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Features

- Cables that meet the requirements of EN 50295 for communication up to 167 KBAUD
- ITC-ER/PLTC-ER rated cable (CSA FT4)
- Oil resistant II and sunlight resistant
- 7/8 and M12 connectors
- Up to 9 Amps and 600 Volt rated
- IP67/IP69K rated



AS-interface System Description

AS-interface (commonly referred to as AS-I) is a low-level I/O interface system. It was originally intended to be a simple, low cost system that would be easy to install and maintain. With that philosophy in mind, the original developers designed AS-I as a discrete-only two-wire system. It incorporated features like automatic station addressing, and power and data were carried on a single untwisted pair of wires.

As the demand for AS-I grew, so did the demand for more complex devices. The next major version of AS-I, v2.1, extended the protocol to include seamless transfer of analog data, transmission of simple diagnostic data, and an extended addressing scheme that effectively doubled the number of stations allowed on the network. The newest version of AS-I, v3.0, has gone even further, allowing more options for analog data and much more detailed diagnostic information to be communicated. New versions of AS-I are backward compatible and support slaves from earlier versions. Additionally, AS-I was one of the first network systems to incorporate a safety protocol, allowing emergency-stop and machine-stop systems to be seamlessly integrated with the network.

AS-I can be used as a stand alone network or can be connected to a higher level system, such as DeviceNet™ or PROFIBUS®-DP, through a gateway. The gateway acts as a slave to the higher system and a master to the AS-I system.

Cordsets

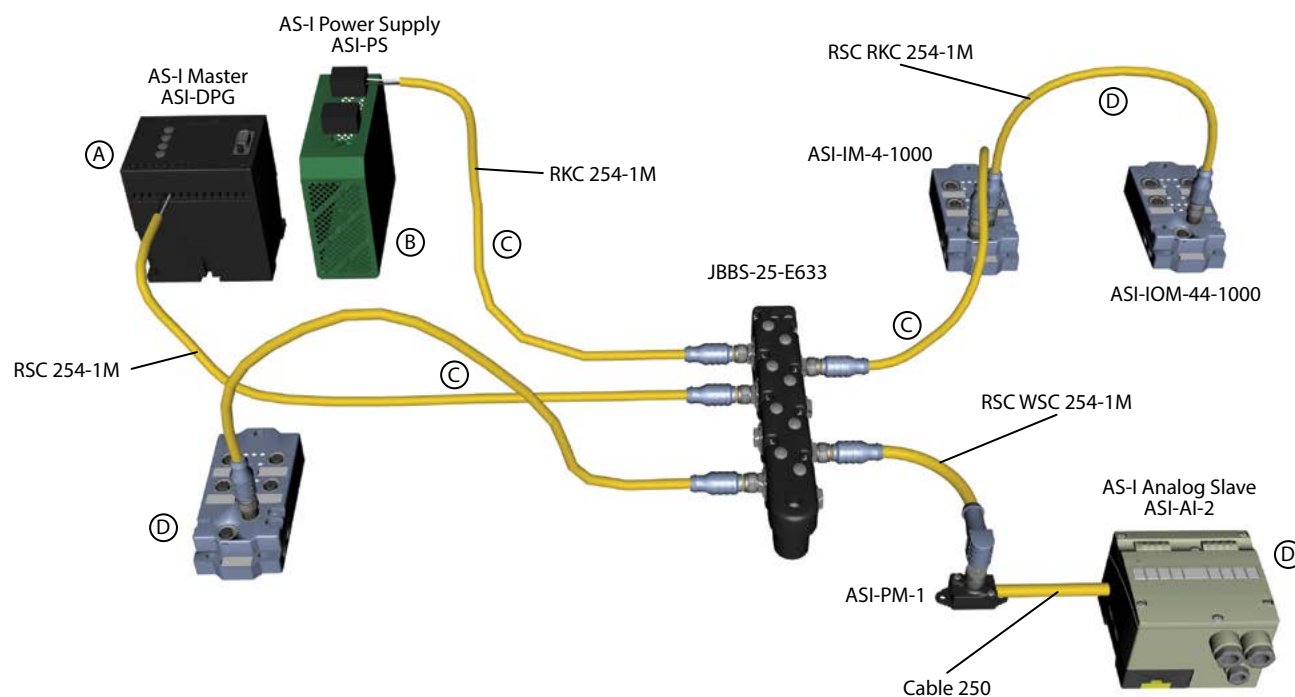
Turck offers a complete line of molded AS-I cordsets to facilitate network installation, resulting in a faster start-up and fewer wiring errors. The bus and drop cables are specially designed foil-shielded, high-flex cables with very low inductance and capacitance to minimize propagation delay time. AS-I cables consist of a single untwisted and unshielded wire pair that carries both 30 VDC power and the network data. AS-I was originally designed for use with flat cable using an insulation displacement connection technology, but the use of round cables with sealed connectors has become more common. Turck provides both cable options.

Maximum Ratings

The AS-I system uses a freeform layout topology. Up to 100 m of cable can be used on a segment before a repeater or tuner needs to be installed to allow the network to be extended beyond the 100 m limit. No terminating resistors are required.

Typical System Configuration

Basic Parts List



A typical AS-I system consists of the following parts:

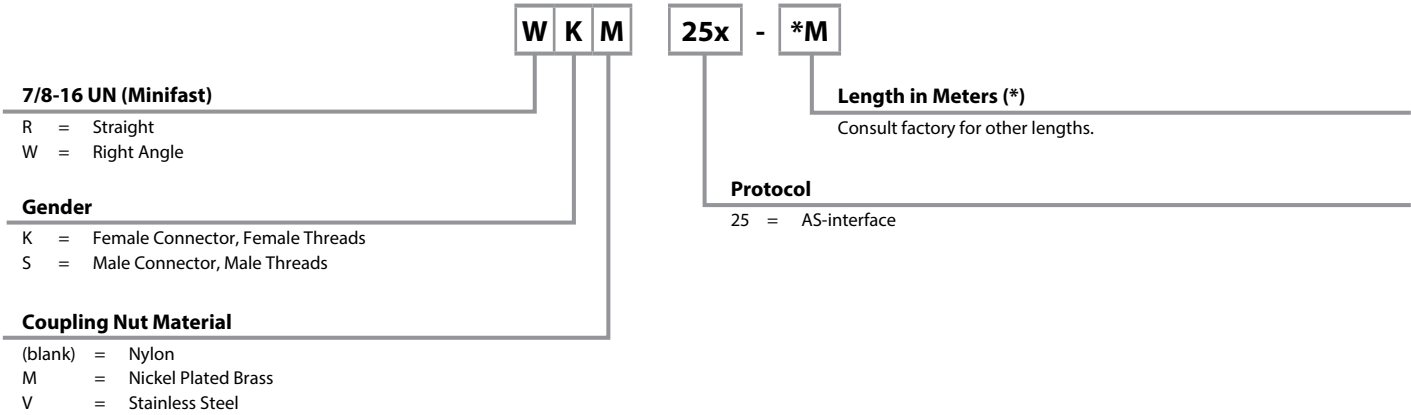
- A - Master
- B - AS-I Power Supply
- C - AS-I Cable (See N2)
- D - AS-I I/O Modules (or Slaves)

AS-I stations require a network master (also called a scanner) to interface the stations to the host controller. In some cases the scanner and controller are packaged as a single unit; in other cases the scanner acts as a gateway to a higher level network or to a PLC. Turck AS-I stations are designed to be fully compatible with AS-I equipment from other manufacturers.

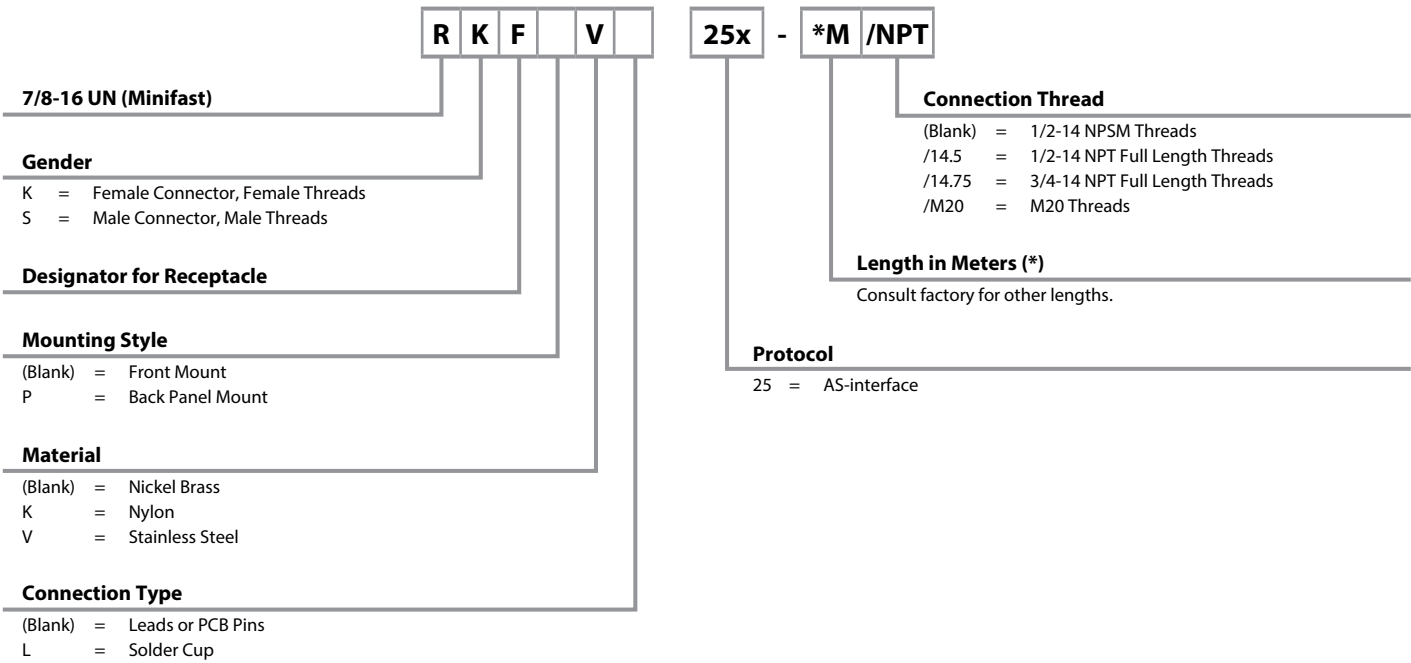
AS-interface® Physical Media Connectivity

Minifast® Cordset Part Number Key

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

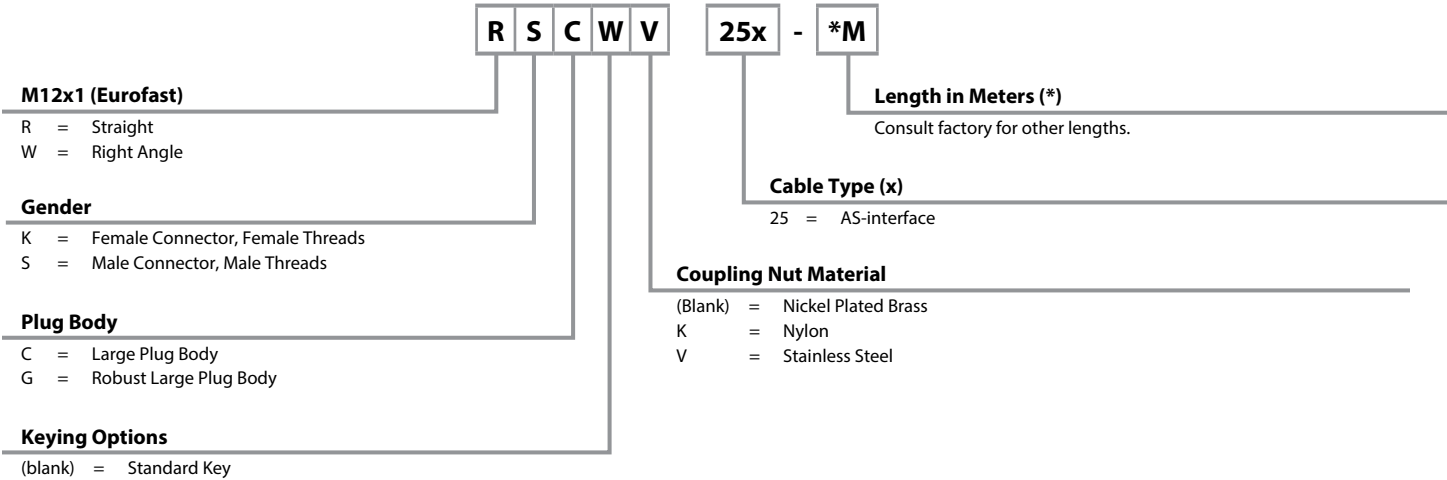


Minifast Receptacle Part Number Key

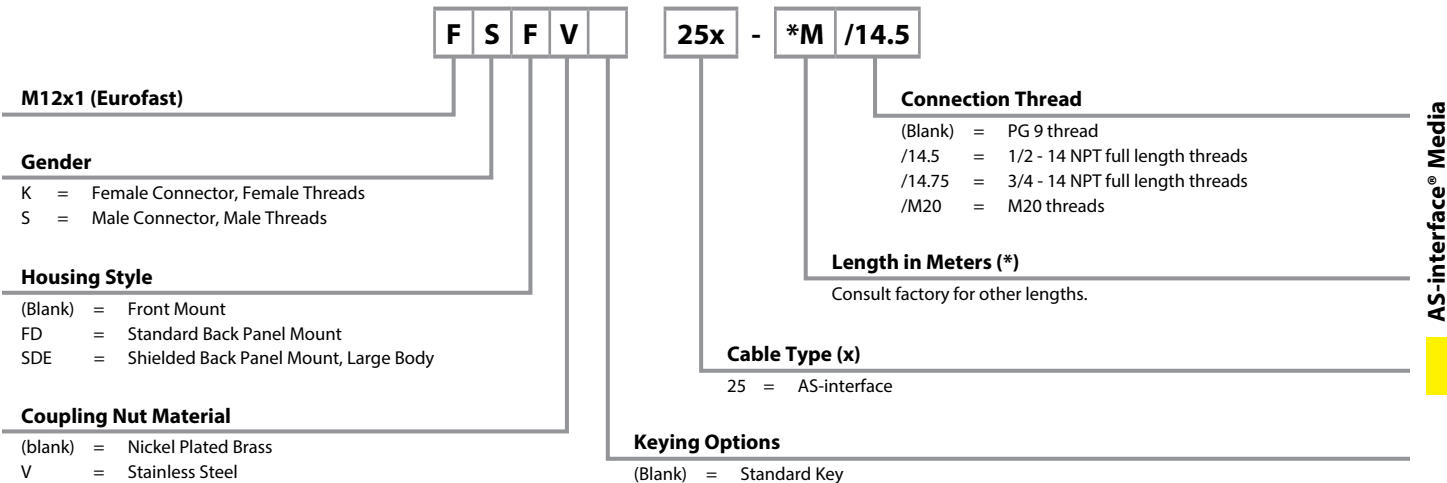


Eurofast® Cordset Part Number Key

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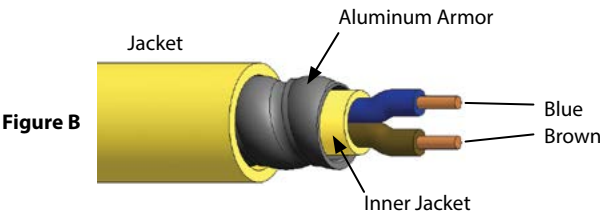
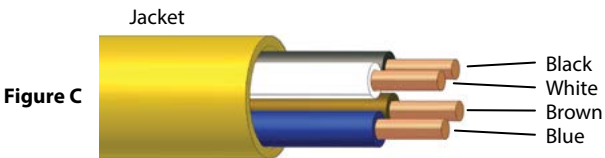
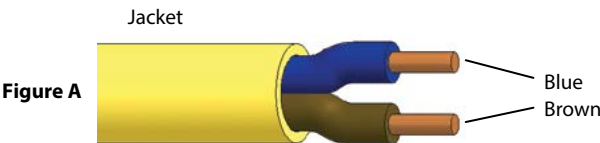


Eurofast Receptacle Part Number Key



AS-interface, Cable Specifications

- AS-interface Cable that meets the requirements of EN50295e for communication up to 167 Kbaud
- Maximum cable length per segment is 100 meters



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

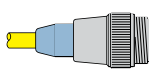
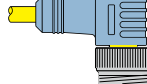
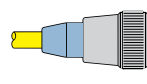
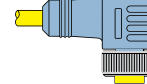
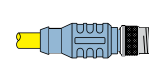
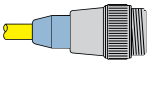
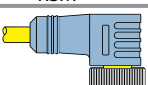
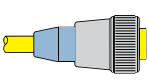
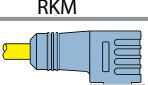
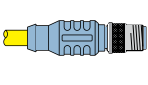
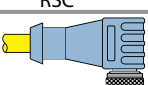
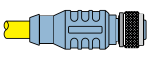
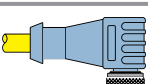
AS-interface® Media

Type	Approvals	Data Pair		Outer Jacket	Bulk Cable Part Number / Weight/300 M
		AWG Color Code	DCR (/1000 feet) Insulation	Material Color Nominal O.D.	
254 105 °C, 600 V	c(UL) 1309 MS, ITC-ER DB, CIC/TC, FT1 FT4	2X16 AWG BU/BN	4.1 Ohms PVC	PVC, YELLOW, 7.2 mm (.285 in)	RB50852-*M, 49 lbs.
254BK 105 °C, 600 V	c(UL) 1309 MS, ITC-ER DB, CIC/TC, FT1 FT4	2X16 AWG BU/BN	4.1 Ohms PVC	PVC, BLACK, 7.2 mm (.285 in)	RB51029-*M, 49 lbs.
254B 105 °C, 600 V	c(UL) 1309 MS, ITC-ER DB, CIC/TC, FT1 FT4	2X16 AWG BU/BN	4.1 Ohms PVC	PVC, BLUE, 7.2 mm (.285 in)	RB50962-*M, 49 lbs.
255A 105 °C, 300 V	UL ITC-ER DB CSA ACIC HL-ABCD, FT1 FT4	2X16 AWG BU/BN	4.1 Ohms PVC	Armor, PVC YELLOW, 15.2 mm (.600 in)	RB50966-*M, 173 lbs.
2544 105 °C, 600 V	c(UL) 1309 MS, ITC-ER DB, CIC/TC, FT1 FT4	4X16 AWG BN/WH/BU/BK	4.1 Ohms PVC	PVC, YELLOW, 8.5 mm (.335 in)	RB51875-*M, 81 lbs.

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

AS-interface® Physical Media Connectivity

AS-interface, Cable and Cordset Selection Matrix

		Minifast®				Eurofast®
		Male		Female		Male
		1 	2 	3 	4 	7 
		RSM	WSM	RKM	WKM	RSC
Minifast (Male)	 Bare	RSM 25x-*M	WSM 25x-*M	RKM 25x-*M	WKM 25x-*M	RSC 25x-*M
	1  RSM	RSM RSM 25x-*M	RSM WSM 25x-*M	RSM RKM 25x-*M	RSM WKM 25x-*M	RSM RSC 25x-*M
	2  WSM		WSM WSM 25x-*M	WSM RKM 25x-*M	WSM WKM 25x-*M	WSM RSC 25x-*M
	3  RKM			RKM RKM 25x-*M	RKM WKM 25x-*M	RKM RSC 25x-*M
	4  WKM				WKM WKM 25x-*M	WKM RSC 25x-*M
	7  RSC					RSC RSC 25x-*M
	8  WSC					
	9  RKC					
	10  WKC					

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

See pages R10 - R11 for dimensional drawings.

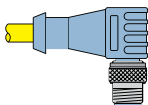
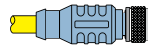
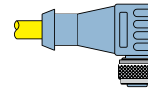
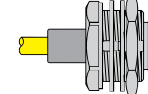
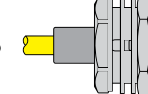
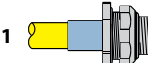
* Indicates length in meters.

x Indicates cable type.

Standard cable lengths are 1, 2, 4, 6, 8, 10, 15....50 meters. Consult factory for other lengths.

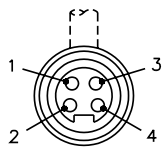
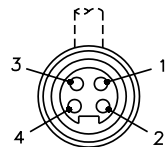
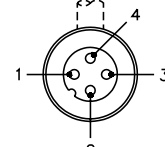
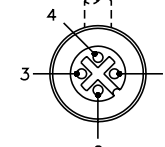
For stainless steel coupling nuts change part number RSM ... to RSV, WSM ... to WSV. For Eurofast Armorfast® cable RSC ... to RSA.

AS-interface, Cable and Cordset Selection Matrix

Eurofast®			Minifast® Bulkhead		Eurofast Bulkhead	
Male	Female		Male	Female	Male	Female
8 	9 	10 	5 	6 	11 	12 
WSC	RKC	WKC	RSFP	RKFP	FSFD	FKFD
WSC 25x-*M	RKC 25x-*M	WKC 25x-*M	RSFP 25x-*M	RKFP 25x-*M	FSFD 25x-*M	FKFD 25x-*M
RSM WSC 25x-*M	RSM RKC 25x-*M	RSM WKC 25x-*M	RSM RSFP 25x-*M	RSM RKFP 25x-*M	RSM FSFD 25x-*M	RSM FKFD 25x-*M
WSM WSC 25x-*M	WSM RKC 25x-*M	WSM WKC 25x-*M	WSM RSFP 25x-*M	WSM RKFP 25x-*M	WSM FSFD 25x-*M	WSM FKFD 25x-*M
RKM WSC 25x-*M	RKM RKC 25x-*M	RKM WKC 25x-*M	RKM RSFP 25x-*M	RKM RKFP 25x-*M	RKM FSFD 25x-*M	RKM FKFD 25x-*M
WKM WSC 25x-*M	WKM RKC 25x-*M	WKM WKC 25x-*M	WKM RSFP 25x-*M	WKM RKFP 25x-*M	WKM FSFD 25x-*M	WKM FKFD 25x-*M
RSC WSC 25x-*M	RSC RKC 25x-*M	RSC WKC 25x-*M	RSC RSFP 25x-*M	RSC RKFP 25x-*M	RSC FSFD 25x-*M	RSC FKFD 25x-*M
WSC WSC 25x-*M	WSC RKC 25x-*M	WSC WKC 25x-*M	WSC RSFP 25x-*M	WSC RKFP 25x-*M	WSC FSFD 25x-*M	WSC FKFD 25x-*M
	RKC RKC 25x-*M	RKC WKC 25x-*M	RKC RSFP 25x-*M	RKC RKFP 25x-*M	RKC FSFD 25x-*M	RKC FKFD 25x-*M
		WKC WKC 25x-*M	WKC RSFP 25x-*M	WKC RKFP 25x-*M	WKC FSFD 25x-*M	WKC FKFD 25x-*M

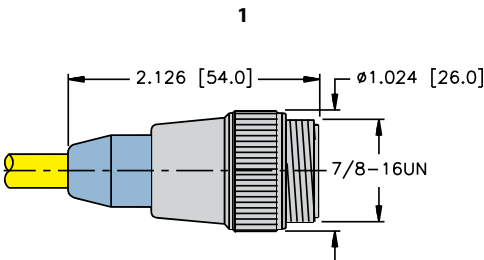
We reserve the right to make technical alterations without prior notice.

AS-interface® Media

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

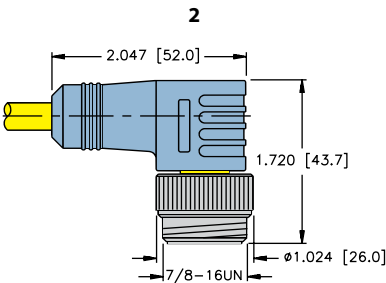
Specifications

Overmold:	TPU	Protection:	NEMA 1, 3, 4, 6P and IEC IP 67
Coupling Nut:	Nickel Plated CuZn or Stainless Steel	Rated Voltage:	300 V
Contact Carrier:	TPU (Polyurethane)	Rated Current:	9 A
Contacts:	Gold Plated CuZn	Ambient Temperature:	-40 °C to +105 °C (-40 °F to +221 °F)



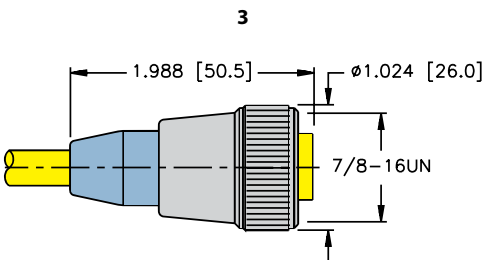
RSM ..

Page R8



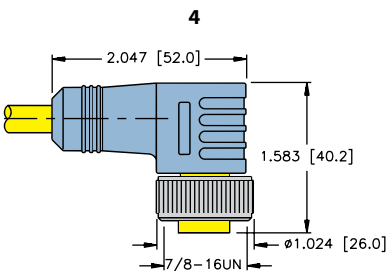
WSM ..

Page R8



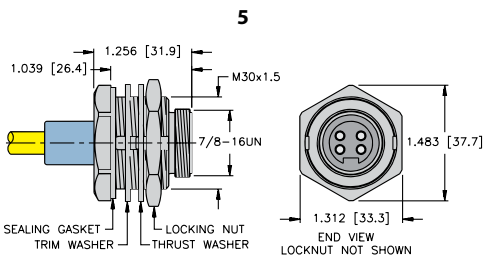
RKM ..

Page R8



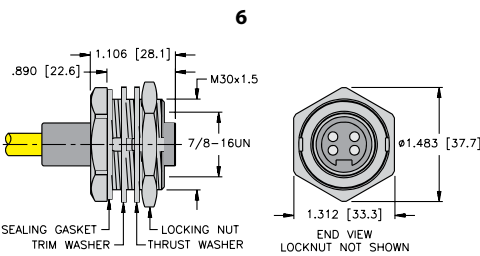
WKM ..

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RSFP ..

Page R9



RKFP ..

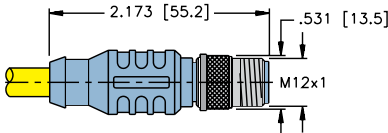
Page R9

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)

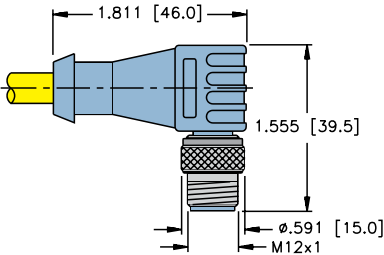
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RSC ..

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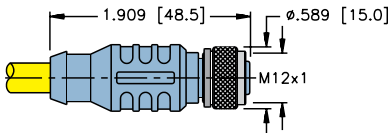
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WSC ..

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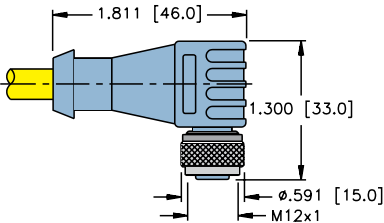
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RKC ..

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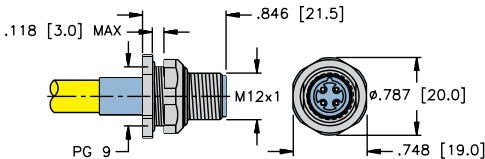
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WKC ..

Page R8

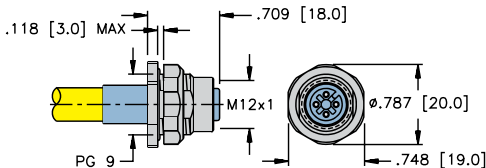
11



FSFD ..

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12



FKFD ..

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

AS-interface® Media

AS-interface® Physical Media Connectivity

AS-interface, Tees

- Creates a Drop or Branch from the Main Bus Line
- Available in Minifast® or Eurofast® Bus or Drop Lines



Housing Style	Part Number	Features	Wiring Diagrams
	RSV 2RKV 25	TPU (Polyurethane), stainless steel, 250 V, 4 A (Eurofast), 9 A (Minifast), -40 °C to +80 °C, Minifast drop connector	
	RSCV 2RKCV 25	TPU (Polyurethane), stainless steel, 250 V, 4 A (Eurofast), -30 °C to +90 °C, Eurofast female drop connector	
	RKC 2RSC 25	TPU (Polyurethane), stainless steel, 250 V, 4 A (Eurofast), -30 °C to +90 °C, Eurofast male drop connector, nickel plated brass	
	RSCV WKCV 25	TPU (Polyurethane), stainless steel, 250 V, 4 A (Eurofast), -40 °C to +105 °C, Eurofast male elbow	
	RSC RKC 25	TPU (Polyurethane), stainless steel, 250 V, 4 A (Eurofast), -40 °C to +105 °C, Eurofast male	

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

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

AS-interface, Gender Changers and Elbow Connectors

- Allows Quick and Easy Change from Male to Female Minifast® Connectors



Housing Style	Part Number	Specs	Application	Wiring Diagrams
	RKM RKM 25	TPU (Polyurethane) 250 V, 9 A -40 °C to +80 °C	Minifast Female Gender Changer • Male cordset to female receptacle	

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

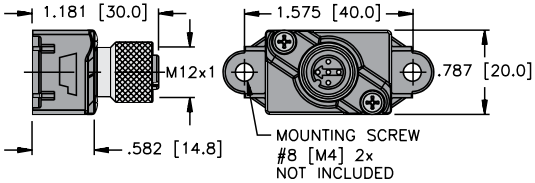
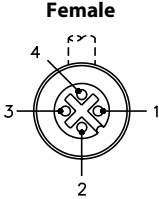
AS-interface® Media

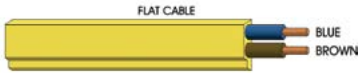
Minifast	Pinouts	Eurofast
Male	1. Brown (+ Voltage) 2. N/C 3. Blue (- Voltage) 4. N/C	Female

AS-interface® Physical Media Connectivity

AS-interface, Eurofast® Flat Cable Adapter

- Allows the mixing of standard AS-I Flat Cable with Eurofast Round Cable in same system
- May be needed when going from a dry to a wet environment or an area where better sealing and Rugged Connectors are required

Housing Style	Part Number	Features	Pinout
	ASI-PM-1 BW1239	TPU (Polyurethane) 250 V, 4 A -40 °C to +75 °C	

	Type	Approvals	Data Pair		Outer Jacket	Bulk Cable Part Number / Weight/300 M
			AWG Color Code	DCR (/1000 feet) Insulation	Material Color Nominal O.D.	
	2501 105 °C, 300 V	UL 2103 CSA AWM	2X16 AWG BU/BN	4.1 Ohms TPE	TPE, YELLOW, Flat	RB51822-*M, 42 lbs.
	2511 105 °C, 300 V	UL 2103 CSA AWM	2X16 AWG BU/BN	4.1 Ohms TPE	TPE, BLACK, Flat	RB51821-*M, 42 lbs.
	253G 75 °C, 300 V	UL PLTC CSA AWM II A/B, FT4	2X16 AWG BU/BN	4.1 Ohms PO	PVC, GRAY, Flat	RB51240-*M, 42 lbs.
	253BK 75 °C, 300 V	UL PLTC CSA AWM II A/B, FT4	2X16 AWG BU/BN	4.3 Ohms PO	PVC, BLACK, Flat	RB51241-*M, 42 lbs.
	253Y 75 °C, 300 V	UL PLTC CSA AWM II A/B, FT4	2X16 AWG BU/BN	4.3 Ohms PO	PVC, YELLOW, Flat	RB51242-*M, 42 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.

AS-interface, Minifast® Male Receptacles

- Provides Quick Connection to Field Devices or Enclosures
- Available for 1/2-14 NPT, 1/2-14 NPSM, 3/4-14 NPT and M20 Threads
- (7/8-16 UN) Minifast Connection



Housing Style	Female Part Number	Male Part Number	Features	Pinout
RKF 25.../14.5 	RKF 25-*M/14.5	RSF 25-*M/14.5	Nickel plated CuZn or stainless steel 300 V, 9 A, -40 °C to +105 °C, 1/2-14 NPT full length threads	Female
RSF 25.../14.5 				
RKF 25.../14.75 	RKF 25-*M/14.75	RSF 25-*M/14.75	Nickel plated CuZn or stainless steel 300 V, 9 A, -40 °C to +105 °C, 3/4-14 NPT full length threads	1. BN 2. N/C 3. BU 4. N/C
RSF 25.../14.75 				
RKF 25.../M20 	RKF 25-*M/M20	RSF 25-*M/M20	Nickel plated CuZn or stainless steel 300 V, 9 A, -40 °C to +105 °C, M20x1.5 threads	Male
RSF 25.../M20 				

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

Standard housing material is nickel plated brass. "RKF .."; "RKFFV .." 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.

AS-interface® Media

AS-interface® Physical Media Connectivity

AS-interface, Minifast® Male Receptacles

- Provides Quick Connection to Field Devices or Enclosures
- Available for 1/2-14 NPT, 1/2-14 NPSM, 3/4-14 NPT and M20 Threads
- (7/8-16 UN) Minifast Connection



Housing Style	Female Part Number	Male Part Number	Features	Pinout
RKF ..	RKF 25-*M	RSF 25-*M	Nickel plated CuZn or stainless steel 300 V, 9 A -40 °C to +105 °C, 1/2-14 NPSM threads	Female
RSF ..				Male

Standard cable length is 0.5 meters. Consult factory for other lengths.
Standard housing material is nickel plated brass. "RKF .."; "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.

AS-interface, Eurofast® Male Receptacles

- Mounted for Quick Connection to Enclosures
- (M12x1) Eurofast Connectors



Housing Style	Female Part Number	Male Part Number	Features	Pinout
FK 25...14.5 FS 25...14.5	FK 25-*M/14.5	FS 25-*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
FK 25...14.75 FS 25...14.75	FK 25-*M/14.75	FS 25-*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	
FK 25.../M20 FS 25.../M20	FK 25-*M/M20	FS 25-*M/M20	Nickel plated CuZn or stainless steel, 250 V, 4 A, -40 °C to +105 °C, M20x1.5 threads	Male

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

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

AS-interface® Physical Media Connectivity

AS-interface, Eurofast® Male Receptacles

- Mounted for Quick Connection to Enclosures
- (M12x1) Eurofast Connectors



Housing Style	Female Part Number	Male Part Number	Features	Pinout
FK 25... FS 25...	FK 25-*M	FS 25-*M	Nickel plated CuZn or stainless steel, 250 V, 4 A, -40 °C to +105 °C, PG 9 threads	Female Male

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

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

AS-interface, Minifast® Field Wireable Connectors with Labels

- Allows for Quick Connection when Pre-Molded Cables are not available
- Available for Male and Female Connectors
- Color Coded Wire Connection for AS-interface



Housing Style	Female Part Number	Male Part Number	Features	Pinout
BK 41.. BS 41..	BK 4140-0/9/ASI	BS 4140-0/9/ASI	Glass filled nylon, PG 9 cable gland, accepts 6-8 mm cable diameter, screw terminals, 90 °C, 250 V, 9 A, mates with standard, 4-pin cordsets and receptacles	Female
BKV 41.. BSV 41..	BKV 4140-0/9/ASI	BSV 4140-0/9/ASI	Glass filled nylon, PG 9 cable gland, accepts 6-8 mm cable diameter, screw terminals, 90 °C, 250 V, 9 A, mates with standard, 4-pin cordsets and receptacles, stainless steel housing	Male

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

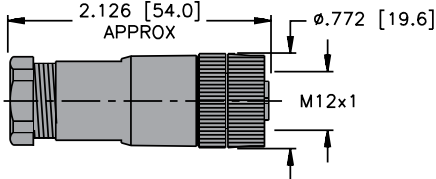
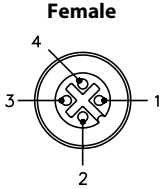
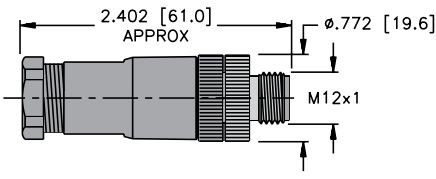
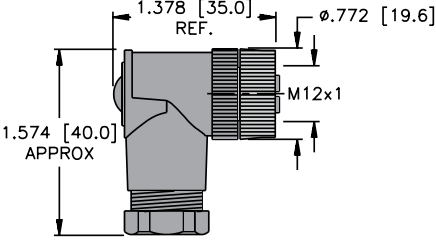
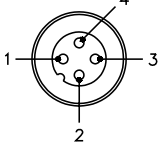
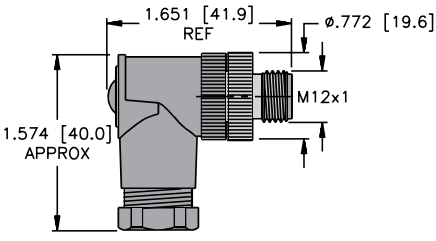
AS-interface® Media

AS-interface® Physical Media Connectivity

AS-interface, Eurofast® Field Wireable Connectors with Labels

- Allows for Quick Connection when Pre-Molded Cables are not available
- Available for Male and Female Connectors
- Color Coded Wire Connection for AS-interface



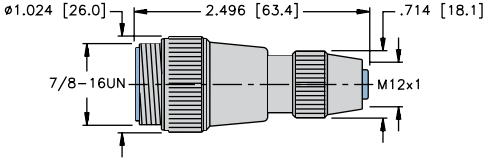
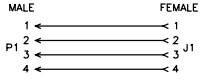
Housing Style	Female Part Number	Male Part Number	Features	Pinout
B 81.. 	B 8141-0/PG9/ASI	BS 8141-0/PG9/ASI	PBT, black, PG 9 cable gland, accepts 6-8 mm cable diameter, screw terminals, 85 °C, 250 V, 4 A, mates with standard, 4-pin cordsets and receptacles	Female 
BS 81.. 				
B 82.. 	B 8241-0/PG9/ASI	BS 8241-0/PG9/ASI	PBT, black, PG 9 cable gland, accepts 6-8 mm cable diameter, screw terminals, 85 °C, 250 V, 4 A, mates with standard, 4-pin cordsets and receptacles	Male 
BS 82.. 				

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

AS-interface, Gender Changer

- Allows quick and easy change from Male to Female and (7/8-16 UN) Minifast® to (M12x1) Eurofast® Connectors

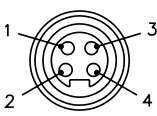
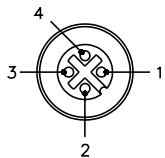


Housing Style	Part Number	Features	Wiring Diagrams
	RSM 25-FK 4.5	Nickel plated CuZn or stainless steel, 250 V, 4 A, 40 °C to +75 °C, female Eurofast, male Minifast, 4-pin	

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

AS-interface® Media

Pinouts

Minifast	Eurofast
Male	Female
	

FOUNDATION™ fieldbus, Conduit Adapters

- Converts Standard Conduits to Quick Disconnect
- Fiberglass Reinforced Nylon Housings
- Nickel Plated Brass Connectors available
- 3/4" Form 8 or Mark 9
- 1" Form 7 available upon request
- Gasket and Mounting Screws provided
- IP67



Housing Style	1 Port Part Number	2 Port Part Number	Specifications	Pinout
	BCA-49-E123	BCA-49-E223	3/4" Form 8 or Mark 9, M12 x 1 stainless steel connectors	Female
	BCA-49-M123	BCA-49-M223	3/4" Form 8 or Mark 9, 7/8"-16 UN stainless steel connectors	Female
	BCA-49SC-M123	BCA-49SC-M223	Short circuit protection, 3/4" Form 8 or Mark 9, 7/8"-16 UN stainless steel connectors	

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