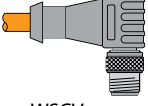
* Indicates length in meters.
Standard spool lengths are 30, 75, 100, 150, 200, 225, 300 meters. Consult factory for other lengths.

We reserve the right to make technical alterations without prior notice.

PROFIBUS®-PA Connectivity

PROFIBUS® –PA Physical Media Connectivity

PROFIBUS-PA, Cable and Cordset Selection Matrix

		Minifast®				Eurofast®
		(Male)		(Female)		Male
		1 	3 	2 	4 	7 
		RSV	WSV	RKV	WKV	RSCV
Minifast (Male)	 Bare	RSV 48x-*M	WSV 48x-*M	RKV 48x-*M	WKV 48x-*M	RSCV 48x-*M
	1  RSV	RSV RSV 48x-*M	RSV WSV 48x-*M	RSV RKV 48x-*M	RSV WKV 48x-*M	RSV RSCV 48x-*M
	3  WSV		WSV WSV 48x-*M	WSV RKV 48x-*M	WSV WKV 48x-*M	WSV RSCV 48x-*M
	2  RKV			RKV RKV 48x-*M	RKV WKV 48x-*M	RKV RSCV 48x-*M
	4  WKV				WKV WKV 48x-*M	WKV RSCV 48x-*M
	7  RSCV					RSCV RSCV 48x-*M
	9  WSCV					
	8  RKCVC					
	10  WKCVC					

We reserve the right to make technical alterations without prior notice.

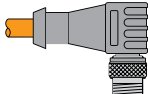
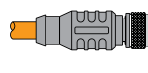
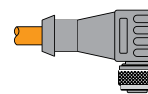
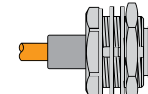
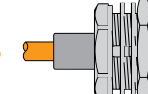
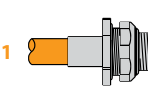
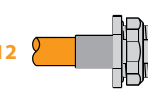
See pages P26 - P27 for dimensional drawings.

* Indicates length in meters.

x Indicates cable type.

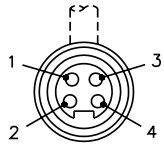
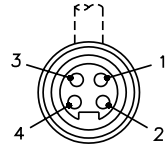
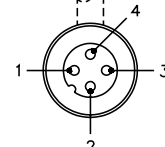
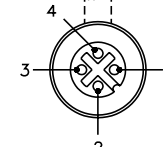
Standard cable lengths are 1, 2, 4, 6, 8, 10, 15, and in +5 meter increments from there. Consult factory for other lengths.

PROFIBUS-PA, Cable and Cordset Selection Matrix

Eurofast®			Minifast® Bulkhead		Eurofast Bulkhead	
Male	Female		Male	Female	Male	Female
 9 WSCV	 8 RKCVC	 10 WKCV	 5 RSFPV	 6 RKFPV	 11 FSFDV	 12 FKFDV
WSCV 48x-*M	RKCVC 48x-*M	WKCV 48x-*M	RSFPV 48x-*M	RKFPV 48x-*M	FSFDV 48x-*M	FKFDV 48x-*M
RSV WSCV 48x-*M	RSV RKCVC 48x-*M	RSV WKCV 48x-*M	RSV RSFPV 48x-*M	RSV RKFPV 48x-*M	RSV FSFDV 48x-*M	RSV FKFDV 48x-*M
WSV WSCV 48x-*M	WSV RKCVC 48x-*M	WSV WKCV 48x-*M	WSV RSFPV 48x-*M	WSV RKFPV 48x-*M	WSV FSFDV 48x-*M	WSV FKFDV 48x-*M
RKV WSCV 48x-*M	RKV RKCVC 48x-*M	RKV WKCV 48x-*M	RKV RSFPV 48x-*M	RKV RKFPV 48x-*M	RKV FSFDV 48x-*M	RKV FKFDV 48x-*M
WKV WSCV 48x-*M	WKV RKCVC 48x-*M	WKV WKCV 48x-*M	WKV RSFPV 48x-*M	WKV RKFPV 48x-*M	WKV FSFDV 48x-*M	WKV FKFDV 48x-*M
RSCV WSCV 48x-*M	RSCV RKCVC 48x-*M	RSCV WKCV 48x-*M	RSCV RSFPV 48x-*M	RSCV RKFPV 48x-*M	RSCV FSFDV 48x-*M	RSCV FKFDV 48x-*M
WSCV WSCV 48x-*M	WSCV RKCVC 48x-*M	WSCV WKCV 48x-*M	WSCV RSFPV 48x-*M	WSCV RKFPV 48x-*M	WSCV FSFDV 48x-*M	WSCV FKFDV 48x-*M
	RKCVC RKCVC 48x-*M	RKCVC WKCV 48x-*M	RKCVC RSFPV 48x-*M	RKCVC RKFPV 48x-*M	RKCVC FSFDV 48x-*M	RKCVC FKFDV 48x-*M
		WKCV WKCV 48x-*M	WKCV RSFPV 48x-*M	WKCV RKFPV 48x-*M	WKCV FSFDV 48x-*M	WKCV FKFDV 48x-*M

We reserve the right to make technical alterations without prior notice.

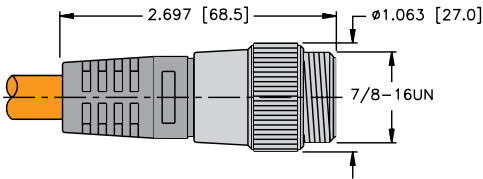
PROFIBUS®-PA Connectivity

Minifast		Pinouts	Eurofast	
Male	Female		Male	Female
		1. Brown (+ Voltage) 2. N/C 3. Blue (- Voltage) 4. Bare (Shield Drain Wire)		

Specifications

Overmold:	TPU	Protection:	NEMA 1, 3, 4, 6P and IEC IP 68
Coupling Nut:	Nickel Plated CuZn or Stainless Steel	Rated Voltage:	300 V
Contact Carrier:	TPU	Rated Current:	9 A
Contacts:	Gold Plated CuZn	Ambient Temperature:	-40 °C to +105 °C (-40 °F to +221 °F)

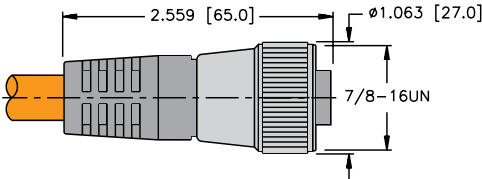
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RSV ..

Page P22

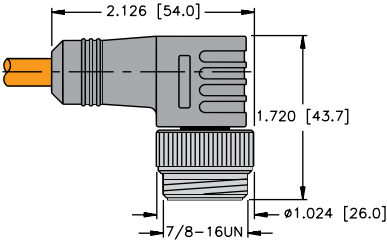
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RKV ..

Page P22

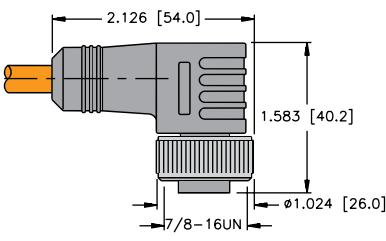
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WSV ..

Page P22

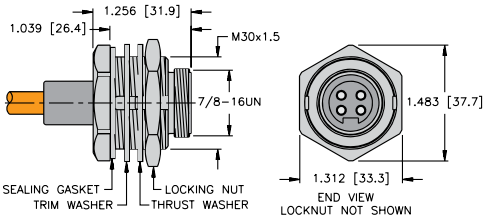
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WKV ..

Page P22

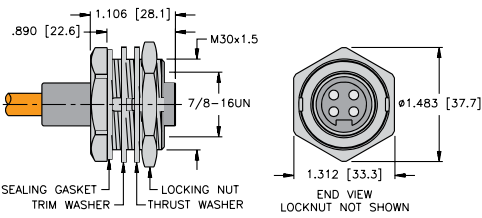
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RSFPV ..

Page P23

6



RKFPV ..

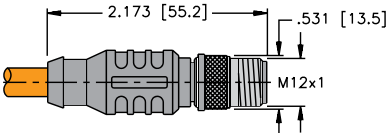
Page P23

We reserve the right to make technical alterations without prior notice.

Specifications

Overmold:	TPU	Protection:	NEMA 1, 3, 4, 6P and IEC IP 68
Coupling Nut:	Nickel Plated CuZn or Stainless Steel	Rated Voltage:	250 V
Contact Carrier:	TPU or POM (Nylon)	Rated Current:	4 A
Contacts:	Gold Plated CuZn	Ambient Temperature:	-40 °C to +105 °C (-40 °F to +221 °F)

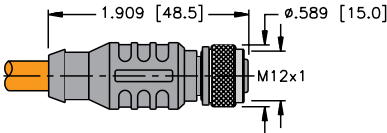
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RSCV ..

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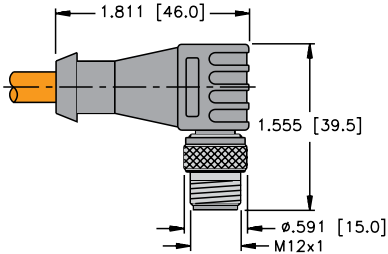
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RKCV ..

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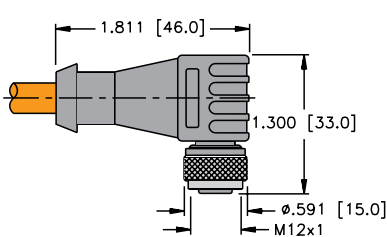
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WSCV ..

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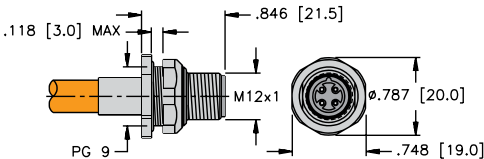
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WKCV ..

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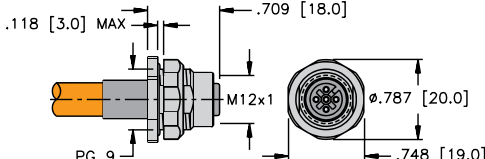
11



FSFDV ..

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FKFDV ..

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We reserve the right to make technical alterations without prior notice.

PROFIBUS®-PA Connectivity

PROFIBUS® –PA Physical Media Connectivity

PROFIBUS-PA, (7/8-16 UN) Minifast® Male Receptacles

- Provides Quick Connection to Field Devices
- Available for 1/2-14 NPT, 1/2-14 NPSM, 3/4-14 NPT and M20 Threads



Housing Style	Female Part Number	Male Part Number	Features	Pinout
RKFV 48-*M/14.5 	RKFV 48-*M/14.5	RSFV 48-*M/14.5	Nickel Plated CuZn or Stainless Steel 600 V, 9 A, -40 °C to +105 °C, 1/2-14 NPT full length threads	Female
RSFV 48-*M/14.5 				
RKFV 48-*M/14.75 	RKFV 48-*M/14.75	RSFV 48-*M/14.75	Nickel Plated CuZn or Stainless Steel 600 V, 9 A, -40 °C to +105 °C, 3/4-14 NPT full length threads	
RSFV 48-*M/14.75 				
RKFV 48-*M/M20 	RKFV 48-*M/M20	RSFV 48-*M/M20	Nickel Plated CuZn or Stainless Steel 600 V, 9 A, -40 °C to +105 °C, M20x1.5 threads	Male
RSFV 48-*M/M20 				

We reserve the right to make technical alterations without prior notice.

Standard cable length is 0.5 meters. Consult factory for other lengths
 Standard housing material is nickel plated brass. "RKFV .."; indicates 316 stainless steel housing.
 For locknuts to be included, add "W/LN" to the end of the part number.

PROFIBUS-PA, (7/8-16 UN) Minifast® Female Receptacles

- Provides Quick Connection to Field Devices
- Available for 1/2-14 NPT, 1/2-14 NPSM, 3/4-14 NPT and M20 Threads



Housing Style	Female Part Number	Male Part Number	Features	Pinout
RKFV 48-*M RSFV 48-*M	RKFV 48-*M	RSFV 48-*M	Nickel Plated CuZn or Stainless Steel 600 V, 9 A, -40 °C to +105 °C, 1/2-14 NPSM threads	Female Male

Standard cable length is 0.5 meters. Consult factory for other lengths
Standard housing material is nickel plated brass. "RKFV .."; indicates 316 stainless steel housing.
For locknuts to be included, add "W/LN" to the end of the part number.

We reserve the right to make technical alterations without prior notice.

PROFIBUS®-PA Connectivity

PROFIBUS® –PA Physical Media Connectivity

PROFIBUS-PA, (M12x1) Eurofast® Male Receptacles

- Mounted Quick Connection to Enclosures
- Available for 1/2-14 NPT, 1/2-14 NPSM, 3/4-14 NPT and M20 Threads



Housing Style	Female Part Number	Male Part Number	Features	Pinout
FKV 48-*M/14.5 FSV 48-*M/14.5	FKV 48-*M/14.5	FSV 48-*M/14.5	Nickel Plated CuZn or Stainless Steel 250 V, 4 A, -40 °C to +105 °C, 1/2-14 NPT full length threads	Female
FKV 48-*M/14.75 FSV 48-*M/14.75	FKV 48-*M/14.75	FSV 48-*M/14.75	Nickel Plated CuZn or Stainless Steel 250 V, 4 A, -40 °C to +105 °C, 3/4-14 NPT full length threads	1. BN 2. N/C 3. BU 4. GY
FKV 48-*M FKV 48-*M	FKV 48-*M/M20	FSV 48-*M/M20	Nickel Plated CuZn or Stainless Steel 250 V, 4 A, -40 °C to +105 °C, M20x1.5 threads	Male

We reserve the right to make technical alterations without prior notice.

Standard cable length is 0.5 meters. Consult factory for other lengths

Standard housing material is nickel plated brass. "RKfV .."; indicates 316 stainless steel housing.

PROFIBUS-PA, (M12x1) Eurofast® Female Receptacles

- Mounted Quick Connection to Enclosures
- Available for 1/2-14 NPT, 1/2-14 NPSM, 3/4-14 NPT and M20 Threads



Housing Style	Female Part Number	Male Part Number	Features	Pinout
FKV 48-*M	FKV 48-*M	FSV 48-*M	Nickel Plated CuZn or Stainless Steel 250 V, 4 A, -40 °C to +105 °C, PG 9 threads	Female
FSV 48-*M				Male

Standard cable length is 0.5 meters. Consult factory for other lengths
Standard housing material is nickel plated brass. "RK FV .."; indicates 316 stainless steel housing.

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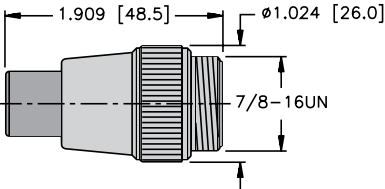
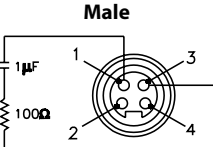
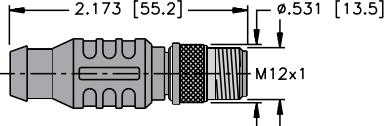
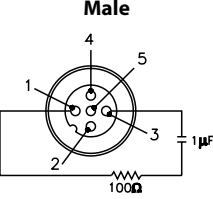
PROFIBUS®-PA Connectivity

PROFIBUS® –PA Physical Media Connectivity

PROFIBUS-PA, Terminating Resistors

- Terminating Resistors stabilize and minimize reflections on the Bus Line
- A Terminating Resistor is required at the beginning and end of the Main Bus Line

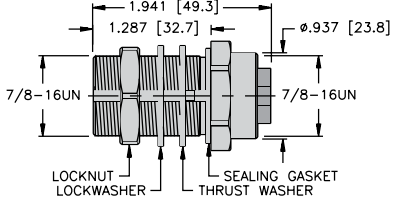
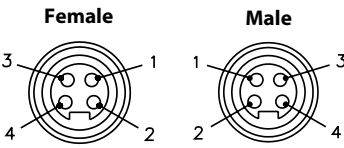
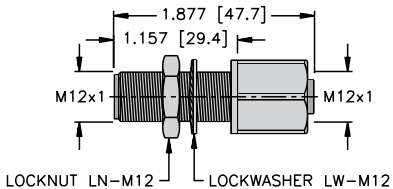
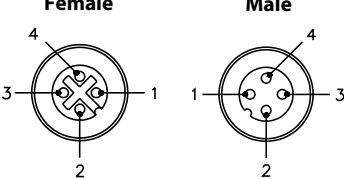


Housing Style	Part Number	Features	Pinout
	RSV 48 TR	Nickel plated brass or stainless steel, 300 V, 9 A, -40 °C to +75 °C, male Minifast® connector	
	RSEV 48-TR	Nickel plated brass or stainless steel, 250 V, 4 A, -40 °C to +75 °C, male Eurofast® connector	

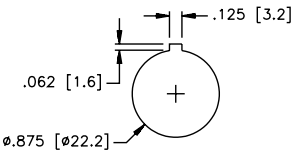
PROFIBUS-PA, Feed Through Connectors

- Receptacles provide transition from Male to Female Connectors
- Available for Bulkhead and Feed Through applications

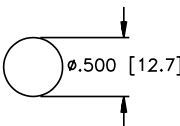


Housing Style	Part Number	Features	Pinout
	RSFV RKFV 48/22	Stainless steel, 300 V, 9 A, -40 °C to +75 °C, straight male/female feed through, for use with molded Minifast cordsets	
	FKV FSV 48/M12	Stainless steel, 250 V, 4 A, -40 °C to +75 °C, straight male/female connector, for pre-molded Eurofast cables	

Panel Cutout
RSFV RKFV 48/22



Panel Cutout
WFS



PROFIBUS-PA, Tees

- Creates a Drop or Branch from the Main Bus Line
- Minifast® Connectors on Bus or Drop Lines



Housing Style	Part Number	Features	Wiring Diagrams
	RSV-2RKV 48	TPU, 250 V, 4 A, -40 °C to +75 °C, data, ground, shield, stainless steel, coupling nuts	
	RSV FKV RKV 48	TPU, 250 V, 4 A, -40 °C to +75 °C, Minifast to Eurofast® drop, data, ground, shield, stainless steel coupling nuts	
	RSCV RKCVC 48	TPU, 250 V, 4 A, -40 °C to +105 °C, stainless steel coupling nuts	

We reserve the right to make technical alterations without prior notice.

PROFIBUS®-PA Connectivity

Pinouts

Minifast		Eurofast	
Male	Female	Male	Female

PROFIBUS® –PA Physical Media Connectivity

PROFIBUS-PA, Gender Changer

- Allows quick and easy changes from Male to Female Minifast® from Connectors



Housing Style	Part Number	Features
	RKV RKV 48	TPU, 250 V, 4 A, -40 °C to +75 °C, changes female cordset to male receptacle

PROFIBUS-PA, Conversion Connector

- Allows Quick and Easy Changes from Minifast® to Eurofast® Connectors



Housing Style	Part Number	Features	Wiring Diagrams
	RSM 48-FK 4.4	Nickel plated brass CuZn or Stainless Steel, 250 V, 4 A, -40 °C to +80 °C, female Eurofast, male Minifast, 4-pin	

We reserve the right to make technical alterations without prior notice.

Pinouts

Minifast		Eurofast
Male	Female	Female

PROFIBUS-PA, Minifast® Field Wireable Connectors

- Screw Terminals accept up to 16 AWG Conductors



Housing Style	Female Part Number	Female Part Number	Features	Pinout
BK 414.. BS 414..	BK 4140-0/9	BS 4140-0/9	Plastic, TPU (cable grip: Plastic, PU), Anodized Aluminum, PG 0/9 cable gland accepts 6-8 mm cable diameter, -40 °C to +90 °C (-40 °F to +194 °F), 250 V, 9 A, mates with all 4-pin Minifast cordsets and receptacles	Female
BSV 414.. BKV 414..	BKV 4140-0/9	BSV 4140-0/9	Glass filled nylon, stainless steel coupling nut, PG 0/9 cable gland accepts 6-8 mm cable diameter, -40 °C to +90 °C (-40 °F to +194 °F), 300 V, 9 A, mates with all 4-pin Minifast cordsets and receptacles	
BKV 414.. BSV 414..	BKV 4140-0/16	BSV 4140-0/16	Glass filled nylon, stainless steel coupling nut, PG 16 cable gland accepts 10-12 mm cable diameter, -40 °C to +90 °C (-40 °F to +194 °F), 600 V, 9 A, mates with all 4-pin Minifast cordsets and receptacles	Male

We reserve the right to make technical alterations without prior notice.

PROFIBUS®-PA Connectivity

PROFIBUS® –PA Physical Media Connectivity

PROFIBUS-PA, Eurofast® Field Wireable Connectors

- Screw Terminals accept up to 18 AWG Conductors



Housing Style	Female Part Number	Female Part Number	Features	Pinout
B 814.. BS 814..	B 8141-0/PG9	BS 8141-0/PG9	PBT, Black, PG 9 cable gland, accepts 4-8 mm cable diameter, 85 °C, 125 V, 4 A, mates with standard key 4-pin Eurofast cordsets and receptacles	Female
B 824.. BS 824..	B 8241-0/PG9	BS 8241-0/PG9	PBT, Black, PG 9 cable gland, accepts 4-8 mm cable diameter, 85 °C, 125 V, 4 A, mates with standard key 4-pin Eurofast cordsets and receptacles	Male

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