

**Application Considerations**

**Installation Guidelines**

Turck's Powerfast products are easy to install by following a few simple guidelines:

- It is important to know the electrical requirements of the application and to select a cordset that has the proper amperage and voltage ratings for the application.
- Cables must be supported to prevent movement on the equipment. Per NFPA 79, the cable must be supported every 12 inches in a non-vertical run, every 36 inches in a vertical run and every 18 inches when suspended in air. The cable should also be supported at any connection points or terminations.
- The cordsets are not intended for disconnection under load. Turck offers Powerlok fittings that prevent the possibility of disconnection. These fittings are not required for use, but can be used as a precautionary measure.
- Power should never be supplied from the male connector. The source of power should always be supplied from the female connector.
- Use Turck closure caps to protect connectors from damage or dirt when not connected.

Note: Consult NFPA 79 (Electrical Standard for Industrial Machinery) for required over current protection of conductors and other selection and installation guidelines for industrial machine applications.

**Cable Options**

Turck offers multiple cable options for the Powerfast products. The majority of Turck's Powerfast products use cables that carry a tray rated, exposed run (TC-ER) approval. Select Turck Powerfast products may carry an additional STOOW cable approval, although versions that carry the STOOW and TC-ER approval are also available as TC-ER only.

Both the STOOW/TC-ER cable and the TC-ER only cable version are premium cable offerings. However, the TC-ER only version has a slightly reduced cable outer diameter. This feature offers more flexibility and is a more cost effective solution. This cable option can be designated by adding a "/S4000" to the end of the part description where applicable.

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

**Estimated hp ratings for D-Size Powerfast**

(Based on 85% motor efficiency and 90% power factor.)

Single Phase (2 Current Carrying Conductors)				
Pin Count	AWG	Current (amps)	Voltage (volts)	Power (hp)
3-pin	10 AWG	30	230	7
			460	14
			575	17
	12 AWG	25	230	5
			460	11
			575	14
	14 AWG	18	230	4
			460	8
			575	10

Three Phase (3 Current Carrying Conductors)				
Pin Count	AWG	Current (amps)	Voltage (volts)	Power (hp)
4-pin	10 AWG	25	230	10
			460	20
			575	25
	12 AWG	20	230	8
			460	16
			575	20
	14 AWG	15	230	6
			460	12
			575	15

Note: These tables are theoretical values and are for reference only. Values will vary based on load conditions, as well as condition, age and type of motor. Please consult a qualified electrician for specific product sizing requirements. Current limits for conductor gauge size taken from NFPA 79 2007 edition.

## 2 and 3-Wire Receptacles, Front Mount, 1/4-18 NPT Threads

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

<b>M23 Multifast® Receptacle</b>	<b>R</b>	<b>K</b>	<b>M</b>	<b>34</b>	-	<b>*M</b>	<b>/S..</b>
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**Gender**

K = female connector, female threads  
 S = male connector, male threads  
 Y = male connector, female threads

**Coupling Nut Material**

(blank) = nylon  
 M = nickel plated brass  
 V = 316 stainless steel (hex)

**Varieties**

(blank) = TC-ER ST00W PVC cable jacket  
 /S4000 = TC-ER PVC cable jacket  
 /S .. = consult factory, special  
 /CS .. = consult factory, special

**Length in Meters**

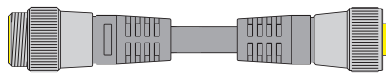
**Number of Wires / AWG / Color Codes**

34 = 3x14 AWG GN, BK, WH  
 44 = 4x14 AWG BK, WH, RD, GN

**Insertion Point of Extension Cable Second Prefix\***

\* Male connector listed first, female connector second  
 Example: **RSM RKM 44-2M**

### Extension Examples



**R S M**    **R K M**    **44** - **\*M**

## A-Size 7/8" Powerfast Receptacle Part Number Key

<b>A-Size 7/8" Powerfast Receptacle</b>	<b>R</b>	<b>K</b>	<b>F</b>	<b>V</b>	<b>34</b>	-	<b>*M</b>	<b>/NPT</b>	<b>/S..</b>
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**Gender**

K = female connector, female threads  
 S = male connector, male threads  
 X = female connector, male threads

**A-Size 7/8" Powerfast Receptacle**

**Housing Material**

(blank) = nickel plated brass  
 K = nylon  
 V = 316 stainless steel

**Varieties**

/S .. = consult factory, special  
 /CS .. = consult factory, special

**Connection Thread**

/NPT = 1/2-14 NPT threads  
 /M20 = M20 x 1.5 threads

**Length in Meters**

**Number of Wires / AWG / Color Codes**

34 = 3x14 AWG GN, BK, WH  
 44 = 4x14 AWG BK, WH, RD, GN

## A-Size 7/8" Powerfast Cordset Specifications

Mechanical	
<b>Mold material/color:</b>	PVC/Black
<b>Contact carrier material:</b>	PVC
<b>Coupling nut material:</b>	
Standard:	Nickel plated brass
Additional options:	Nylon 316 stainless steel
<b>Environmental protection:</b>	NEMA 1, 3, 4, 6P and IEC IP67
<b>Temperature rating:</b>	-40 °C to +90 °C (-40 °F to +194 °F)

Electrical	
<b>Contact material:</b>	Brass or copper with gold plating
<b>Cable jacket material/color:</b>	
Standard:	TC-ER STOOW TPE/Black
Additional options:	TC-ER TPE or TC-ER PVC/Black (/S4000 version)
<b>Ratings:</b>	15 Amps, 600 VAC







## A-Size 7/8" Powerfast Receptacle Part Number Key

Mechanical	
<b>Contact carrier material:</b>	PVC
<b>Housing material/plating:</b>	
Standard:	Nickel plated brass
Additional options:	Nylon 316 stainless steel
<b>Environmental protection:</b>	NEMA 1, 3, 4, 6P and IEC IP67
<b>Temperature rating:</b>	-40 °C to +105 °C (-40 °F to +221 °F)

Electrical	
<b>Contact material:</b>	Brass or copper with gold plating
<b>Cable jacket material/color:</b>	PVC
<b>Ratings:</b>	15 Amps, 600 VAC







## A-Size 7/8" Powerfast Cordset Selection Matrix

			1 	2 	3 	4 
			Straight Female	Straight Male	Right Angle Female	Right Angle Male
Pins	AWG	Current Rating	TC-ER STOOW	TC-ER STOOW	TC-ER STOOW	TC-ER STOOW
3	14	15	RKM 34-*M	RSM 34-*M		
4	14	15	RKM 44-*M	RSM 44-*M		

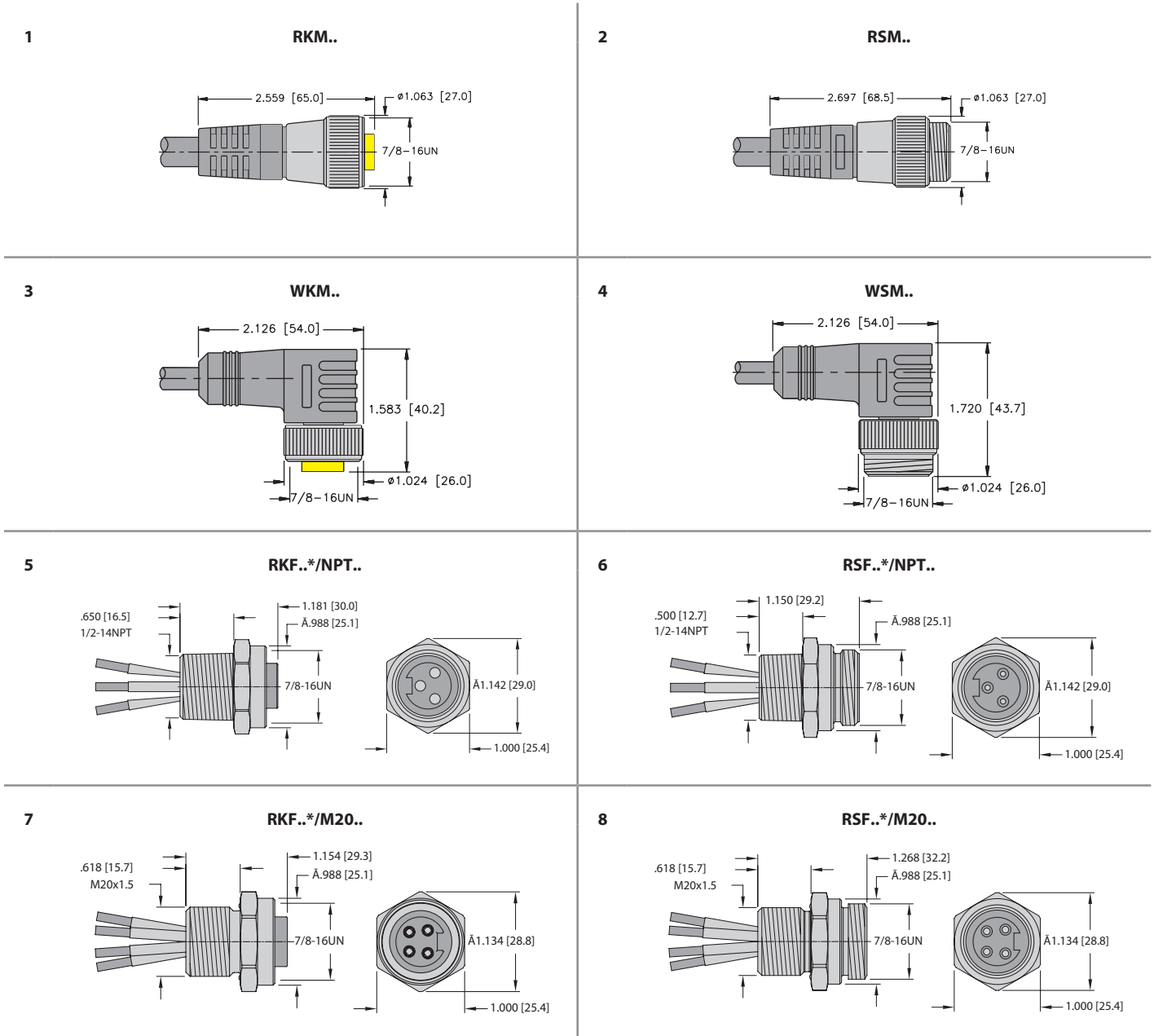
Pins	AWG	Current Rating	TC-ER	TC-ER	TC-ER	TC-ER
3	14	15	RKM 34-*M/S4000	RSM 34-*M/S4000	WKM 34-*M/S4000	WSM 34-*M/S4000
4	14	15	RKM 44-*M/S4000	RSM 44-*M/S4000	WKM 44-*M/S4000	WSM 44-*M/S4000

## A-Size 7/8" Powerfast Receptacle Selection Matrix

			5 	6 	7 	8 
			Female	Male	Female	Male
Pins	AWG	Current Rating	1/2-14 NPT Mounting Thread	1/2-14 NPT Mounting Thread	M20 Mounting Thread	M20 Mounting Thread
3	14	15	RKF 34-*M/NPT	RSF 34-*M/NPT	RSF 34-*M/M20	RKF 34-*M/M20
4	14	15	RKF 44-*M/NPT	RSF 44-*M/NPT	RSF 44-*M/M20	RKF 44-*M/M20

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

## A-Size 7/8" Powerfast Cordset and Receptacle Dimensions



A-Size 7/8" powerfast

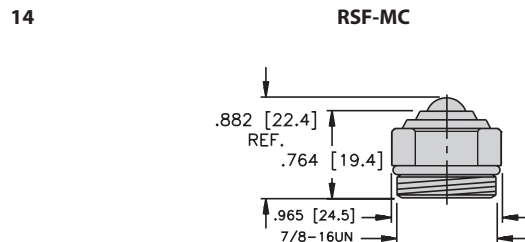
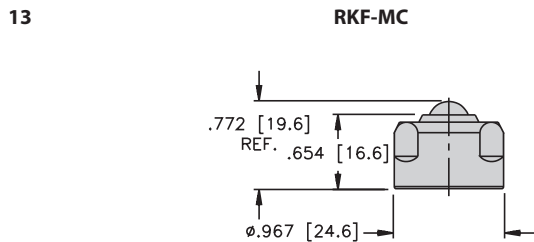
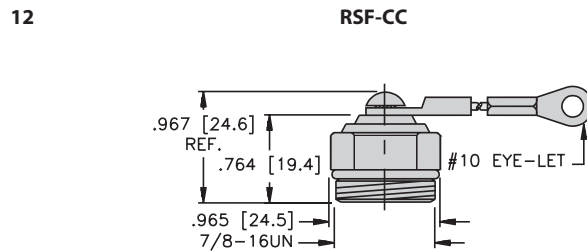
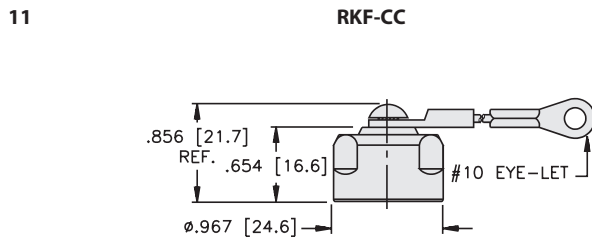
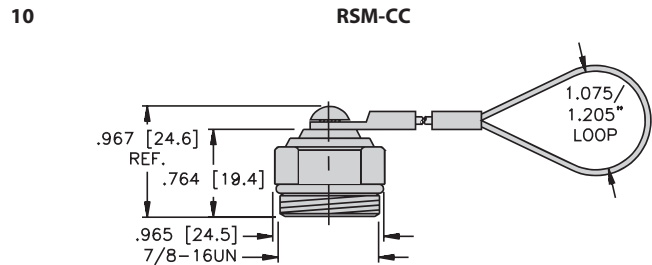
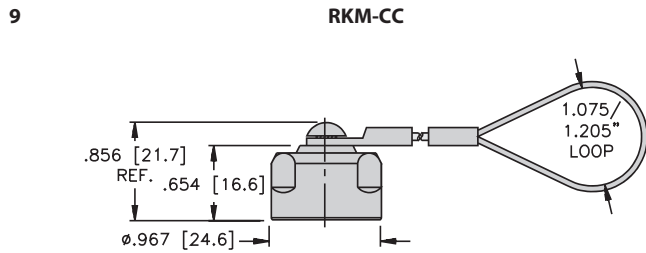
## A-Size 7/8" Powerfast Cordset and Receptacle Pinouts

3-Pin		Pinouts	4-Pin		Pinouts
Female	Male		Female	Male	
		1. GN 2. BK 3. WH			1. BK 2. WH 3. RD 4. GN

## A-Size 7/8" Powerfast Closure Cap Selection Matrix

		9	10	11	12	13	14
		Mates to male cordsets and receptacles	Mates to female cordsets and receptacles	Mates to male receptacles	Mates to female receptacles	Mates to male cordsets and receptacles	Mates to female cordsets and receptacles
Material	Thread	6" SS Loop Lanyard	6" SS Loop Lanyard	6" SS Lanyard with Eyelet	6" SS Lanyard with Eyelet	No Lanyard	No Lanyard
Nickel Plated Brass	7/8-16 UN	RKM-CC	RSM-CC	RKF-CC	RSF-CC	RKF-MC	RSF-MC
Stainless Steel	7/8-16 UN	RKMV-CC	RSMV-CC	RKfV-CC	RSfV-CC	RKFV-MC	RSfV-MC

## A-Size 7/8" Powerfast Closure Cap Dimensions



## A-Size 7/8" Powerlok

Part Number	Application
<b>LOCK-A POWER</b>	Nylon locking guard for straight A-Size Powerfast connectors

A-Size Powerlok Open



A-Size Powerlok Closed



## A-Size Powerfast Disconnect Switch Selection Matrix

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



Pins	AWG	Current Rating	Standard	M12 Auxiliary Output
3	14	15 Amps	RSF RKF 34/DS	RSF RKF 34/DS/AUX
4	14	15 Amps	RSF RKF 44/DS	RSF RKF 44/DS/AUX

A-Size 7/8" powerfast