

DMS-TP™

Dry-mated Sealed Connectors

The Cinch Advantage

Cinch's Mil/Aero Circulars DMS-TP™ connectors meet the highest standards of safety for the harsh environment applications. Designed as a solution for obstacles encountered in the Oil and Gas industry, it has proven effective in harsh environment applications with prolonged use in the presence of oil, gas, sand, mud, hydrocarbons, and salt. It is ideal where extreme changes in temperature, pressure, humidity and intense vibration are present.

These dry-mated sealed connectors provide high performance with cost efficiency. Nickel-plated brass shells are suited for excellent corrosion resistance, high electrical conductivity and resistance to biological fouling while providing reliable water tightness via two O-rings in the coupling interface. They are easy to mate and unmate, even with high contact density layouts. The scoop proof design makes blind mating possible and increases pin integrity.

Cinch Connectivity Solutions Mil/Aero Circular connectors provide the ideal solution in harsh or demanding environments against physical and environmental conditions.

Features

- 500 hours salt spray
- Sealed and reliable connectors
- Scoop proof for pin protection while mating
- High-performance sealing and mechanical retention
- High-grade materials for short term immersion

Applications

- Downhole oil and gas
- Offshore drilling
- Harsh environment applications
- Heavy industry applications



Specifications

Mechanical

Material	Insert	Nylatron (PA66 + M0S2)
	Contacts	Copper Alloy
	Shell and Subcomponents	Brass 360 per ASTM B16
	O-Ring	Gland Seal - Neoprene
Finish	Plunger	Hard Gold per MIL-DTL-45204, over Nickel underplate per QQ-N-290
	Contact	Electroless Nickel per AMS-C-26074

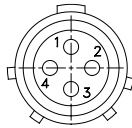
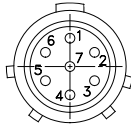
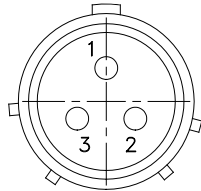
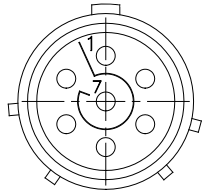
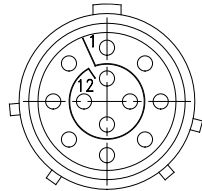
Electrical

Dielectric Withstanding Voltage	Service 1	1500V RMS 50Hz
	Service 2	2300V RMS 50Hz
Operating Voltage	Service 1	600V RMS 50Hz
	Service 2	1000V RMS 50Hz
Insulation Resistance		10,000 Mega ohms (MIN)
Contact Current Rating (Max per contact)	Size 20	7.5 amps
	Size 16	13 amps
	Size 14	17 amps
	Size 12	23 amps

Environmental

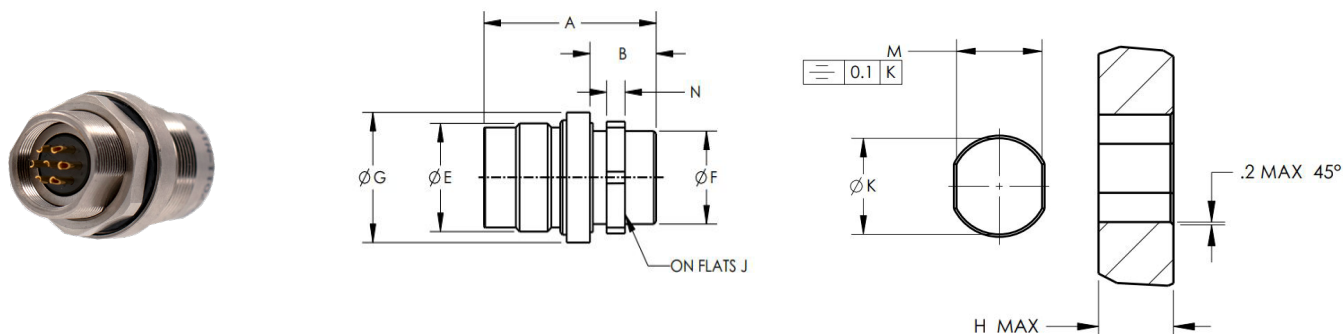
Operating Temperature		-20°C to +85°C
Salt Spray		500 Hours
Durability		500 Mating cycles
Shock		Static acceleration of 120g on each axis
Fluid Resistance		Oil, Alcohol, Petrol, Diesel Fuel, Sea Water
Water Tightness Service Rating		Unmated: 72 PSI, Mated: 435 PSI
Vibration (1 hour each Axis)	1 – 5 Hz	Acceleration = 0.1g
	5 – 22 Hz	Amplitude = 1mm
	22 – 50 Hz	Acceleration = 2g

Contact Arrangement

Size 10	04-16  4 Contact - 16GA Service 1	07-20  7 Contacts - 20GA Service 1	
Size 14	03-12  3 Contact - 12GA Service 2	07-14  7 Contact - 14GA Service 2	12-16  12 Contact - 16GA Service 21

Jam Nut Receptacle Specifications

Mechanical Dimensions



Dimensions in mm (in)										
Shell Size	A	B	ØE	ØF	ØG	H max	on flats J	ØK ^{+0.1/-0}	M ^{+0.1/-0}	N
10	37 (1.457)	14 (0.551)	M21 x 1	M18 x 0.75	25 (0.984)	10 (0.394)	22 (0.866)	18.2 (0.716)	16.2 (0.638)	4 (0.156)
14	37 (1.457)	13 (0.521)	M29 x 1	M25 x 0.75	34 (1.339)	9 (0.354)	30 (1.182)	25.2 (0.992)	23.2 (0.913)	4 (0.156)

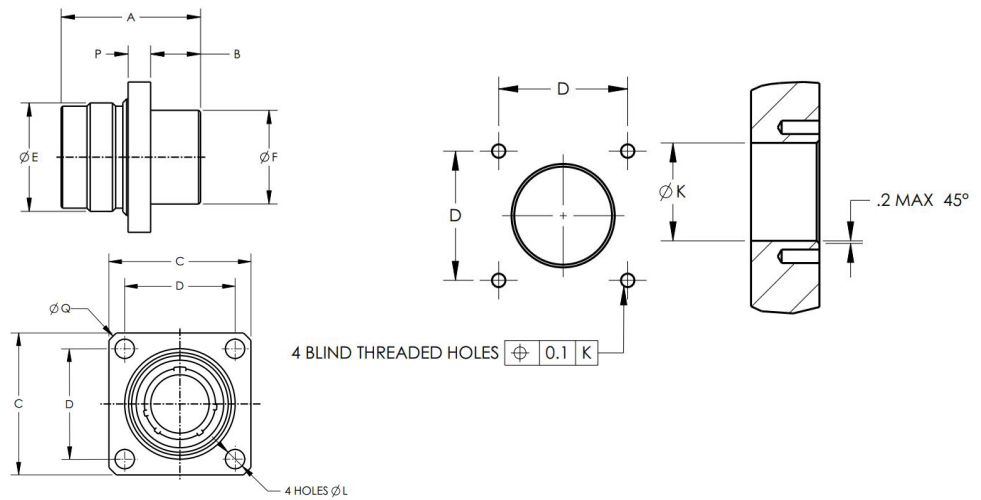
Ordering Information

Cinch Part Number	Receptacle	Type	Size	Contact Arrangement	TP Series P/N (Ref)
500-7009-N10	Male	Jam Nut	10	07 - 20	RER-M-10TPN-07-20
500-7011-N10	Female	Jam Nut	10	07 - 20	RER-F-10TPN-07-20
500-7018-N10	Male	Jam Nut	10	04 - 16	RER-M-10TPN-04-16
500-7019-N10	Female	Jam Nut	10	04 - 16	RER-F-10TPN-04-16
500-7004-N14	Male	Jam Nut	14	12 - 16	RER-M-14TPN-12-16
500-7007-N14	Female	Jam Nut	14	12 - 16	RER-F-14TPN-12-16
500-7010-N14	Male	Jam Nut	14	03 - 12	RER-M-14TPN-03-12
500-7008-N14	Female	Jam Nut	14	03 - 12	RER-F-14TPN-03-12
500-7018-N14	Male	Jam Nut	14	07 - 14	RER-M-14TPN-07-14
500-7019-N14	Female	Jam Nut	14	07 - 14	RER-F-14TPN-07-14

Flange Mount Receptacle Specifications



Mechanical Dimensions



Dimensions in mm (in)											
Shell Size	A	B	C	D	ØE	ØF	ØK +0.1/-0	ØL	P	ØQ Max	R
10	37 (1.457)	14 (0.551)	32 (1.260)	24 (0.945)	M21 x 1	18 (0.708)	18.2 (0.716)	4.3 (0.169)	5 (0.197)	42.5 (1.673)	M4
14	37 (1.457)	13 (0.521)	40 (1.575)	31 (1.220)	M29 x 1	25 (0.989)	25.2 (0.992)	5.3 (0.209)	6 (0.236)	53.5 (2.106)	M5

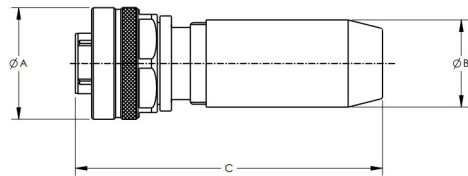
Ordering Information

Cinch Part Number	Receptacle	Type	Size	Contact Arrangement	TP Series P/N (Ref)
500-0009-N10	Male	Flange Mount	10	07 - 20	REC-M-10TPN-07-20
500-0011-N10	Female	Flange Mount	10	07 - 20	REC-F-10TPN-07-20
500-0018-N10	Male	Flange Mount	10	04 - 16	REC-M-10TPN-04-16
500-0019-N10	Female	Flange Mount	10	04 - 16	REC-F-10TPN-04-16
500-0004-N14	Male	Flange Mount	14	12 - 16	REC-M-14TPN-12-16
500-0007-N14	Female	Flange Mount	14	12 - 16	REC-F-14TPN-12-16
500-0010-N14	Male	Flange Mount	14	03 - 12	REC-M-14TPN-03-12
500-0008-N14	Female	Flange Mount	14	03 - 12	REC-F-14TPN-03-12
500-0018-N14	Male	Flange Mount	14	07 - 14	REC-M-14TPN-07-14
500-0019-N14	Female	Flange Mount	14	07 - 14	REC-F-14TPN-07-14



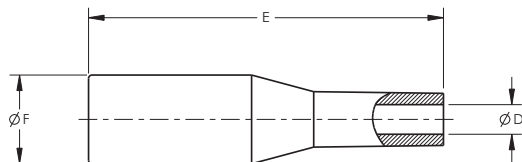
Plug Specifications

Mechanical Dimensions



Shell Size	Dimensions in mm (in)		
	ØA	ØB	C
10	24.5 (0.965)	19.55 (0.770)	72 (2.835)
14	33.5 (1.319)	28.55 (1.124)	90 (3.543)

Boot Mechanical Dimensions



Shell Size	Dimensions in mm (in)			
	Part Number	ØD	E	ØF
10	999-0600-101	5 (0.197)	81.28 (3.2)	20.32 (0.8)
	999-0600-102	6.8 (0.268)	81.28 (3.2)	20.32 (0.8)
	999-0600-103	8.5 (0.335)	81.28 (3.2)	20.32 (0.8)
14	999-0600-141	9 (0.354)	113.03 (4.45)	28.96 (1.14)
	999-0600-142	11 (0.433)	113.03 (4.45)	28.96 (1.14)
	999-0600-143	13 (0.512)	113.03 (4.45)	28.96 (1.14)

Plug Specifications



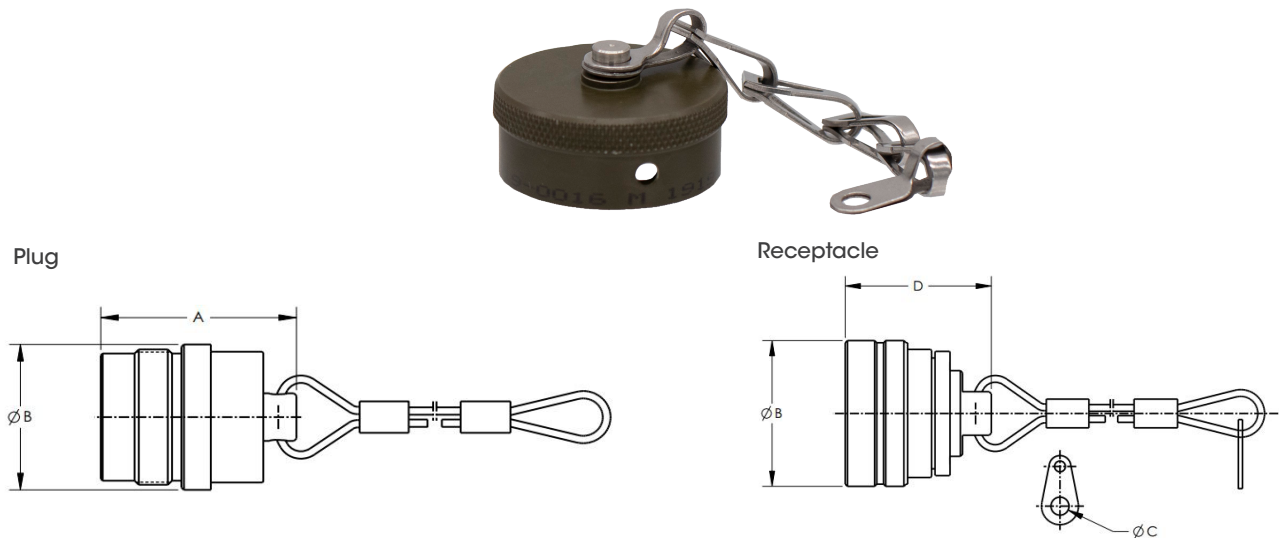
Ordering Information

Cinch Part Number	Plug	Type	Size	Contact Arrangement	Cable OD	TP Series P/N (Ref)	Boot Part Number
500-0016-N10-97	Female	Straight	10	07 - 20	9.7 mm	FED-F-10TPN-07-20-A97	999-0600-103
500-0016-N10	Female	Straight	10	07 - 20	8.7 mm	FED-F-10TPN-07-20-A87	999-0600-102
500-0016-N10-75	Female	Straight	10	07 - 20	7.5 mm	FED-F-10TPN-07-20-A75	999-0500-101
500-0017-N10-97	Male	Straight	10	07 - 20	9.7 mm	FED-M-10TPN-07-20-A97	999-0600-103
500-0017-N10	Male	Straight	10	07 - 20	8.7 mm	FED-M-10TPN-07-20-A87	999-0600-102
500-0017-N10-75	Male	Straight	10	07 - 20	7.5 mm	FED-M-10TPN-07-20-A75	999-0500-101
500-0020-N10	Male	Straight	10	04 - 16	9.7 mm	FED-M-10TPN-04-16-A97	999-0600-103
500-0020-N10-87	Male	Straight	10	04 - 16	8.7 mm	FED-M-10TPN-04-16-A87	999-0600-102
500-0020-N10-75	Male	Straight	10	04 - 16	7.5 mm	FED-M-10TPN-04-16-A75	999-0500-101
500-0021-N10	Female	Straight	10	04 - 16	9.7 mm	FED-F-10TPN-04-16-A97	999-0600-103
500-0021-N10-87	Female	Straight	10	04 - 16	8.7 mm	FED-F-10TPN-04-16-A87	999-0600-102
500-0021-N10-75	Female	Straight	10	04 - 16	7.5 mm	FED-F-10TPN-04-16-A75	999-0500-101
500-0003-N14-97	Male	Straight	14	12 - 16	9.7 mm	FED-M-14TPN-12-16-A97	999-0600-141
500-0003-N14	Male	Straight	14	12 - 16	11.0 mm	FED-M-14TPN-12-16-A110	999-0600-141
500-0003-N14-138	Male	Straight	14	12 - 16	13.8 mm	FED-M-14TPN-12-16-A138	999-0600-142
500-0012-N14-97	Female	Straight	14	12 - 16	9.7 mm	FED-F-14TPN-12-16-A97	999-0600-141
500-0012-N14	Female	Straight	14	12 - 16	11.0 mm	FED-F-14TPN-12-16-A110	999-0600-141
500-0012-N14-138	Female	Straight	14	12 - 16	13.8 mm	FED-F-14TPN-12-16-A138	999-0600-142
500-0013-N14-97	Female	Straight	14	07 - 14	9.7 mm	FED-F-14TPN-07-14 A97	999-0600-141
500-0013-N14-110	Female	Straight	14	07 - 14	11.0 mm	FED-F-14TPN-07-14 A110	999-0600-141
500-0013-N14	Female	Straight	14	07 - 14	13.8 mm	FED-F-14TPN-07-14 A138	999-0600-142
500-0015-N14-97	Male	Straight	14	07 - 14	9.7 mm	FED-M-14TPN-07-14-A97	999-0600-141
500-0015-N14-110	Male	Straight	14	07 - 14	11.0 mm	FED-M-14TPN-07-14-A110	999-0600-141
500-0015-N14	Male	Straight	14	07 - 14	13.8 mm	FED-M-14TPN-07-14-A138	999-0600-142
500-0020-N14	Male	Straight	14	03 - 12	9.7 mm	FED-M-14TPN-03-12-A97	999-0600-141
500-0020-N14-110	Male	Straight	14	03 - 12	11.0 mm	FED-M-14TPN-03-12-A110	999-0600-141
500-0020-N14-138	Male	Straight	14	03 - 12	13.8 mm	FED-M-14TPN-03-12-A138	999-0600-142
500-0021-N14	Female	Straight	14	03 - 12	9.7 mm	FED-F-14TPN-03-12-A97	999-0600-141
500-0021-N14-110	Female	Straight	14	03 - 12	11.0 mm	FED-F-14TPN-03-12-A110	999-0600-141
500-0021-N14-138	Female	Straight	14	03 - 12	13.8 mm	FED-F-14TPN-03-12-A138	999-0600-142



Dust Cap Specifications

Mechanical Dimensions



Shell Size	Dimensions in mm (in)				
	A	B	ØC	D	E
10	39 (1.535)	24 (0.945)	4.2 (0.165)	34 (1.339)	25 (0.984)
14	40 (1.575)	32 (1.260)	4.2 (0.165)	34 (1.339)	34 (1.339)

Ordering Information

Cinch Part Number	Description	Type	Size	TP Series P/N (Ref)
500-PSCC-N10	Plug	Cap	10	BEFC-10TP
500-RSCC-N10	Receptacle	Cap	10	BERC-10TP
500-PSCC-N14	Plug	Cap	14	BEFC-14TP
500-RSCC-N14	Receptacle	Cap	14	BERC 14TP

Mouser Electronics

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