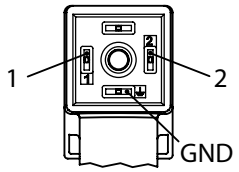
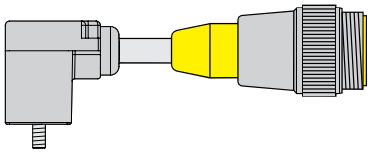
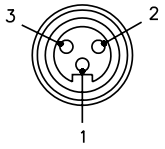
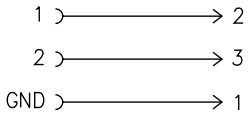
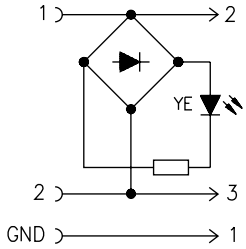
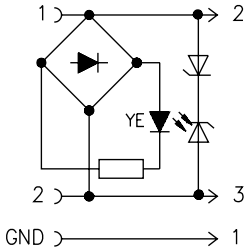
Type "C" (8 mm) Valve Connector to Minifast® Extension



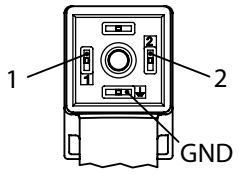


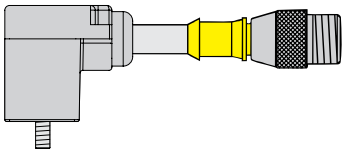


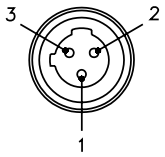
Wiring Diagrams

Straight Wired (A)	Indicator LED (L, M)	Indicator LED and Suppressor Diodes (P)
		

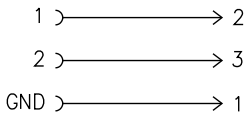
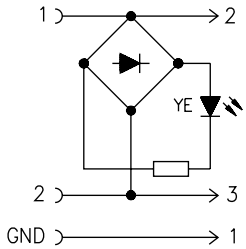
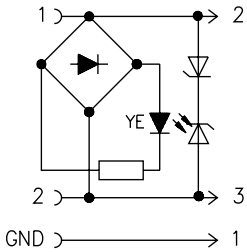
Type "C" (8 mm) Valve Connector Microfast® Extension







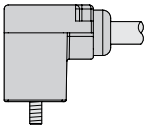
Wiring Diagrams

Straight Wired (A)	Indicator LED (L, M)	Indicator LED and Suppressor Diodes (P)
		

Valve Plug Connectivity

Valve Connectors, Type "C" (9.4 mm)

- **Available with PVC and TPU Jackets**
- **18 and 24 AWG**
- **2 Conductor + Ground**



Type C

"C" (9.4 mm) Style Valve Connectors, Standard Color Code

Application	Cable Specs	Pinout	Voltage VAC/DC	Straight Wired	Indicator LED	Indicator LED and Suppressor Diodes
Standard duty PVC	3/18 AWG, Grey PVC 105 °C 6.2 mm OD Black Body	1. BK 1 2. BK 2 Gnd-GN/YE	0-220 24 48 110	TC9S 2-A653-*M - - - - - - - - - - - -	- - - - TC9S 2-L653-*M TC9S 2-M653-*M TC9S 2-N653-*M	- - - - TC9S 2-P653-* - - - - - - - -
Standard duty TPU	3/18 AWG, Grey TPU 90 °C 6.0 mm OD Black Body	1. BK 1 2. BK 2 Gnd-GN/YE	0-220 24 48 110	TC9S 2-A669-*M - - - - - - - - - - - -	- - - - TC9S 2-L669-*M TC9S 2-M669-*M TC9S 2-N669-*M	- - - - TC9S 2-P669-* - - - - - - - -

"C" (9.4 mm) Style Valve Connectors, IEC Color Code

Application	Cable Specs	Pinout	Voltage VAC/DC	Straight Wired	Indicator LED	Indicator LED and Suppressor Diodes
Small diameter PVC	3/24 AWG, Yellow PVC 105 °C 4.4 mm OD Black Body	1. BN 2. BU Gnd - BK	0-220 24 48 110	TC9S 2-A642-*M - - - - - - - - - - - -	- - - - TC9S 2-L642-*M TC9S 2-M642-*M TC9S 2-N642-*M	- - - - TC9S 2-P642-* - - - - - - - -
Small diameter TPU	3/24 AWG, Black TPU 90 °C 4.2 mm OD Black Body	1. BN 2. BU Gnd - BK	0-220 24 48 110	TC9S 2-A587-*M - - - - - - - - - - - -	- - - - TC9S 2-L587-*M TC9S 2-M587-*M TC9S 2-N587-*M	- - - - TC9S 2-P587-* - - - - - - - -

* Length in meters.

Valve Connectors, Type "C" (9.4 mm)

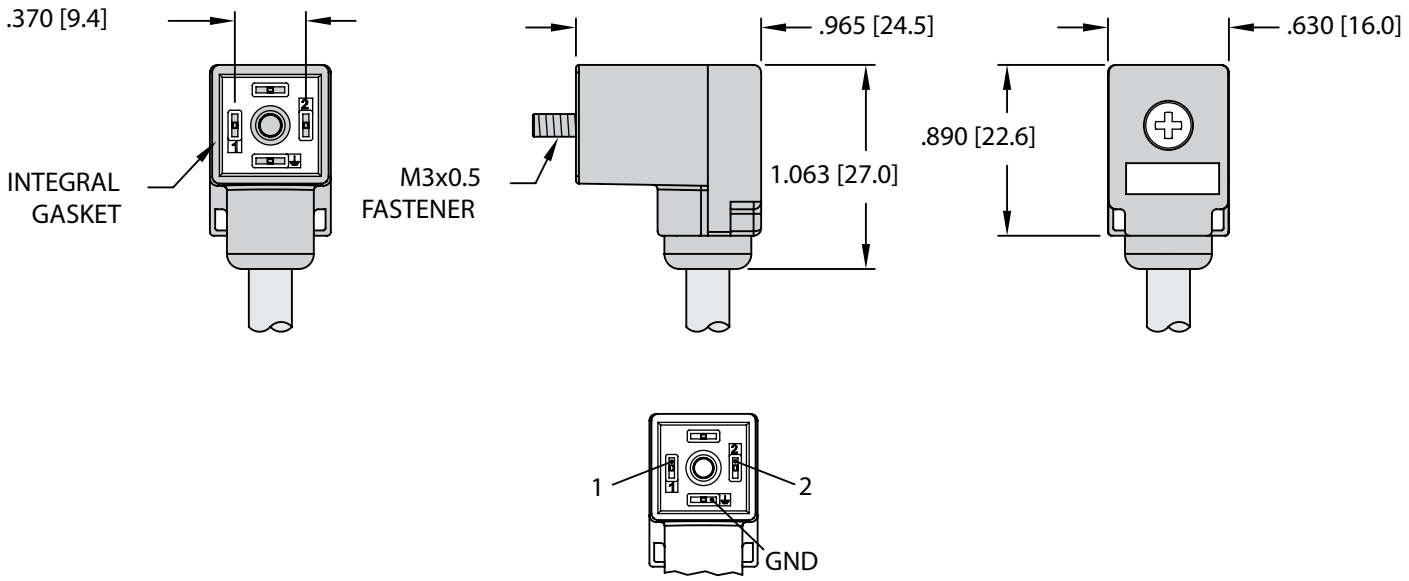
Specifications

Connectors:	Oil resistant polyurethane body material, Nylon contact carrier.
Contacts:	Silver plated copper alloy.
Cable:	See table.
Cable Length:	Standard cable lengths are nominal 5 meters. Other lengths available by request - consult factory.
Protection Class:	NEMA 1, 3, 4, 6P and IEC IP 67 when connected and secured.

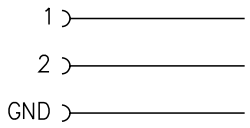
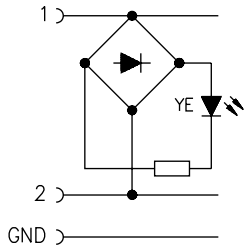
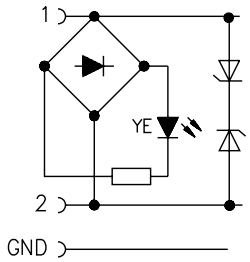
Options: Grey connector body available (special order), change part number TC9S...to TC9G…
For other combinations or options, consult factory.

Dimensions

Type C (9.4 mm)



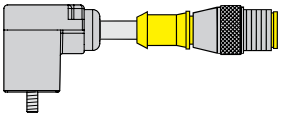
Wiring Diagrams

Straight Wired (A)	Indicator LED (L, M, N)	Indicator LED and Suppressor Diodes (P)
		

Valve Plug Connectivity

Valve Connectors, Type "C" (9.4 mm) Extensions

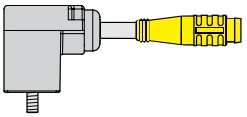
- **Available with PVC and TPU Jackets**
- **2 Conductor + Ground (Eurofast®)**



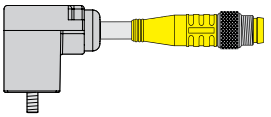
Eurofast Extension

"C" (9.4 mm) Style Valve Connectors, Eurofast Extension

Application	Cable Specs	Voltage VAC/DC	Straight Wired	Indicator LED	Indicator LED and Suppressor Diodes
Standard duty PVC	3/18 AWG, Grey PVC 105 °C 6.2 mm OD Black Body	0-220 24 48 110	TC9S 2-A653-*M-RS 5.3T - - - - - - - - - - - -	- - - - TC9S 2-L653-*M-RS 5.3T TC9S 2-M653-*M-RS 5.3T TC9S 2-N653-*M-RS 5.3T	- - - - TC9S 2-P653-*M-RS 5.3T - - - - - - - -
Standard duty TPU	3/18 AWG, Grey TPU 90 °C 6.0 mm OD Black Body	0-220 24 48 110	TC9S 2-A669-*M-RS 5.3T - - - - - - - - - - - -	- - - - TC9S 2-L669-*M-RS 5.3T TC9S 2-M669-*M-RS 5.3T TC9S 2-N669-*M-RS 5.3T	- - - - TC9S 2-P669-*M-RS 5.3T - - - - - - - -



Picofast Snap Extension



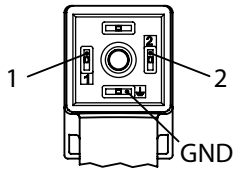
Picofast Threaded Extension

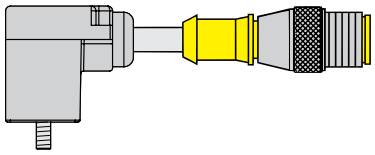
"C" Style Valve Connectors, Picofast® Extension

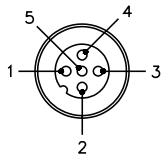
Application	Cable Specs	Voltage VAC/DC	Straight Wired	Indicator LED	Indicator LED and Suppressor Diodes
Small diameter, PVC Snap lock	3/24 AWG Yellow PVC 105 °C 4.4 mm OD	0-125 24 48	TC9S 2-A642-*M-PSG 3 - - - - - - - -	- - - - TC9S 2-L642-*M-PSG 3 TC9S 2-M642-*M-PSG 3	- - - - TC9S 2-P642-*M-PSG 3 - - - -
Small diameter, TPU Snap lock	3/24 AWG Black TPU 90 °C 4.2 mm OD	0-125 24 48	TC9S 2-A587-*M-PSG 3 - - - - - - - -	- - - - TC9S 2-L587-*M-PSG 3 TC9S 2-M587-*M-PSG 3	- - - - TC9S 2-P587-*M-PSG 3 - - - -
Small diameter, PVC Threaded	3/24 AWG Yellow PVC 105 °C 4.4 mm OD	0-125 24 48	TC9S 2-A642-*M-PSG 3M - - - - - - - -	- - - - TC9S 2-L642-*M-PSG 3M TC9S 2-M642-*M-PSG 3M	- - - - TC9S 2-P642-*M-PSG 3M - - - -
Small diameter, TPU Threaded	3/24 AWG Black TPU 90 °C 4.2 mm OD	0-125 24 48	TC9S 2-A587-*M-PSG 3M - - - - - - - -	- - - - TC9S 2-L587-*M-PSG 3M TC9S 2-M587-*M-PSG 3M	- - - - TC9S 2-P587-*M-PSG 3M - - - -

* Length in meters.

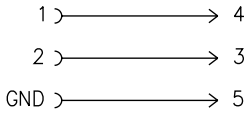
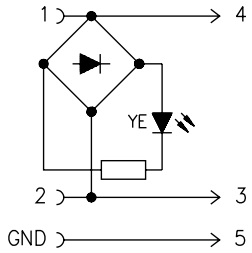
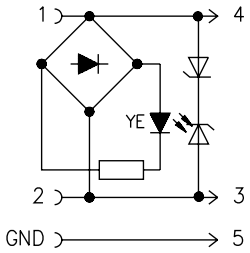
Type "C" (9.4 mm) Valve Connector to Eurofast® Extension



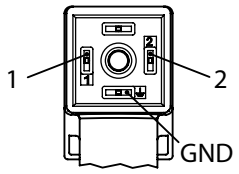


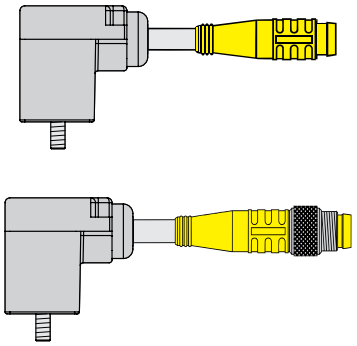


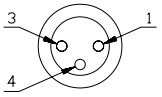
Wiring Diagrams

Straight Wired (A)	Indicator LED (L, M, N)	Indicator LED and Suppressor Diodes (P)
		

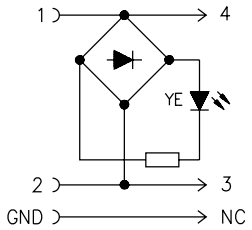
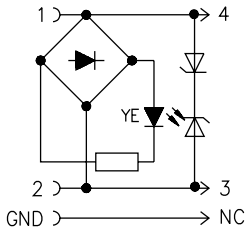
Type "C" (9.4 mm) Valve Connector to Picofast® Extension







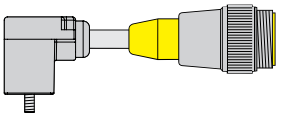
Wiring Diagrams

Straight Wired (A)	Indicator LED (L, M)	Indicator LED and Suppressor Diodes (P)
		

Valve Plug Connectivity

Valve Connectors, Type "C" (9.4 mm) Extensions

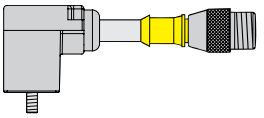
- **Available with PVC and TPU Jackets**
- **18 AWG**
- **2 Conductor + Ground**



Minifast Extension

"C" (9.4 mm) Style Valve Connectors, Minifast® Extension

Application	Cable Specs	Voltage VAC/DC	Straight Wired	Indicator LED	Indicator LED and Suppressor Diodes
Standard duty PVC	3/18 AWG, Grey PVC 105 °C 6.2 mm OD Black Body	0-220 24 48 110	TC9S 2-A653-*M-RSM 30 - - - - - - - - - - - -	- - - - TC9S 2-L653-*M-RSM 30 TC9S 2-M653-*M-RSM 30 TC9S 2-N653-*M-RSM 30	- - - - TC9S 2-P653-*M-RSM 30 - - - - - - - -
Standard duty TPU	3/18 AWG, Grey TPU 90 °C 6.0 mm OD Black Body	0-220 24 48 110	TC9S 2-A669-*M-RSM 30 - - - - - - - - - - - -	- - - - TC9S 2-L669-*M-RSM 30 TC9S 2-M669-*M-RSM 30 TC9S 2-N669-*M-RSM 30	- - - - TC9S 2-P669-*M-RSM 30 - - - - - - - -



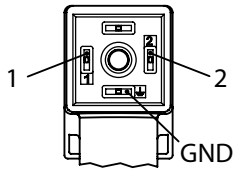
Microfast Extension

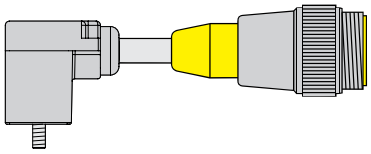
"C" (9.4 mm) Style Valve Connectors, Microfast® Extension

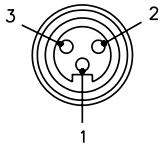
Application	Cable Specs	Voltage VAC/DC	Straight Wired	Indicator LED	Indicator LED and Suppressor Diodes
Standard duty PVC	3/18 AWG, Grey PVC 105 °C 6.2 mm OD Black Body	0-220 24 48 110	TC9S 2-A653-*M-SB 3T - - - - - - - -	- - - - TC9S 2-L653-*M-SB 3T TC9S 2-M653-*M-SB 3T TC9S 2-N653-*M-SB 3T	- - - - TC9S 2-P653-*M-SB 3T - - - - - - - -
Standard duty TPU	3/18 AWG, Grey TPU 90 °C 6.0 mm OD Black Body	0-220 24 48 110	TC9S 2-A669-*M-SB 3T - - - - - - - - - - - -	- - - - TC9S 2-L669-*M-SB 3T TC9S 2-M669-*M-SB 3T TC9S 2-N669-*M-SB 3T	- - - - TC9S 2-P669-*M-SB 3T - - - - - - - -

* Length in meters.

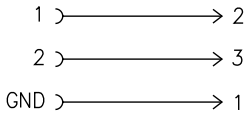
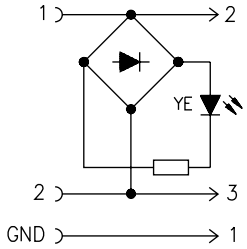
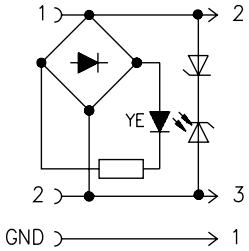
Type "C" (9.4 mm) Valve Connector to Minifast® Extension



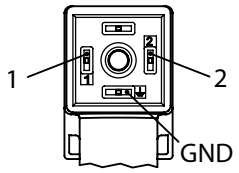


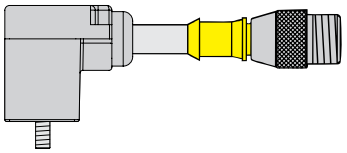


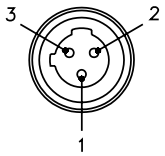
Wiring Diagrams

Straight Wired (A)	Indicator LED (L, M, N)	Indicator LED and Suppressor Diodes (P)
		

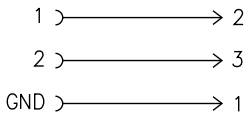
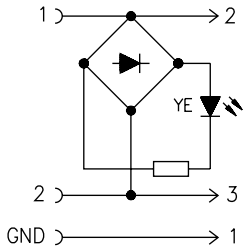
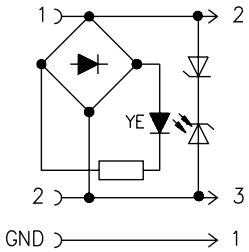
Type "C" (9.4 mm) Valve Connector to Microfast® Extension







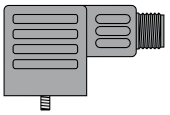
Wiring Diagrams

Straight Wired (A)	Indicator LED (L, M, N)	Indicator LED and Suppressor Diodes (P)
		

Valve Plug Connectivity

Valve Connectors w/Integral Eurofast® or Picofast® Connector

- **Integral Eurofast and Picofast Connectors**
- **Compact Size**
- **2 Conductor + Ground (Eurofast)**



Eurofast

"A" Style Valve Connectors, Integral Eurofast Connector

Application	Pinout	Voltage VAC/DC	Straight Wired	Indicator LED	Indicator LED and MOV
"A" Style Connector with Integral Eurofast connector 2 Conductors, 1 Ground Ground contacts Parallel wired	1 → 4 2 → 3 GND → 5 GND	0-220 24-48	VAS 22-A-FS 5.3 - - - -	- - - - - - - -	- - - - VAS 22-D-FS 5.3

* Length in meters.

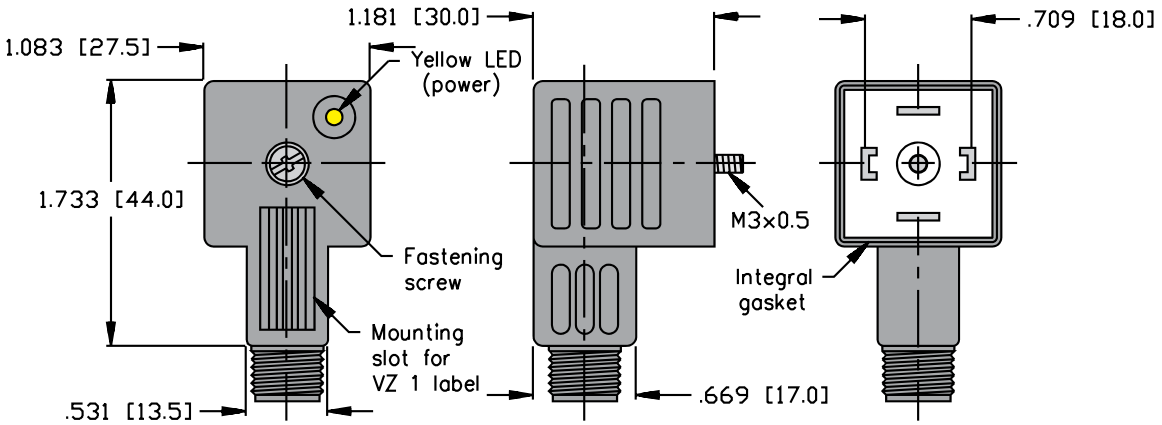
Valve Connectors w/Integral Eurofast® or Picofast® Connector

Specifications

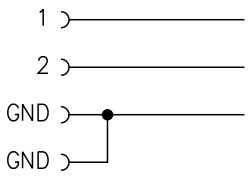
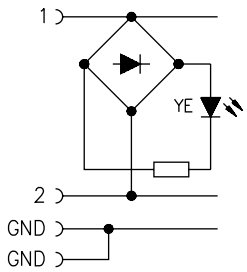
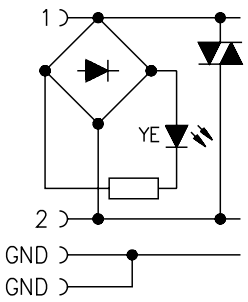
Specifications:	Oil resistant polyurethane body material, Nylon valve plug contact carrier, TPU Eurofast contact carrier.
Contacts:	Valve plug: silver plated copper alloy; Eurofast: gold plated brass.
Temperature:	-30 °C to +80 °C (-22 °F to +176 °F).
Protection Class:	NEMA 1, 3, 4, 6P and IEC IP 67 when connected and secured.

Dimensions

Type A with Eurofast



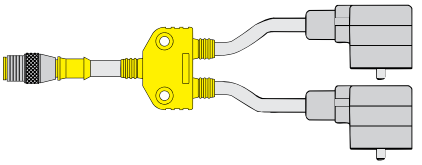
Wiring Diagrams

Straight Wired (A)	Indicator LED (L, M, N)	Indicator LED and Suppressor Diodes (P)
		

Valve Plug Connectivity

Eurofast® 2 Branch Splitters with Valve Plugs

- **Combine 2 Valve Plugs into 1 Eurofast**
- **For Use w/Eurofast J-boxes w/2 Signals/Port**
- **Available with All Valve Plug Styles (A, B, I and C)**

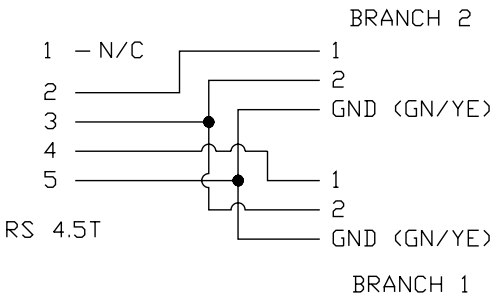


4-wire Series-Wired VB2

Application	Specifications	Wiring Diagram	Part Number
Combine 2 valve plugs into 1 cable. For use with 2 signal / port junction boxes. "A" style (18 mm) valve plugs.	220 VAC/DC 4.0 A RS 4.5T = Grey PVC, 5.3 mm OD, 4/22 AWG Valve plug = Grey PVC, 6.2 mm OD 3/18 AWG	**Diagram A**	VB2-RS 4.5T-*/2VAS 22-A653-*/*
Combine 2 valve plugs into 1 cable. For use with 2 signal / port junction boxes. "B" style (10 mm) valve plugs.	220 VAC/DC 4.0 A RS 4.5T = Grey PVC 5.3 mm OD, 4/22 AWG Valve plug = Grey PVC, 6.2 mm OD 3/18 AWG	**Diagram A**	VB2-RS 4.5T-*/2VBS 2-A653-*/*
Combine 2 valve plugs into 1 cable. For use with 2 signal / port junction boxes. "I" style (11 mm) valve plugs.	220 VAC/DC 4.0 A RS 4.5T = Grey PVC, 5.3 mm OD, 4/22 AWG Valve plug = Grey PVC, 6.2 mm OD 3/18 AWG	**Diagram A**	VB2-RS 4.5T-*/2VIS 2-A653-*/*
Combine 2 valve plugs into 1 cable. For use with 2 signal / port junction boxes. "C" style (8 mm) valve plugs.	220 VAC/DC 4.0 A RS 4.5T = Grey PVC, 5.3 mm OD, 4/22 AWG Valve plug = Grey PVC, 6.2 mm OD 3/18 AWG	**Diagram A**	VB2-RS 4.5T-*/2TC8S 2-A653-*/*
Combine 2 valve plugs into 1 cable. For use with 2 signal / port junction boxes. "C" style (9.4 mm) valve plugs.	220 VAC/DC 4.0 A RS 4.5T = Grey PVC, 5.3 mm OD, 4/22 AWG Valve plug = Grey PVC, 6.2 mm OD 3/18 AWG	**Diagram A**	VB2-RS 4.5T-*/2TC9S 2-A653-*/*

* Length in meters.

Diagram A



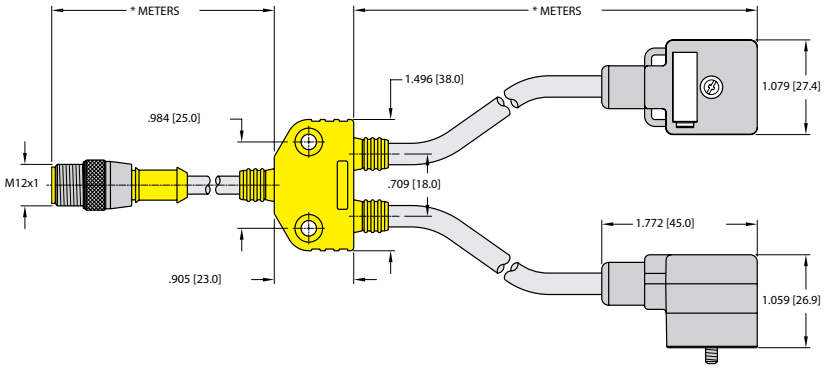
Specifications

Junction Body:	Oil resistant Yellow polyurethane.	**Coupling Nuts:**	Nickel plated brass.
Connector:	Oil resistant polyurethane body material, Nylon or TPU contact carrier.	**Cable:**	See table.
Contacts:	Gold plated brass (Eurofast). Silver plated copper alloy (V*fast).	**Temperature:**	-40 °C to +105 °C (-40 °F to +221 °F) - all PVC cable; -40 °C to +90 °C (-40 °F to +194 °F) - with TPU cable.
		Protection:	NEMA 1, 3, 4, 6P and IEC IP 68.

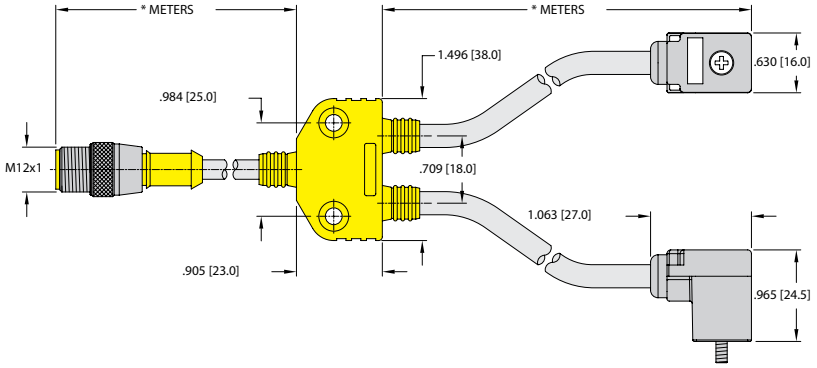
Cable Length: Trunk - nominal 1 meter. Branches - nominal 0.3 meters. Other lengths available by request - consult factory.
Cable Options: Other jackets available by request - consult factory.
Valve Options: Available w/LED or LED+mov, consult factory.
Eurofast® Options: Stainless steel coupling nut add "V" to part number (RS .. to RSV ..).
Nylon coupling nut add "K" to part number (RS .. to RSK ..).
Right angle connectors, change part number (RS .. to WS..).

Dimensions

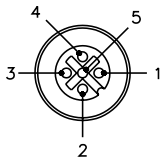
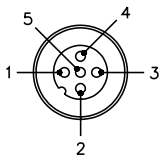
VB2-RS 4.5T-*/2V .. S 2 .. -A528-*/*



VB2-RS 4.5T-*/2TC .. S 2-A528-*/*



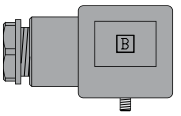
Pinout

5-Pin	
Female	**Male**
	

Valve Plug Connectivity

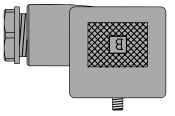
Valve Connectors, Field Wireables

- **Convert Hard Wiring Into Quick Disconnect**
- **Facilitate Field Replacements**



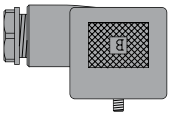
"A" Style Valve Connector

Application	Specifications	Straight Wired
"A" Style Valve Connector	0-220 VAC/DC, 10 A	VAS 3-AW



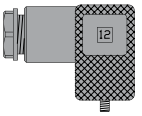
"B" Style Valve Connector

Application	Specifications	Straight Wired
"B" Style Valve Connector	0-220 VAC/DC, 10 A	VBS 2-AW



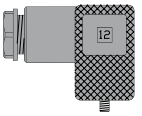
"I" Style Valve Connector

Application	Specifications	Straight Wired
"I" Style Valve Connector	0-220 VAC/DC, 10 A	VIS 2-AW



"C" (8 mm) Style Valve Connector

Application	Specifications	Straight Wired
"C" (8 mm) Style Valve Connector	0-220 VAC/DC, 10 A	TC8S 2-AW



"C" (9.4 mm) Style Valve Connector

Application	Specifications	Straight Wired
"C" (9.4 mm) Style Valve Connector	0-220 VAC/DC, 10 A	TC9S 2-AW

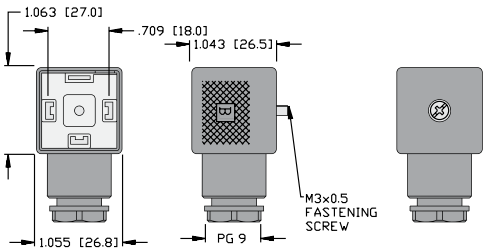
Valve Connectors, Field Wireables

Specifications

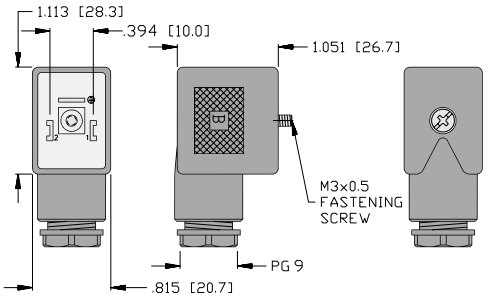
Housing:	Nylon, black.	**Cable Gland:**	PG 9 accepts cable diameter 6-8 mm. PG 7 accepts cable diameter 4-6 mm.
Connectors:	Nylon, black.		
Gasket:	Nitrile.	**Temperature:**	-25 °C to +90 °C (-13 °F to +194 °F).
Contacts	Nickel plated brass	**Protection Class:**	NEMA 4, 6P and IEC IP 65.
Terminals:	Screw terminals, conductors to 14 AWG.		

Dimensions

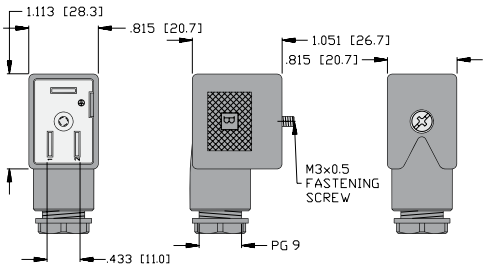
VAS 3-AW



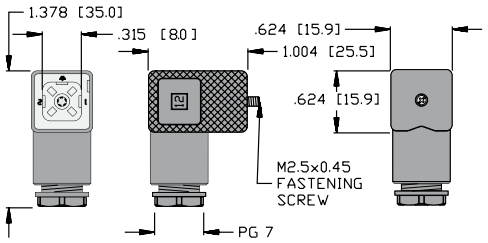
VBS 2-AW



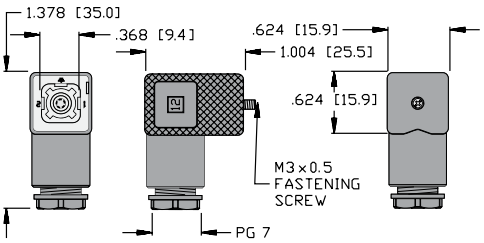
VIS 2-AW



TC8S 2-AW



TC9S 2-AW



Notes

Features

- NPT and PG thread cable glands in nylon or metal materials
- Locknuts in multiple thread sizes for receptacle mounting
- M12/M8 torque tool
- Fiberglass and silicone sleeving
- Customizable labels

Liquid Tight Nylon Strain Relief Cable Glands

Communication Rate/Cycle Time

Whenever a metal strain relief cable gland is used, this Nylon Strain Relief Cable Gland can be substituted to save you money without sacrificing performance. Typical applications are: Control cabinets, car washes, hot tubs, instrumentation, carpet cleaning machines, food processing equipment, underground for direct burial, and underwater to 300 ft. (150 PSIG).

Pull-out Resistance - Protection

Flexible, overlapping clamping splines prevent the form seal from being pulled out of the fitting and offers protection for the cable.

Dependable

Exceeds NEMA 4x and 6 specifications (UL tested). For submersion applications, use an O-Ring or Seal Ring between body and housing. Either tap the housing or secure in panel hole with Locking Nut.

Non-Corrosive

The Nylon strain relief cable glands are resistant to salt water, weak acids, weak alkalis, alcohol, esters, ketones, ether, gasoline, mineral, animal and vegetable oil.

Submersible

The patented recess and high performance seal guarantees NEMA 4x and 6 (IP 68) at 150 PSIG (10 BAR).

Rugged Construction

The rugged lead screw results in a dependable transmission of force between nut and body.

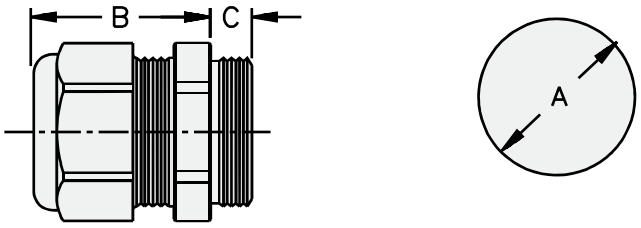
Liquid Tight

The concentric seal ridge and molded groove for an optional O-Ring results in a liquid tight seal between body and housing.

EMI/RFI Proof-Grounded

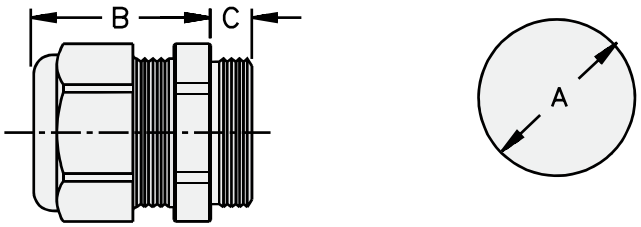
- Termination of the braided shield
- Strip cable jacket and braiding to different lengths
- For small diameter cables, fold the braided shield back over the cable jacket
- Insert cable into fitting until it reaches contact point
- Tighten dome nut

PG/NPT Threads - Nylon/Straight



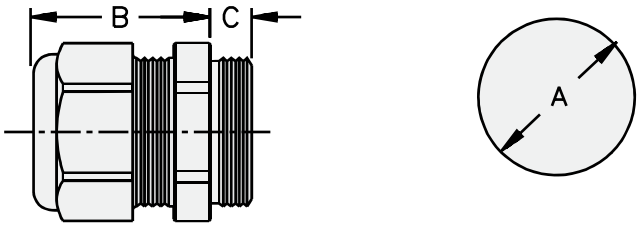
Part Number	Cable Range	Thread Type	Clearance Hole (A)	Body Length (B)	Thread Length (C)
CG-PG7STRT-NYLON 3-6.5MM	3 to 6.5 mm	PG7	12.5 mm	20 mm	8 mm
CG-PG9STRT-NYLON 4-8MM	4 to 8 mm	PG9	15.2 mm	22 mm	8 mm
CG-PG11STRT-NYLON 5-10MM	5 to 10 mm	PG11	18.5 mm	24 mm	8 mm
CG-3/8STRT-NYLON 2-6MM	2 to 6 mm	3/8" NPT	17.2 mm	22 mm	15 mm
CG-1/2STRT-NYLON 5-9MM	5 to 9 mm	1/2" NPT	21.1 mm	27 mm	13 mm
CG-1/2STRT-NYLON 10-14MM	10 to 14 mm	1/2" NPT	21.1 mm	28 mm	13 mm
CG-3/4STRT-NYLON 9-16MM	9 to 16 mm	3/4" NPT	26.7 mm	30 mm	13 mm

PG/NPT Threads - Metal/Straight



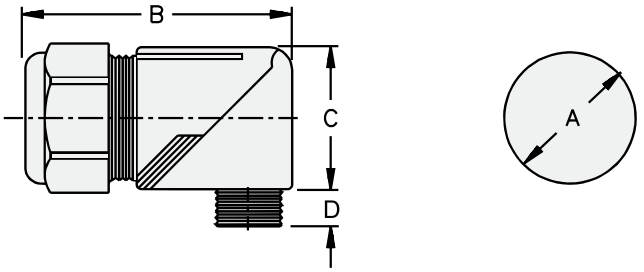
Part Number	Cable Range	Thread Type	Clearance Hole (A)	Body Length (B)	Thread Length (C)
CG-PG7STRT-METAL 3-6.5MM	3 to 6.5 mm	PG7	12.5 mm	19 mm	5 mm
CG-PG9STRT-METAL 4-8MM	4 to 8 mm	PG9	15.2 mm	21 mm	6 mm
CG-PG11STRT-METAL 5-10MM	5 to 10 mm	PG11	18.5 mm	22 mm	6 mm
CG-3/8STRT-METAL 4-8MM	4 to 8 mm	3/8" NPT	17.2 mm	21 mm	15 mm
CG-1/2STRT-METAL 6-12MM	6 to 12 mm	1/2" NPT	21.1 mm	24 mm	13 mm
CG-3/4STRT-METAL 13-18MM	13 to 18 mm	3/4" NPT	26.7 mm	25 mm	13 mm

SHIELDED - PG/NPT Threads - Metal/Straight



Part Number	Cable Range	Thread Type	Clearance Hole (A)	Body Length (B)	Thread Length (C)
CG-3/8STRT-SHLDMTL 4-8MM	4 to 8 mm	3/8" NPT	17.2 mm	20 mm	15 mm
CG-1/2STRT-SHLDMTL 6-12MM	6 to 12 mm	1/2" NPT	21.1 mm	22 mm	13 mm
CG-3/4STRT-SHLDMTL 9-16MM	9 to 16 mm	3/4" NPT	26.7 mm	29 mm	13 mm

PG/NPT Threads - Nylon/Right Angle

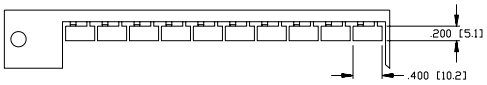
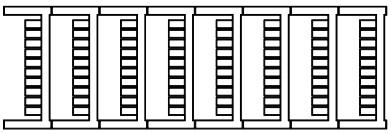
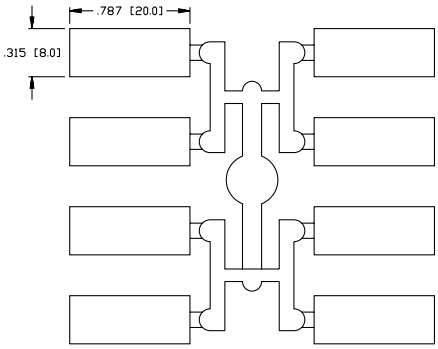
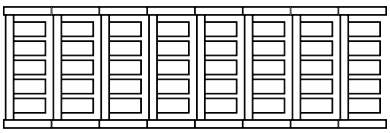


Part Number	Cable Range	Thread Type	Clearance Hole (A)	Body Length (B)	Height (C)	Thread Length (D)
CG-PG9ANGLE-NYLON 4-8MM	4 to 8 mm	PG 9	15.2 mm	45 mm	23 mm	8 mm
CG-3/8ANGLE-NYLON 4-8MM	4 to 8 mm	3/8" NPT	17.2 mm	45 mm	23 mm	15 mm
CG-1/2ANGLE-NYLON 5-9MM	5 to 9 mm	1/2" NPT	21.1 mm	57 mm	30.5 mm	13 mm
CG-1/2ANGLE-NYLON 10-14MM	10 to 14 mm	1/2" NPT	21.1 mm	65 mm	32.5 mm	13 mm
CG-3/4ANGLE-NYLON 9-16MM	9 to 16 mm	3/4" NPT	26.7 mm	73 mm	40 mm	13 mm

Strain Relief Cord Grips

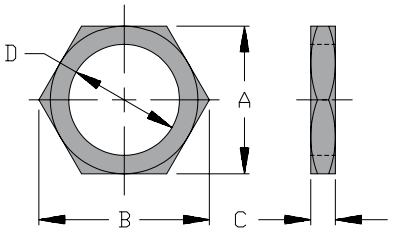
Part Number	Specifications	Application	Drawing
SRF-PG11	Nylon PG 11 threads Accepts cable diameter .200-.394" IP 68 -30 °C to +100 °C	Strain relief cord grip	
SRF-PG13.5	Nylon PG 13.5 threads Accepts cable diameter .236-.472" IP 68 -30 °C to +100 °C	Strain relief cord grip	

Snap-in Labels

Part Number	Specifications	Application	Drawing
KS 5/10 (10/Labels)	10 white labels 5x10 mm each	Snap-in labels for VBRS and VBRK splitters and Eurofast® to Picofast® adapters and junction boxes	
Custom printed labels **(Consult factory for part number)**	1 sheet minimum 80 white labels, 5x10 mm each		
VZ 1 (8/labels)	8 white labels 8x20 mm each Nylon	Snap-in labels for Eurofast and Microfast® junction boxes, V*fast®	
Custom printed labels **(Consult factory for part number)**	1 sheet minimum 40 white labels, 8x20 mm each		

Lock Nuts

Part Number	Specifications	Application	A	B	C	D
LOCKNUT-PG 9 Metal (5/Bag)	Nickel plated brass PG 9 threads 5 per bag	Lock nut Eurofast® receptacles	0.71″ 18.0 mm	0.79″ 20.0 mm	0.11″ 2.8 mm	PG 9
LOCKNUT-PG 13.5 Metal (5/Bag)	Nickel plated brass PG 13.5 threads 5 per bag	Lock nut Eurofast receptacles	0.90″ 23.0 mm	1.00″ 25.5 mm	0.12″ 3.0 mm	PG 13.5
LOCKNUT 1/4-18 (10/Bag)	Nickel plated brass 1/4-18 threads 10 per bag	Lock nut Eurofast and Microfast® receptacles	0.69″ 17.5 mm	0.79″ 20.0 mm	0.16″ 4.0 mm	1/4-18
LOCKNUT 1/2-14 Hex (10/Bag)	Die-cast Zinc ½-14 threads 10 per bag	Lock nut Minifast®, Eurofast and Microfast receptacles	0.94″ 24.0 mm	1.1″ 27.5 mm	0.16″ 4.0 mm	1/2-14



Torque Wrench

Picture	Part Number	Specifications
Base 		
Torque Adjuster 		
M8 Insert 	SCREWTY M8/M12 TORQUE WRENCH	For tightening and loosening of Eurofast® and Picofast® connectors **M8 Torque:** Recommended: 0.5 Nm **M12 Torque:** Recommended: 0.8 Nm
M12 Insert 		

Braided Fiberglass Sleeving Viton Coated (Bulk)

Part Number	Specifications	Application	Features
FFV 1/4INCH BLACK 50 FOOT ROLL† **FFV 1/4INCH BLACK (10/BAG-6IN)**†	Viton (fluoroelastomer) coated, braided fiberglass, black 1/4″ diameter -70 °C to +220 °C NEMA TF-1	Protective sleeving for insulation of cable.	Excellent chemical and solvent resistance, coating offers improved flexibility and protection throughout a wide operating temperature range.
FFV 3/8INCH BLACK 50 FOOT ROLL† **FFV 3/8INCH BLACK (10/BAG-6IN)**†	Viton (fluoroelastomer) coated, braided fiberglass, black 3/8″ diameter -70 °C to +220 °C NEMA TF-1		
FFV 1/2INCH BLACK 50 FOOT ROLL† **FFV 1/2INCH BLACK (10/BAG-6IN)**†	Viton (fluoroelastomer) coated, braided fiberglass, black 1/2″ diameter -70 °C to +220 °C NEMA TF-1		
FFV 5/8INCH BLACK 50 FOOT ROLL† **FFV 5/8INCH BLACK (10/BAG-6IN)**†	Viton (fluoroelastomer) coated, braided fiberglass, black 5/8″ diameter -70 °C to +220 °C NEMA TF-1		
FFV 1INCH BLACK 50 FOOT ROLL† **FFV 1INCH BLACK (10/BAG-6IN)**†	Viton (fluoroelastomer) coated, braided fiberglass, black 1″ diameter -70 °C to +220 °C NEMA TF-1		
FFV 1 1/2INCH BLACK 50 FOOT ROLL† **FFV 1 1/2INCH BLACK (10/BAG-6IN)**†	Viton (fluoroelastomer) coated, braided fiberglass, black 1 1/2″ diameter -70 °C to +220 °C NEMA TF-1		

Braided Fiberglass Sleeving Acryl-Coated (Bulk)

Part Number	Specifications	Application	Features
FF 3/4INCH BLACK (10/BAG)† **FF 3/4INCH BLACK 50 FOOT ROLL**†	Acryl-coated braided fiberglass 3/4″ diameter -70 °C to +240 °C NEMA TF-1	Protective sleeving for insulation of cable.	Excellent chemical and solvent resistance.
FF 1/2INCH BLACK (10/BAG)† **FF 1/2INCH BLACK 50 FOOT ROLL**†	Acryl-coated braided fiberglass 1/2″ diameter -70 °C to +240 °C NEMA TF-1		

† Sleeving part numbers only; cordset not included.

Expandable Silicone Rubber Coated, Fiberglass Sleeving (Bulk)

Part Number	Specifications	Application	Features
FFFS WHT ID 3/8-INCH-30M† **FFFS WHT ID 3/8-INCH (10/BAG-6IN)**†	Fiberglass braid, silicone rubber coating, white 3/8" diameter, -55 °C to +200 °C NEMA TF-1	Expandable silicone coated fiberglass sleeving for protection of cable and coupling nut.	"Heat shrink" like fit with abrasion, moisture, cut-through chemical and weld slag resistance.
FFFS WHT ID 5/8-INCH-30M† **FFFS WHT ID 5/8-INCH (10/BAG-6IN)**†	Fiberglass braid, silicone rubber coating, white 5/8" diameter, -55 °C to +200 °C NEMA TF-1		
FFFS BLK ID 3/4-INCH-30M† **FFFS BLK ID 3/4-INCH (10/BAG-6IN)**†	Fiberglass braid, silicone rubber coating, black 3/4" diameter, -55 °C to +200 °C NEMA TF-1		
FFFS BLK ID 1-INCH-30M† **FFFS BLK ID 1-INCH (10/BAG-6IN)**†	Fiberglass braid, silicone rubber coating, black 1" diameter, -55 °C to +200 °C NEMA TF-1		

† Sleeving part numbers only; cordset not included.

Silicone Tubing (*Bulk)

Part Number	Specifications	Application	Features
ST ID 1/4-INCH-30M† **ST ID 1/4-INCH (10/BAG-6IN)**†	Silicone rubber tubing, translucent 1/4" diameter UL	Protective tubing for insulation of cable.	Excellent weld slag resistance.
ST ID 3/8-INCH-30M† **ST ID 3/8-INCH (10/BAG-6IN)**†	Silicone rubber tubing, translucent 3/8" diameter UL		
ST ID 3/8-INCH-30M† **ST ID 3/8-INCH (10/BAG-6IN)**†	Silicone rubber tubing, translucent 1/2" diameter UL		
ST ID 3/4-INCH-30M† **ST ID 3/4-INCH (10/BAG-6IN)**†	Silicone rubber tubing, translucent 3/4" diameter UL		

Add "/S1077" to end of part number to get silicone tubing assembled to pigtail or extension cordsets up to 4 meters (Picofast®, Eurofast®, Microfast® and Minifast®; 0.5 meter min. on extensions).

† Sleeving part numbers only; cordset not included.

Weld Shield Sleeve - Hook and Loop Closure

Part Number	Specifications	Application	Features
FFW 1INC 2FOOT	Plain weave fiberglass, neoprene coated, black 1" Bundle OD, 3.25" circumference 4" Sleeve Width Flat, Tested to ISO 6945 -40 °C to +204 °C Temperature Resistance	Applicable sleeve for protection of cable.	Sleeve offers excellent resistance to abrasion, water, most chemicals, heat, sparks, and flame in a wide operating temperature range, while being lightweight, tough and highly flexible.
FFW 2INC 2FOOT	Plain weave fiberglass, neoprene coated, black 2" Bundle OD, 6" circumference 7.75" Sleeve Width Flat, Tested to ISO 6945 -40 °C to +204 °C Temperature Resistance		
FFW 3INC 2FOOT*	Plain weave fiberglass, neoprene coated, black 3" Bundle OD, 9.4" circumference 11" Sleeve Width Flat, Tested to ISO 6945 -40 °C to +204 °C Temperature Resistance		
FFW 4INC 2FOOT*	Plain weave fiberglass, neoprene coated, black 4" Bundle OD, 12.5" circumference 14" Sleeve Width Flat, Tested to ISO 6945 -40 °C to +204 °C Temperature Resistance		
FFW 5INC 2FOOT	Plain weave fiberglass, neoprene coated, black 5" Bundle OD, 15.75" circumference 17.25" Sleeve Width Flat, Tested to ISO 6945 -40 °C to +204 °C Temperature Resistance		
FFW 6INC 2FOOT	Plain weave fiberglass, neoprene coated, black 6" Bundle OD, 18.8" circumference 20.375" Sleeve Width Flat, Tested to ISO 6945 -40 °C to +204 °C Temperature Resistance		
FFW 7INC 2FOOT	Plain weave fiberglass, neoprene coated, black 7" Bundle OD, 22" circumference 23.5" Sleeve Width Flat, Tested to ISO 6945 -40 °C to +204 °C Temperature Resistance		
FFW 8INC 2FOOT	Plain weave fiberglass, neoprene coated, black 8" Bundle OD, 25.125" circumference 26.625" Sleeve Width Flat, Tested to ISO 6945 -40 °C to +204 °C Temperature Resistance		

* 25 foot spool also available.

Weld Seal Tape

Part Number	Specifications	Application	Features
FST 1IN 12YARDS	Silicone rubber, Clear 1" width, 12 yard length, -40 °C to +204 °C	Applicable clear tape protecting open areas between silicone tubing and mold.	Tape offers excellent resistance to water, most chemicals, heat, sparks, and flame in a wide operating temperature range, while being lightweight, and highly flexible.

Features

- Multiple body styles
- M12 and M8 connectors
- 2 and 4 branch products
- LED options
- Integral connectors or cables
- Standard, parallel and series wired

2-Branch Splitter Part Number Key

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

VB2 - [ ] - RS 4.4 T - * / 2 FKM 4.4 [ ] - * / * / /S651

2 Branch Splitter

Housing Material

PX3 = 3 PNP LEDs

HomeRun Connector

FSM = Male Eurofast® connector
FKM = Female Eurofast connector
RS = Male Eurofast connector with cable
RK = Female Eurofast connector with cable
WS = Male Eurofast connector (right angle) with cable
WK = Female Eurofast connector (right angle) with cable

Number of HomeRun Wires

4.4 = 4 wires
4.41 = 4 NAMUR wires
4.5 = 5 wires

Plug Options

(Blank) = No barb fitting
T = "T" barb fitting

Cable Length in Meters

(Blank) = No cable

Wiring

(Blank) = Standard
"/S651" = Parallel
"/S719" = Series
/S = Consult factory
/CS = /CS = Consult

Cable Length in Meters

(Blank) = No cable

Plug Options

(Blank) = No barb fitting
T = "T" barb fitting

Number of Branch Wires

4.21 = 2 NAMUR wires
4 = 3 wires
4.4 = 4 wires
4.5 = 5 wires

Branch Connectors

FSM = Male Eurofast connector
FKM = Female Eurofast connector
RS = Male Eurofast connector with cable
RK = Female Eurofast connector with cable
WS = Male Eurofast connector (right angle) with cable
WK = Female Eurofast connector (right angle) with cable

2 Branch

3 and 4 Branch Splitter Part Number Key

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

V	6	R	K	C	V	-	*	/	R	K	V	4.4	-	*/	*/	*/	*/	S651

3 or 4-Branch Splitter

# of HomeRun Wires

Family Group

R = Eurofast®
P = Picofast®

Gender

S = Male
K = Female

Body Style (if applicable)

Coupling Nut Material

(Blank) = Standard
V = Stainless steel
K = Nylon
M = Threaded (pico)
Z = Snap (pico)

Length in Meters of Cable

Any length over 10 m rounded to the nearest meter.

Family Group

R = Eurofast
P = Picofast

Gender

S = Male
K = Female

Coupling Nut Material

(Blank) = Standard
V = Stainless steel
K Nylon

Number of Wires and/or Locking Method

Eurofast = 4, 4.4, 4.5
Picofast = 3, 3Z, 3M, 3F, 4, 4Z, 4M

Branch 1 Length in Meters

Any length over 10 m rounded to the nearest full meter.

Branch 2 Length in Meters

Any length over 10 m rounded to the nearest full meter.

Branch 3 Length in Meters

Any length over 10 m rounded to the nearest full meter.

Branch 4 Length in Meters

Any length over 10 m rounded to the nearest full meter.

Wiring

(Blank) = Standard
"/S651" = Parallel
"/S719" = Series
/S = Consult factory
/CS = /CS = Consult

2-Branch Compact Splitter Part Number Key

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

YBZ2 - [ ] - FSM 4.5 / 2 FK 4.5 [ ] - * / * / /S651

Compact 2-Branch Splitter

YBZ2 = M12 Eurofast®
YP2 = M8 Picofast®

Housing Material

PX3 = 3 PNP LEDs
PX2 = 2 PNP LEDs

HomeRun Connector

FSM = Male Eurofast
PSG = Male Picofast with cable
RS = Male Eurofast with cable
MFS = Male Picofast

Number of HomeRun Wires

4.4 = 4 wires
4.5 = 5 wires
4M = 4 wires
3M = 3 wires
6M = 6 wires

2 Branch

Wiring

(Blank) = Standard
"/S651" = Parallel

Cable Length in Meters

(Blank) = No cable

Plug Options

(Blank) = No barb fitting
T = "T" barb fitting (M12 Eurofast)

Number of Branch Wires

4.5 = 5 wires
3M = 3 wires
4 = 3 wires
4.4 = 4.4 wires
4M = 4 wires

Branch Connectors

FK = Female Eurofast connector
PKG = Female Picofast connector with cable
RK = Female Eurofast connector with cable
MFK = Female Picofast connector
PSG = Male Picofast connector with cable

2-Branch (VBRS/K) Splitter Part Number Key

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

VB	RS		4.4	-	2	PKG	3	M	-	*	/	*	/	/S90

2 Branch Splitter

HomeRun Connector

RS = Male M12 Eurofast®
RK = Female M12 Eurofast

Coupling Nut

(Blank) = Nickel plated brass
K = Nylon

Number of HomeRun Wires

4.4 = 4 wires
4.5 = 5 wires
4.41 = 4 NAMUR wires

2 Branch

Branch Connectors

ESM = Male M8 Picofast® snap lock
SKM = Female M8 Picofast threaded
PKG = Female M8 Picofast threaded with cable
PSG = Male M8 Picofast threaded with cable
RS = Male M12 Eurofast threaded with cable
RK = Female M12 Eurofast threaded with cable

Wiring

(Blank) = PVC
/S = Consult factory, special
/CS.. = Consult factory, special
/S90 = TPU
/S101 = Flexlife-20
/S651 = Parallel wiring

Cable Length in Meters

(Blank) = No cable

Connector Style/Plug Options

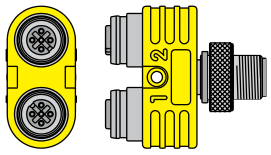
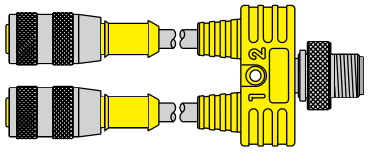
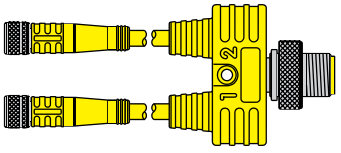
(Blank) = M8 Picofast threaded
M = M8 Picofast threaded with cable
S = M8 Picofast snap lock
Z = M8 Picofast snap lock with cable
T = M12 Eurofast "T" barb fitting

Number of Branch Wires

4.5 = 5 wires
3M = 3 wires
4 = 3 wires
4.4 = 4.4 wires
4M = 4 wires

M12 Eurofast® 2-Branch Compact Splitters Eurofast Trunk Connector

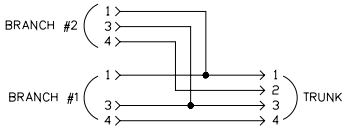
- **Combine two Sensors into one Cable**
- **For use on cylinders and other Dual-Input applications**
- **Tough TPU Construction**

Housing	Part Number	Features	Wiring Diagram
	**YBZ2-FSM4.4/2FK4**	250 V, 4 A , 2 Eurofast branches, 3-wire & 1 Eurofast trunk, 4-wire	Standard
	YBZ2-FSM4.4/2FK4.4/S651	250 V, 4 A, 2 Eurofast branches, 4-wire & 1 Eurofast trunk, 4-wire	Parallel 4-wire
	YBZ2-FSM4.5/2FK4.5/S651	250 V, 4 A, 2 Eurofast branches, 5-wire & 1 Eurofast trunk, 5-wire	Parallel 5-wire
	YBZ2-PX3-FSM4.4/2FK4	10-30 VDC, 4 A, 2 Eurofast branches, 3-wire & 1 Eurofast trunk, 4-wire	LED
	**YBZ2-FSM4.4/2RK4T-*/***	250 V, 4 A, RK 4T = Grey PVC, 5.1 mm OD, 3x20 AWG, 2 Eurofast branches, 3-wire & 1 Eurofast trunk, 4-wire	Standard
	YBZ2-FSM4.4/2RK4.4T-*/*/S651	250 V, 4 A, RK 4.4T = Grey PVC, 5.1 mm OD, 4x22 AWG, 2 Eurofast branches, 4-wire & 1 Eurofast trunk, 4-wire	Parallel 4-wire
	**YBZ2-FSM4.4/2PKG3M-*/***	125 V, 4 A, PKG 3M = Yellow PVC, 4.4 mm OD, 3x24 AWG, 2 Picofast® branches, 3-wire & 1 Eurofast trunk, 4-wire	Standard

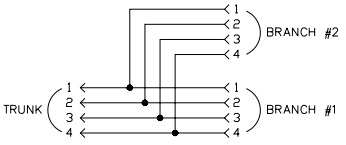
* Length in meters.

Wiring Diagrams

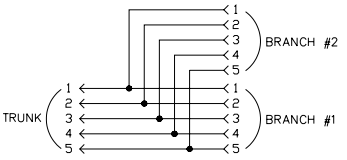
Standard



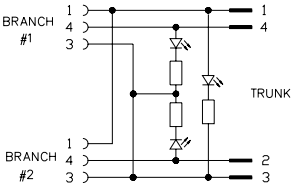
Parallel, 4-wire



Parallel, 5-wire



LED



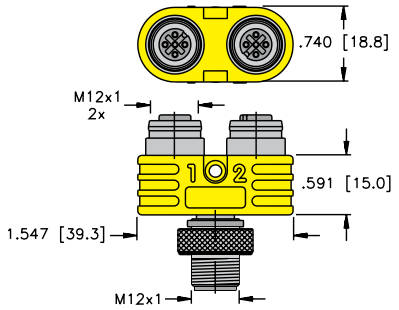
M12 Eurofast® 2-Branch Compact Splitters Eurofast Trunk Connector

Specifications

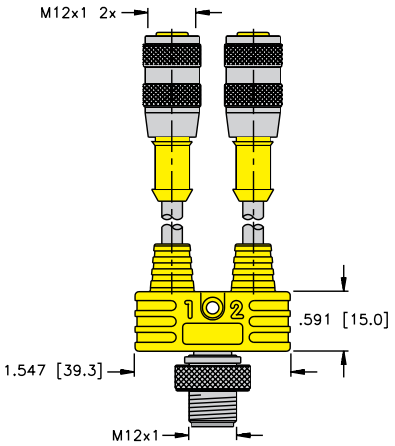
Junction Body:	Oil resistant yellow TPU	**Coupling Nuts:**	Nickel plated brass
Connector:	Oil resistant TPU body material, Nylon or TPU contact carrier	**Cable:**	See table
		Temperature:	-40 °C to +105 °C (-40 °F to +221 °F)
Contacts:	Gold plated brass	**Protection:**	NEMA 1, 3, 4, 6P and IEC IP68

Cable Length: Branches - nominal 0.3 meters. Other lengths available by request - consult factory.
Cable Options: Standard cable jacket - grey/yellow PVC. TPU and other jackets available by request - consult factory.
Connector Options: (for legs with cable)
Stainless steel coupling nut add "V" to part number (PKG to PKGV, PSG to PSGV, RK to RKV).
Notes: Mounting hole accepts #4 screw.

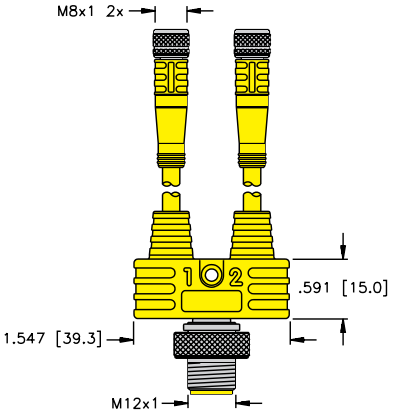
VB2-RS 4.5T-*/2V .. S 2 .. -A528-*/*



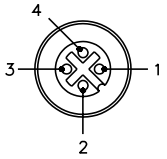
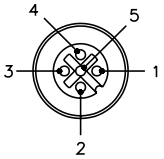
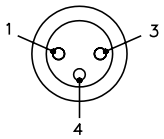
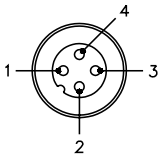
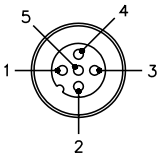
YBZ2-FSM 4.4/2RK 4(.4)T-*/*



YBZ2-FSM 4.4/2PKG 3M-*/*

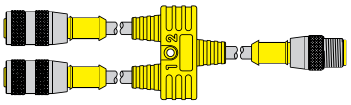
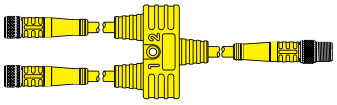
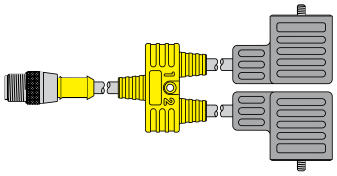


Pinouts

4-Pin Eurofast	5-Pin Eurofast	3-Pin Picofast®	4-Pin Eurofast	5-Pin Eurofast
Female			Male	
				

M12 Eurofast® 2-Branch Compact Splitters, Trunk and Branch Extensions

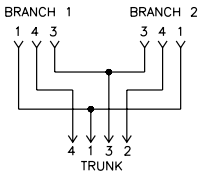
- **Combine two sensors into one Cable**
- **For use on Cylinders and other Dual-Input applications**
- **Tough TPU Construction**

Housing	Part Number	Features	Wiring Diagram
	**YBZ2-RS4.4T-*/2RK4T-*/***	250 V, 4 A, RS 4.4T = Grey PVC, 5.1 mm OD, 4x22 AWG, RK 4T = Grey PVC, 5.1 mm OD, 3x20 AWG, 2 Eurofast branches, 3-wire & 1 Eurofast trunk, 4-wire	Standard
	YBZ2-RS4.4T-*/2RK4.4T-*/*/S651	250 V, 4 A, RS 4.4T & RK 4.4T = Grey PVC, 5.1 mm OD, 4x22 AWG, 2 Eurofast branches, 4-wire & 1 Eurofast trunk, 4-wire	Parallel 4-wire
	YBZ2-RS4.5T-*/2RK4.5T-*/*/S651	250 V, 4 A, RK 4.5T & RS 4.5T = Grey PVC, 5.7 mm OD, 5x22 AWG, 2 Eurofast branches, 5-wire & 1 Eurofast trunk, 5-wire	Parallel 5-wire
	**YBZ2-PSG4M-*/2PKG3M-*/***	125 V, 2 A, PSG 4M = Yellow PVC,4.4 mm OD, 4x26 AWG, PKG 3M = Yellow PVC, 4.4 mm OD, 3x24 AWG, 2 Picofast® branches, 3-wire & 1 Picofast trunk, 4-wire	Standard
	YBZ2-PSG3M-*/2PKG3M-*/*/S651	125 V, 4 A, PSG 3M & PKG 3M = Yellow PVC, 4.4 mm OD, 3x24 AWG, 2 Picofast branches, 3-wire & 1 Picofast trunk, 3-wire	Parallel 3-wire
	**YBZ2-RS4.5T-*/2VAS22-A653-*/***	220 V, 4 A, RS 4.5T = Grey PVC, 5.1 mm OD, 4x22 AWG, VAS22 = Grey PVC, 6.2 mm OD, 3x18 AWG, 2 valve branches, 3-wire & 1 Eurofast trunk, 4-wire	Standard valve

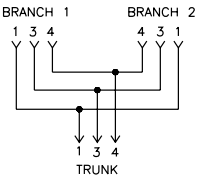
* Length in meters.

Wiring Diagrams

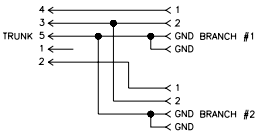
Standard



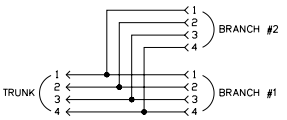
Parallel, 3-wire



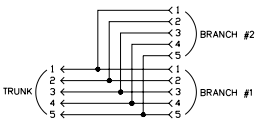
Standard, valve



Parallel, 4-wire



Parallel, 5-wire



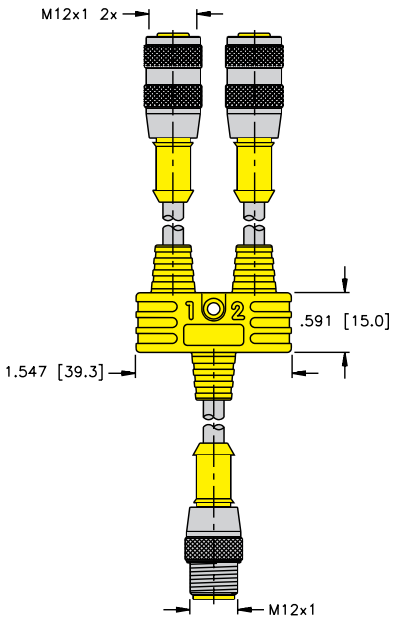
M12 Eurofast® 2-Branch Compact Splitters, Trunk and Branch Extensions

Specifications

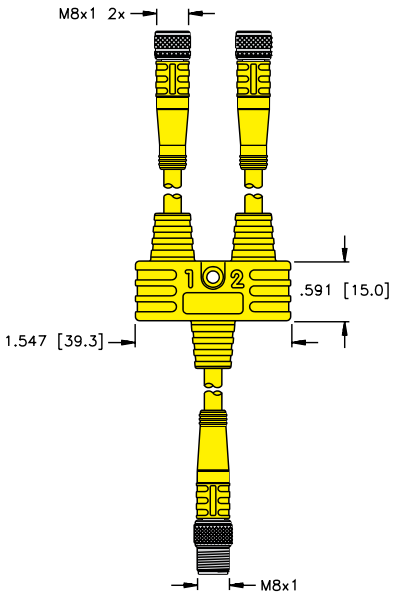
Junction Body:	Oil resistant yellow TPU	**Coupling Nuts:**	Nickel plated brass
Connector:	Oil resistant TPU body material, Nylon or TPU contact carrier	**Cable:**	See table
		Temperature:	-40 °C to +105 °C (-40 °F to +221 °F)
Contacts:	Gold plated brass	**Protection:**	NEMA 1, 3, 4, 6P and IEC IP68

Cable Length: Branches - nominal 0.3 meters. Other lengths available by request - consult factory.
Cable Options: Standard cable jacket - grey/yellow PVC. TPU and other jackets available by request - consult factory.
Connector Options: (for legs with cable)
Stainless steel coupling nut add "V" to part number (PKG to PKGV, PSG to PSGV, RK to RKV).
Notes: Mounting hole accepts #4 screw.

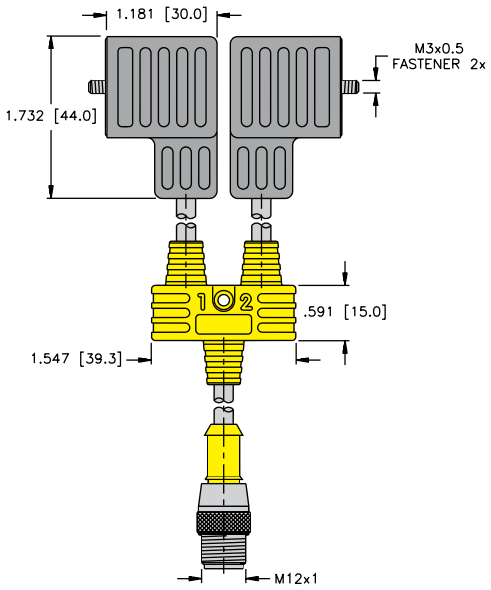
YBZ2-RS 4.4(5)T-*/2RK 4(.4)(.5)T-*/*



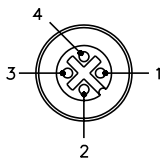
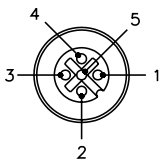
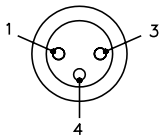
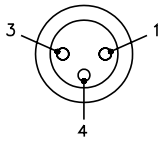
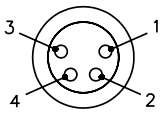
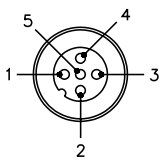
YBZ2-PSG 3(4)M-*/2PKG 3M-*/*



YBZ2-RS 4.5T-*/2VAS22-A653-*/*

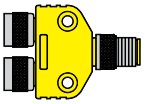
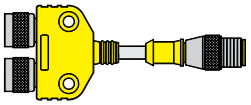
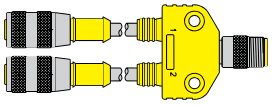
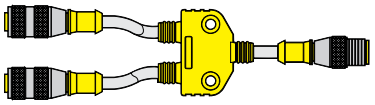
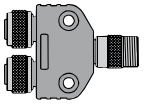
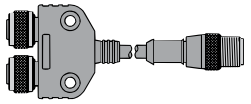
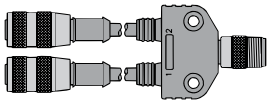
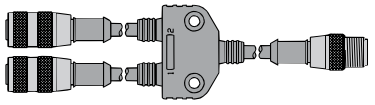


Pinouts

4-Pin Eurofast	5-Pin Eurofast	3-Pin Picofast®	3-Pin Picofast	4-Pin Picofast	5-Pin Eurofast
Female			Male		
					

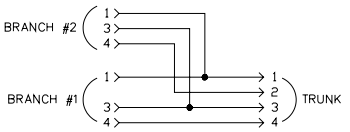
Eurofast® 2-Branch Splitters, Standard and LED Wiring

- **Combine two Sensors into one Cable**
- **For use on Cylinders and other Dual-Input applications**
- **Tough TPU Construction**
- **For 3-wire DC Sensors or Switches**

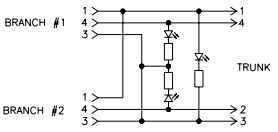
Housing	Part Number	Features	Wiring Diagram
	**VB2-FSM 4.4/2FKM 4**	250 V, 4.0 A, combine two sensors into one cable	Standard
	**VB2-RS 4.4T-*/2FKM 4**	250 V, 4.0 A, RS 4.4T = Grey PVC, 5.1 mm OD, 4x22 AWG, combine two sensors into one cable	
	**VB2-FSM 4.4/2RK 4T-*/***	250 V, 4.0 A, Grey PVC, 5.1 mm OD, RK 4T - 3x20 AWG, combine two sensors into one cable	
	**VB2-RS 4.4T-*/2RK 4T-*/***	250 V, 4.0 A, Grey PVC, 5.1 mm OD, RK 4T - 3x20 AWG, RS 4.4T - 4x22 AWG, combine two sensors into one cable	
	**VB2P3-FSM 4.4/2FKM 4**	10-30 VDC, 4.0 A, combine two sensors into one cable; 3 LEDs, 2 signals, PNP, 1 power	LED
	**VB2P3-RS 4.4T-*/2FKM 4**	10-30 VDC, 4.0 A, RS 4.4T = Grey PVC, 5.1 mm OD, 4x22 AWG, combine two sensors into one cable; 3 LEDs, 2 signals, PNP, 1 power	
	**VB2P3-FSM 4.4/2RK 4T-*/***	10-30 VDC, 4.0 A, Grey PVC, 5.1 mm OD, RK 4T - 3x20 AWG, combine two sensors into one cable; 3 LEDs, 2 signals, PNP, 1 power	
	**VB2P3-RS 4.4T-*/2RK 4T-*/***	10-30 VDC, 4.0 A, Grey PVC, 5.1 mm OD, RK 4T - 3x20 AWG, RS 4.4T - 4x22 AWG, combine two sensors into one cable; 3 LEDs, 2 signals, PNP, 1 power	

Wiring Diagrams

Standard



LED



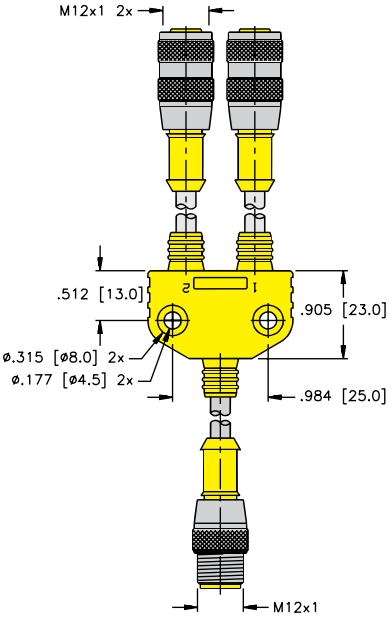
Eurofast® 2-Branch Splitters, Standard and LED Wiring

Specifications

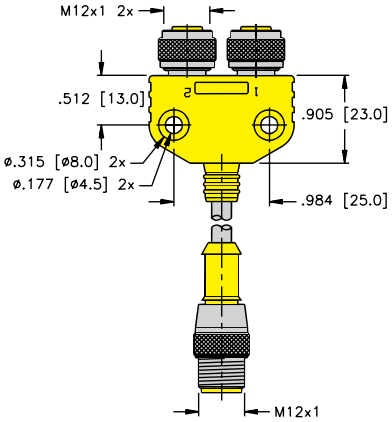
Junction Body:	Oil resistant yellow TPU (non-LED) Translucent black TPU (LED)	**Coupling Nuts:**	Nickel plated brass
		Cable:	See table
Connector:	Oil resistant TPU body material, Nylon or TPU contact carrier	**Temperature:**	-40 °C to +105 °C (-40 °F to +221 °F)
Contacts:	Gold plated brass	**Protection:**	IEC IP67

Cable Length: Trunk - nominal 1 meter. Branches - nominal 0.3 meters. Other lengths available by request - consult factory.
Cable Options: Standard cable jacket - grey PVC. TPU and other jackets available by request - consult factory.
Connector Options: (for legs with cable)
Stainless steel coupling nut add "V" to part number (RS to RSV, RK to RKV).
Nylon coupling nut add "K" to part number (RS to RSK, RK to RKK).
Right angle connectors, change part number (RS to WS, RK to WK).
Notes: Mounting hole accepts #8 screw.

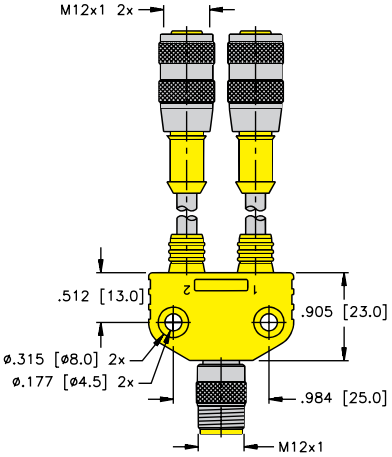
VB2-RS 4.4T-*/2RK 4T-*/*
VB2-PX3-RS 4.4T/2RK 4T-*/*



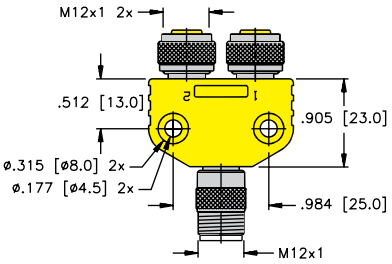
VB2-RS 4.4T-*/2FKM 4
VB2-PX3-RS 4.4T-*/2FKM 4



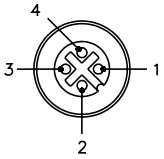
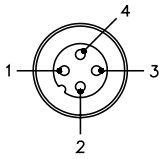
VB2-FSM 4.4/2RK 4T-*/*
VB2-PX3-FSM 4.4/2RK 4T-*/*



VB2-FSM 4.4/2FKM 4
VB2-PX3-FSM 4.4/2FKM 4

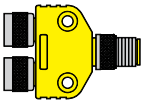
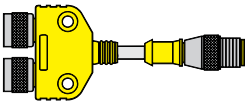
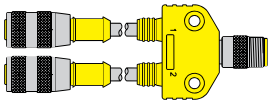
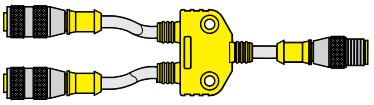
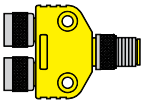
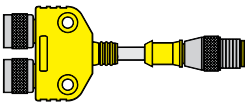
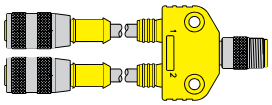
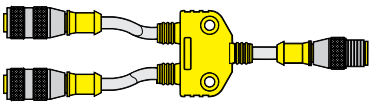
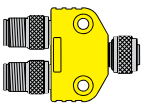


Pinouts

4-Pin	
Female	**Male**
	

M12 Eurofast® 2-Branch Splitters, Parallel Wiring, Shielded Option

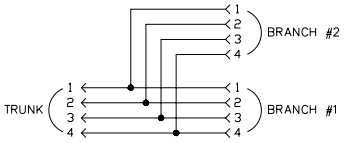
- **For use on Photoelectric Controls, Power Distribution, and other Dual-Input applications**
- **Tough TPU Construction**

Housing	Part Number	Features	Wiring Diagram
	**VB2-FSM 4.4/2FKM 4.4/S651**	250 V, 4.0 A, parallel wired, 4 conductor	Parallel
	**VB2-RS 4.4T-*/2FKM 4.4/S651**	250 V, 4.0 A, RS 4.4T = Grey PVC, 5.1 mm OD, 4x22 AWG, parallel wired, 4 conductor	Parallel
	**VB2-FSM 4.4/2RK 4.4T-*/*/S651**	250 V, 4.0 A, RK 4.4T = Grey PVC, 5.1 mm OD, 4x22 AWG, parallel wired, 4 conductor	Parallel
	**VB2-RS 4.4T-*/2RK 4.4T-*/*/S651**	250 V, 4.0 A, Grey PVC, 5.1 mm OD, 4x22 AWG, parallel wired, 4 conductor	Parallel
	**VB2-FSM 4.5/2FKM 4.5/S651**	250 V, 4.0 A, parallel wired, 5 conductor	Parallel
	VB2-FSMS 4.5/2FKMS 4.5/S651	250 V, 4.0 A, parallel wired, Shielded, 5 conductor	Parallel, Shielded
	**VB2-RS 4.5T-*/2FKM 4.5/S651**	250 V, 4.0 A, RS 4.5T = Grey PVC, 5.7 mm OD, 5x22 AWG, parallel wired, 5 conductor	Parallel
	**VB2-FSM 4.5/2RK 4.5T-*/*/S651**	250 V, 4.0 A, RK 4.5T = Grey PVC, 5.7 mm OD, 5x22 AWG, parallel wired, 5 conductor	Parallel
	**VB2-RS 4.5T-*/2RK 4.5T-*/*/S651**	250 V, 4.0 A, Grey PVC, 5.7 mm OD, 5x22 AWG, parallel wired, 5 conductor	Parallel
	**VB2-FKMS 4.5/2FSMS 4.5/S651**	250 V, 4.0 A, parallel wired, shielded, 5 conductor	Parallel, Shielded

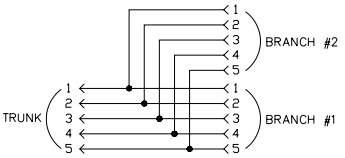
We reserve the right to make technical alterations without prior notice.

Wiring Diagrams

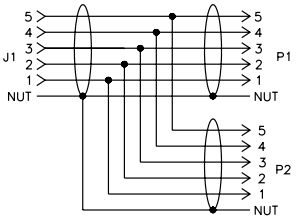
Parallel, 4-pin



Parallel, 5-pin



Parallel, Shielded, 5-pin



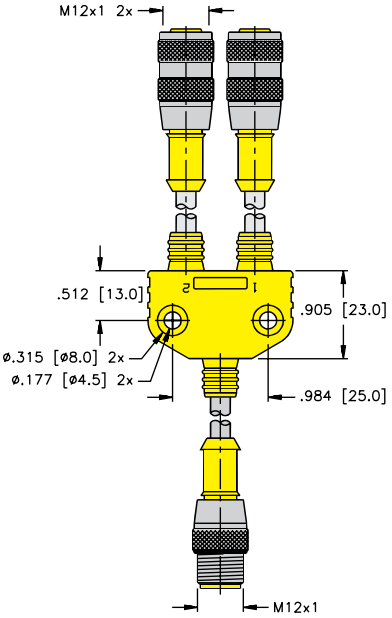
M12 Eurofast® 2-Branch Splitters, Parallel Wiring, Shielded Option

Specifications

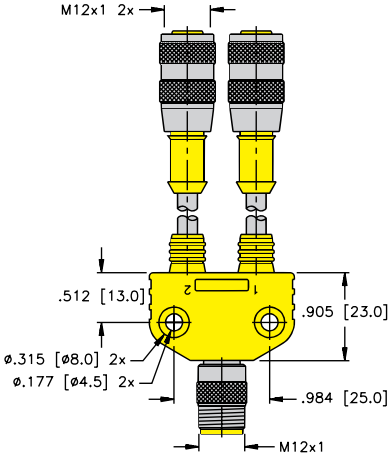
Junction Body:	Oil resistant yellow TPU	**Coupling Nuts:**	Nickel plated brass
Connector:	Oil resistant TPU body material, Nylon or TPU contact carrier	**Cable:**	See table
		Temperature:	-40 °C to +105 °C (-40 °F to +221 °F)
Contacts:	Gold plated brass	**Protection:**	IEC IP67, IEC IP60 (shielded)

Cable Length: Trunk - nominal 1 meter. Branches - nominal 0.3 meters. Other lengths available by request - consult factory.
Cable Options: Standard cable jacket - grey PVC. TPU and other jackets available by request - consult factory.
Connector Options: (for legs with cable)
Stainless steel coupling nut add "V" to part number (RS to RSV, RK to RKV).
Nylon coupling nut add "K" to part number (RS to RSK, RK to RKK).
Right angle connectors, change part number (RS to WS, RK to WK).
Notes: Mounting holes accept #8 screw.

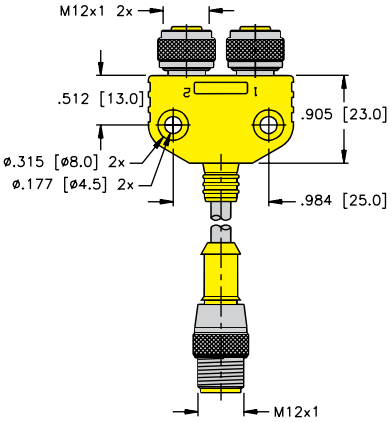
VB2-RS 4.4(5)T-*/2RK 4.4(5)T-*/*/S651



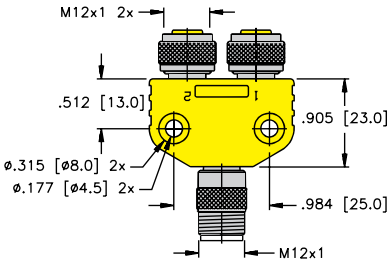
VB2-FSM 4.4(5)/2RK 4.4(5)T-*/*/S651



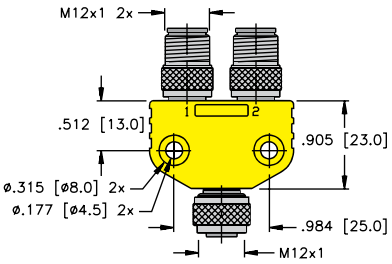
VB2-RS 4.4(5)T-*/2FKM 4.4(5)/S651



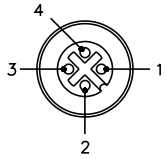
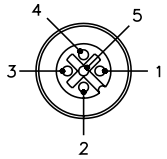
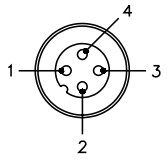
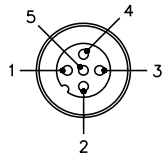
VB2-FSM(S) 4.4(5)/2FKM(S) 4.4(5)/S651



VB2-FKMS 4.5/2FSMS 4.5/S651

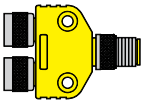
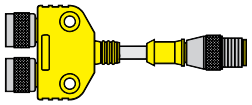
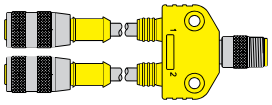
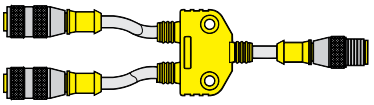


Pinout

4-Pin	5-Pin	4-Pin	5-Pin
Female		Male	
			

M12 Eurofast® 2-Branch Splitters, Series Wiring

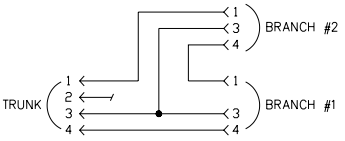
- **Combine two Sensors into one Cable**
- **Series Wired**
- **Tough TPU Construction**
- **For 3-wire DC Sensors or Switches**

Housing	Part Number	Features	Wiring Diagram
	**VB2-FSM 4.4/2FKM 4/S719**	250 V, 4.0 A, series wired for AND function (PNP signals)	Series
	**VB2-RS 4.4T-*/2FKM 4/S719**	250 V, 4.0 A, RS 4.4T = Grey PVC, 5.1 mm OD, 4x22 AWG, series wired for AND function (PNP signals)	
	**VB2-FSM 4.4/2RK 4T-*/*/S719**	250 V, 4.0 A, RK 4T = Grey PVC, 5.1 mm OD, 3x20 AWG, series wired for AND function (PNP signals)	
	**VB2-RS 4.4T-*/2RK 4T-*/*/S719**	250 V, 4.0 A, Grey PVC, 5.1 mm OD, RK 4T - 3x20 AWG, RS 4.4T - 4x22 AWG, series wired for AND function (PNP signals)	

* Length in meters.

Wiring Diagrams

Series



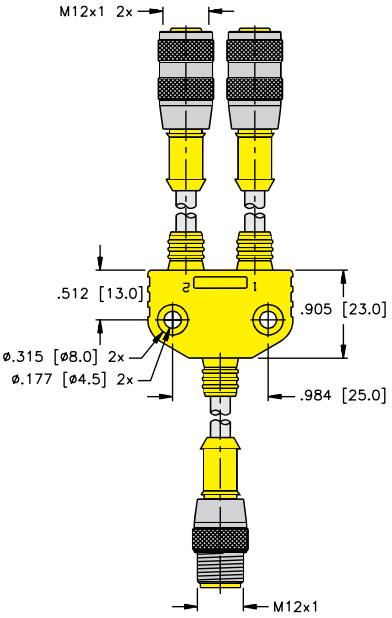
M12 Eurofast® 2-Branch Splitters, Series Wiring

Specifications

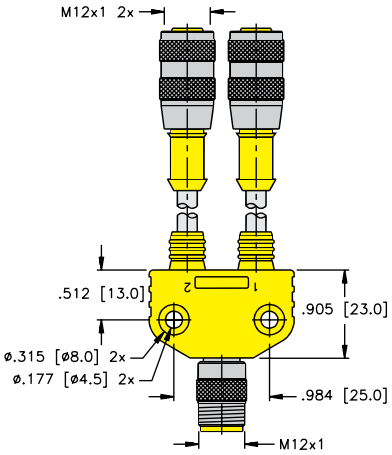
Junction Body:	Oil resistant yellow TPU	**Coupling Nuts:**	Nickel plated brass
Connector:	Oil resistant TPU body material, Nylon or TPU contact carrier	**Cable:**	See table
		Temperature:	-40 °C to +105 °C (-40 °F to +221 °F)
Contacts:	Gold plated brass	**Protection:**	IEC IP67

Cable Length: Trunk - nominal 1 meter. Branches - nominal 0.3 meters. Other lengths available by request - consult factory.
Cable Options: Standard cable jacket - grey PVC. TPU and other jackets available by request - consult factory.
Connector Options: (for legs with cable)
Stainless steel coupling nut add "V" to part number (RS to RSV, RK to RKV).
Nylon coupling nut add "K" to part number (RS to RSK, RK to RKK).
Right angle connectors, change part number (RS to WS, RK to WK).
Notes: Mounting holes accept #8 screw.

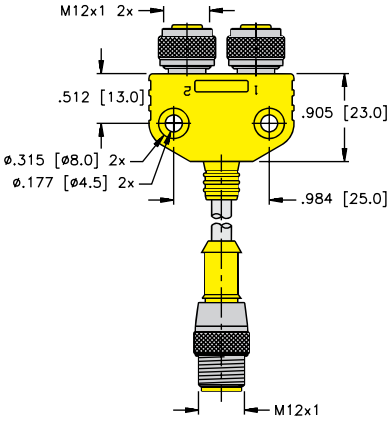
VB2-RS 4.4T-*/2RK 4T-*/*/S719



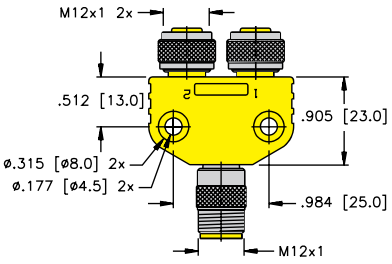
VB2-FSM 4.4/2RK 4T-*/*/S719



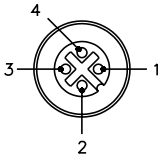
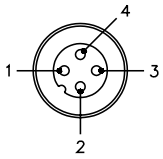
VB2-RS 4.4T-*/2FKM 4/S719



VB2-FSM 4.4/2FKM 4/S719

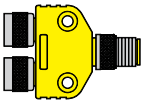
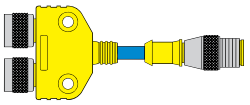
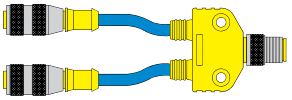
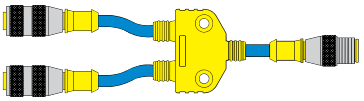


Pinouts

4-Pin	4-Pin
Female	Male
	

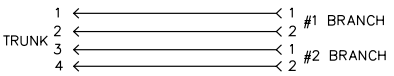
M12 Eurofast® 2-Branch Splitters, NAMUR Wiring

- **Combine two NAMUR Sensors into one Cable**
- **Tough TPU Construction**
- **For use with NAMUR Junction Boxes**

Housing	Part Number	Features	Wiring Diagram
	**VB2-FSM 4.41/2FKM 4.21**	250 V, 4.0 A, combine two NAMUR sensors into one cable	NAMUR
	**VB2-RS 4.41T-*/2FKM 4.21**	250 V, 4.0 A, RS 4.41T = Blue PVC, 5.1 mm OD, 4x22 AWG, combine two NAMUR sensors into one cable	
	**VB2-FSM 4.41/2RK 4.21T-*/***	250 V, 4.0 A, RK 4.21T = Blue PVC, 5.1 mm OD, 2x20 AWG, combine two NAMUR sensors into one cable	
	**VB2-RS 4.41T-*/2RK 4.21T-*/***	250 V, 4.0 A, Blue PVC, 5.1 mm OD, RK 4.21T – 2x20 AWG, RS 4.41T – 4x22 AWG, combine two NAMUR sensors into one cable	

* Length in meters.

Namur Wiring Diagram



M12 Eurofast® 2-Branch Splitters, NAMUR Wiring

Specifications

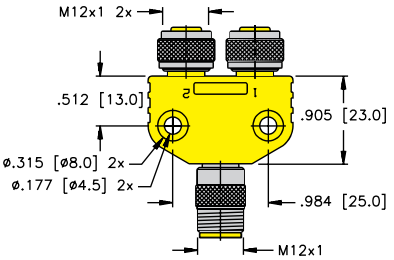
Junction Body:	Oil resistant yellow TPU	**Coupling Nuts:**	Nickel plated brass
Connector:	Oil resistant TPU body material, Nylon or TPU contact carrier	**Cable:**	See table
		Temperature:	-40 °C to +105 °C (-40 °F to +221 °F)
Contacts:	Gold plated brass	**Protection:**	IEC IP67

Cable Length: Trunk - nominal 1 meter. Branches - nominal 0.3 meters. Other lengths available by request - consult factory.

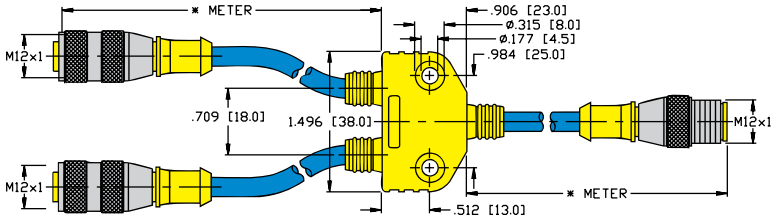
Connector Options: (for legs with cable)
Stainless steel coupling nut add "V" to part number (RS to RSV, RK to RKV).
Nylon coupling nut add "K" to part number (RS to RSK, RK to RKK).
Right angle connectors, change part number (RS to WS, RK to WK).

Notes: Mounting holes accept #8 screw.

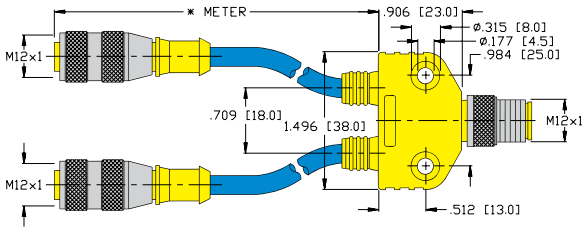
VB2-FSM 4.41/2FKM 4.21



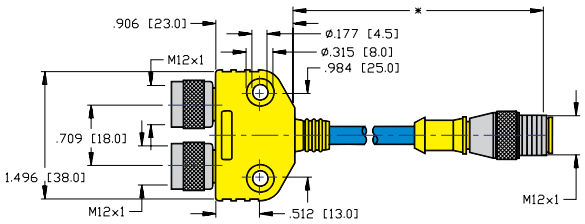
VB2-RS 4.41T-*/2RK 4.21T-*/*



VB2-FSM 4.41/2RK 4.21T-*/*

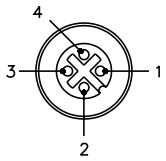
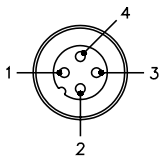


VB2-RS 4.41T-*/2FKM 4.21



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

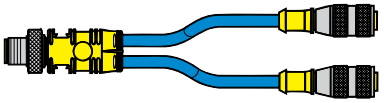
Pinouts

4-Pin	
Female	**Male**
	

Splitters

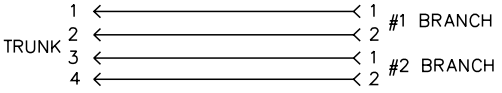
M12 Eurofast® 2-Branch Splitters, NAMUR Wiring

- **Combine two NAMUR Sensors into one Cable**
- **Eurofast Connection features Anti-Vibration Coupling Nut (main leg only)**
- **Tough TPU Body resists Oil and Abrasion**
- **Compact size saves space**

Housing	Part Number	Features	Wiring Diagram
	**VBRS 4.41-2RK 4.21T-*/***	250 V, 4.0 A, 2x20 AWG, Blue PVC, 5.1 mm OD, combine two NAMUR sensors into one cable. Connects directly to Eurofast junction box.	NAMUR

* Length in meters.
To add mounting hole, add /S857 to the end of the part number.

Namur Wiring Diagram



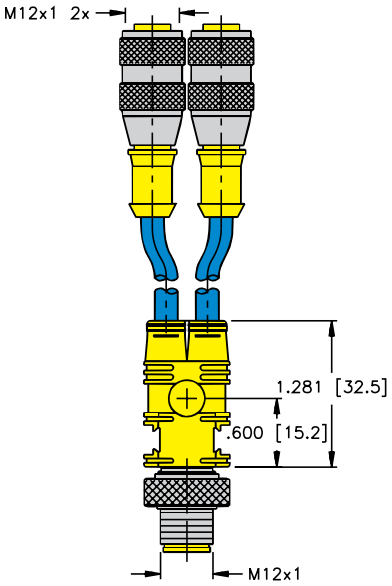
M12 Eurofast® 2-Branch Splitters, NAMUR Wiring

Specifications

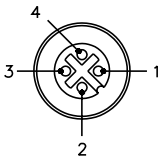
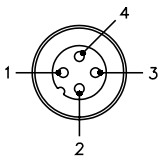
Junction Body:	Oil resistant yellow TPU	**Cable:**	See table
Connector:	Oil resistant TPU body material, Nylon or TPU contact carrier	**Temperature:**	-40 °C to +105 °C (-40 °F to +221 °F)
		Protection:	NEMA 1, 3, 4, 6P and IEC IP67
Contacts:	Gold plated brass, machined from solid stock	**Accessories:**	KS 5/10 labels 2 of each included
Coupling Nuts:	Nickel plated brass		

Cable Length: Branches - nominal 0.3 meters. Other lengths available by request - consult factory.

VBRS 4.41-2RK 4.21T-*/*



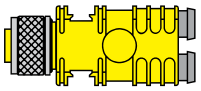
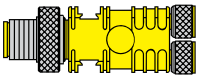
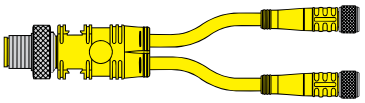
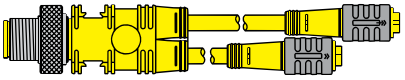
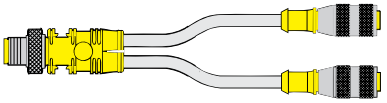
Pinouts

4-Pin	
Female	**Male**
	

Splitters

M12 Eurofast® and M8 Picofast® 2-Branch Molded Splitters

- **Combine two Picofast or Eurofast Connections into one Eurofast Receptacle**
- **Eurofast Connection features Anti-vibration Coupling Nut (main leg only)**
- **Compact size saves space**
- **Tough TPU Body resists Oil and Abrasion**

Housing	Part Number	Features	Wiring Diagram
	**VBRK 4.4-2ESM 3S**	60 VAC/75 VDC, 4.0 A, for sensors with complementary outputs, splits signals. Branches have snap lock	Diagram A
	**VBRS 4.4-2SKM 3**	60 VAC/75 VDC, 4.0 A, combine two sensors into one cable. Connects directly to Eurofast junction box. Branches have threaded coupling nut	Diagram B
	**VBRS 4.4-2PKG 3M-*/***	60 VAC/75 VDC, 4.0 A, 3x24 AWG, Yellow PVC, 4.4 mm OD, combine two sensors into one cable. Connects directly to Eurofast junction box. Branches have threaded coupling nut	Diagram B
	**VBRS 4.4-2PKG 3Z-*/***	60 VAC/75 VDC, 4.0 A, 3x24 AWG, Yellow PVC, 4.4 mm OD, combine two sensors into one cable. Connects directly to Eurofast junction box. Branches have snap lock	Diagram B
	**VBRS 4.4-2RK 4T-*/***	250 V, 4.0 A, 3x20 AWG, Grey PVC, 5.1 mm OD, combine two sensors into one cable. Connects directly to Eurofast junction box	Diagram B

* Length in meters.
To add mounting hole, add /S857 to the end of the part number.

Wiring Diagrams

Diagram A

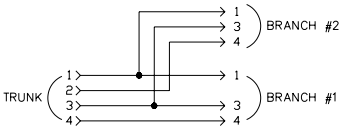
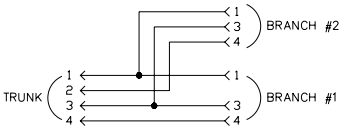


Diagram B



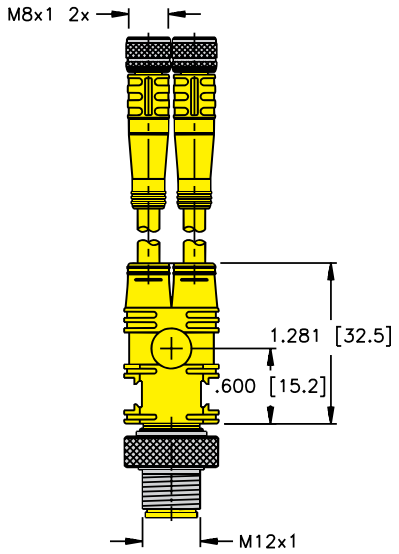
M12 Eurofast® and M8 Picofast® 2-Branch Molded Splitters

Specifications

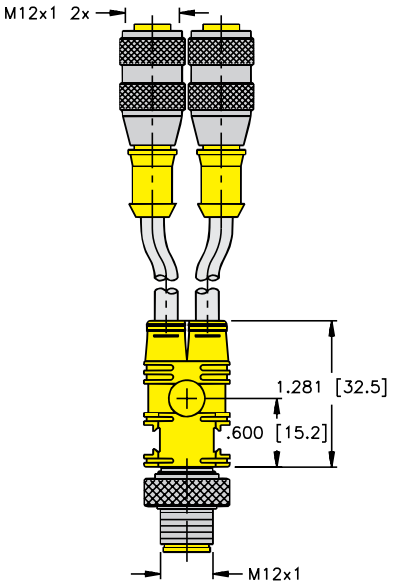
Junction Body:	Oil resistant yellow TPU	**Cable:**	See table
Connector:	Oil resistant TPU body material, Nylon or TPU contact carrier	**Temperature:**	-40 °C to +105 °C (-40 °F to +221 °F)
		Protection:	NEMA 1, 3, 4, 6P and IEC IP67
Contacts:	Gold plated brass	**Accessories:**	KS 5/10 labels included
Coupling Nuts:	Nickel plated brass. POM locking sleeve		

Cable Length: Branches - nominal 0.3 meters. Other lengths available by request - consult factory.

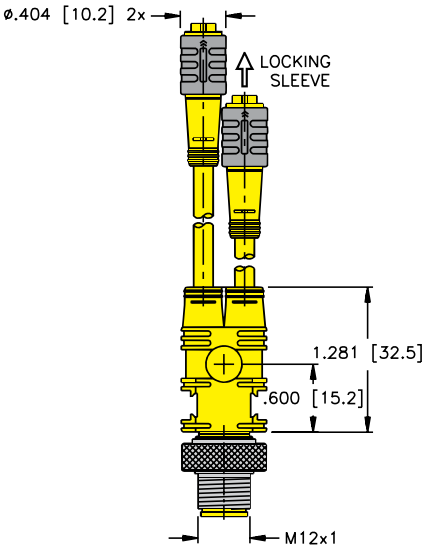
VBRS 4.4-2PKG 3M-*/*



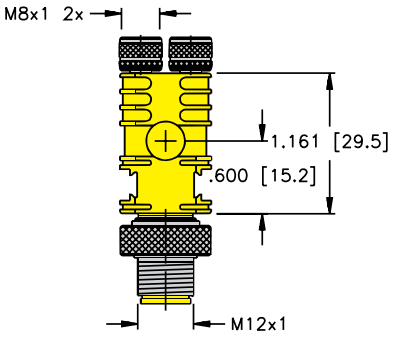
VBRS 4.4-2RK 4T-*/*



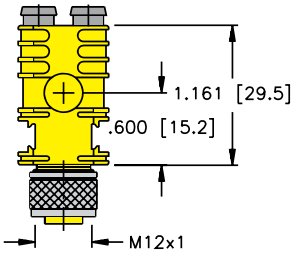
VBRS 4.4-2PKG 3Z-*/*



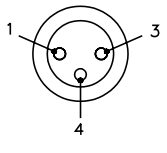
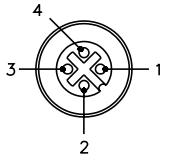
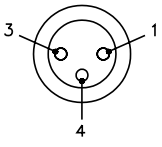
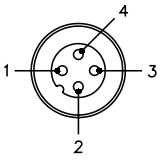
VBRS 4.4-2SKM 3



VBRK 4.4-2ESM 3S



Pinout

3-Pin Picofast	4-Pin Eurofast	3-Pin Picofast	4-Pin Eurofast
Female		Male	
			

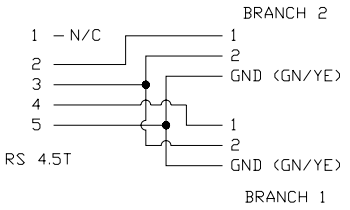
M12 Eurofast® 2-Branch Splitters with Valve Plugs

- **Combine two Valve Plugs into one Eurofast**
- **For use with Eurofast J-boxes with 2 Signals Port**
- **Available with all Valve Plug styles (A, B, I and C)**

Part Number	Features	Wiring Diagram
VB2-RS 4.5T-*/2VAS 22-A528-*/*	220 V, 4.0 A, RS 4.5T = Grey PVC, 5.1 mm OD, 4x22 AWG, Valve plug = Grey PVC, 5.1 mm OD 3x20 AWG, combine two valve plugs into one cable. For use with 2 signal / port junction boxes. “A” style (18 mm) valve plugs.	Diagram A
VB2-RS 4.5T-*/2VBS 2-A528-*/*	220 V, 4.0 A, RS 4.5T = Grey PVC, 5.1 mm OD, 4x22 AWG, Valve plug = Grey PVC, 5.1 mm OD 3x20 AWG, combine two valve plugs into one cable. For use with 2 signal / port junction boxes. “B” style (10 mm) valve plugs.	
VB2-RS 4.5T-*/2VIS 2-A528-*/*	220 V, 4.0 A, RS 4.5T = Grey PVC, 5.1 mm OD, 4x22 AWG, Valve plug = Grey PVC, 5.1 mm OD 3x20 AWG, combine two valve plugs into one cable. For use with 2 signal / port junction boxes. “I” style (11 mm) valve plugs.	
VB2-RS 4.5T-*/2TC8S 2-A528-*/*	220 V, 4.0 A, RS 4.5T = Grey PVC, 5.1 mm OD, 4x22 AWG, Valve plug = Grey PVC, 5.1 mm OD 3x20 AWG, combine two valve plugs into one cable. For use with 2 signal / port junction boxes. “C” style (8 mm) valve plugs.	
VB2-RS 4.5T-*/2TC9S 2-A528-*/*	220 V, 4.0 A, RS 4.5T = Grey PVC, 5.1 mm OD, 4x22 AWG, Valve plug = Grey PVC, 5.1 mm OD 3x20 AWG, combine two valve plugs into one cable. For use with 2 signal / port junction boxes. “C” style (9.4 mm) valve plugs.	

* Length in meters.

Diagram A



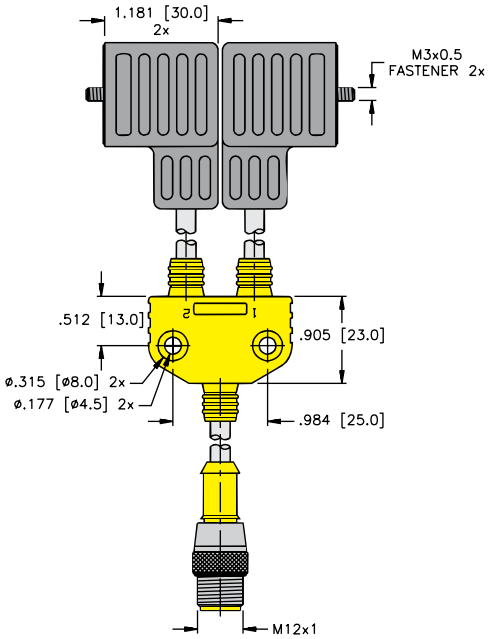
M12 Eurofast® 2-Branch Splitters with Valve Plugs

Specifications

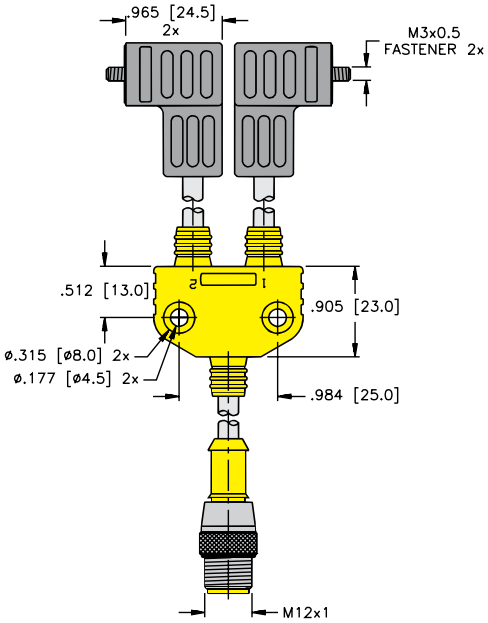
Junction Body:	Oil resistant yellow TPU	**Coupling Nuts:**	Nickel plated brass
Connector:	Oil resistant TPU body material, Nylon or TPU contact carrier	**Cable:**	See table
		Temperature:	-40 °C to +105 °C (-40 °F to +221 °F)
Contacts:	Gold plated brass (Eurofast). Silver plated copper alloy (VALVE PLUG)	**Protection:**	IEC IP67

Cable Length: Trunk - nominal 1 meter. Branches - nominal 0.3 meters. Other lengths available by request - consult factory.
Cable Options: Other jackets available by request - consult factory.
Valve Options: Available w/LED or LED+MOV, consult factory.
Eurofast Options: Stainless steel coupling nut add "V" to part number (RS .. to RSV ..).
Nylon coupling nut add "K" to part number (RS .. to RSK ..).
Right angle connectors, change part number (RS .. to WS..).

VB2-RS 4.5T-*/2V ..S 2 ..-A528-*/*

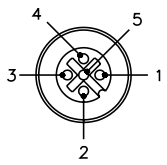
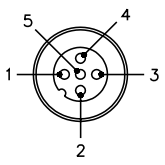


VB2-RS 4.5T-*/2TC .. S 2-A528-*/*



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

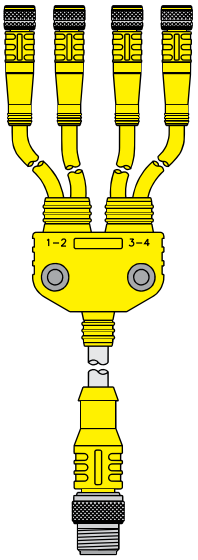
Pinouts

5-Pin Eurofast	5-Pin Eurofast
Female	Male
	

Splitters

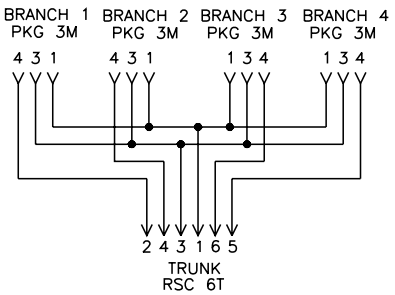
M12 Eurofast® 4-Branch Splitters, Standard Wiring

- **Combine four Sensors into one Cable**
- **Tough TPU Construction**
- **For 3-wire DC Sensors or Switches**

Housing	Part Number	Features	Wiring Diagram
	**V6RSC-*/PKG3M-*/*/*/***	60 VAC/75 VDC, 2.0 A, RSC 6T = Grey PVC, 5.7 mm OD, 6x24 AWG, PKG = Yellow PVC, 4.4 mm OD, 3x24 AWG, combine four sensors into one cable	Standard

* Length in meters.

Wiring Diagram



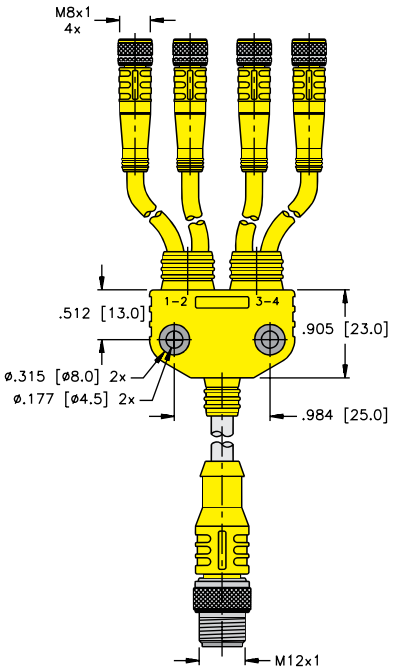
M12 Eurofast® 4-Branch Splitters, Standard Wiring

Specifications

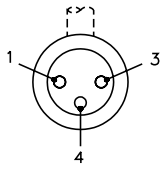
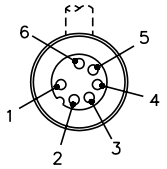
Junction Body:	Oil resistant yellow TPU	**Coupling Nuts:**	Nickel plated brass
Connector:	Oil resistant TPU body material, Nylon or TPU contact carrier	**Cable:**	See table
		Temperature:	-40 °C to +105 °C (-40 °F to +221 °F)
Contacts:	Gold plated brass	**Protection:**	IEC IP67

Cable Length: Trunk - nominal 1 meter. Branches - nominal 0.3 meters. Other lengths available by request - consult factory.
Cable Options: Standard cable jacket - grey PVC. TPU and other jackets available by request - consult factory.
Connector Options: (for legs with cable)
Stainless steel coupling nut add "V" to part number (PKG to PKGV).
Notes: Mounting hole accepts #8 screw.

V6RSC-*/PKG3M-*/*/*/*



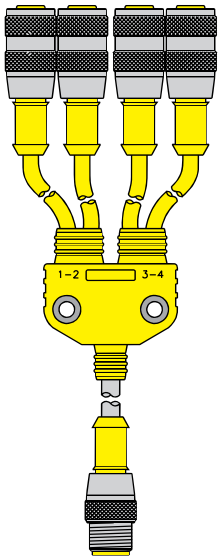
Pinouts

3-Pin	6-Pin
Female	Male
	

Splitters

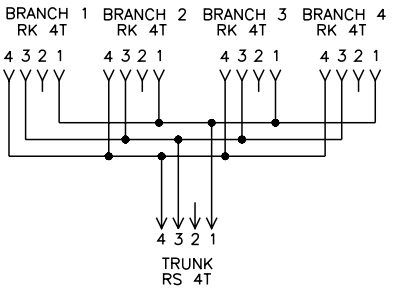
M12 Eurofast® 4-Branch Splitters, Standard Wiring

- **For use on Photoelectric Controls, Power Distribution and other Parallel-wired applications**
- **Tough TPU Construction**

Housing	Part Number	Features	Wiring Diagram
	**V3RS-*/RK4-*/*/*/*/S651**	60 VAC /75 VDC, 2.0 A, Yellow PVC, 4.4 mm OD, 3x24 AWG, parallel wired, 3 conductor	Parallel

* Length in meters.

Wiring Diagram



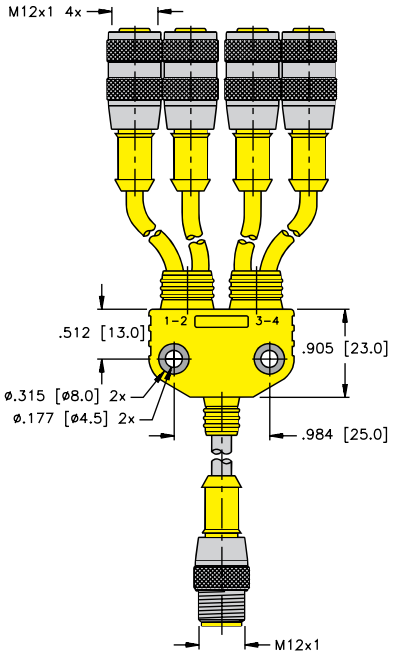
M12 Eurofast® 4-Branch Splitters, Standard Wiring

Specifications

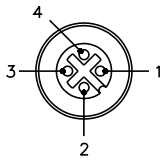
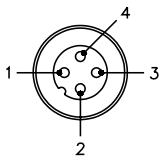
Junction Body:	Oil resistant yellow TPU	**Coupling Nuts:**	Nickel plated brass
Connector:	Oil resistant TPU body material, Nylon or TPU contact carrier	**Cable:**	See table
		Temperature:	-40 °C to +105 °C (-40 °F to +221 °F)
Contacts:	Gold plated brass	**Protection:**	IEC IP67

Cable Length: Trunk - nominal 1 meter. Branches - nominal 0.3 meters. Other lengths available by request - consult factory.
Cable Options: Standard cable jacket - grey PVC. TPU and other jackets available by request - consult factory.
Connector Options: (for legs with cable)
Stainless steel coupling nut add "V" to part number (RS to RSV, RK to RKV).
Nylon coupling nut add "K" to part number (RS to RSK, RK to RKK).
Right angle connectors, change part number (RS to WS, RK to WK).
Notes: Mounting holes accept #8 screw.

V3RS-*/RK4-*/*/*/*/S651

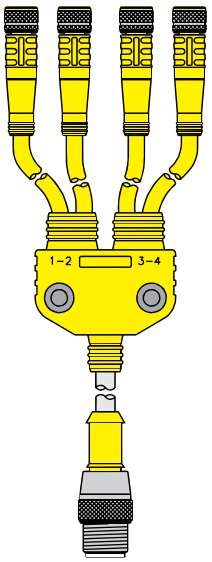


Pinouts

4-Pin	
Female	**Male**
	

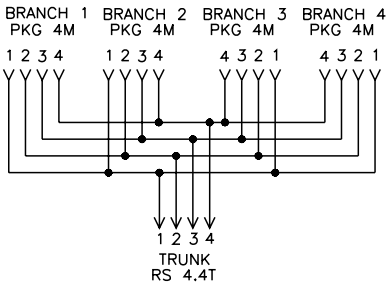
M12 Eurofast® 4-Branch Splitters, Parallel Wiring

- **For use on Photoelectric Controls, Power Distribution and other Parallel-wired applications**
- **Tough TPU Construction**

Housing	Part Number	Features	Wiring Diagram
	**V4RS-*/PKG4M-*/*/*/*/S651**	125 VAC / VDC, 2.0 A, RS 4.4T = Grey PVC, 5.1 mm OD, 4x22 AWG, PKG 4M = Yellow PVC, 4.4 mm OD, 4x26 AWG, parallel wired, 4 conductor	Parallel

* Length in meters.

Wiring Diagram



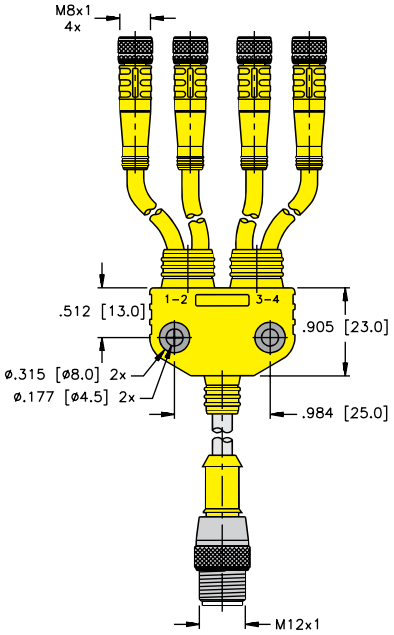
M12 Eurofast® 4-Branch Splitters, Parallel Wiring

Specifications

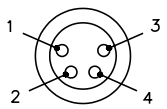
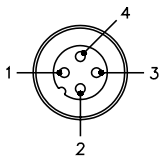
Junction Body:	Oil resistant yellow TPU	**Coupling Nuts:**	Nickel plated brass
Connector:	Oil resistant TPU body material, Nylon or TPU contact carrier	**Cable:**	See table
		Temperature:	-40 °C to +105 °C (-40 °F to +221 °F)
Contacts:	Gold plated brass	**Protection:**	IEC IP67

Cable Length: Trunk - nominal 1 meter. Branches - nominal 0.3 meters. Other lengths available by request - consult factory.
Cable Options: Standard cable jacket - grey PVC. TPU and other jackets available by request - consult factory.
Connector Options: (for legs with cable)
Stainless steel coupling nut add "V" to part number (PSG to PSGV, PKG to PKGV).
Right angle connectors, change part number (RS to WS, RK to WK).
Notes: Mounting holes accept #8 screw.

V4RS-*/PKG4M-*/*/*/*/S651



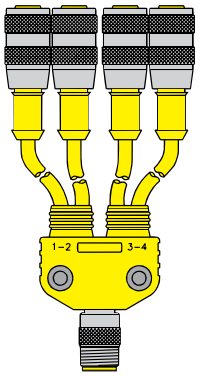
Pinouts

4-Pin	
Female	**Male**
	

Splitters

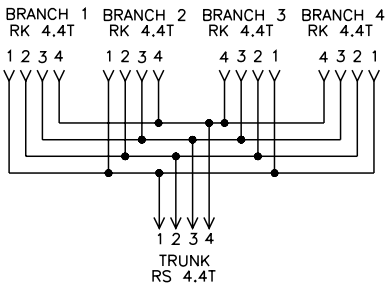
M12 Eurofast® 4-Branch Splitters, Parallel Wiring

- **For use on Photoelectric Controls, Power Distribution and other Parallel-wired applications**
- **Tough TPU Construction**

Housing	Part Number	Features	Wiring Diagram
	**V4FSM/RK4.4-*/*/*/*/S651**	250 V, 2.0 A, RK 4.4T = Yellow PVC, 4.4 mm OD, 4x26 AWG, parallel wired, 4 conductor	Parallel

* Length in meters.

Wiring Diagram



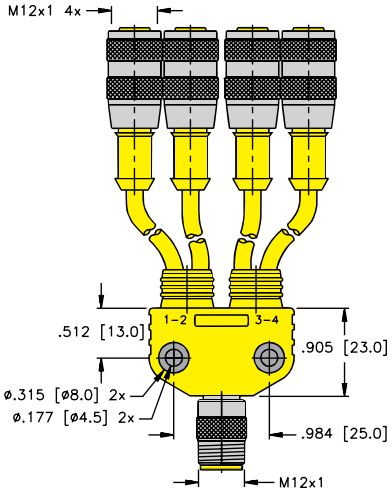
M12 Eurofast® 4-Branch Splitters, Parallel Wiring

Specifications

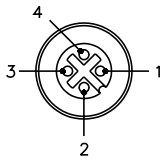
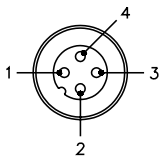
Junction Body:	Oil resistant yellow TPU	**Coupling Nuts:**	Nickel plated brass
Connector:	Oil resistant TPU body material, Nylon or TPU contact carrier	**Cable:**	See table
		Temperature:	-40 °C to +105 °C (-40 °F to +221 °F)
Contacts:	Gold plated brass	**Protection:**	IEC IP67

Cable Length: Trunk - nominal 1 meter. Branches - nominal 0.3 meters. Other lengths available by request - consult factory.
Cable Options: Standard cable jacket - grey PVC. TPU and other jackets available by request - consult factory.
Connector Options: (for legs with cable)
Stainless steel coupling nut add "V" to part number (RS to RSV, RK to RKV).
Nylon coupling nut add "K" to part number (RS to RSK, RK to RKK).
Right angle connectors, change part number (RS to WS, RK to WK).
Notes: Mounting holes accept #8 screw.

V4FSM/RK4.4-*/*/*/*/S651



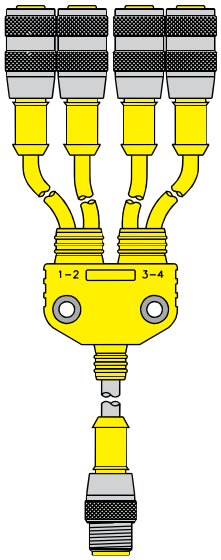
Pinouts

4-Pin	
Female	**Male**
	

Splitters

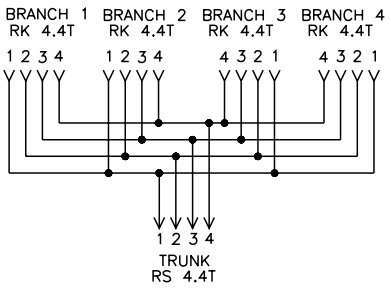
M12 Eurofast® 4-Branch Splitters, Parallel Wiring

- **For use on Photoelectric Controls, Power Distribution and other Parallel-wired applications**
- **Tough TPU Construction**

Housing	Part Number	Features	Wiring Diagram
	**V4RS-*/RK4.4-*/*/*/*/S651**	250 V, 2.0 A, RS 4.4T = Grey PVC, 5.1 mm OD, 4x22 AWG, RK 4.4T = Yellow PVC, 4.4 mm OD, 4x26 AWG, parallel wired, 4 conductor	Parallel

* Length in meters.

Wiring Diagram



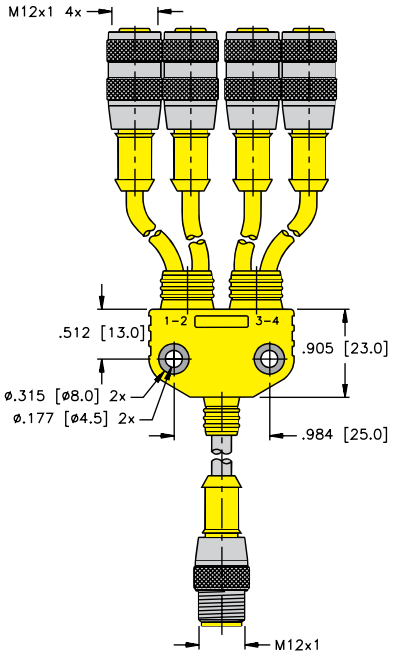
M12 Eurofast® 4-Branch Splitters, Parallel Wiring

Specifications

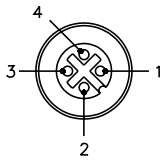
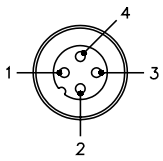
Junction Body:	Oil resistant yellow TPU	**Coupling Nuts:**	Nickel plated brass
Connector:	Oil resistant TPU body material, Nylon or TPU contact carrier	**Cable:**	See table
		Temperature:	-40 °C to +105 °C (-40 °F to +221 °F)
Contacts:	Gold plated brass	**Protection:**	IEC IP67

Cable Length: Trunk - nominal 1 meter. Branches - nominal 0.3 meters. Other lengths available by request - consult factory.
Cable Options: Standard cable jacket - grey PVC. TPU and other jackets available by request - consult factory.
Connector Options: (for legs with cable)
Stainless steel coupling nut add "V" to part number (RS to RSV, RK to RKV).
Nylon coupling nut add "K" to part number (RS to RSK, RK to RKK).
Right angle connectors, change part number (RS to WS, RK to WK).
Notes: Mounting holes accept #8 screw.

V4RS-*/RK4.4-*/*/*/*/S651



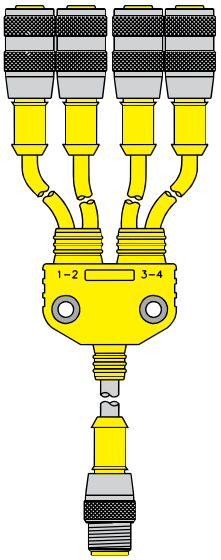
Pinouts

4-Pin	
Female	**Male**
	

Splitters

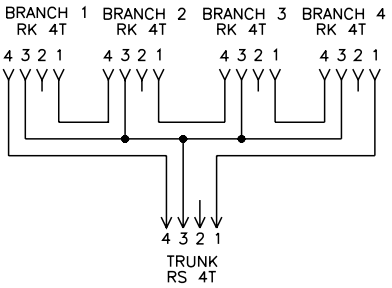
M12 Eurofast® 4-Branch Splitters, Series Wiring

- **Combine four Sensors into one Cable**
- **Series Wired**
- **Tough TPU Construction**
- **For 3-wire DC Sensors or Switches**

Housing	Part Number	Features	Wiring Diagram
	**V3RS-*/RK 4-*/*/*/*/S719**	60 VAC/75 VDC, 2.0 A, Grey PVC, 4.4 mm OD, 3x24 AWG, series wired for and function PNP signals	Series

* Length in meters.

Wiring Diagram



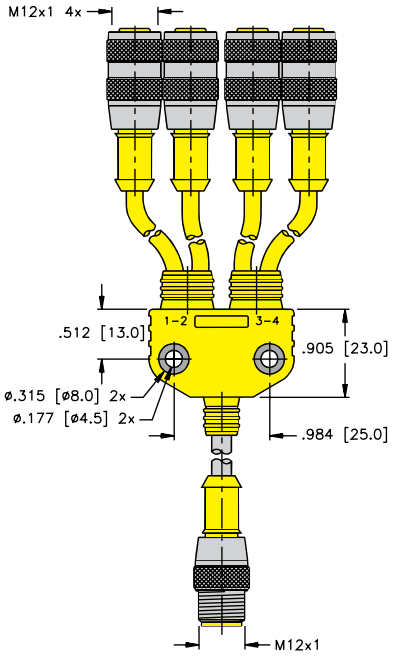
M12 Eurofast® 4-Branch Splitters, Series Wiring

Specifications

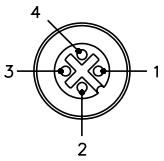
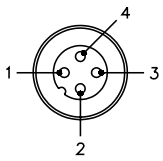
Junction Body:	Oil resistant yellow TPU	**Coupling Nuts:**	Nickel plated brass
Connector:	Oil resistant TPU body material, Nylon or TPU contact carrier	**Cable:**	See table
		Temperature:	-40 °C to +105 °C (-40 °F to +221 °F)
Contacts:	Gold plated brass	**Protection:**	IEC IP67

Cable Length: Trunk - nominal 1 meter. Branches - nominal 0.3 meters. Other lengths available by request - consult factory.
Cable Options: Standard cable jacket - grey PVC. TPU and other jackets available by request - consult factory.
Connector Options: (for legs with cable)
Stainless steel coupling nut add "V" to part number (RS to RSV, RK to RKV).
Nylon coupling nut add "K" to part number (RS to RSK, RK to RKK).
Right angle connectors, change part number (RS to WS, RK to WK).
Notes: Mounting holes accept #8 screw.

V3RS-*/RK 4-*/*/*/*/S719



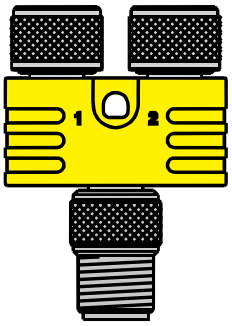
Pinouts

4-Pin	
Female	**Male**
	

Splitters

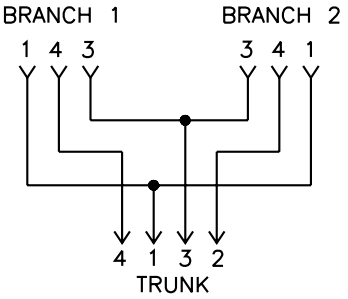
M8 Picofast® 2-Branch Compact Splitters, Standard and LED Wiring

- **Combine two Sensors into one Cable**
- **For use on Cylinders and other Dual-Input applications**
- **Tough TPU Construction**
- **IEC IP67 Protection**

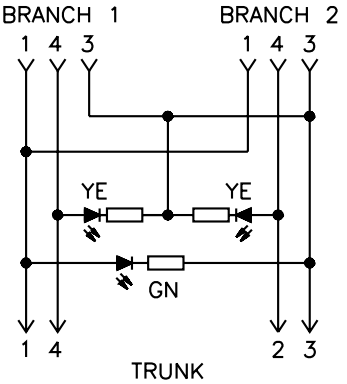
Housing	Part Number	Features	Wiring Diagram
	**YP2-MFS 4/2MFK 3**	125 V, 2 A, 2 Picofast branches, 3-wire & 1 Picofast trunk, 4-wire	Standard 3-wire
	**YP2-PX2-MFS 4/2MFK 3**	30 V, 2 A, 2 Picofast branches, 3-wire & 1 Picofast trunk, 4-wire, LEDs	LED 3-wire

Wiring Diagrams

Standard 3-wire



LED 3-wire



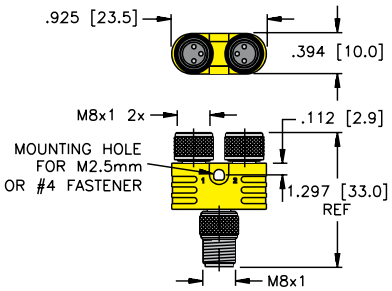
M8 Picofast® 2-Branch Compact Splitters, Standard and LED Wiring

Specifications

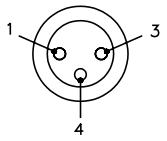
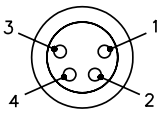
Junction Body:	Oil resistant yellow TPU	**Coupling Nuts:**	Nickel plated brass
Connector:	Oil resistant TPU body material, Nylon or TPU contact carrier	**Temperature:**	-30 °C to +80 °C (-22 °F to +176 °F)
		Protection:	NEMA 1, 3, 4, 6P and IEC IP67
Contacts:	Gold plated brass		

Notes: Mounting hole accepts #4 screw.

YP2-(PX2)MFS4/2MFK3



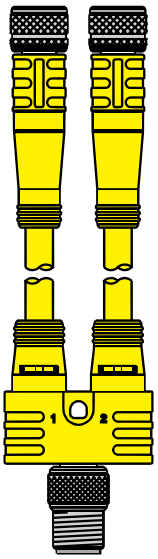
Pinouts

3-pin Picofast	4-pin Picofast
Female	Male
	

Splitters

M8 Picofast® 2-Branch Compact Splitters, Standard and Parallel Wiring

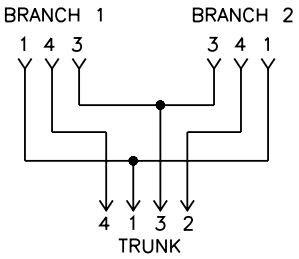
- **Combine two Sensors into one Cable**
- **For use on Cylinders and other Dual-Input applications**
- **Tough TPU Construction**
- **IEC IP67 Protection**

Housing	Part Number	Features	Wiring Diagram
	**YP2-MFS3/2PKG3M-*/*/S651**	125 V, 4 A, PKG 3M = Yellow PVC, 4.4 mm OD, 3x24 AWG, 2 Picofast branches, 3-wire & 1 Picofast trunk, 3-wire	Parallel 3-wire
	YP2-MFS4/2PKG3M-*/*	125 V, 2 A, PKG 3M = Yellow PVC, 4.4 mm OD, 3x24 AWG, 2 Picofast branches, 3-wire & 1 Picofast trunk, 4-wire	Standard 3 to 4-wire
	YP2-MFS4/2PKG4M-*/*/S651	125 V, 2 A, PKG 4M = Yellow PVC, 4.4 mm OD, 4x26 AWG, 2 Picofast branches, 4-wire & 1 Picofast trunk, 4-wire	Parallel 4-wire

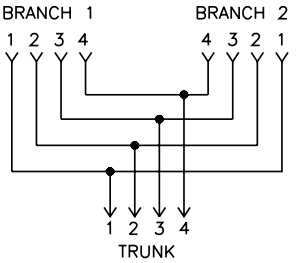
* Length in meters.

Wiring Diagrams

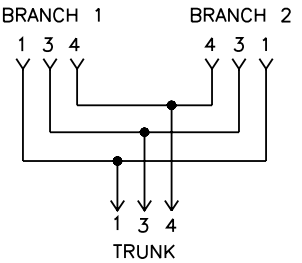
Standard 3 to 4-wire



Parallel 4-wire



Parallel 3-wire



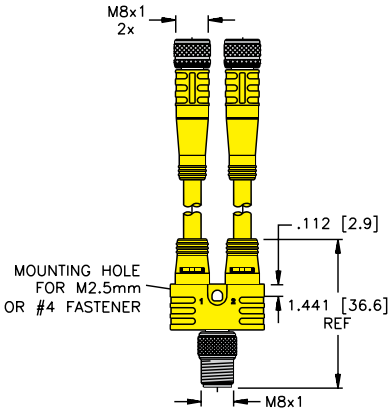
M8 Picofast® 2-Branch Compact Splitters, Standard and Parallel Wiring

Specifications

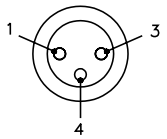
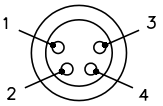
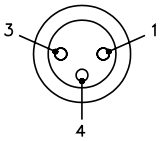
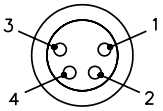
Junction Body:	Oil resistant yellow TPU	**Coupling Nuts:**	Nickel plated brass
Connector:	Oil resistant TPU body material, Nylon or TPU contact carrier	**Cable:**	See table
		Temperature:	-40 °C to +105 °C (-40 °F to +221 °F)
Contacts:	Gold plated brass	**Protection:**	NEMA 1, 3, 4, 6P and IEC IP67

Cable Length: Branches - nominal 0.3 meters. Other lengths available by request - consult factory.
Cable Options: Standard cable jacket - grey/yellow PVC. TPU and other jackets available by request - consult factory.
Connector Options: (for legs with cable)
Stainless steel coupling nut add "V" to part number (PKG to PKGV, PSG to PSGV, RK to RKV).
Notes: Mounting hole accepts #4 screw.

YP2-MFS3(4)/2PKG3(4)M-*/*(/S651)



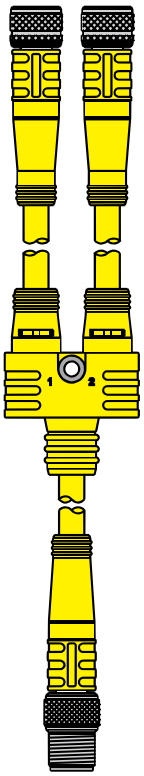
Pinouts

3-Pin Picofast	4-pin Picofast	3-Pin Picofast	4-pin Picofast
Female		Male	
			

Splitters

M8 Picofast® 2-Branch Compact Splitters, Standard and Parallel Wiring

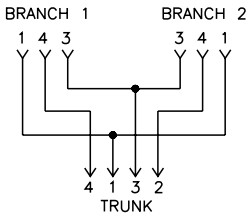
- **Combine two Sensors into one Cable**
- **For use on Cylinders and other Dual-Input applications**
- **Tough TPU Construction**
- **IEC IP67 Protection**

Housing	Part Number	Features	Wiring Diagram
	**YP2-PSG3M-*/2PKG3M-*/*/S651**	125 V, 4 A, PSG 3M & PKG3M = Yellow PVC, 4.4 mm OD, 3x24 AWG, 2 Picofast branches, 3-wire & 1 Picofast trunk, 3-wire	Parallel 3-wire
	YP2-PSG4M-*/2PKG3M-*/*	125 V, 2 A, PSG 4M = Yellow PVC, 4.4 mm OD, 4x26 AWG, PKG3M = Yellow PVC, 4.4 mm OD, 3x24 AWG, 2 Picofast branches, 3-wire & 1 Picofast trunk, 4-wire	Standard 3 to 4-wire
	YP2-PSG4M-*/2PKG4M-*/*/S651	125 V, 2 A, PSG 4M & PKG4M = Yellow PVC, 4.4 mm OD, 4x26 AWG, 2 Picofast branches, 4-wire & 1 Picofast trunk, 4-wire	Parallel 4-wire
	YP2-PSG6M-*/2PKG6M-*/*/S651	125 V, 2 A, PSG 6M & PKG 6M = Yellow PVC, 4.5 mm OD, 6x26 AWG, 2 Picofast branches, 6-wire & 1 Picofast trunk, 6-wire	Parallel 6-wire

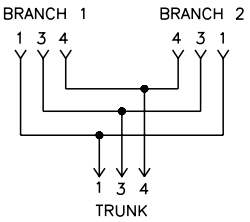
* Length in meters.

Wiring Diagrams

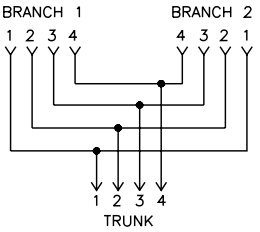
Standard, 3 to 4-wire



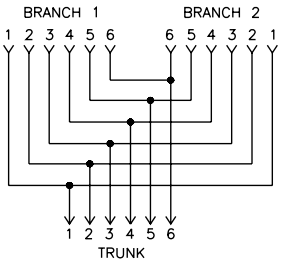
Parallel, 3-wire



Parallel, 4-wire



Parallel, 6-wire



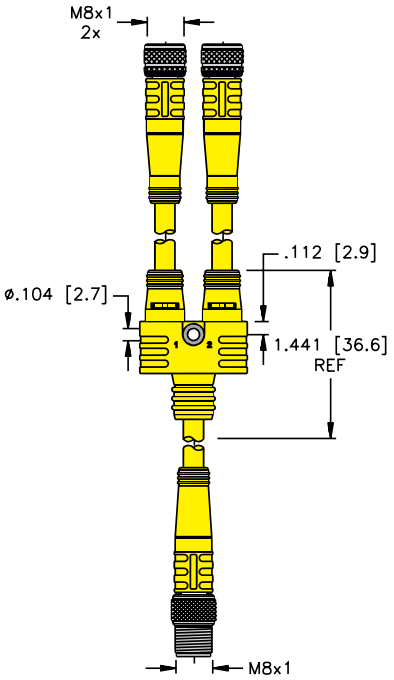
M8 Picofast® 2-Branch Compact Splitters, Standard and Parallel Wiring

Specifications

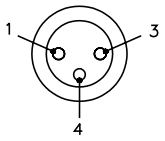
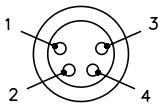
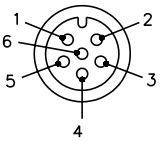
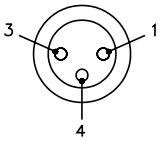
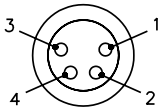
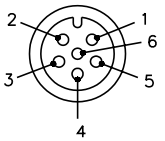
Junction Body:	Oil resistant yellow TPU	**Coupling Nuts:**	Nickel plated brass
Connector:	Oil resistant TPU body material, Nylon or TPU contact carrier	**Cable:**	See table
		Temperature:	-40 °C to +105 °C (-40 °F to +221 °F)
Contacts:	Gold plated brass	**Protection:**	NEMA 1, 3, 4, 6P and IEC IP67

Cable Length: Trunk - nominal 1 meter. Branches - nominal 0.3 meters. Other lengths available by request - consult factory.
Cable Options: Standard cable jacket - grey/yellow PVC. TPU and other jackets available by request - consult factory.
Connector Options: (for legs with cable)
Stainless steel coupling nut add "V" to part number (PKG to PKGV, PSG to PSGV, RK to RKV).
Notes: Mounting hole accepts #4 screw.

YP2-PSG3(4,6)M-*/2PKG3(4,6)M-*/*(/S651)



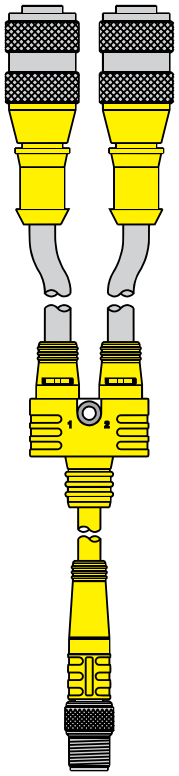
Pinouts

3-pin Picofast	4-pin Picofast	6-pin Picofast	3-pin Picofast	4-pin Picofast	6-pin Picofast
Female			Male		
					

Splitters

M8 Picofast® 2-Branch Compact Splitters, Standard Wiring

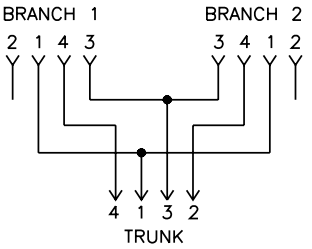
- **Combine two Sensors into one Cable**
- **For use on Cylinders and other Dual-Input applications**
- **Tough TPU Construction**
- **IEC IP67 Protection**

Housing	Part Number	Features	Wiring Diagram
	**YP2-PSG4M-*/2RK4T-*/***	125 V, 2 A, PSG 4M = Yellow PVC, 4.4 mm OD, 4x26 AWG, RK 4T = Grey PVC, 5.1 mm OD, 3x20 AWG, 2 Eurofast® branches, 4-wire & 1 Picofast trunk, 4-wire	Standard

* Length in meters.

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

Wiring Diagram



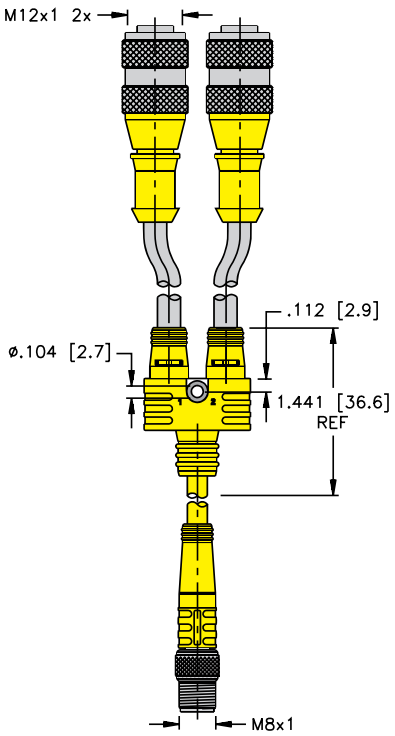
M8 Picofast® 2-Branch Compact Splitters, Standard Wiring

Specifications

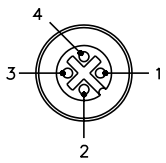
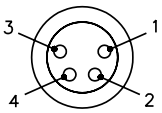
Junction Body:	Oil resistant yellow TPU	**Coupling Nuts:**	Nickel plated brass
Connector:	Oil resistant TPU body material, Nylon or TPU contact carrier	**Cable:**	See table
		Temperature:	-40 °C to +105 °C (-40 °F to +221 °F)
Contacts:	Gold plated brass	**Protection:**	NEMA 1, 3, 4, 6P and IEC IP67

Cable Length: Trunk - nominal 1 meter. Branches - nominal 0.3 meters. Other lengths available by request - consult factory.
Cable Options: Standard cable jacket - grey/yellow PVC. TPU and other jackets available by request - consult factory.
Connector Options: (for legs with cable)
Stainless steel coupling nut add "V" to part number (PKG to PKGV, PSG to PSGV, RK to RKV).
Notes: Mounting hole accepts #4 screw.

YP2-PSG4M-*/2RK4T-*/*



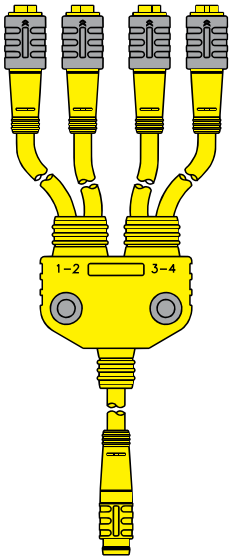
Pinouts

4-pin Eurofast®	4-pin Picofast
Female	Male
	

Splitters

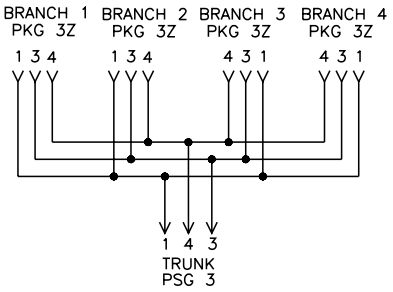
M8 Picofast® 4-Branch Splitters, Parallel Wiring

- **For use on Photoelectric Controls, Power Distribution and other Parallel-wired applications**
- **Tough TPU Construction**

Housing	Part Number	Features	Wiring Diagram
	**V3PSG-*/PKG3Z-*/*/*/*/S651**	125 V, 2.0 A, Yellow PVC, 4.4 mm OD, 3x24 AWG, parallel wired, 3 conductor	Parallel

* Length in meters.

Wiring Diagram



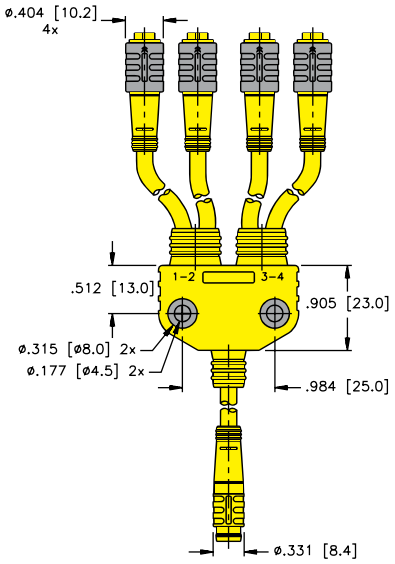
M8 Picofast® 4-Branch Splitters, Parallel Wiring

Specifications

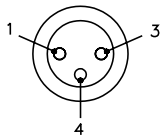
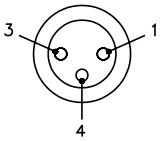
Junction Body:	Oil resistant yellow TPU	**Coupling Nuts:**	Nickel plated brass
Connector:	Oil resistant TPU body material, Nylon or TPU contact carrier	**Cable:**	See table
		Temperature:	-40 °C to +105 °C (-40 °F to +221 °F)
Contacts:	Gold plated brass	**Protection:**	IEC IP67

Cable Length: Trunk - nominal 1 meter. Branches - nominal 0.3 meters. Other lengths available by request - consult factory.
Cable Options: Standard cable jacket - grey PVC. TPU and other jackets available by request - consult factory.
Notes: Mounting holes accept #8 screw.

V3PSG-*/PKG3Z-*/*/*/*/S651



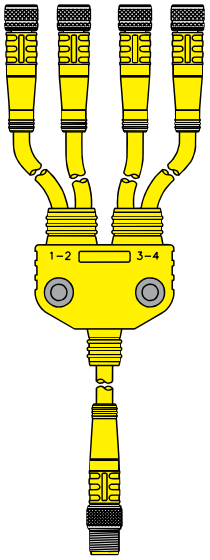
Pinouts

3-Pin	
Female	**Male**
	

Splitters

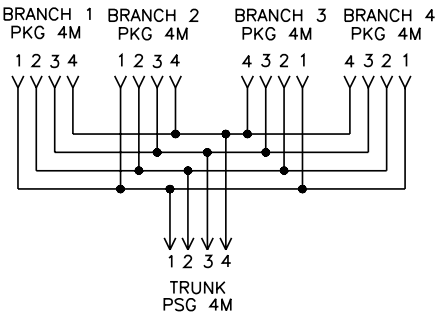
M8 Picofast® 4-Branch Splitters, Parallel Wiring

- **For use on Photoelectric Controls, Power Distribution and other Parallel-wired applications**
- **Tough TPU Construction**

Housing	Part Number	Features	Wiring Diagram
	**V4PSGM-*/PKG4M-*/*/*/*/S651**	125 V, 2.0 A, yellow PVC, 4.4 mm OD, 4x26 AWG, parallel wired, 4 conductor	Parallel

* Length in meters.

Wiring Diagram



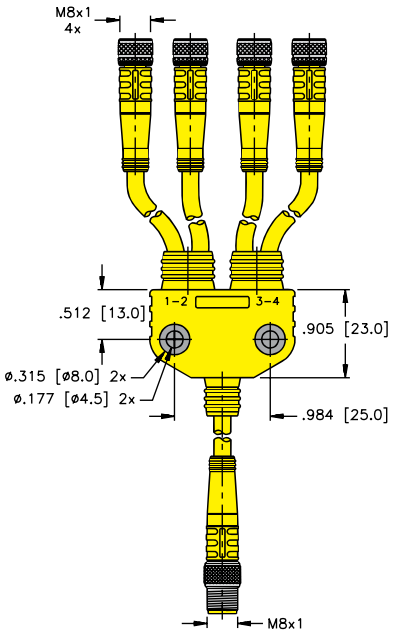
M8 Picofast® 4-Branch Splitters, Parallel Wiring

Specifications

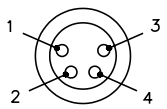
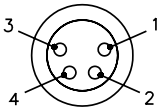
Junction Body:	Oil resistant yellow TPU	**Coupling Nuts:**	Nickel plated brass
Connector:	Oil resistant TPU body material, Nylon or TPU contact carrier	**Cable:**	See table
		Temperature:	-40 °C to +105 °C (-40 °F to +221 °F)
Contacts:	Gold plated brass	**Protection:**	IEC IP67

Cable Length: Trunk - nominal 1 meter. Branches - nominal 0.3 meters. Other lengths available by request - consult factory.
Cable Options: Standard cable jacket - grey PVC. TPU and other jackets available by request - consult factory.
Connector Options: (for legs with cable)
Stainless steel coupling nut add "V" to part number (PSG to PSGV, PKG to PKGV).
Notes: Mounting holes accept #8 screw.

V4PSGM-*/PKG4M-*/*/*/*/S651

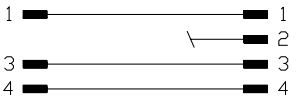
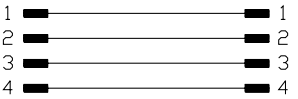
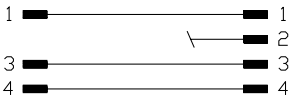
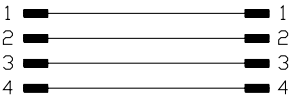


Pinouts

4-Pin	
Female	**Male**
	

M8 Picofast® to M12 Eurofast® Adapters

- **Enables Picofast and Eurofast Connectors to be interchanged**
- **Compact size saves space**
- **Eurofast Connection has Anti-vibration Coupling Nut**

Part Number	Features	Wiring Diagram
FKMR 4-ESM 3S	60 VAC/75 VDC, 4.0 A, female Eurofast, male snap-lock Picofast connector, 3-pin	
FKMR 4.4-ESM 4S	30 VAC/36 VDC, 4.0 A, female Eurofast, male snap-lock Picofast connector, 4-pin	
FSMR 4-SKM 3	60 VAC/75 VDC, 4.0 A, male Eurofast, female threaded Picofast connector, 3-pin	
FSMR 4.4-SKM 4	30 VAC/36 VDC, 4.0 A, male Eurofast, female threaded Picofast connector, 4-pin	

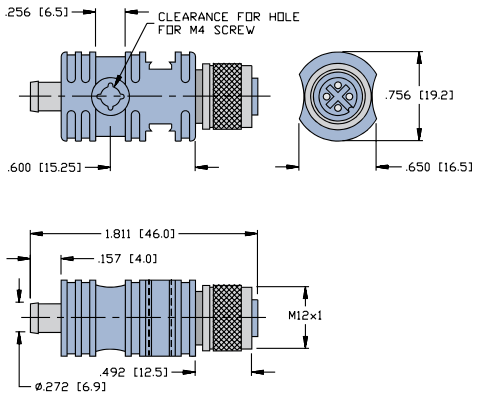
To add mounting hole, add /S857 to the end of the part number.

M8 Picofast® to M12 Eurofast® Adapters

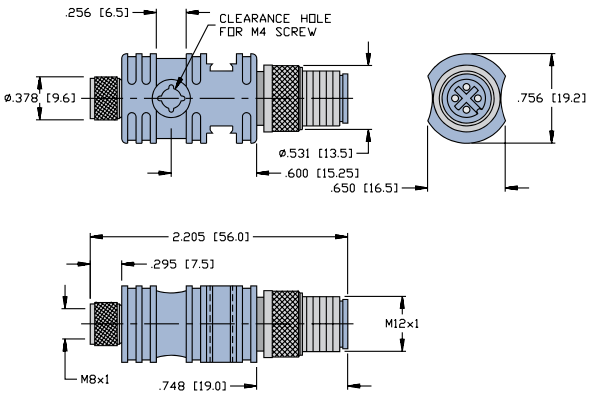
Specifications

Junction Body:	Oil resistant blue-gray TPU	**Coupling Nuts:**	Nickel plated brass
Connector:	Nylon or TPU contact holder	**Temperature:**	-30 °C to +80 °C (-22 °F to +176 °F)
Contacts:	Gold plated brass	**Protection:**	NEMA 1, 3, 4, 6P and IEC IP67

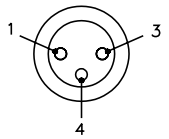
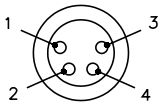
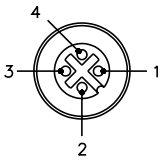
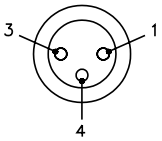
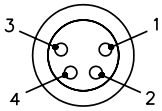
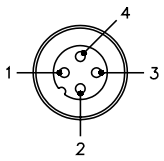
FKMR ..



FSMR ..



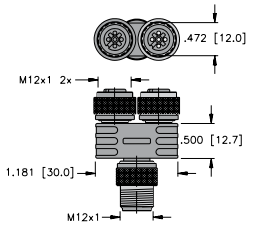
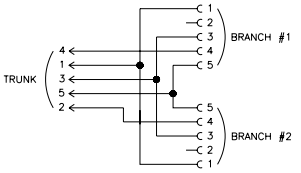
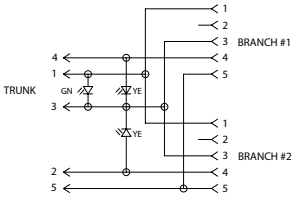
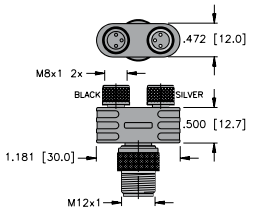
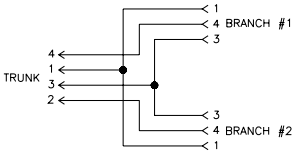
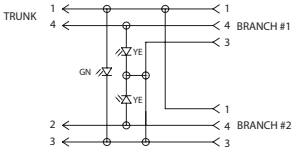
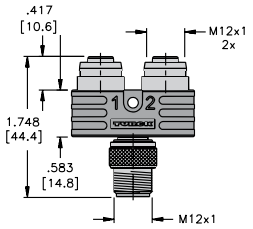
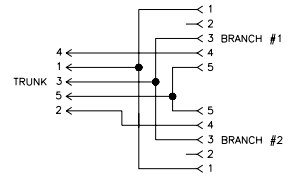
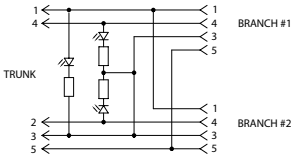
Pinouts

3-pin Picofast	4-pin Picofast	4-Pin Eurofast	3-pin Picofast	4-pin Picofast	4-Pin Eurofast
Female			Male		
					

Splitters

Multibox® 2 - Branch Molded Splitters

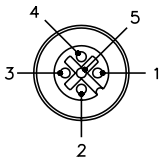
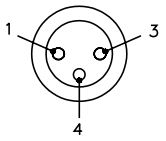
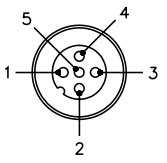
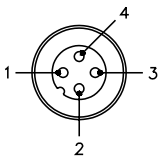
- **Consolidate two Sensors/Actuators into one**
- **M8 Picofast® or M12 Eurofast® Connector Branches**
- **Tough TPU Construction**
- **IEC IP67 Protection**

Housing	Part Number	Features	Wiring Diagram
	**YB2-FSM 4.5-2FKM 4.5 (Fits 8MB12 J-boxes)**	2 Eurofast branches, black TPU, 80 °C, 30 VAC/36 VDC, 4 A, combine two sensors/ actuators with Eurofast connector branches into one	
	YB2-FSM 4.5-2FKM 4.5/S1063 (Fits VB J-boxes)	2 Eurofast branches, grey TPU, 80 °C, 30 VAC/36 VDC, 4 A, combine two sensors/ actuators with Eurofast connector branches into one	
	YB2-FSM 4.5-2FKM 4.5-P7X3	2 Eurofast branches, translucent black TPU, 80 °C, 30 VDC, 4 A, 3 LEDs, PNP, combine two sensors/actuators with Eurofast connector branches into one	
	**YB2-FSM 4.4/2PKG 3M**	2 Picofast branches, black TPU, 80 °C, 30 VAC/36 VDC, 2 A, combine two sensors/ actuators with Picofast connector branches into one	
	YB2-FSM 4.4/2PKG 3M-P7X3	2 Picofast branches, translucent black TPU, 80 °C, 30 VDC, 2 A, 3 LEDs, PNP, combine two sensors/actuators with Picofast connector branches into one	
	**YBZ2-FSM 4.5/2FKM 4.5/S771**	2 Eurofast branches, black TPU, 80 °C, 30 VAC/36 VDC, 4 A, combine two sensors/ actuators with Eurofast connector branches into one	
	YBZ2-PX3-FSM 4.5/2FKM 4.5	2 Eurofast branches, transparent TPU, 80 °C, 36 VDC, 4 A, 3 LEDs, PNP, combine two sensors/actuators with Eurofast connector branches into one	

Standard coupling nut material is nickel plated brass.

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

Pinouts

5-Pin Eurofast	3-Pin Picofast	5-Pin Eurofast	4-Pin Eurofast
Female		Male	
			

Turck Standards

One or more of the following standards may apply to products or components of products in this catalog. This section is intended to provide a reference to the applicable standards only. Original or facsimiles of the original standards documents should be used for interpretation. It is the responsibility of the user to determine the suitability of use of the products represented in this catalog.

ANSI/B93.55M

Generally defines the geometry and connection scheme of "mini" type connectors used in fluid power (valve) applications. It defines the numerical marking of the pins and the conductor size and colors for 3 and 5 pin versions. This specification was the basis for the so-called "automotive" standard conductor colors that are widely used on sensors.

CENELEC EN 50 044

Identifies connections for inductive proximity switches. The specification defines conductor colors for proximity switches with 2, 3, or 4 conductors. It also defines numerical marking of the terminals, whether quick disconnect, or not. Turck sensors and recommended cordsets that apply within the scope of the standard comply with CENELEC EN 50 044. The conventions defined in this standard have been widely adopted in industry to include photoelectric controls and other related sensing devices.

CSA

The Canadian Standards Association is a not-for-profit membership-based association serving business, industry, government and consumers in Canada and the global marketplace.

Is the CSA mark valid across America?

Yes. CSA International is accredited by the Occupational Health and Safety Administration (OSHA) as a Nationally Recognized Testing Laboratory (NRTL). The CSA tests to the same American industry standards as other accredited laboratories, regardless of who authored or published the standard. CSA marks are recognized and accepted throughout America by federal, state and local authorities.

DIN 43650

Defines the geometry and other characteristics of the "square" connectors most frequently used on hydraulic and pneumatic solenoid valves and other devices in the fluid power industry.

MSHA

The Mine Safety and Health Administration - a US Government agency that ensures and regulates safety for mines and mine workers. The MSHA approval is required for products used in underground mines, including electrical equipment, power cords, and instrumentation components.

The MSHA standards require special fire-resistant properties and characteristics that prevent the propagation of flames.

IEC 61076-2-101

Defines the geometry and other characteristics of the M12x1 family of threaded connectors used to connect control and measurement devices in industrial environments.

IEC 61076-2-104

Defines the geometry and other characteristics of the M8x1 family of threaded and snap connectors used to connect control and measurement devices in industrial environments.

NRTL

Nationally Recognized Test Laboratory - An independent laboratory authorized by the US Government to perform product safety evaluations. Test laboratories must meet government laboratory standards, and are audited annually by OSHA to maintain this credential. UL standards are adopted by the US government and OSHA as being "Safety Standards", and these accredited labs then use the UL standards to perform product evaluations.

The Canadian Standards Association (CSA) is authorized as a NRTL to perform product evaluations and tests to the UL Standards. The certification mark "CSA NRTL/C" is then applied to products that satisfy all construction and performance criteria for both US and Canada. This certification mark is generally accepted by local building, safety, and quality agencies as meeting safety, construction, and performance criteria in both the US and Canada.

RoHS (Restriction of Hazardous Substances in Electrical and Electronic Equipment)

In Europe, the RoHS directive is the legal basis for the ban of certain materials (lead and other specific heavy metals) in electric and electronic products. This directive was adopted and implemented in Europe as of July 1st, 2006.

This directive is geared towards high volume consumer goods. Turck is not required to adopt the directive, but is affected by the legal requirements which prescribe that only lead-free products and components to be sold in Europe.
Turck, however, is engaged in testing lead-free soldering and substitute substances/components in support of our commitment to the environment. The main issue we had to overcome to become RoHS compliant was our solder material that contained lead. We have tested and verified a RoHS approved solder material which was implemented as of May 1st, 2006 and a RoHS logo will be added to bag labels for those parts. Please be aware that there are certain products like PCBs and ITC/PLTC cable that will continue to contain restricted substances.

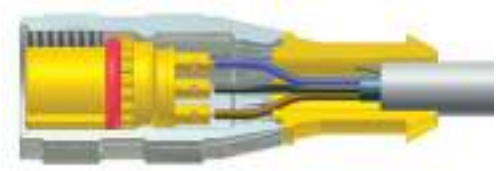
Shielded Cordsets

Whenever wire is used to transmit electrical data, it is possible for the wire to absorb external noise, possibly changing the characteristics of the electrical signal, or to give off noise that could cause changes in other electrical components that are near. Shielding is the act of placing conductive material between the potential noise emitters and receivers.

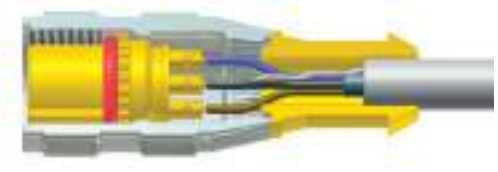
Electrical noise is usually classified as electro-magnetic interference (EMI) or radio frequency interference (RFI).

Turck offers a number of shielding options:

1. Foil shield with drain, drain not connected



2. Foil shield with drain, drain connected to a pin



3. Foil and braid shield with shield tied to coupling nut

4. Aluminum armored cable with armor tied to coupling nut

For a shield to be effective, it must be tied to a ground at some point. It is usually preferred to not tie the shield to ground at more than one point to avoid ground loops. A shield not tied to a ground will reflect some noise and is better than no shield at all, but will be much more effective if tied to a ground.

High frequency noise, RFI, is handled well with a foil shield. The wavelength of RFI is usually small and can pass through the 'holes' in a braided shield. EMI is usually larger wavelengths and needs a braided shield to increase the mass of shielding material to be effective.

Aluminum armored cables provide the ultimate in noise immunity as they are basically flexible conduit.

Select the shielded cordset that best meets your needs. If it is easier to tie the shield to ground inside the panel, the foil/drain with the drain not connected inside the cordset is a good choice. If you can connect the drain via a pin inside the device being connected, the foil/drain with the drain connected to a pin is a good choice. Any environments with EMI noise from things like large motors or welding equipment will benefit from a braided shield tied to the coupling nut.

Turck shielded cordsets with the shield tied to the coupling nut offer complete shielding for the entire length of the cordset. A metal sleeve inside the molded body connects the braid/foil shield of the cable to the metal coupling nut with no loss of shielding potential.

Turck armored cordsets are the ultimate in shielded connectors. A Turck patented process allows the interlocked aluminum armor to be connected directly to the coupling nut offering the same protection as running conductors inside metal conduit.

IP Protection Class

IP		Dust Protection						
		0_ Unprotected	1_ Objects ≥ 50 mm	2_ Objects ≥ 12.5 mm	3_ Objects ≥ 2.5 mm	4_ Objects ≥1.0 mm	5_ Dust Protected	6_ Dust Tight
Water Protection	_0 Unprotected	IP 00	IP 10	IP 20	IP 30	IP 40	IP 50	IP 60
	_1 Dripping Water		IP 11	IP 21	IP 31	IP 41	IP 51	IP 61
	_2 Dripping Water on 15° slant		IP 12	IP 22	IP 32	IP 42	IP 52	IP 62
	_3 Spraying Water			IP 23	IP 33	IP 43	IP 53	IP 63
	_4 Splashing Water				IP 34	IP 44	IP 54	IP 64
	_4K Splashing Water High Pressure				IP 34K	IP 44K	IP 54K	IP 64K
	_5 Jet Water						IP 55	IP 65
	_6 Intense Jet Water						IP 56	IP 66
	_6K Intense Jet Water High Pressure						IP 56K	IP 66K
	_7 Temporary immersion							IP 67
	_8 Continuous immersion as specified by manufacturer							IP 68
	_9K Water at high pressure/Steam jet cleaning							IP 69K

Ingress Protection Classes- IEC 60529

First ID Number	Protection from penetration of…	Protection from penetration of…
0	Unprotected	N/A
1	Solid Foreign Particles Ø50 mm	No full penetration of sphere with Ø50 mm
2	Solid Foreign Particles Ø12.5 mm	No full penetration of sphere with Ø12.5 mm
3	Solid Foreign Particles Ø2.5 mm	No penetration of rod with Ø2.5 mm
4	Solid Foreign Particles Ø1.0 mm	No penetration of wire with Ø1.0 mm
5	Dust	Dust may only penetrate in such quantity that function and safety are not impacted
6	Dust	No penetration of dust

First ID Number	Protection from penetration of…	Protection from penetration of…
0	Unprotected	N/A
1	Dripping water	Vertically falling drips may not cause any damage
2	Dripping water when the enclosure is in a slanted position of up to 15 °C	Vertically falling drips may not cause any damage
3	Spraying water	Spraying water, which is sprayed in a perpendicular angle of up to 60 °C may not cause any damage
4	Splashing water	Water splashing against the enclosure from every direction may not cause any damage
4K	Splashing water with increased pressure	Water splashing against the enclosure from every direction and with increased pressure may not cause any damage
5	Jet water	Water which is hosed against the enclosure from every direction may not cause damage
6	Intense jet water	Water which is hosed against the enclosure with high intensity may not cause any damage
6K	Intense jet water with increased pressure	Water which is hosed against the enclosure with high intensity and increased pressure may not cause any damage
7	Temporary immersion in water	Water may not enter the enclosure in such quantity as to cause damage when the enclosure is held under water for a set period of time using predetermined pressure (1 m for 30 min)
8	Continuous immersion in water	Water may not enter the enclosure in such quantity as to cause damage when the enclosure is held under water for a set period of time using predetermined pressure (Turck standard is 6' of water, and other chemicals, for a period of 24 hours)
9K	Water at high-pressure/steam jet cleaning	Water which is directed against the enclosure from every direction with extremely high pressure may not cause any damage (14 to 16 l/min at 8,000 to 10,000 kPa)

NEMA Standards

NEMA		NEMA 1	NEMA 2	NEMA 12	NEMA 13	NEMA 3	NEMA 3R	NEMA 4	NEMA 4X	NEMA 6	NEMA 6P
Rating Type		Indoor				Outdoor		Indoor/Outdoor			
Protection Against:	Test Number										
Incidental Contact	6.2	•	•	•	•	•	•	•	•	•	•
Falling Dirt	6.2	•	•	•	•	•	•	•	•	•	•
Rust	6.8	•		•	•	•	•	•	•	•	•
Circulating Dust, Lint, Fibers (nonhazardous)	6.5.1.2(2)			•	•	•		•	•	•	•
Windblown Dust	6.5.1.1(2)					•		•	•	•	•
Falling Liquids/Light Splashing	6.3.2.2		•	•	•	•		•	•	•	•
Rain	6.4.2.1					•	•	•	•	•	•
Rain	6.4.2.2					•		•	•	•	•
Snow and Sleet	6.6.2.2					•	•	•	•	•	•
Hose Down and Splashing Water	6.7							•	•	•	•
Occasional Prolonged Submersion	6.11(2)									•	•
Oil and Coolant Drip	6.3.2.2			•	•						
Oil and Coolant, Spray/Splash	6.12				•						
Corrosive Agents	6.9					•	•		•		•

NEMA 250 Test Definitions

6.2 Rod Entry Test - a ½" diameter rod may not enter the enclosure and a 1/8" rod cannot enter within 4" of live components

6.3 Drip Test - 20 drops per minute for 30 minutes with no water entering enclosure 6.3.2.2 Evaluation, no water shall enter enclosure

6.4 Rain Test - All exposed surfaces are sprayed with 5 psi of water for 60 minutes at a rate of 18" per hour rise in a straight sided pan 6.4.2.1 Evaluation, No water shall have reached live parts, insulation, or mechanisms 6.4.2.2 Evaluation. No water shall have entered enclosure

6.5.1.1 (2) Outdoor Dust Test (alternate method) - Stream of water at 45 gallons per minute from a 1" diameter nozzle, from all directions at a distance from 10' to 12'. Test time is a minimum of 5 minutes. No water shall enter enclosure.

6.5.1.2 (2) Indoor Dust Test (alternate method) - Atomized water at 30 psi is sprayed from all directions from a distance of 12" to 15" at a rate of 3 gallons per hour. No water shall enter enclosure.

6.6 External Icing Test - The enclosure is sprayed with water between 0 °C and 3 °C in a room at 2 °C. The spray is between 1 and 2 gallons per hour per square foot. Spray for 1 hour. The room temp is then dropped to between -7 °C and -3 °C with the spray still going. Ice needs to build up on a test bar at a rate of 1/4 inch per hour. Spray continues until 3/4 inch of ice is on the enclosure. Room temperature is maintained for at least 3 hours. 6.6.2.2 Evaluation, enclosure is undamaged after ice has melted.

6.7 Hose down Test - Stream of water at 65 gallons per minute from a 1" diameter nozzle from all angles at a distance of 10' to 12'. Test time is 48 seconds times (height + width + depth of enclosure in feet) or a minimum of 5 seconds. No water shall enter enclosure.

6.8 Rust Resistance Test - only applicable to enclosures incorporating external ferrous parts

6.9 Corrosion Protection - Test per UL 508, 6.9 or 6.10.

6.11 (2) Air Pressure Test (alternate method) - Enclosure is submerged in water at a pressure equal to a depth of 6' for 24 hours. No water shall enter enclosure.

6.12 Oil Exclusion Test - Stream of test liquid at 2 gallons per minute from a 3/8" nozzle for 30 minutes. Water with 0.1% wetting agent is directed from all angles from a distance of 12" to 18". No test liquid shall enter the enclosure.

Charts

Conversion Chart		
AWG to Metric		
AWG	Diameter (mm)	Section (mm ²)
8	3.26	10
10	2.59	6
12	2.05	4
14	1.63	2.5
16	1.29	1.5
18	1.024	0.75
20	0.813	0.5
22	0.643	0.34
24	0.511	0.25
26	0.405	0.14
28	0.32	0.05
30	0.255	0.05

Thread Conversion Chart	
PG to Metric	
PG	Diameter (mm)
7	12
9	16
11	20
16	25

Cable Length Tolerance Chart	
All Lengths	+4% or 50 mm, whichever is greater than -0 mm
Strip Length	Tolerance(mm)
0-7 mm	±0.5 mm
8-29 mm	±1.0 mm
30-49 mm	±2.0 mm
50-69 mm	±3.0 mm
70-100 mm	±4.0 mm
Over 100 mm	±5.0 mm

Installing Cable Products in Accordance with the National Electrical Code (NEC)

The NEC is a set of guidelines for installation of electrical devices, including cables, meant to reduce the risk of electrical shock, fire, etc. The NEC is simply a code, and local laws may or may not require installation based on the NEC. Check local laws for applicability.

The NEC generally does not cover cables installed inside a machine. Any cables installed in an exposed manner, on the outside of a machine or from one machine to something else, must be an approved type and installed in accordance with the appropriate NEC articles.

UL (Underwriters Laboratory) and CSA (Canadian Standards Association) are the primary sources in North America for approving cables to specific standards. While a cable installed within a piece of machinery does not fall under the NEC, most people want to install an approved cable. Turck cables have both UL and CSA approvals. Many of these approvals are the UL AWM (Appliance Wiring) approvals and are acceptable for use in a UL approved device. A UL Listed cable may be installed outside a machine per the NEC standards. UL Listed cables available from Turck include NEC designations for hard duty cables (SOOW, SJOOW, STOOW, SEOW), armored cables (MC), and tray-rated cables (PLTC, ITC).

Hard duty cables designations are:

- S- Service Grade (600 V)
- SJ - Service Grade Junior (300 V)
- ST - Service Grade Thermoplastic (600 V)
- SE - Service Grade Thermoplastic Elastomer (600 V)
- O - Oil resistant jacket material
- OO - Oil resistant jacket and conductor insulation
- W - Weather proof

Turck armored cables are available in 3 different configurations. Type MC cables, type MC cables with ITC/PLTC approvals and simply ITC/PLTC approved. Armored cables with ITC/PLTC approvals may be installed in an exposed run without being offered additional mechanical protection.

Tray-rated cables from Turck include Instrument Tray Cable (ITC) and/or Power Limited Tray Cable (PLTC) or Tray Cable-Exposed Run (TC-ER).

Turck NEC type approved cables are dual listed with other UL type approvals. For example, the RKM 126-*M cordset has a 12 conductor 16 AWG cable with UL AWM 600 V approval and ITC/PLTC approval.

Please refer to the NEC and local laws for specific installation requirements based on your environment.

Cable Applications

Proper management of cabling systems can mean the difference between a dependable and smooth operating installation and costly reoccurring down time. The suggestions outlined below illustrate some of the common sources of problems and provide simple and effective solutions.

RoHS (Restriction of Hazardous Substances in Electrical and Electronic Equipment)

Providing sufficient bend radius will allow the cable to absorb the energy of bending over a greater portion of its length, increasing its effective working life. Small increases in the radius of the bend can produce substantial increases in cable life.

Minimum bend radius for fixed applications:
Standard cable - 5x cable diameter
Armorfast® cable - 12x cable diameter

Minimum bend radius for moving applications:
Standard cable - 10x cable diameter
Armorfast® cable - 15x cable diameter

Eliminating Stress Points in Cable Dress

Installing cables to allow for adequate stress loops and freedom of motion increase the life of the cables. Turck cordsets incorporate molded strain reliefs that will assist in preventing stress.

Tie Down Loops

Correct

Incorrect

Strain Relief

Correct

Incorrect

Cable Bundling Techniques

When bundling several cables together, always keep the bundle loose enough to move within itself. Tightly tied bundles create both compression and tension stresses when the bundle is moved.

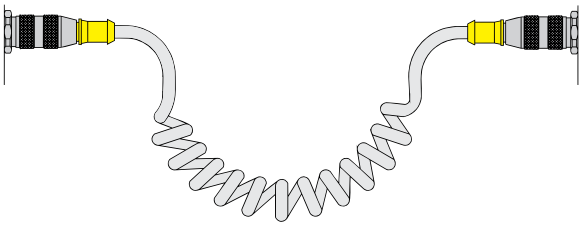
Correct

Incorrect

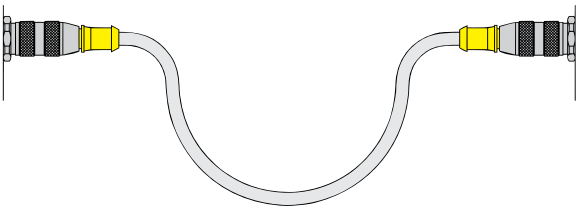
Cabling for Motion Applications

Where cabling is subjected to linear, angular or rotational motion between two points, always allow adequate cable length to absorb the energy imparted by the motion. Use of coiled cords, mechanical support mechanisms, or large, well supported cable loops will maximize cable life.

Coil Cord



Cable Loop



Standard Cable Selection Guide

Selection Criteria	PVC Flexlife®	TPU Flexlife (S90)	CPE Rubber Flexlife (S600)	Weldlife (S1587)	Flexlife-20® TPE (S101)	Flexlife-20 TPU(S90/S101)
Ozone and UV resistance	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent
Temperatures	-40 °C to 105 °C	-40 °C to 90 °C	-50 °C to 105 °C	-60 °C to 105 °C	-60 °C to 105 °C	-40 °C to 90 °C
Cold Bend test	-40 °C	-40 °C	-55 °C	-60 °C	-60 °C	-40 °C
Abrasion & Cut-through resistance	Fair	Excellent	Excellent	Good	Good	Excellent
Flexing (# of cycles)	2 million	2 million	2 million	2 million	20 million+	20 million+
Burn resistance	Good	Excellent	Excellent	Good	Good	Excellent
Oxidation resistance	Excellent	Excellent	Good	Excellent	Excellent	Excellent
Water resistance	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent
Cost	$	$$	$$$	$$	$$	$$
Weld Slag resistance	Poor	Good	Excellent	Excellent	Excellent	Good
Flame Test						
UL Test standards	Horizontal	Vertical Tray	Horizontal	Horizontal/ Vertical Tray	Horizontal/ Vertical Tray	Vertical Tray
CSA Test standards	FT1	FT4	FT1	FT1/FT4	FT1/FT4	FT4
Chemical Resistance						
Acids	Fair/Good	Good	Excellent	Good	Good	Good
Alkalines	Good	Excellent	Excellent	Excellent	Excellent	Excellent
Alcohols	Poor/Fair	Poor/Fair	Excellent	Excellent	Excellent	Poor/Fair
Most Solvents	Poor/Fair	Poor	Good	Poor	Poor	Poor
Oils	Good	Excellent	Excellent	Good	Excellent	Excellent
Gasoline	Poor	Poor	Poor	Poor	Poor	Poor
Greases	Good	Excellent	Excellent	Poor	Poor	Excellent
Available in Cordsets						
Eurofast®	X	X	X	X	X	
Picofast®	X	X		X	X	X
Minifast®	X	X	X	X	X	
Microfast®	X	X	X	X		
Multifast®	X	X		X	X	X
V*fast®	X	X	X	X		

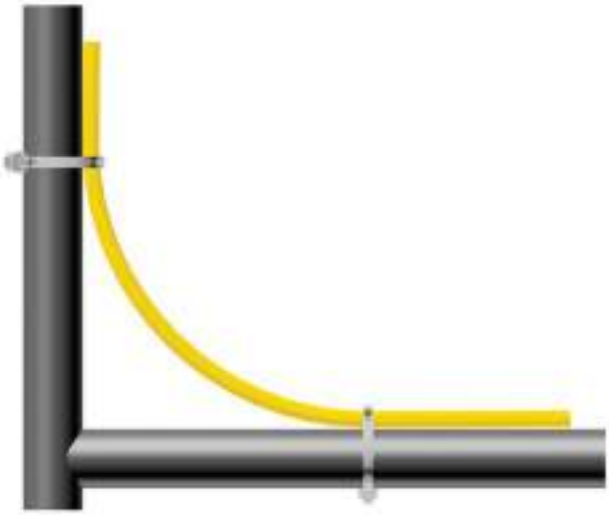
Specialty Cable Selection Guide

Selection Criteria	Armorfast MC/ITC	† ITC/PLTC PVC	† ITC/PLTC TPU	ITC/PLTC ER/DB PVC	ITC/PLTC ER/DB TPE
Ozone and UV resistance	Excellent	Excellent	Excellent	Excellent	Excellent
Temperatures	-25 °C to 105 °C	-30 °C to105 °C	-60 °C to 105 °C	-40 °C to 105 °C	-60 °C to 105 °C
Cold Bend test	-25 °C	-30 °C	-60 °C	-40 °C	-60 °C
Abrasion & Cut-through resistance	Fair	Fair	Excellent	Good	Very Good
Flexing (# of cycles)	2 million	2 million	2 million	2 million	2 million
Burn resistance	Fair/Good	Excellent	Excellent	Excellent	Excellent
Oxidation resistance	Excellent	Excellent	Excellent	Excellent	Excellent
Water resistance	Excellent	Excellent	Excellent	Excellent	Excellent
Cost	$	$	$$	$$	$$
Weld Slag resistance	Poor	Good	Good	Poor	Excellent
Flame Test					
UL Test standards	Vertical Tray	Vertical Tray	Vertical Tray	Vertical Tray	Vertical Tray
CSA Test standards	FT4	FT4	FT4	FT4	FT4
IEC Test Standards	60332-3 Cat. A	60332-3 Cat. A	60332-3 Cat. A		
IEEE Test Standards	1202	1202	1202	1202	1202
Chemical Resistance					
Acids	Fair/Good	Fair/Good	Good	Fair/Good	Good
Alkalines	Good	Good	Excellent	Good	Excellent
Alcohols	Poor/Fair	Poor/Fair	Poor/Fair	Poor/Fair	Excellent
Most Solvents	Poor/Fair	Poor/Fair	Poor	Poor/Fair	Poor
Oils	Good	Good	Excellent	Good	Good
Gasoline	Poor	Poor	Poor	Poor	Poor
Greases	Good	Good	Excellent	Good	Poor
Available in Cordsets					
Eurofast®	X	X	X	X	X
Picofast®			X		
Minifast®	X	X	X	X	X
Microfast®			X		
Multifast®		X	X	X	
V*fast®			X		

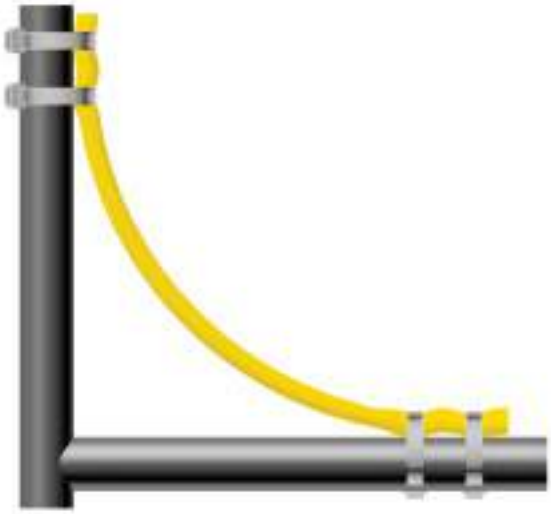
Tying Cables with Cable Ties

When tying cable with self locking cable ties, always leave the ties loose enough for the cables to slide freely under the tie. Over tightening will create stress concentrations that can cause the conductors to fail prematurely. Never tighten the tie to the point where the cable jacket becomes deformed or pinched.

Correct



Incorrect



Glossary of Terms

Abrasion Resistance
Ability of wire, cable or material to resist surface wear.
AC Alternating Current
Current in which the charge-flow periodically reverses and is represented by: I = I0cos (2 f + f) [I= Im cos (vt+f] where I is the current, I0 is the amplitude, f is the frequency, and f if the phase angle.
Ambient Temperature
The temperature of a medium (gas or liquid) surrounding an object.
Ampere (A)
The unit of current. One ampere is the current flowing through one ohm of resistance at one volt potential.
ANSI
Abbreviation for American National Standards Institute.
Armorfast®
Cordset with metal clad cable (NEC type MC)
Armored Cable
A cable provided with a wrapping of metal for mechanical protection.
AWG (American Wire Gauge)
The standard system used for designating wire diameter. The lower the AWG number, the larger the diameter. Also called the Brown and Sharpe (B&S) wire gauge.
AWM (Appliance Wiring Material)
A UL designation covering insulated wire and cable for internal wiring of appliances and equipment.
Binder
A spirally served tape or thread used for holding assembled cable components in place awaiting subsequent manufacturing operations.
Braid
A fibrous or metallic group of filaments interwoven in cylindrical form to form a covering over one or more wires.
Cable
A stranded conductor with or without insulation and other coverings (single-conductor cable), or a combination of conductors (multiple-conductor cable).
Color Code
Wire or circuit identification by color, utilizing solid colors, tracers, braids, surface printing, etc.
Contact Holder
Insulating device that holds the contacts in their proper position
Conductivity
The ability of a material to allow electrons to flow, measured by the current per unit of voltage applied. It is the reciprocal of resistivity.
Conductor
A wire (or combination of wires not insulated from one another) suitable for carrying electric current.
Conduit
A tube or trough in which insulated wires and cables are run.
Connector
A device used to provide rapid connect / disconnect service for electrical cable and wire terminations.
Contact
The parts of a connector that actually carry the electrical current and that are touched together or separated to control the flow.
Cable
A multiconductor cable made for operation in control circuits.
Cordset
Portable cord fitted with a wiring device at one or both ends.
Cord
A small, flexible insulated cable.
CPE (Chlorinated Polyethylene)
A flexible material with high tear strength and good resistance to most inorganic chemicals. It is inherently difficult to ignite. A Thermoset plastic.
Creepage
The conduction of electricity across the surface of a dielectric.
Crimp Termination
A connection in which a metal sleeve is secured to a conductor by mechanically crimping the sleeve with pliers, presses or automated crimping machines.
Current (I)
The rate of transfer of electricity. Practical unit is the ampere, which represents the transfer of one coulomb per second. In a simple circuit, current (I) produced by a cell or electromotive force (E) when there is an external resistance and internal resistance is:
I = E / R + r)
Current Carrying Capacity
The maximum current an insulated conductor can safely carry without exceeding its insulation and jacket temperature limitations.
Cut-Through Resistance
The ability of a material to withstand mechanical pressure, usually a sharp edge or small bending radius, without separation.
Dielectric Strength
The voltage that an insulator can withstand before breakdown occurs. Usually expressed as a voltage gradient (such as volts per mil).
Direct Current (DC)
An electric current that flows in only one direction.
Drain Wire
In a cable, the bare wire laid over the component or components and used as a ground connection.
Earth
British terminology for zero-reference ground.
Eurofast®
M12 threads, single key, 2 - 6, 8, 10, 12 pin
Extruded Cable
Cable with conductors that are uniformly insulated and formed by applying a homogeneous insulation material in a continuous extrusion process.
Fillers
Non-conducting components cabled with the insulated conductors or optical fibers to impart roundness, flexibility, tensile strength, or a combination of all three, to the cable.
Firefast®
High temperature protective sleeving.
Ground
An electrical connection to the earth, generally through a ground rod. Also a common return to a point of zero potential, such as the metal chassis of equipment.

Glossary of Terms

Ground Loop
A completed circuit between shielded pairs of a multiple pair created by random contact between shields. An undesirable circuit condition in which interference is created by ground currents when grounds are connected at more than one point.
Ground Potential
The potential of the earth. A circuit, terminal or chassis is said to be at ground potential when it is used as a reference point for other potentials in the system.
Hygroscopic
Capable of absorbing moisture from the air.
IEC
European Standardization agency; International Electrotechnical Commission.
Input
A signal (or power) which is applied to a piece of electrical apparatus or the terminals on the apparatus to which a signal or power is applied.
Insulation
A material having good dielectric properties that is used to separate close electrical components, such as cable conductors and circuit components.
ITC
Instrument Tray Cable. NEC classification for cable resistant to the spread of fire and suitable for use in cable trays. 150 V rating.
Irradiation
In insulation, the exposure of the material to high-energy emissions for the purpose of favorably altering the molecular structure.
Jacket
Pertaining to wire and cable, the outer protective covering, may also provide additional insulation.
LED
Light Emitting Diode used to indicate device status.
Line Voltage
The value of the potential existing on a supply or power line.
Load
A device that consumes power from a source and uses that power to perform a function.
MC
Metal Clad Cable. NEC classification for cable resistant to crush and impact based on an outer covering of metal.
Microfast®
½"-20 UNF threads, dual key, 2-6 pin
Minifast®
7/8"-16UN threads, 2 - 6 pin
Minifast B size
1"-16 UN threads, 6-8 pin
Minifast C size
1 1/8"-16 UN threads, 9, 10, 12 pin
Moisture Resistance
The ability of a material to resist absorbing moisture from the air or from water when immersed.
Molded Plug
A connector molded onto either end of a cord or cable.
MOV
Acronym for Metal Oxide Varistor. A solid state device used to suppress voltage surges \ spikes
MSHA
Mine Safety and Health Administration
Multibox®
Junction boxes, 4, 6, 8 and 16 port
Multifast®
M23 threads, 12, 16 and 19 pin or M27 threads, 26 and 28 pin
Mylar
DuPont trademark for polyester film.
National Electrical Code (NEC)
A set of regulations governing construction and installation of electrical wiring and apparatus in the United States, established by the American National Board of Fire Underwriters.
NEMA
National Electrical Manufacturers Association.
Neoprene
A synthetic rubber with good resistance to oil, chemical, and flame. Also called polychloroprene. A Thermoset plastic.
Noise
In a cable or circuit, any extraneous signal that tends to interfere with the signal normally present in or passing through the system.
NPN Output
Transistor output that switches the common or negative voltage to the load (current sinking). Load connected between output and positive supply.
Ohm (Ω)
The electrical unit of resistance. The value of resistance through which a potential difference of one volt will maintain a current of one ampere.
Ohm's Law
E = I x R. Voltage (E) is directly proportional to the product of current (I) and resistance of circuit.
Output
The useful power or signal delivered by a circuit or device.
PA (Polyamide, Nylon)
An abrasion-resistant thermoplastic with good chemical resistance, also known as polyamide.
Pentafast®
M5 threads, 3 and 4 pin
Picofast®
Snap lock or M8 threads, 3, 4 and 6 pin
Plastic
High-polymeric substances, including both natural and synthetic products, but excluding the rubbers, that are capable of flowing under heat and pressure.
Plug
A connector associated with being attached to a cable.
PLTC
Power Limited Tray Cable. NEC classification for cable resistant to the spread of fire and suitable for use in cable trays. 300 V rating.
PNP Output
Transistor output that switches the positive voltage to the load (current sourcing). Load connected between output and common.

Glossary of Terms

POM (Polyoxymethylene, Acetal, Delrin)
Polyoxymethylene - a crystalline thermoplastic polymer with a high melting point. It is suitable for mechanical parts or electrical insulators that require structural strength at above normal temperatures.

Potting
The sealing of a cable termination or other component with a liquid that thermosets into an elastomer.

PUR (Polyurethane)
Broad class of polymers noted for good abrasion and solvent resistance.

PVC (Polyvinyl Chloride)
A general-purpose thermoplastic widely used for wire and cable insulation and jackets.

Powerfast
1 3/8"-16 threads, 2, 3 and 4 pin or M23 threads, 6, 7 and 9 pins or M40 threads, 4-pin.

Resistance
A measure of the difficulty in moving electrical current through a medium when voltage is applied. It is measured in ohms.

Retractile Cord
A cord having a specially treated jacket or insulation so that it will retract like a spring. Retractility may be added to all or part of a cord's length.

RoHS
(Restriction of Hazardous Substances).

Rubber
A general term used to describe wire insulation made of thermosetting elastomers, such as natural or synthetic rubbers, neoprene, Hypalon, CPE butyl rubber and others.

Shield
In cables, a metallic layer placed around a conductor or group of conductors to prevent electrostatic or electromagnetic interference between the enclosed wires and external fields.

Signal
Any visible or audible indication that can convey information. Also, the information conveyed through a communication system.

SJOOW
Junior hard service, rubber insulated, portable cord with oil resistant rubber outer jacket. Stranded copper conductors with separator and individual oil and water resistant rubber insulation. Two or more color coded conductors cabled with filler, wrapped with separator and rubber jacketed overall. 300 V.

Solid Conductor
A conductor consisting of a single wire.

Solid State
Pertains to circuits and components using semiconductors without moving parts. Example: transistors, diodes, SCR, etc.

SOOW
Heavy duty, rubber-insulated portable cord with oil resistant rubber outer jacket. Stranded copper conductors with separator and individual oil and rubber insulation. Two or more color-coded conductors cabled with filler, wrapped with separator and rubber jacketed overall. 600 V.

STOW
Heavy duty, PVC insulated, portable cord with oil resistant PVC outer jacket. Stranded copper conductors, PVC insulation. Two or more color coded conductors cabled with filler, wrapped with separator and PVC jacketed overall. Approved for outdoor use. 600 V.

Stranded Conductor
A conductor composed of groups of wires twisted together.

Temperature Rating
The maximum temperature at which a material may be used in continuous operation without loss of its basic properties.

Thermoplastic
A material that will soften, flow or distort appreciably when subjected to heat and pressure.

Thermoset
A material that hardens or sets when heat is applied, and which, once set, cannot be re-softened by heating. The application of heat is called "curing".

TPE
Thermo Plastic Elastomer. Broad class of polymers noted for flexibility and weld slag resistance.

TPR
Thermo Plastic Rubber. Another name for TPE.

Twisted Pairs
A cable composed of two small, insulated conductors twisted together without a common covering.

Versafast™
M16 threads, 5, 6, 7, 8, 12, 14 and 19 pin

V*fast®
DIN 43650, type A, B, I and C

VDE
German approval agency.

Volt (V)
A unit of electrical pressure. One volt is the electrical pressure that will cause one ampere of current to flow through one ohm of resistance.

Voltage
The term most often used in place of electromotive force, potential difference, or voltage drop. Designates the electric pressure existing between two points that is capable of producing a current when a closed circuit is connected between these points.

Voltage Rating
The highest voltage that may be continuously applied to a wire in conformance with standards or specifications.

VW-1
A flammability rating established by Underwriters Laboratories for wires and cables that pass a specially designed vertical flame test, formerly designated FR-1.

Wicking
The longitudinal flow of a liquid in a wire or cable due to capillary action.

Notes

Notes

Warranty Terms and Conditions

RISK OF LOSS

Delivery of the equipment to a common carrier shall constitute delivery to the Purchaser and the risk of loss shall transfer at that time to Purchaser. Should delivery be delayed due to an act or omission on the part of the Purchaser, risk of loss shall transfer to the Purchaser upon notification by Turck Inc. that the order is complete and ready for shipment.

WARRANTIES

Turck Inc. (hereinafter "Turck") offers five (5) WARRANTIES to cover all products sold. They are as follows:

1) The **12-MONTH WARRANTY** is available for the products listed - generally those not covered by **LIFETIME**, **5-YEAR**, **24-MONTH** or **18-MONTH** warranty. No registration required.
2) The **18-MONTH WARRANTY** is available for the products listed - generally those not covered by **LIFETIME** or **5-YEAR WARRANTY**. No registration is required.
3) The **24-MONTH WARRANTY** is available for the products listed - generally those not covered by **LIFETIME**, **5-YEAR** or **18-MONTH**. No registration is required.
4) The **5-YEAR WARRANTY** is available generally for the products listed. No registration is required.
5) A **LIFETIME WARRANTY** is available for the products listed. It becomes effective when the accompanying TURCK **LIFETIME WARRANTY REGISTRATION** is completed and returned to Turck.

GENERAL TERMS AND CONDITIONS FOR ALL WARRANTIES

- **12-MONTH STANDARD WARRANTY**
- **18-MONTH STANDARD WARRANTY**
- **24-MONTH STANDARD WARRANTY**
- **5-YEAR WARRANTY**
- **LIFETIME WARRANTY**

Turck warrants the Products covered by the respective WARRANTY AGREEMENTS to be free from defects in material and workmanship under normal and proper usage for the respective time periods listed above from the date of shipment from Turck. In addition, certain specific terms apply to the various WARRANTIES.

THESE EXPRESS WARRANTIES ARE IN LIEU OF AND EXCLUDE ALL OTHER REPRESENTATIONS MADE - BOTH EXPRESSED AND IMPLIED. THERE ARE NO WARRANTIES OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE FOR PRODUCTS COVERED BY THESE TERMS AND CONDITIONS.

Turck warrants that the goods sold are as described, but no promise, description, affirmation of fact, sample model or representation, oral or written shall be part of an order, unless set forth in these terms and conditions, or are in writing and signed by an authorized representative of Turck. These WARRANTIES do not apply to any Product which has been subject to misuse, negligence, or accident - or to any Product which has been modified or repaired, improperly installed, altered, or disassembled - except according to Turck's written instructions.

These WARRANTIES are subject to the following conditions:

1) These WARRANTIES are limited to the electronic and mechanical performance only, as expressly detailed in the Product specifications and NOT to cosmetic performance.
2) These WARRANTIES shall not apply to any cables attached to, or integrated with the Product. However, the **18-MONTH WARRANTY** shall apply to cables sold separately by Turck.
3) These WARRANTIES shall not apply to any Products which are stored, or utilized, in harsh environmental or electrical conditions outside Turck's written specifications.
4) The WARRANTIES are applicable only to Products shipped from Turck subsequent to January 1, 1988.

ADDITIONAL SPECIFIC TERMS FOR:

(12-MONTH STANDARD WARRANTY) for Linear Displacement Transducers, EZ Track, RFID Products, Draw Wire Assemblies and Slip Rings.

(18-MONTH STANDARD WARRANTY) FOR Q-TRACK INDUCTIVE SENSORS, ULTRASONIC SENSORS, FLOW SENSORS, PRESSURE SENSORS, TEMPERATURE SENSORS, INCLINOMETERS, CABLES AND ALL NON-SENSING PRODUCTS SOLD BY TURCK INC. INCLUDING MULTI-SAFE, MULTI-MODUL, MULTI-CART AND RELATED AMPLIFIER PRODUCTS, RELAYS AND TIMERS.

(24-MONTH STANDARD WARRANTY) FOR ENCODERS excluding Draw Wire Assemblies.

5-YEAR WARRANTY FOR INDUCTIVE AND CAPACITIVE PROXIMITY SENSORS: The periods covered for the above WARRANTIES and Products shall be 12 MONTHS, 18-MONTHS, 24-MONTHS and 5-YEARS, respectively, from the date of shipment from Turck.

LIFETIME WARRANTY (OPTIONAL - REGISTRATION REQUIRED) FOR INDUCTIVE, INDUCTIVE MAGNET OPERATED AND CAPACITIVE PROXIMITY SENSORS SOLD TO THE ORIGINAL PURCHASER FOR THE LIFETIME OF THE ORIGINAL APPLICATION.

Warranty Terms and Conditions

THE FOLLOWING TERMS APPLY TO THE LIFETIME WARRANTY IN ADDITION TO THE GENERAL TERMS:

1) This WARRANTY shall be effective only when the LIFETIME WARRANTY REGISTRATION has been completed, signed by the End User and an authorized Turck Representative or Distributor and has been received by Turck no later than six (6) months after installation in the End User's Plant, or two (2) years from the date product was shipped from Turck, whichever is sooner.
2) This warranty is available only to Turck's authorized Representatives, Distributors and to the Original User. (The term "Original User" means that person, firm, or corporation which first uses the Product on a continuous basis in connection with the operation of a production line, piece of machinery, equipment, or similar device.) In the event the ownership of the product is transferred to a person, firm or corporation other than the Original User, this WARRANTY shall terminate.
3) This WARRANTY is applicable only to the Original Application. In the event the machinery, equipment, or production line to which the Product is connected, or on which it is installed, is substituted, changed, moved or replaced, the WARRANTY shall terminate.
4) This WARRANTY shall be valid only if the Product was purchased by the Original User from Turck, or from an authorized Turck Distributor, or was an integral part of a piece of machinery and equipment obtained by the Original user from an Original Equipment Manufacturer, which itself, was purchased directly from Turck or from an authorized Distributor.

PURCHASER'S REMEDIES

This Remedy shall apply to all WARRANTIES. If a Turck Distributor desires to make a WARRANTY Claim, the Distributor shall, if requested by Turck, ship the Product to Turck's factory in Minneapolis, Minnesota, postage or freight prepaid. If the User desires to make a WARRANTY Claim, they shall notify the authorized Turck Distributor from whom it was purchased or, if such Distributor is unknown, shall notify Turck. Turck shall, at its option, take any of the following two courses of action for any products which Turck determines are defective in materials or workmanship.

1) Repair or replace the Product and ship the Product to the Original Purchaser or to the authorized Turck Distributor, postage or freight prepaid; or
2) Repay to the Original Purchaser that price paid by the Original Purchaser; provided that if the claim is made under the LIFETIME WARRANTY, and such Product is not then being manufactured by Turck, then the amount to be repaid by Turck to the Original Purchaser shall be reduced according to the following schedule:

Number of Years Since Date of Purchase by Original Purchaser	Percent of Original Purchase Price To Be Paid by Turck
10	50%
15	25%
20	10%
More than 20	5%

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CONSIDER SAFETY AND PROTECTION PRECAUTIONS

Turck takes great care to design and build reliable and dependable products, however, some products can fail eventually. You must take precautions to design your equipment to prevent property damage and personal injury in the unlikely event of failure. As a matter of policy, Turck does NOT recommend the installation of electronic controls as the sole device FOR THE PROTECTION OF PERSONNEL in connection with power driven presses, brakes, shears and similar equipment and, therefore, the customer should build in redundancy or dual control using approved safety devices for these applications.

TURCK PRODUCTS

Turck Inc. sells its products through authorized distributors. These distributors provide our customers with technical support, service and local stock. Turck distributors are located nationwide – including all major metropolitan marketing areas.

For application assistance or for the location of your nearest Turck distributor, call:

1-800-544-7769

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