

FOUNDATION™ fieldbus, Cable Specifications

- Cable that Meets the Requirements of ISA/SP50 and FOUNDATION™ fieldbus Requirements for Type A Cable
- Cables are Available in 3-wire Versions with a Device Ground or 2-wire Versions

Type A Cable Specifications

- Temperature range: -40 to +105°C
- Governed by: ISA SP50.02 specification
- Sunlight Resistant
- PLTC and ITC Rated (CSA FT4)
- Impedance [Z_0 at f_c (31.25 kHz)] = 100 Ohms \pm 20 %
- Maximum Attenuation at 1.25 f_c (39 kHz) = 3.0 dB/km
- Maximum Capacitive Unbalance to Shield = 2 nF/km
- Maximum DC Resistance (per conductor) = 24 Ohms/km
- Maximum Propagation Delay Variance 0.25 f_c to 1.25 f_c = 1.7 μ s/km
- Conductor Cross-sectional area (wire size) = nominal 0.8 mm² (#18 AWG) or 1.2 mm² (#16 AWG)
- Shield Coverage = 100 % (90 % minimum)

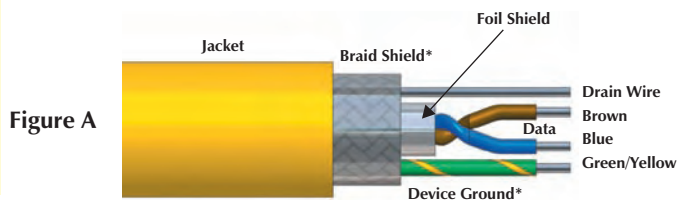


Figure A

*Available on some cable types

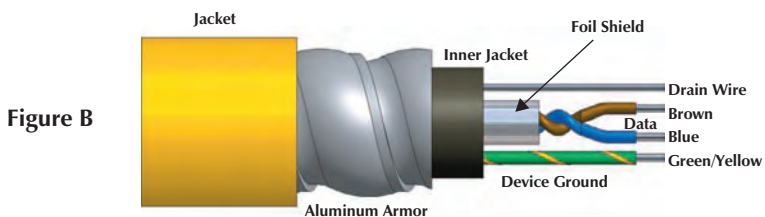


Figure B

Type	Approvals	Data Pair		Device Ground	Outer Jacket	Shields	Bulk Cable Part Number / Weight/300 M	Figure
		AWG Color Code	DCR (/1000 feet) Insulation	AWG Color Code	Material Color Nominal O.D.	Type Drain Wire		
490 AWM 2517 105°C 300 Volts	NEC ITC PLTC Open Wiring CEC [CMG] AWM I/II A/B FT4	2/18 AWG BU/BN	6.5 Ohms XLPE	18 AWG GN/YE	PVC Yellow 8.4 mm (.330 in)	Foil 20 AWG	RB50693-*M 58 lbs.	A
490B AWM 2517 105°C 300 Volts	NEC ITC PLTC Open Wiring CEC [CMG] AWM I/II A/B FT4	2/18 AWG BU/BN	6.5 Ohms XLPE	18 AWG GN/YE	PVC Blue 8.4 mm (.330 in)	Foil 20 AWG	RB50783-*M 58 lbs.	A
492A 105°C 300 Volts	NEC ITC PLTC/CM CEC [CMG HLBCD]	2/18 AWG BU/BN	6.5 Ohms XLPE	18 AWG GN/YE	Armor/PVC Yellow 14.9 mm (0.585 in)	Foil 18 AWG	RB50874-*M 96 lbs. armorfast®	B
492BA 105°C 300 Volts	NEC ITC PLTC/CM CEC [CMG HLBCD]	2/18 AWG BU/BN	6.5 Ohms XLPE	18 AWG GN/YE	Armor/PVC Blue 14.9 mm (0.585 in)	Foil 18 AWG	RB50803-*M 96 lbs. armorfast®	B
493 AWM 2517 105°C 300 Volts	NEC ITC PLTC Open Wiring CEC [CMG] AWM I/II A/B FT4	2/18 AWG BU/BN	6.5 Ohms XLPE	None	PVC Yellow 8.5 mm (.335 in)	Foil/Braid 20 AWG	RB50784-*M 59 lbs.	A
493B AWM 2517 105°C 300 Volts	NEC ITC PLTC Open Wiring CEC [CMG] AWM I/II A/B FT4	2/18 AWG BU/BN	6.5 Ohms XLPE	None	PVC Blue 8.5 mm (.335 in)	Foil/Braid 20 AWG	RB50786-*M 59 lbs.	A

* Indicates length in meters.
Standard cable lengths are 30, 75, 150, 225 and 300 meters.

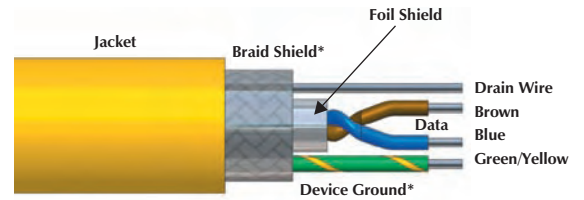
FOUNDATION™ fieldbus, Cable Specifications

- Cable that Meets the Requirements of ISA/SP50 and FOUNDATION™ fieldbus Requirements for Type A Cable
- Cables are Available in 3-wire Versions with a Device Ground or 2-wire Versions

Type A Cable Specifications

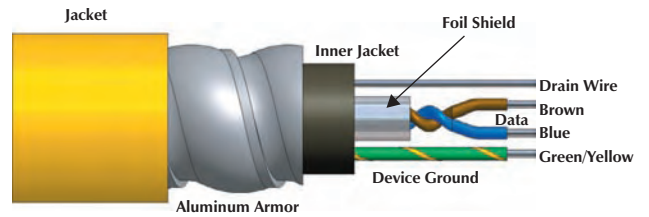
- Temperature range: -40 to +105°C
- Governed by: ISA SP50.02 specification
- Sunlight Resistant
- PLTC and ITC Rated (CSA FT4)
- Impedance [Z_0 at f_r (31.25 kHz)] = 100 Ohms \pm 20 %
- Maximum Attenuation at 1.25 f_r (39 kHz) = 3.0 dB/km
- Maximum Capacitive Unbalance to Shield = 2 nF/km
- Maximum DC Resistance (per conductor) = 24 Ohms/km
- Maximum Propagation Delay Variance 0.25 f_r to 1.25 f_r = 1.7 μ s/km
- Conductor Cross-sectional area (wire size) = nominal 0.8 mm² (#18 AWG) or 1.2 mm² (#16 AWG)
- Shield Coverage = 100 % (90 % minimum)

Figure A



*Available on some cable types

Figure B



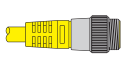
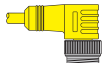
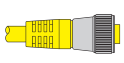
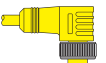


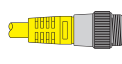

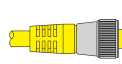
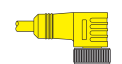

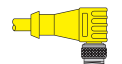
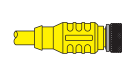
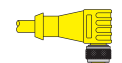
Type	Approvals	Data Pair		Device Ground	Outer Jacket	Shields	Bulk Cable Part Number / Weight/300 M	Figure
		AWG Color Code	DCR (/1000 feet) Insulation	AWG Color Code	Material Color Nominal O.D.	Type Drain Wire		
4930 AWM 2517 105°C 300 Volts	NEC ITC PLTC Open Wiring CEC [CMG] AWM I/II A/B FT4	2/18 AWG BU/BN	6.5 Ohms XLPE	None	PVC Orange 8.5 mm (.335 in)	Foil/Braid 20 AWG	RB50785-*M 59 lbs.	A
496 AWM 2517 105°C 300 Volts	NEC ITC PLTC Open Wiring CEC [CMG] AWM I/II A/B FT4	2/16 AWG BU/BN	4.1 Ohms XLPE	None	PVC Yellow 9.6 mm (.378 in)	Foil 18 AWG	RB50891-*M 64 lbs.	A
496BK AWM 2517 105°C 300 Volts	NEC ITC PLTC Open Wiring CEC [CMG] AWM I/II A/B FT4	2/16 AWG BU/BN	4.1 Ohms XLPE	None	PVC Black 9.6 mm (.378 in)	Foil 18 AWG	RB51300-*M 64 lbs.	A

* Indicates length in meters.
Standard cable lengths are 30, 75, 150, 225 and 300 meters.

TURCK

Network Media Products

FOUNDATION™ fieldbus, Cable and Cordset Selection Matrix

		<i>minifast</i> ®				<i>eurofast</i> ®	
		Pin (Male)		Socket (Female)		Pin (Male)	
		1  RSV	2  WSV	3  RKV	4  WKV	5  RSCV	
 Bare		RSV 49x-*M	WSV 49x-*M	RKV 49x-*M	WKV 49x-*M	RSCV 49x-*M	
<i>minifast</i>	Pin (Male)	1  RSV	RSV RSV 49x-*M	RSV WSV 49x-*M	RSV RKV 49x-*M	RSV WKV 49x-*M	RSV RSCV 49x-*M
	2  WSV		WSV WSV 49x-*M	WSV RKV 49x-*M	WSV WKV 49x-*M	WSV RSCV 49x-*M	
	3  RKV			RKV RKV 49x-*M	RKV WKV 49x-*M	RKV RSCV 49x-*M	
	4  WKV				WKV WKV 49x-*M	WKV RSCV 49x-*M	
<i>eurofast</i>	Pin (Male)	5  RSCV				RSCV RSCV 49x-*M	
	6  WSCV						
	7  RKCVC						
	8  WKCVC						

See pages R19 - R20 for dimensional drawings.





* Indicates length in meters.

x Indicates cable type.

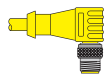
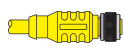
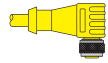
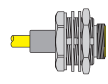
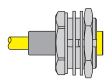
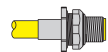
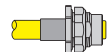
Refer to the Cordset Builder at www.turck.com for assistance with cordset/cable combinations.

Standard cable lengths are 0.3, 0.5, 1.0, 2.0, 2.5, 3.0, 3.5, 4.0, 5.0, 6.0, 8.0, 10, 15....50 Meters. Consult factory for other lengths.

For stainless steel coupling nuts change part number RSM ... to RSV, WSM ... to WSV. For *eurofast armorfast*® cable RSC ... to RSA.

<i>minifast</i>		Pinouts	<i>eurofast</i>	
Male	Female	1. Blue (- Voltage) 2. Brown (+ Voltage) 3. Bare (Shield Drain Wire) 4. Green/Yellow (Ground)	Male	Female
				

FOUNDATION™ fieldbus, Cable and Cordset Selection Matrix

<i>eurofast</i> ®			<i>minifast</i> ® Bulkhead		<i>eurofast</i> Bulkhead	
Pin (Male)	Socket (Female)		Pin (Male)	Socket (Female)	Pin (Male)	Socket (Female)
6  WSCV	7  RKCX	8  WKCX	9  RSFPV	10  RKFPV	11  FSFDV	12  FKFDV
WSCV 49x-*M	RKCX 49x-*M	WKCX 49x-*M	RSFPV 49x-*M	RKFPV 49x-*M	FSFDV 49x-*M	FKFDV 49x-*M
RSV WSCV 49x-*M	RSV RKCX 49x-*M	RSV WKCX 49x-*M	RSV RSFPV 49x-*M	RSV RKFPV 49x-*M	RSV FSFDV 49x-*M	RSV FKFDV 49x-*M
WSV WSCV 49x-*M	WSV RKCX 49x-*M	WSV WKCX 49x-*M	WSV RSFPV 49x-*M	WSV RKFPV 49x-*M	WSV FSFDV 49x-*M	WSV FKFDV 49x-*M
RKV WSCV 49x-*M	RKV RKCX 49x-*M	RKV WKCX 49x-*M	RKV RSFPV 49x-*M	RKV RKFPV 49x-*M	RKV FSFDV 49x-*M	RKV FKFDV 49x-*M
WKV WSCV 49x-*M	WKV RKCX 49x-*M	WKV WKCX 49x-*M	WKV RSFPV 49x-*M	WKV RKFPV 49x-*M	WKV FSFDV 49x-*M	WKV FKFDV 49x-*M
RSCV WSCV 49x-*M	RSCV RKCX 49x-*M	RSCV WKCX 49x-*M	RSCV RSFPV 49x-*M	RSCV RKFPV 49x-*M	RSCV FSFDV 49x-*M	RSCV FKFDV 49x-*M
WSCV WSCV 49x-*M	WSCV RKCX 49x-*M	WSCV WKCX 49x-*M	WSCV RSFPV 49x-*M	WSCV RKFPV 49x-*M	WSCV FSFDV 49x-*M	WSCV FKFDV 49x-*M
	RKCX RKCX 49x-*M	RKCX WKCX 49x-*M	RKCX RSFPV 49x-*M	RKCX RKFPV 49x-*M	RKCX FSFDV 49x-*M	RKCX FKFDV 49x-*M
		WKCX WKCX 49x-*M	WKCX RSFPV 49x-*M	WKCX RKFPV 49x-*M	WKCX FSFDV 49x-*M	WKCX FKFDV 49x-*M

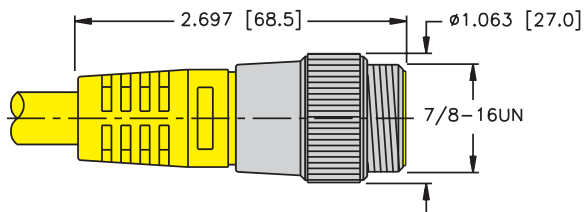
FOUNDATION fieldbus

FOUNDATION™ fieldbus, minifast® Cordset and Receptacle Connector Dimensions

Specifications

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

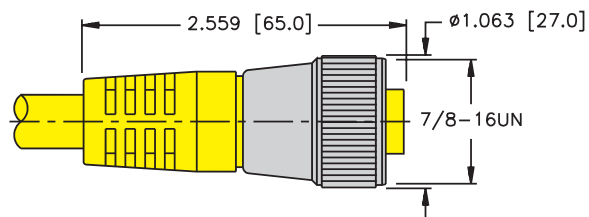
1



RSV ..

Pages R17 - R18

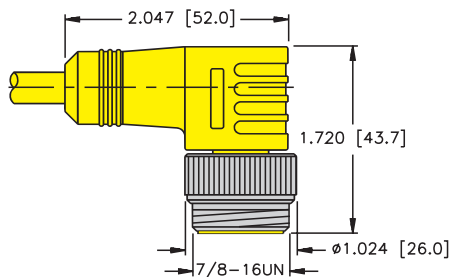
3



RKV ..

Pages R17 - R18

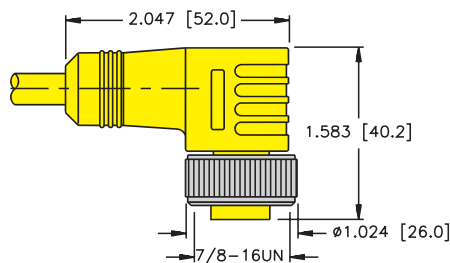
2



WSV ..

Pages R17 - R18

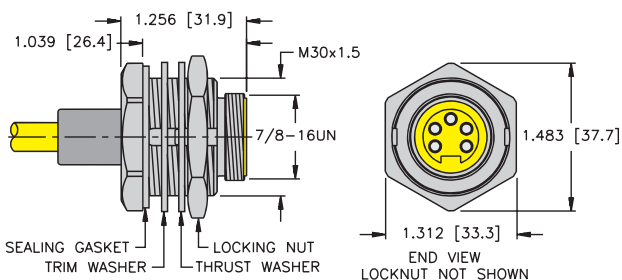
4



WKV ..

Pages R17 - R18

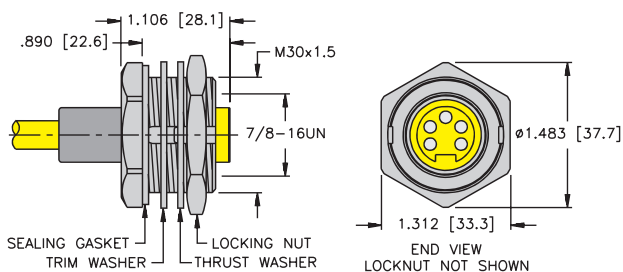
9



RSFPV ..

Pages R17 - R18

10



RKFPV ..

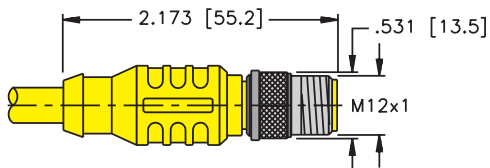
Pages R17 - R18

FOUNDATION™ fieldbus, eurofast® Cordset and Receptacle Connector Dimensions

Specifications

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

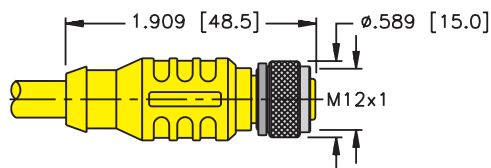
5



RSCV ..

Pages R17 - R18

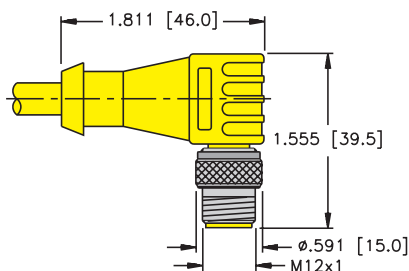
7



RKCVC ..

Pages R17 - R18

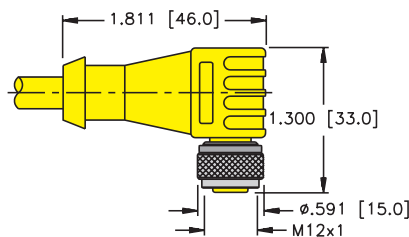
6



WSCV ..

Pages R17 - R18

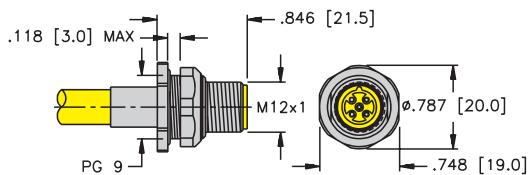
8



WKCVC ..

Pages R17 - R18

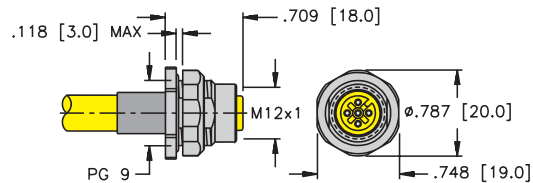
11



FSFDV ..

Pages R17 - R18

12



FKFDV ..

Pages R17 - R18

FOUNDATION fieldbus

FOUNDATION™ fieldbus, eurofast® Heavy Duty Cordsets

- Heavy Duty Coupling Nut Completely Supports the Molded Plug Body
- Provides Superior Strength



Housing	Part Number	Specs	Applications	Pinouts
	RSGV-49x-M	TPU (Polyurethane) Nickel Plated CuZn or Stainless Steel 250 V, 4 A -40° to +105°C	eurofast Heavy Duty Cordsets <ul style="list-style-type: none"> • Heavy coupling nut completely supports the molded plug body to provide superior strength 	Male
	RKGV-49x-M			Female

* Indicates length in meters.

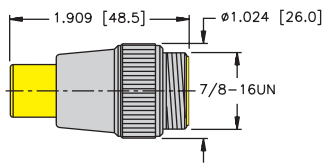
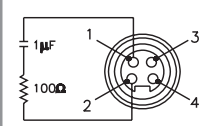
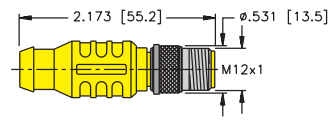
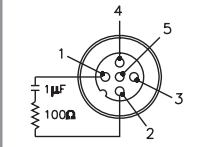
x Indicates cable type.

For nickel plated brass coupling nut change: RSGV ... to RSG ... or RKGV ... to RKG ...

FOUNDATION™ fieldbus, Terminating Resistors

- Terminating Resistors Stabilize and Minimize Reflections on the Bus Line
- A Terminating Resistor is Required at the Beginning and End of the Main Bus Line



Housing	Part Number	Specs	Application	Pinouts
	RSV 49-TR	Nickel Plated Brass or Stainless Steel 250 V, 4 A -40° to +75°C	minifast ® Terminating Resistor <ul style="list-style-type: none"> • Male minifast connector 	Male 
	RSEV 49-TR		eurofast ® Terminating Resistor <ul style="list-style-type: none"> • Male eurofast connector 	Male 

TURCK

Network Media Products

FOUNDATION™ fieldbus, Feed Through Connectors

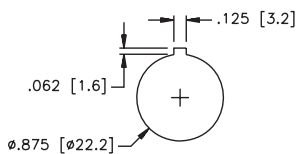
- Receptacles Provide Transition from Male to Female Connectors
- Available for Bulkhead and Feed Through Applications



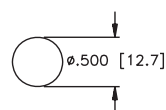
Housing	Part Number	Specs	Application	Pinouts
	RSFV RKFV 49/22	Nickel Plated CuZn or Stainless Steel 300 V, 9 A -40° to +75°C	minifast® Bulkhead Receptacle <ul style="list-style-type: none"> • Straight male/female feed-through • For use with minifast cordsets 	Male Female
	FKV FSV 49/M12	Nickel Plated CuZn or Stainless Steel 250 V, 4 A -40° to +75°C	eurofast® Bulkhead Receptacle <ul style="list-style-type: none"> • Straight male/female connector • For use with eurofast cordsets 	Male Female

Standard housing material is nickel plated brass. "RSF RKF .."; "RSFV RKFV .." indicates stainless steel housing.

Panel Cutout
RSF RKF 49/22




Panel Cutout
FKM FS 49/M12

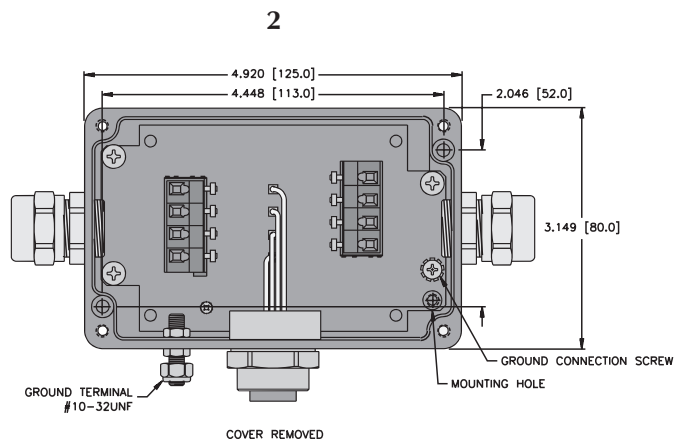
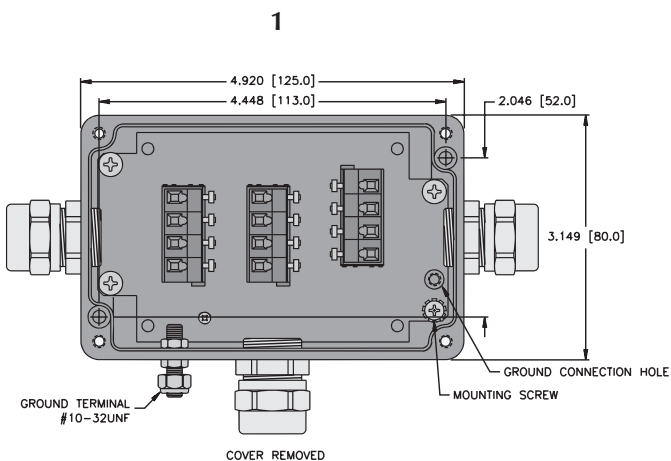


FOUNDATION™ fieldbus, Field Wireable Tee

- A Hybrid Connection System Offering Reliable Connections on Short Drops and Ease of Installation on Long Trunk Runs
- Features Standard *minifast*® Connector for the Drop Connection and Terminal Connectors on the Trunk Connections



Housing	Part Number	Specs	Application	Pinout
See Drawing 1	SPTT1-A49	Anodized Aluminum 250 V, 4 A -40° to +75°C	Field wireable terminals and (7/8-16UN) <i>minifast</i> connector on drop connection	Female 
See Drawing 2	SPTTM13-A49	NEMA 1, 3, 4, 6P and IEC IP 68		



Wiring Diagram

