

Hazardous Location Interconnect Systems

Enhanced-survivability connector assemblies rated for C1D2 and C2D2 locations.



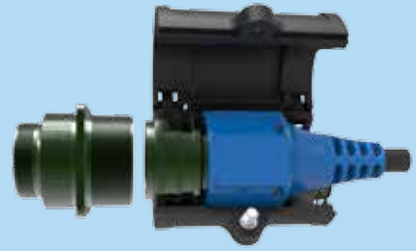
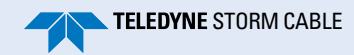


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TELEDYNE CABLE SOLUTIONS

Teledyne Cable Solutions (TCS), an alliance formed of Teledyne Storm Cable and Teledyne VariSystems, provides bulk wire and cable and overmolded cable assemblies to the oil and gas, marine, defense, and transit industries.

With over 50 years of dedicated experience providing multiconductor cable and interconnect solutions for harsh environments, TCS meets challenges for application-specific multi-core cables and complex overmolded cable assemblies and harnesses.



Why Teledyne Cable Solutions?

We build cables & assemblies that solve cable problems.



ENGINEERED SOLUTIONS

- Proven processes to solve complex interconnect challenges
- Engineering, CAD, and technical sales support
- Product design from 3D modeling to comprehensive testing
- Comprehensive Quality & Continuous Improvement Programs

THE RIGHT TOOLS FOR THE JOB

- A wide variety of components, materials, and capabilities to develop custom solutions
- Over 50 years of dedicated experience in providing cable and interconnect solutions

QUICK TIME-TO-MARKET

- Rapid prototyping
- Fast deliveries
- Low minimum orders

Hazardous Location Interconnect Systems

Interconnect packages rated for hazardous environments

Key Features:

- Turnkey assembly includes aluminum alloy connectors (receptacle and plug) with pressure molded resilient insert, hazardous location rated cable, locking mechanism, and dust cap with lanyard
- Qualified for Class I, Division II (C1D2) and Class II, Division II (C2D2) hazardous locations

Benefits:

- An alternative to installing wiring in conduit, saving time and material costs
- Cables are constructed with Telethane®, a proprietary jacket material developed to withstand extreme environments



TYPICAL APPLICATIONS

- Petroleum refineries
- Gasoline storage and dispensing areas
- Spray finishing areas
- Aircraft hangars and fuel servicing areas
- Utility gas plants
- Operations involving storage and handling of liquefied petroleum gas or natural gas
- Oilfield tank farms

Standards:

- Conforms to ISA STD. 12.12.01 & UL STDS. 1977, 817:2015, and 2238
- Certified to CSA STDS. C22.2 Nos. 213, 182.3-M1987, and No. 21-14
- Non-incendive Electrical Equipment for Use in Class I and II, Division 2 and Class III, Divisions 1 and 2 Hazardous (Classified) Locations [ISA 12.12.01:2015 Ed.6]
- Non-incendive Electrical Equipment for Use in Class I and II, Division 2 and Class III, Divisions 1 and 2 Hazardous (Classified) Locations [CSA C22.2#213:2015]
- Cord Sets and Power-Supply Cords [UL 817:2015 Ed.12 +R: 09Mar2016]
- UL 2238 Issue: 2011/05/04 Cable Assemblies and Fittings for Industrial Control and Signal Distribution
- CSA C22.2 No. 21-14, Cord sets and power-supply cords, February 2014

Ratings:

- Voltage: 300V Maximum
- Current ratings: A) 9pin models and below = 5 amps B) Models larger than 9pin = 2.5amps
- Maximum connection cycles: 400
- Cable Assembly C1D2 & CIID2 Class I Division 2 ABCD Class II Division 2 EFG Temperature Code: T6 Ambient Temperature Range: -25°C<=Tamb<=+39°C

Hazardous Location Interconnect Systems



Hazardous location cables provide an alternative to installing wiring in conduit, saving time and material costs, and allowing for easy maintenance and repair. Conduit systems, although effective at keeping vapors and liquids from migrating through the cable system, are often labor-intensive to install and maintain. TCS hazardous location cables offer the same amount of protection from the elements as conduit systems with a simpler, less expensive installation process.

Teledyne Cable Solutions has developed a range of North American agency-approved, cost-effective, qualified interconnect products rated for Class I, Division II (C1D2) and Class II, Division II (C2D2) hazardous locations. The turn-key assembly includes aluminum alloy connectors (receptacle and plug) with pressure molded resilient insert, hazardous location rated cable, a ruggedized locking mechanism, and a dust cap with lanyard.

A selection of product sizes from 16 and larger is available in a wide range of pin counts.

The Teledyne hazardous location cables are constructed with Telethane®, a proprietary insulating jacket material targeted for applications where heat and oil resistance exceeds traditionally processed thermoplastics. Rubber-like flexibility at temperatures down to -40°C and heat-stabilized, and can be rated at 1000 hours at 175°C, this material replaces traditional cross-linked rubber at a significantly lower cost.

Hazardous Location Chart

Guide to Equipment certification requirements for North America

PROTECTION CONCEPTS [NEC® & CEC®]						
Type of Protection	Code (EPL)	Country	Class	Division/Zone	Standard	Basic Concept of Protection
ELECTRICAL EQUIPMENT FOR FLAMMABLE GAS, VAPORS AND MIST - CLASS I						
General Requirements	- AEx Ex	US US CA	Class I Class I Class I	Division 1 & 2 Division 1 & 2 Division 1 & 2	FM 3600 ISA 60079-0 CSA C22.2 No. 60079-0	No arcs, sparks or hot surfaces
Increased Safety	AEx e (Gb) Ex e (Gb)	US CA	Class I Class I	Zone 1 Zone 1	ISA 60079-7 CSA C22.2 No. 60079-7	
Non-Incendive	NI NI	US CA	Class I Class I	Division 2 Division 2	ISA 12.12.01/FM 3611 CSA C22.2 No. 213	
Non-Sparking	AEx nA (Gc) Ex nA (Gc)	US CA	Class I Class I	Zone 2 Zone 2	ISA 60079-15 CSA C22.2 No. 60079-15	Contain the explosion and extinguish the flame
Explosion-proof	XP XP	US CA	Class I Class I	Division 1 Division 1	UL 1203 CSA C22.2 No. 30	
Flame-proof	AEx d (Gb) Ex d (Gb)	US CA	Class I Class I	Zone 1 Zone 1	ISA 60079-1 CSA C22.2 No. 60079-1	
Powder Filled	AEx q (Gb) Ex q (Gb)	US CA	Class I Class I	Zone 1 Zone 1	ISA 60079-5 CSA C22.2 No. 60079-5	Limit energy of sparks and surface-temperature
Enclosed Break	AEx nC (Gc) Ex nC (Gc)	US CA	Class I Class I	Zone 2 Zone 2	ISA 60079-15 CSA C22.2 No. 60079-15	
Intrinsic Safety ¹	IS IS AEx ia (Ga) AEx ib (Gb) AEx ic (Gc) Ex ia (Ga) Ex ib (Gb)	US CA US US US CA CA	Class I Class I Class I Class I Class I Class I Class I	Division 1 Division 1 Zone 0 Zone 1 Zone 2 Zone 0 Zone 1	UL 913 / FM 3610 CSA C22.2 No. 157 ISA 60079-11 ISA 60079-11 ISA 60079-11 CSA C22.2 No. 60079-11 CSA C22.2 No. 60079-11	
Limited Energy	Ex nL (Gc)	CA	Class I	Zone 2	CSA C22.2 No. 60079-15	0.173 (4.4) 0.173 (4.4) 750 750
Pressurized	Type X	US	Class I	Division 1	NFPA 496 (FM 3620)	
	Type X	CA	Class I	Division 1	NFPA 496	
	Type Y	US	Class I	Division 1	NFPA 496 (FM 3620)	
	Type Y	CA	Class I	Division 1	NFPA 496	
	Type Z	US	Class I	Division 2	NFPA 496 (FM 3620)	
	Type Z	CA	Class I	Division 2	NFPA 496	
	AEx px (Gb)	US	Class I	Zone 1	ISA 60079-2	
	Ex px (Gb)	CA	Class I	Zone 1	CSA C22.2 No. 60079-2	
AEx py (Gb)	US	Class I	Zone 1	ISA 60079-2		
Ex py (Gb)	CA	Class I	Zone 1	CSA C22.2 No. 60079-2		
AEx pz (Gc)	US	Class I	Zone 2	ISA 60079-2		
Ex pz (Gc)	CA	Class I	Zone 2	CSA C22.2 No. 60079-2		
Restricted Breathing	AEx nR (Gc) Ex nR (Gc)	US CA	Class I Class I	Zone 2 Zone 2	ISA 60079-15 CSA C22.2 No. 60079-15	
Encapsulation	AEx ma (Ga) A	US	Class I	Zone 0	ISA 60079-18	
	Ex mb (Gb) A	US	Class I	Zone 2	ISA 60079-18	
	Ex mc (Gc)	US	Class I	Zone 1	ISA 60079-18	
	Ex m	CA	Class I	Zone 1	CSA C22.2 No. 60079-18	
Oil Immersion	AEx o (Gb) Ex o (Gb)	US CA	Class I Class I	Zone 1 Zone 1	ISA 60079-6 CSA C22.2 No. 60079-6	

Hazardous Location Chart

Guide to Equipment certification requirements for North America

PROTECTION CONCEPTS [NEC® & CEC®]						
Type of Protection	Code (EPL)	Country	Class	Division/Zone	Standard	Basic Concept of Protection
ELECTRICAL EQUIPMENT FOR COMBUSTIBLE DUST - CLASS II & CLASS III						
General Requirements	- - - Ex	US CA US US	Class I Class II Class III -	Division 1 & 2 Division 1 & 2 Division 1 & 2 Zone 20, 21, 22	FM 3600 CSA C22.2 No. 25 FM 3600 ISA 60079-0	Keep combustible dust out
Dust-Ignition proof	DIP	US CA	Class I Class I	Division 1 Division 1	UL 1203 CSA C22.2 No. 25	
Dust Protected	NI	US CA	Class II Class II	Division 2 Division 2	ISA 12.12.01 / FM 3611 CSA C22.2 No. 25	
Enclosure	AEx ta (Da)	US	Class II	Zone 20 ²	ISA 60079-31	
	AEx tb (Db)	US	Class II	Zone 21 ²	ISA 60079-31	
	AEx tc (Dc)	US	Class II	Zone 22 ²	ISA 60079-31	
	Ex ta	CA	Class II	Division 1	CSA C22.2 No. 60079-31	
	Ex ta	CA	Class III	Division 1	CSA C22.2 No. 60079-31	
	Ex tb	CA	Class II	Division 1	CSA C22.2 No. 60079-31	
Ex tb	CA	Class III	Division 1	CSA C22.2 No. 60079-31		
Ex tc	CA	Class II	Division 2	CSA C22.2 No. 60079-31		
Ex tc	CA	Class III	Division 2	CSA C22.2 No. 60079-31		
Fiber & Flying Protection	- -	US CA	Class III Class III	Division 1 & 2 Division 1 & 2	UL 1203 / ISA 12.12.01 CSA C22.2 No. 25	
Encapsulation	AEx maD	US	Class II	Zone 20	ISA 61241-18	
	AEx mbD	US	Class II	Zone 21	ISA 61241-18	
	Ex ma	CA	Class II	Division 1	CSA C22.2 No. 60079-18	
	Ex ma	CA	Class III	Division 1	CSA C22.2 No. 60079-18	
	Ex mb	CA	Class II	Division 1	CSA C22.2 No. 60079-18	
	Ex mb	CA	Class III	Division 1	CSA C22.2 No. 60079-18	
	Ex mc	CA	Class II	Division 2	CSA C22.2 No. 60079-18	
	Ex mc	CA	Class III	Division 2	CSA C22.2 No. 60079-18	
Pressurization	Type X	US	Class II	Division 1	NFPA 496 (FM 3620)	
	Type X	CA	Class II	Division 1	NFPA 496	
	Type Y	US	Class II	Division 1	NFPA 496 (FM 3620)	
	Type Y	CA	Class II	Division 1	NFPA 496	
	Type Z	US	Class II	Division 2	NFPA 496 (FM 3620)	
	Type Z	CA	Class II	Division 2	NFPA 496	
	AEx pD	US	Class II	Zone 21	ISA 62141-2	
Intrinsic Safety	IS	US	Class II	Division 1	UL 913 / FM 3610	
	AEx iaD	US	Class II	Zone 20	ISA 61241-11	
	AEx ibD	US	Class II	Zone 21	ISA 61241-11	
	IS	US	Class III	Division 1	UL 913 / FM 3610	

Note 1: For associated intrinsically safe apparatus suitable for installation in a hazardous location, the symbol for the type of protection "ia" or "ib" are enclosed within square brackets on the marking, e.g. AEx d [ia] IIC T4. For intrinsically safe apparatus not suitable for installation in a hazardous location, both the symbol "Ex" or "AEx" and the symbol for the type of protection "ia" or "ib" are enclosed within the same square brackets on the marking, e.g. [AEx ia] IIC; in this case, a temperature class is not included.

Note 2: Zones 20-22 are not currently classified in the Canadian Electric Code (CEC®).

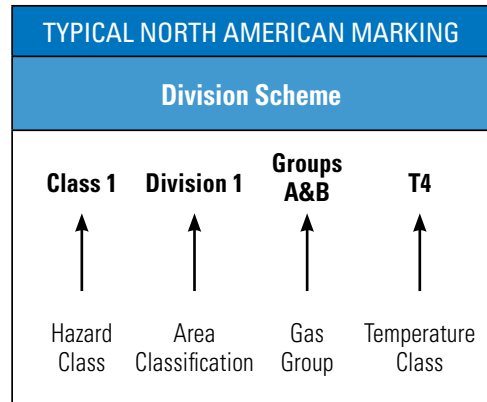


Hazardous Location Chart

Guide to Equipment certification requirements for North America

STANDARDS BY PRODUCT TYPES		
Product Category	Standard(s)	Class & Division
Luminaires	UL 844 "Luminaires for use in Hazardous (Classified) Locations"	Class I, Divisions 1 & 2 Class II, Divisions 1 & 2 Class I, Zones 1 & 2 Class II, Zones 20, 21, 22 Class III
	CSA C22.2 No. 137 "Electric luminaires for use in hazardous locations"	Class I, Divisions 1 & 2 Class II, Divisions 1 & 2
Motors and Generators (Explosion-proof & Dust-ignition proof)	UL 674 "Electric motors and generators for use in hazardous (classified) locations" ³	Class I, Division 1, Groups B,C,D Class I, Zone 1, Groups IIA, IIB, IIB+H2 Class II, Division 1, Groups E,F,G Class II, Zones 20, 21
	CSA C22.2 No. 145 "Electric motors and generators for use in hazardous (classified) locations" ³	
Industrial Control Panels	UL 698A "Industrial control panels relating to hazardous (classified) locations"	Associated apparatus for the following hazardous (classified) locations: Class I, Division 1 Class I, Zone 0 and Zone 1 Class II, Division 1 Class III, Division 1 Class II, Zone 20 and Zone 21
	CSA C22.2 No. 14 "Industrial control equipment" Section 4.18	Control panels located in ordinary locations with intrinsically safe barriers: Class I, Division 1 Class I, Zone 0 and Zone 1 Class II, Division 1
Flashlights	UL 783 "Electric flashlights and lanterns for use in hazardous (classified) locations"	Class I, Divisions 1 & 2 Class II, Divisions 1 & 2 Class I, Zones 1 & 2
Heaters	UL 823 "Electric heaters for use in hazardous (classified) locations"	Class I, Divisions 1 & 2 Class II, Divisions 1 & 2 Class III, Divisions 1 & 2 Class I, Zone 1 Class II, Zones 20, 21, and 22
Fuel Dispensing Equipment	UL 87 "Power-operated dispensing devices for petroleum products"	Areas classified for fuel dispensing equipment per national and local codes
	UL 87A Dispensers for gasoline and ethanol blends, E0 to E85	
	UL 87B Dispensers for diesel fuel, biodiesel blends to B20, kerosene and fuel oil	
	UL 87C Dispensers for diesel exhaust fluids	
	UL 1238 "Control equipment for use with flammable liquid dispensing devices"	
	CSA C22.2 No. 22 "Electrical equipment for flammable and combustible fuel dispensers"	

ENCLOSURE TYPE RATINGS [NEC & CEC]		
Type	Area	Brief Description
1	Indoor	General Purpose
2	Indoor	Protection against angled dripping water
3,3R, 3S	Indoor/Outdoor	Protection against rain, snow
4, 4X	Indoor/Outdoor	Protection against rain, snow, hose directed water and corrosion (X only)
5	Indoor	Protection against angled dripping water, dust, fibers, flyings
6	Indoor/Outdoor	Protection against temporary submersion
6P	Indoor/Outdoor	Protection against prolonged submersion
12, 12K	Indoor	Protection against circulating dust, fibers, flyings
13	Indoor	Protection against circulating dust, fibers, flyings, seepage



Note 3: UL 674 and CSA 145 are harmonized standards.

Hazardous Location Chart

Guide to Equipment certification requirements for North America and ATEX & IECEx

ATMOSPHERE GROUPS				TEMPERATURE CLASSIFICATION ⁷				
Substance	Hazard Class	Division Groups	Zone Groups	Max. Surface Temperature	NEC [®] 500 CEC [®]	NEC [®] 505/IEC - Group II		
Acetylene	Class I Flammable Gases	Group A	IIC	450° C (824° F)	T1	T1		
Hydrogen		Group B	IIC	300° C (572° F)	T2	T2		
Ethylene		Group C	IIB	280° C (536° F)	T2A			
Propane		Group D	IIA	260° C (500° F)	T2B			
Methane		Group D	IIA ⁵	230° C (446° F)	T2C			
Combustible Metal Dusts		Class II Combustible Dusts	Group D	IIIC ⁶	215° C (419° F)	T2D	T3	
Combustible Carbonaceous Dusts	Group D				IIIB ⁶	200° C (392° F)		T3
						180° C (356° F)		T3A
Combustible Dusts not in Group E or F (Flour, Grain, Wood, Plastics, Chemicals)	Group D				IIIB ⁶	165° C (329° F)		T3B
						160° C (320° F)	T3C	
Combustible Fibers and Flyings	Class 111 Fibers and Flyings				Not Applicable	IIIA ⁶	135° C (275° F)	T4
				120° C (248° F)	T4A			
				100° C (212° F)	T5			
				85° C (185° F)	T6	T6		

Note 4: Group E is applicable to Class II, Division 1 only.
 Note 5: Methane is a Group IIA Gas for non-mining applications.
 Note 6: Groups IIIA, IIIB and IIIC have not been adopted by the Canadian Electrical Code.

Note 7: For Group I applications (ATEX and IECEx only), electrical apparatus has fixed temperature limits of 150°C (where layers of coal dust can form) and 450°C (where coal dust is not expected to form a layer).

CLASSIFICATION OF DIVISIONS AND ZONES			
Hazard Level	Division Scheme	Zone Scheme	Definitions
Continuous Hazard	Division 1	Zone 0 / Zone 20	A place in which an explosive atmosphere is continually present
Intermittent Hazard		Zone 1 / Zone 21	A place in which an explosive atmosphere is likely to occur in normal operation
Hazard Under Abnormal Conditions	Division 2	Zone 2 / Zone 22	A place in which an explosive atmosphere is not likely to occur in normal operation, but may occur for short periods



Product Selection Guide

Steps to choosing a Hazardous Location Interconnect Package

Follow this step-by-step guide to select a package that fits your needs, or complete the worksheet on page 12 & 13. If you need technical assistance, please contact us at cablesolutions@teledyne.com or (214) 637-1381.

STEP 1 CHOOSE THE SOURCE CONNECTION:

WALL MOUNT CONNECTOR (located on page 18 & 19)

- All wall mount connectors come prewired with 24 inches of Cross Linked Polyethylene wire



ENCLOSURE BULKHEAD MOUNT CONNECTOR (located on page 24 & 25)

- All Bulkhead connectors come prewired with 24 inches of Cross Linked Polyethylene wire



PIGTAIL ASSEMBLY WITH INLINE PLUG (page 22 & 23) OR RECEPTACLE (page 20 & 21)

- Type of cable and length will need to be selected
- Locking mechanism, connector covers, and labels will come standard with your selection



STEP 2 CHOOSE THE CORDSET CONFIGURATION:

DOUBLE ENDED ASSEMBLY

- Select mating connectors to your source connection
 - Inline plugs can be found on page 22 & 23
 - Inline receptacles can be found on page 20 & 21
- Locking mechanisms, connector covers, and labeling will come standard with your selection



PIGTAIL ASSEMBLY WITH INLINE PLUG (page 22 & 23) OR RECEPTACLE (page 20 & 21)

- Type of cable and length will need to be selected
- Locking mechanism, connector covers, and labels will come standard with your selection



STEP 3 CHOOSE THE END DEVICE CONNECTION:

WALL MOUNT CONNECTOR (located on page 18 & 19)

- All wall mount connectors come prewired with 24 inches of Cross Linked Polyethylene wire



ENCLOSURE BULKHEAD MOUNT CONNECTOR (located on page 24 & 25)

- All Bulkhead connectors come prewired with 24 inches of Cross Linked Polyethylene wire



PIGTAIL ASSEMBLY WITH INLINE PLUG (page 22 & 23) OR RECEPTACLE (page 20 & 21)

- Type of cable and length will need to be selected
- Locking mechanism, connector covers, and labels will come standard with your selection

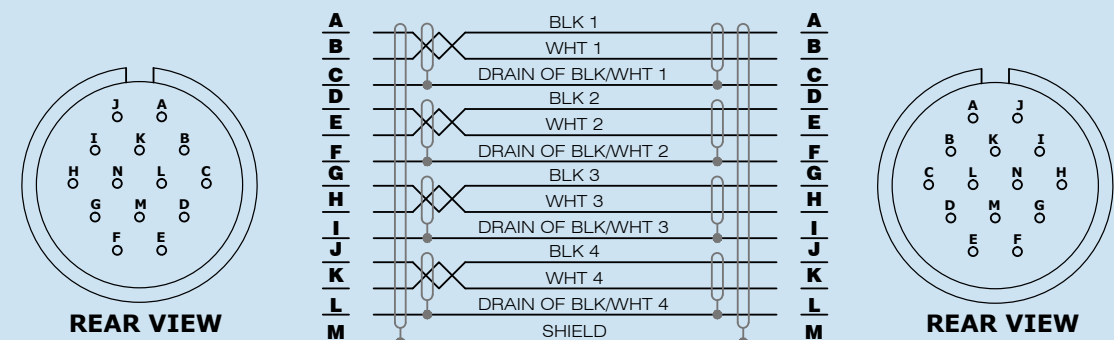


STEP 4 MAKE YOUR CABLE SELECTION :

- Gauge size of wires
- Core type: Multi Conductor, Multi Pair, or Individually shielded pairs
- Cable shielding preference: None, single shield of Aluminum foil, Double shielded of Aluminum foil and interwoven braid
- What is the use: Voltage, Temperature,
- What type of installation method: Conduit, raceway,



STEP 5 DETAIL YOUR WIRE CHART FOR EACH ASSEMBLY (FOR EXAMPLE) :



Product Selection Guide

Steps to choosing a Hazardous Location Interconnect Package

Product Worksheet

Steps to choosing a Hazardous Location Interconnect Package

Follow this step-by-step guide to select a package that fits your needs.

STEP 1 SELECT SOURCE CONNECTION

Select one of the three options below.



- A WALL MOUNT CONNECTOR**
located on page 18 & 19
P/N _____
- B ENCLOSURE (BULKHEAD) MOUNT CONNECTOR**
located on page 24 & 25
P/N _____
- C PIGTAIL ASSEMBLY**
 - INLINE PLUG** page 22 & 23
P/N _____
 - INLINE RECEPTACLE** page 20 & 21
P/N _____

TYPE OF CABLE _____
CABLE LENGTH _____ ft

All wall mount and bulkhead connectors come prewired with 24 inches of cross-linked Polyethylene wire

STEP 2 SELECT CORDSET CONFIGURATION



Select one of the two options below.

Locking mechanism, connector covers, and labels will come standard with your selection.

- A DOUBLE ENDED ASSEMBLY**
 - INLINE PLUG** page 22 & 23
P/N _____
P/N _____
 - INLINE RECEPTACLE** page 20 & 21
P/N _____
P/N _____
- B PIGTAIL ASSEMBLY**
 - INLINE PLUG** 22 & 23
P/N _____
P/N _____
 - INLINE RECEPTACLE** page 20 & 21
P/N _____
P/N _____

STEP 4 SELECT CABLE

CABLE ATTRIBUTES

Gauge Size _____ AWG
Cable Length _____ ft
Voltage _____
Operating temp _____
ADDT'L requirements _____

TYPE OF INSTALLATION METHOD

- A CONDUIT**
- B RACEWAY**
- C OTHER** _____

CORE TYPE

- A MULTICONDUCTOR**
- B MULTI-PAIR**
- C INDIVIDUAL SHIELDED PAIRS**

CABLE SHIELDING

- A NONE**
- B SINGLE SHIELD OF ALUMINUM FOIL**
- C DOUBLE SHIELDED OF ALUMINUM FOIL**
- D INTERWOVEN BRAID**

Product Worksheet

Steps to choosing a Hazardous Location Interconnect Package

If you need technical assistance, please contact us at cablesolutions@teledyne.com or (214) 637-1381.

STEP 3 SELECT END DEVICE CONNECTION

Select one of the three options below.

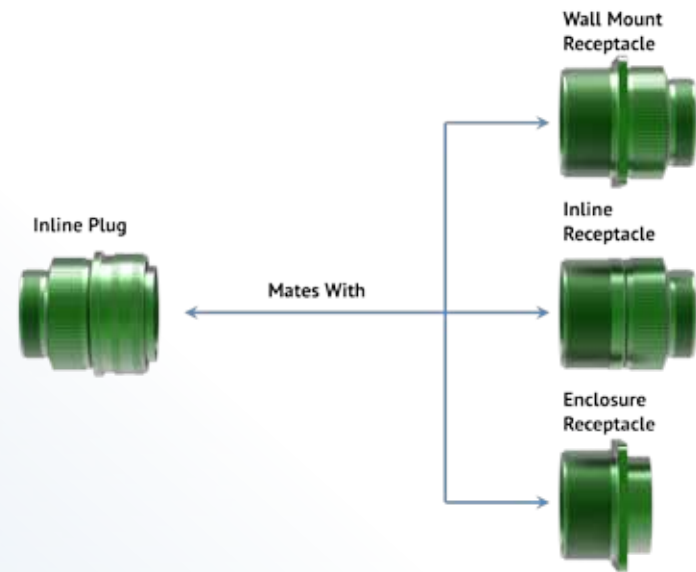


- A WALL MOUNT CONNECTOR**
located on page 18 & 19
P/N _____
- B ENCLOSURE (BULKHEAD) MOUNT CONNECTOR**
located on page 24 & 25
P/N _____
- C PIGTAIL ASSEMBLY**
 - INLINE PLUG** page 22 & 23
P/N _____
 - INLINE RECEPTACLE** page 20 & 21
P/N _____

TYPE OF CABLE _____
CABLE LENGTH _____ ft

All wall mount and bulkhead connectors come prewired with 24 inches of cross-linked Polyethylene wire

Connector Styles and Dimensions

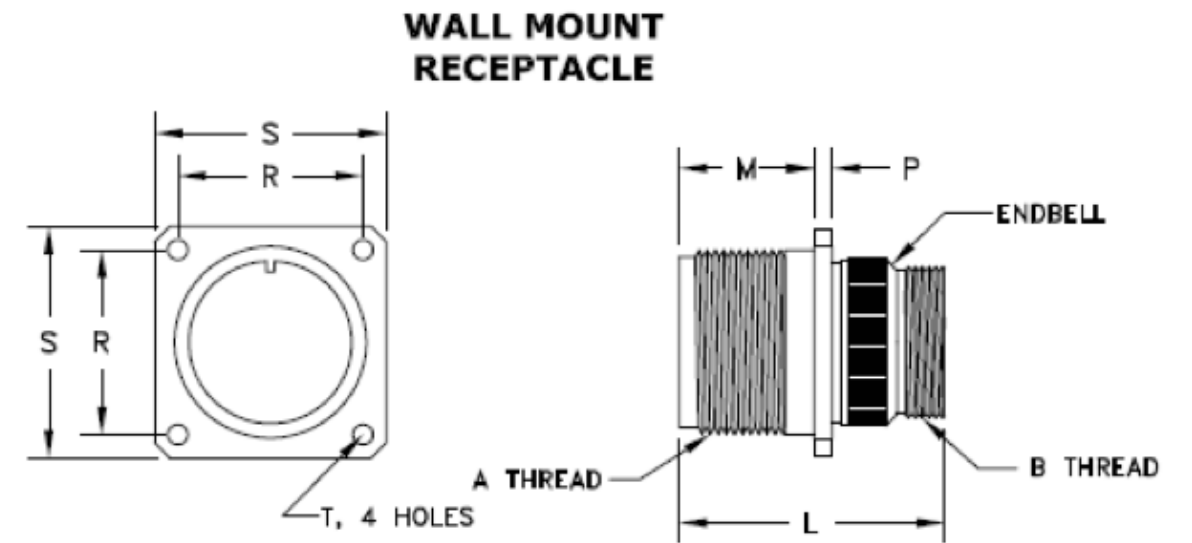


MATERIALS AND FINISHES:

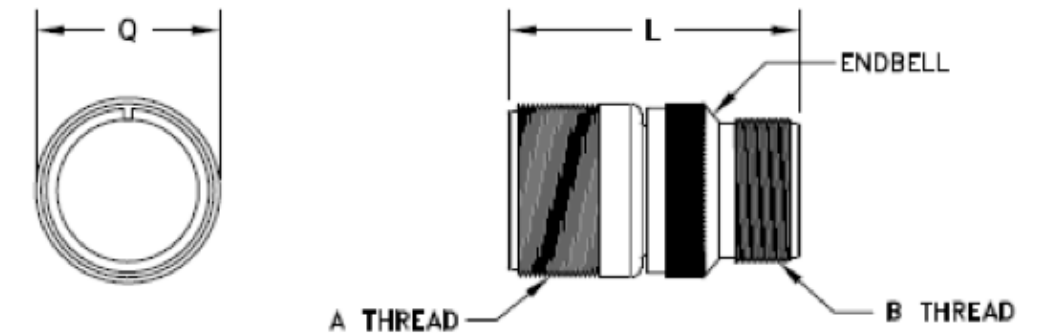
- Shell: Aluminum alloy
- Plating: Olive drab chromate coating over cadmium plating to QQ-P-416. Options: ROHS connectors available
- Contacts: Brass or Copper alloy. Silver plating to QQ-S-365
- Insulator: Resilient Neoprene.



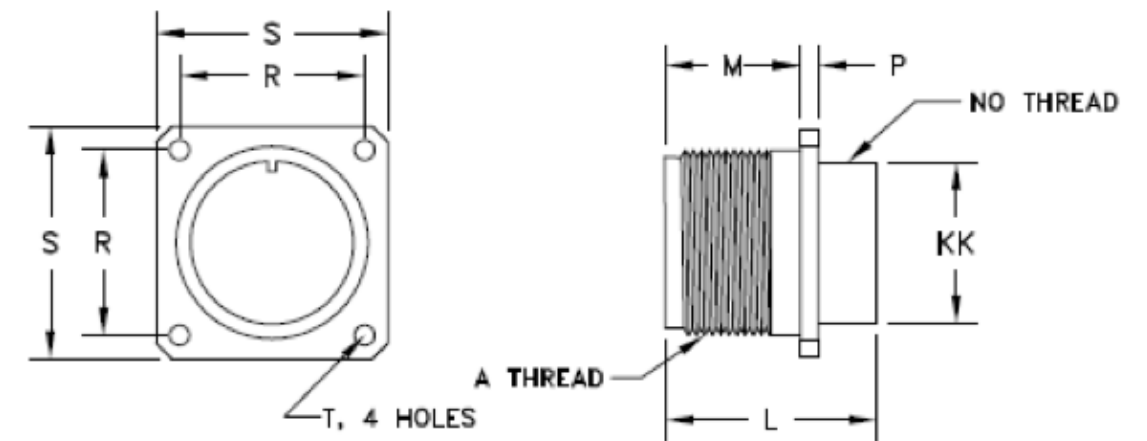
Connector Styles and Dimensions



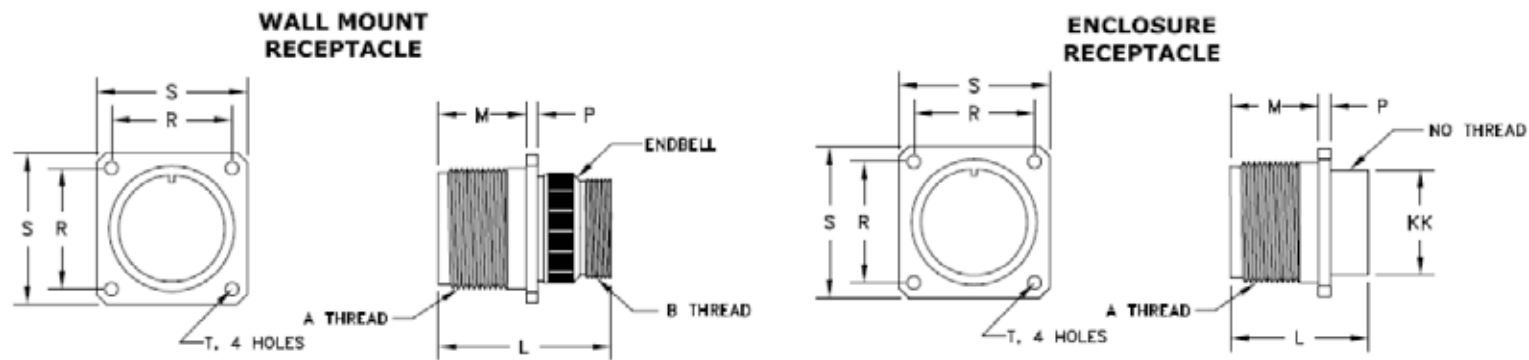
INLINE RECEPTACLE



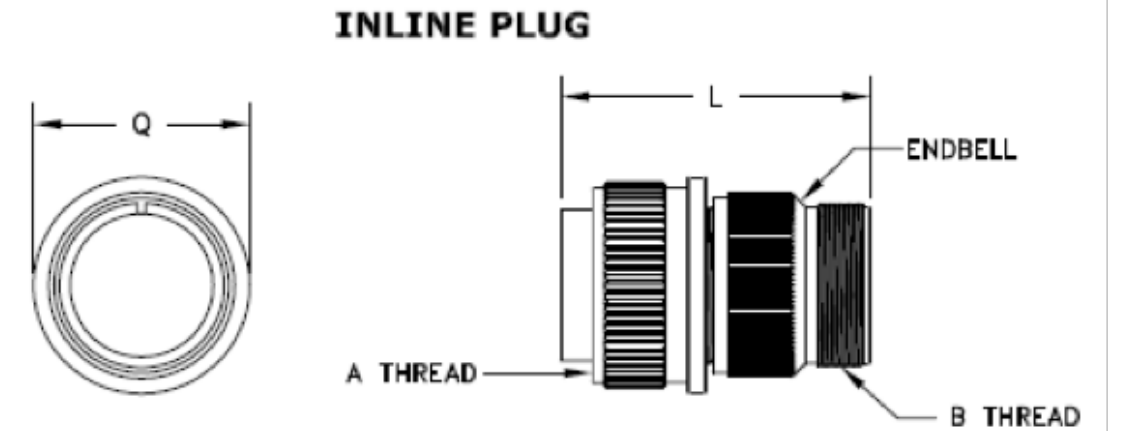
ENCLOSURE RECEPTACLE



Connector Styles and Dimensions



Connector Styles and Dimensions



SHELL SIZE	WALL MOUNT/ENCLOSURE RECEPTACLES						WALL MOUNT/ INLINE RECEPT'S	ENCLOSURE RECEPTACLE	
	A THREAD CLASS 2A	M (+.010/- .000)	P REF.	R (+/- .005)	S (+/- .031)	T DIA. (+.004/- .002)	L REF.	L REF.	KK DIA. (+.010/-000)
10S	.625-24NEF	0.562 (14.3)	0.110 (2.8)	0.719 (18.3)	1.000 (25.4)	0.120 (3.0)	1.468 (37.3)	0.969 (24.6)	0.500 (12.7)
10SL	.625-24NEF	0.562 (14.3)	0.110 (2.8)	0.719 (18.3)	1.000 (25.4)	0.120 (3.0)	1.468 (37.3)	0.969 (24.6)	0.625 (15.9)
14S	.875-20UNEF	0.562 (14.3)	0.110 (2.8)	0.906 (23.0)	1.188 (30.2)	0.120 (3.0)	1.468 (37.3)	0.969 (24.6)	0.750 (19.1)
16S	1.000-20UNEF	0.562 (14.3)	0.110 (2.8)	0.906 (23.0)	1.281 (32.5)	0.120 (3.0)	1.468 (37.3)	0.969 (24.6)	0.875 (22.2)
16	1.000-20UNEF	0.750 (19.1)	0.110 (2.8)	0.906 (23.0)	1.281 (32.5)	0.120 (3.0)	1.843 (46.8)	1.344 (34.1)	0.875 (22.2)
18	1.125-18NEF	0.750 (19.1)	0.141 (3.6)	1.062 (27.0)	1.375 (34.9)	0.120 (3.0)	1.938 (49.2)	1.344 (34.1)	1.000 (25.4)
20	1.125-18NEF	0.750 (19.1)	0.141 (3.6)	1.156 (29.4)	1.500 (38.1)	0.120 (3.0)	1.844 (46.8)	1.344 (34.1)	1.125 (28.6)
22	1.375-18NEF	0.750 (19.1)	0.141 (3.6)	1.250 (31.8)	1.625 (41.3)	0.120 (3.0)	1.938 (49.2)	1.344 (34.1)	1.250 (31.8)
24	1.500-18NEF	0.812 (20.6)	0.141 (3.6)	1.375 (34.9)	1.750 (44.5)	0.147 (3.7)	1.969 (50.0)	1.406 (35.7)	1.375 (34.9)
28	1.750-18NS	0.812 (20.6)	0.141 (3.6)	1.562 (39.7)	2.000 (50.8)	0.147 (3.7)	2.188 (55.6)	1.406 (35.7)	1.625 (41.3)
32	2.000-18NS	0.875 (22.2)	0.156 (4.0)	1.750 (44.5)	2.250 (57.2)	0.173 (4.4)	2.157 (54.8)	1.469 (37.3)	1.875 (47.6)
36	2.250-16UN	0.875 (22.2)	0.156 (4.0)	1.938 (49.2)	2.500 (63.5)	0.173 (4.4)	2.219 (56.4)	1.469 (37.3)	2.062 (52.4)
40	2.750-16UN	0.875 (22.2)	0.156 (4.0)	2.188 (55.6)	2.750 (69.9)	0.173 (4.4)	2.188 (55.6)	1.469 (37.3)	2.312 (58.7)

All dimensions in inches (millimeters in parenthesis)

SHELL SIZE	INLINE PLUG			
	A THREAD CLASS 2B	Q DIA. MAX.	B THREAD CLASS 2A	L REF.
10S	.625-24NEF	0.869 (22.1)	.500-28UNEF	1.468 (37.3)
10SL	.625-24NEF	0.946 (24.0)	.625-24-UNEF	1.468 (37.3)
14S	.875-20UNEF	1.123 (28.5)	.750-20UNEF	1.468 (37.3)
16S	1.000-20UNEF	1.250 (31.8)	.875-20UNEF	1.468 (37.3)
16	1.000-20UNEF	1.250 (31.8)	.875-20UNEF	1.843 (46.8)
18	1.125-18NEF	1.333 (33.9)	1.000-20UNEF	1.938 (49.2)
20	1.125-18NEF	1.461 (37.1)	1.125-18UNEF	1.844 (46.8)
22	1.375-18NEF	1.588 (40.3)	1.250-18UNEF	1.938 (49.2)
24	1.500-18NEF	1.715 (43.6)	1.375-18UNEF	1.970 (50.0)
28	1.750-18NS	1.968 (50.0)	1.625-18UNEF	2.189 (55.6)
32	2.000-18NS	2.209 (56.1)	1.875-16UN	2.158 (54.8)
36	2.250-16UN	2.463 (62.6)	2.0625-16UN	2.219 (56.4)
40	2.750-16UN	2.719 (69.1)	2.3125-16UN	2.188 (55.6)

All dimensions in inches (millimeters in parenthesis)

Teledyne Part Numbers: Wall Mount Receptacle **PIN**

WALL MOUNT RECEPTACLE CONNECTOR: PIN					WALL MOUNT RECEPTACLE CONNECTOR: PIN				
LAYOUT	PIN/SOCKET	# OF CONTACTS	CONTACT SIZE	TELEDYNE PART NUMBER	LAYOUT	PIN/SOCKET	# OF CONTACTS	CONTACT SIZE	TELEDYNE PART NUMBER
10S-2	P	1	16	TCPP100002	22-18	P	8	16	TCPP100068
10SL-3	P	3	16	TCPP100003	22-19	P	14	16	TCPP100069
10SL-4	P	2	16	TCPP100004	22-20	P	9	16	TCPP100070
14S-1	P	3	16	TCPP100008	22-23	P	8	12	TCPP100072
14S-2	P	4	16	TCPP100009	22-28	P	7	12	TCPP100073
14S-5	P	5	16	TCPP100011	22-33	P	7	16	TCPP100074
14S-6	P	6	16	TCPP100012	22-36	P	8	12	TCPP100075
14S-7	P	3	16	TCPP100013	24-2	P	7	12	TCPP100076
16S-1	P	7	16	TCPP100018	24-5	P	16	16	TCPP100077
16S-8	P	5	16	TCPP100023	24-6	P	8	12	TCPP100078
16-10	P	3	12	TCPP100025	24-9	P	2	4	TCPP100079
16-11	P	2	12	TCPP100026	24-10	P	7	8	TCPP100080
16-13	P	2	12	TCPP100028	24-22	P	4	8	TCPP100081
18-1	P	10	16	TCPP100029	24-27	P	7	16	TCPP100082
18-10	P	4	12	TCPP100034	24-28	P	24	16	TCPP100083
18-11	P	5	12	TCPP100035	28-12	P	26	16	TCPP100086
18-12	P	6	16	TCPP100036	28-13	P	26	16	TCPP100087
18-19	P	10	16	TCPP100039	28-15	P	35	16	TCPP100088
20-7	P	8	16	TCPP100050	28-16	P	20	16	TCPP100089
20-11	P	13	16	TCPP100051	28-17	P	15	16	TCPP100090
20-15	P	7	12	TCPP100052	28-18	P	12	16	TCPP100091
20-19	P	3	8	TCPP100053	28-21	P	37	16	TCPP100092
20-23	P	2	8	TCPP100054	32-5	P	2	0	TCPP100093
20-25	P	13	16	TCPP100055	32-17	P	4	4	TCPP100094
20-27	P	14	16	TCPP100056	32-22	P	54	16	TCPP100095
20-29	P	17	16	TCPP100057	36-4	P	3	0	TCPP100096
20-30	P	13	16	TCPP100058	36-5	P	4	0	TCPP100097
20-33	P	11	16	TCPP100059	36-10	P	48	16	TCPP100098
22-2	P	3	8	TCPP100061	36-15	P	35	16	TCPP100101
22-7	P	1	0	TCPP100062	36-52	P	52	16	TCPP100102
22-14	P	19	16	TCPP100067	40-56	P	85	16	TCPP100103

Teledyne Part Numbers: Wall Mount Receptacle **SOCKET**

WALL MOUNT RECEPTACLE CONNECTOR: SOCKET					WALL MOUNT RECEPTACLE CONNECTOR: SOCKET				
LAYOUT	PIN/SOCKET	# OF CONTACTS	CONTACT SIZE	TELEDYNE PART NUMBER	LAYOUT	PIN/SOCKET	# OF CONTACTS	CONTACT SIZE	TELEDYNE PART NUMBER
10S-2	S	1	16	TCPP200002	22-18	S	8	16	TCPP200068
10SL-3	S	3	16	TCPP200003	22-19	S	14	16	TCPP200069
10SL-4	S	2	16	TCPP200004	22-20	S	9	16	TCPP200070
14S-1	S	3	16	TCPP200008	22-23	S	8	12	TCPP200072
14S-2	S	4	16	TCPP200009	22-28	S	7	12	TCPP200073
14S-5	S	5	16	TCPP200011	22-33	S	7	16	TCPP200074
14S-6	S	6	16	TCPP200012	22-36	S	8	12	TCPP200075
14S-7	S	3	16	TCPP200013	24-2	S	7	12	TCPP200076
16S-1	S	7	16	TCPP200018	24-5	S	16	16	TCPP200077
16S-8	S	5	16	TCPP200023	24-6	S	8	12	TCPP200078
16-10	S	3	12	TCPP200025	24-9	S	2	4	TCPP200079
16-11	S	2	12	TCPP200026	24-10	S	7	8	TCPP200080
16-13	S	2	12	TCPP200028	24-22	S	4	8	TCPP200081
18-1	S	10	16	TCPP200029	24-27	S	7	16	TCPP200082
18-10	S	4	12	TCPP200034	24-28	S	24	16	TCPP200083
18-11	S	5	12	TCPP200035	28-12	S	26	16	TCPP200086
18-12	S	6	16	TCPP200036	28-13	S	26	16	TCPP200087
18-19	S	10	16	TCPP200039	28-15	S	35	16	TCPP200088
20-7	S	8	16	TCPP200050	28-16	S	20	16	TCPP200089
20-11	S	13	16	TCPP200051	28-17	S	15	16	TCPP200090
20-15	S	7	12	TCPP200052	28-18	S	12	16	TCPP200091
20-19	S	3	8	TCPP200053	28-21	S	37	16	TCPP200092
20-23	S	2	8	TCPP200054	32-5	S	2	0	TCPP200093
20-25	S	13	16	TCPP200055	32-17	S	4	4	TCPP200094
20-27	S	14	16	TCPP200056	32-22	S	54	16	TCPP200095
20-29	S	17	16	TCPP200057	36-4	S	3	0	TCPP200096
20-30	S	13	16	TCPP200058	36-5	S	4	0	TCPP200097
20-33	S	11	16	TCPP200059	36-10	S	48	16	TCPP200098
22-2	S	3	8	TCPP200061	36-15	S	35	16	TCPP200101
22-7	S	1	0	TCPP200062	36-52	S	52	16	TCPP200102
22-14	S	19	16	TCPP200067	40-56	S	85	16	TCPP200103

Teledyne Part Numbers: Inline Receptacle Connector **PIN**

INLINE RECEPTACLE CONNECTOR: PIN					INLINE RECEPTACLE CONNECTOR: PIN				
LAYOUT	PIN/SOCKET	# OF CONTACTS	CONTACT SIZE	TELEDYNE PART NUMBER	LAYOUT	PIN/SOCKET	# OF CONTACTS	CONTACT SIZE	TELEDYNE PART NUMBER
10S-2	P	1	16	TCIR100002	22-18	P	8	16	TCIR100068
10SL-3	P	3	16	TCIR100003	22-19	P	14	16	TCIR100069
10SL-4	P	2	16	TCIR100004	22-20	P	9	16	TCIR100070
14S-1	P	3	16	TCIR100008	22-23	P	8	12	TCIR100072
14S-2	P	4	16	TCIR100009	22-28	P	7	12	TCIR100073
14S-5	P	5	16	TCIR100011	22-33	P	7	16	TCIR100074
14S-6	P	6	16	TCIR100012	22-36	P	8	12	TCIR100075
14S-7	P	3	16	TCIR100013	24-2	P	7	12	TCIR100076
16S-1	P	7	16	TCIR100018	24-5	P	16	16	TCIR100077
16S-8	P	5	16	TCIR100023	24-6	P	8	12	TCIR100078
16-10	P	3	12	TCIR100025	24-9	P	2	4	TCIR100079
16-11	P	2	12	TCIR100026	24-10	P	7	8	TCIR100080
16-13	P	2	12	TCIR100028	24-22	P	4	8	TCIR100081
18-1	P	10	16	TCIR100029	24-27	P	7	16	TCIR100082
18-10	P	4	12	TCIR100034	24-28	P	24	16	TCIR100083
18-11	P	5	12	TCIR100035	28-12	P	26	16	TCIR100086
18-12	P	6	16	TCIR100036	28-13	P	26	16	TCIR100087
18-19	P	10	16	TCIR100039	28-15	P	35	16	TCIR100088
20-7	P	8	16	TCIR100050	28-16	P	20	16	TCIR100089
20-11	P	13	16	TCIR100051	28-17	P	15	16	TCIR100090
20-15	P	7	12	TCIR100052	28-18	P	12	16	TCIR100091
20-19	P	3	8	TCIR100053	28-21	P	37	16	TCIR100092
20-23	P	2	8	TCIR100054	32-5	P	2	0	TCIR100093
20-25	P	13	16	TCIR100055	32-17	P	4	4	TCIR100094
20-27	P	14	16	TCIR100056	32-22	P	54	16	TCIR100095
20-29	P	17	16	TCIR100057	36-4	P	3	0	TCIR100096
20-30	P	13	16	TCIR100058	36-5	P	4	0	TCIR100097
20-33	P	11	16	TCIR100059	36-10	P	48	16	TCIR100098
22-2	P	3	8	TCIR100061	36-15	P	35	16	TCIR100101
22-7	P	1	0	TCIR100062	36-52	P	52	16	TCIR100102
22-14	P	19	16	TCIR100067	40-56	P	85	16	TCIR100103

Teledyne Part Numbers: Inline Receptacle Connector **SOCKET**

INLINE RECEPTACLE CONNECTOR: SOCKET					INLINE RECEPTACLE CONNECTOR: SOCKET				
LAYOUT	PIN/SOCKET	# OF CONTACTS	CONTACT SIZE	TELEDYNE PART NUMBER	LAYOUT	PIN/SOCKET	# OF CONTACTS	CONTACT SIZE	TELEDYNE PART NUMBER
10S-2	S	1	16	TCIR200002	22-18	S	8	16	TCIR200068
10SL-3	S	3	16	TCIR200003	22-19	S	14	16	TCIR200069
10SL-4	S	2	16	TCIR200004	22-20	S	9	16	TCIR200070
14S-1	S	3	16	TCIR200008	22-23	S	8	12	TCIR200072
14S-2	S	4	16	TCIR200009	22-28	S	7	12	TCIR200073
14S-5	S	5	16	TCIR200011	22-33	S	7	16	TCIR200074
14S-6	S	6	16	TCIR200012	22-36	S	8	12	TCIR200075
14S-7	S	3	16	TCIR200013	24-2	S	7	12	TCIR200076
16S-1	S	7	16	TCIR200018	24-5	S	16	16	TCIR200077
16S-8	S	5	16	TCIR200023	24-6	S	8	12	TCIR200078
16-10	S	3	12	TCIR200025	24-9	S	2	4	TCIR200079
16-11	S	2	12	TCIR200026	24-10	S	7	8	TCIR200080
16-13	S	2	12	TCIR200028	24-22	S	4	8	TCIR200081
18-1	S	10	16	TCIR200029	24-27	S	7	16	TCIR200082
18-10	S	4	12	TCIR200034	24-28	S	24	16	TCIR200083
18-11	S	5	12	TCIR200035	28-12	S	26	16	TCIR200086
18-12	S	6	16	TCIR200036	28-13	S	26	16	TCIR200087
18-19	S	10	16	TCIR200039	28-15	S	35	16	TCIR200088
20-7	S	8	16	TCIR200050	28-16	S	20	16	TCIR200089
20-11	S	13	16	TCIR200051	28-17	S	15	16	TCIR200090
20-15	S	7	12	TCIR200052	28-18	S	12	16	TCIR200091
20-19	S	3	8	TCIR200053	28-21	S	37	16	TCIR200092
20-23	S	2	8	TCIR200054	32-5	S	2	0	TCIR200093
20-25	S	13	16	TCIR200055	32-17	S	4	4	TCIR200094
20-27	S	14	16	TCIR200056	32-22	S	54	16	TCIR200095
20-29	S	17	16	TCIR200057	36-4	S	3	0	TCIR200096
20-30	S	13	16	TCIR200058	36-5	S	4	0	TCIR200097
20-33	S	11	16	TCIR200059	36-10	S	48	16	TCIR200098
22-2	S	3	8	TCIR200061	36-15	S	35	16	TCIR200101
22-7	S	1	0	TCIR200062	36-52	S	52	16	TCIR200102
22-14	S	19	16	TCIR200067	40-56	S	85	16	TCIR200103

Teledyne Part Numbers: Inline Plug Connector **PIN**

INLINE PLUG CONNECTOR: PIN					INLINE PLUG CONNECTOR: PIN				
LAYOUT	PIN/SOCKET	# OF CONTACTS	CONTACT SIZE	TELEDYNE PART NUMBER	LAYOUT	PIN/SOCKET	# OF CONTACTS	CONTACT SIZE	TELEDYNE PART NUMBER
10S-2	P	1	16	TCIP100002	22-18	P	8	16	TCIP100068
10SL-3	P	3	16	TCIP100003	22-19	P	14	16	TCIP100069
10SL-4	P	2	16	TCIP100004	22-20	P	9	16	TCIP100070
14S-1	P	3	16	TCIP100008	22-23	P	8	12	TCIP100072
14S-2	P	4	16	TCIP100009	22-28	P	7	12	TCIP100073
14S-5	P	5	16	TCIP100011	22-33	P	7	16	TCIP100074
14S-6	P	6	16	TCIP100012	22-36	P	8	12	TCIP100075
14S-7	P	3	16	TCIP100013	24-2	P	7	12	TCIP100076
16S-1	P	7	16	TCIP100018	24-5	P	16	16	TCIP100077
16S-8	P	5	16	TCIP100023	24-6	P	8	12	TCIP100078
16-10	P	3	12	TCIP100025	24-9	P	2	4	TCIP100079
16-11	P	2	12	TCIP100026	24-10	P	7	8	TCIP100080
16-13	P	2	12	TCIP100028	24-22	P	4	8	TCIP100081
18-1	P	10	16	TCIP100029	24-27	P	7	16	TCIP100082
18-10	P	4	12	TCIP100034	24-28	P	24	16	TCIP100083
18-11	P	5	12	TCIP100035	28-12	P	26	16	TCIP100086
18-12	P	6	16	TCIP100036	28-13	P	26	16	TCIP100087
18-19	P	10	16	TCIP100039	28-15	P	35	16	TCIP100088
20-7	P	8	16	TCIP100050	28-16	P	20	16	TCIP100089
20-11	P	13	16	TCIP100051	28-17	P	15	16	TCIP100090
20-15	P	7	12	TCIP100052	28-18	P	12	16	TCIP100091
20-19	P	3	8	TCIP100053	28-21	P	37	16	TCIP100092
20-23	P	2	8	TCIP100054	32-5	P	2	0	TCIP100093
20-25	P	13	16	TCIP100055	32-17	P	4	4	TCIP100094
20-27	P	14	16	TCIP100056	32-22	P	54	16	TCIP100095
20-29	P	17	16	TCIP100057	36-4	P	3	0	TCIP100096
20-30	P	13	16	TCIP100058	36-5	P	4	0	TCIP100097
20-33	P	11	16	TCIP100059	36-10	P	48	16	TCIP100098
22-2	P	3	8	TCIP100061	36-15	P	35	16	TCIP100101
22-7	P	1	0	TCIP100062	36-52	P	52	16	TCIP100102
22-14	P	19	16	TCIP100067	40-56	P	85	16	TCIP100103

Teledyne Part Numbers: Inline Plug Connector **SOCKET**

INLINE PLUG CONNECTOR: SOCKET					INLINE PLUG CONNECTOR: SOCKET				
LAYOUT	PIN/SOCKET	# OF CONTACTS	CONTACT SIZE	TELEDYNE PART NUMBER	LAYOUT	PIN/SOCKET	# OF CONTACTS	CONTACT SIZE	TELEDYNE PART NUMBER
10S-2	S	1	16	TCIP200002	22-18	S	8	16	TCIP200068
10SL-3	S	3	16	TCIP200003	22-19	S	14	16	TCIP200069
10SL-4	S	2	16	TCIP200004	22-20	S	9	16	TCIP200070
14S-1	S	3	16	TCIP200008	22-23	S	8	12	TCIP200072
14S-2	S	4	16	TCIP200009	22-28	S	7	12	TCIP200073
14S-5	S	5	16	TCIP200011	22-33	S	7	16	TCIP200074
14S-6	S	6	16	TCIP200012	22-36	S	8	12	TCIP200075
14S-7	S	3	16	TCIP200013	24-2	S	7	12	TCIP200076
16S-1	S	7	16	TCIP200018	24-5	S	16	16	TCIP200077
16S-8	S	5	16	TCIP200023	24-6	S	8	12	TCIP200078
16-10	S	3	12	TCIP200025	24-9	S	2	4	TCIP200079
16-11	S	2	12	TCIP200026	24-10	S	7	8	TCIP200080
16-13	S	2	12	TCIP200028	24-22	S	4	8	TCIP200081
18-1	S	10	16	TCIP200029	24-27	S	7	16	TCIP200082
18-10	S	4	12	TCIP200034	24-28	S	24	16	TCIP200083
18-11	S	5	12	TCIP200035	28-12	S	26	16	TCIP200086
18-12	S	6	16	TCIP200036	28-13	S	26	16	TCIP200087
18-19	S	10	16	TCIP200039	28-15	S	35	16	TCIP200088
20-7	S	8	16	TCIP200050	28-16	S	20	16	TCIP200089
20-11	S	13	16	TCIP200051	28-17	S	15	16	TCIP200090
20-15	S	7	12	TCIP200052	28-18	S	12	16	TCIP200091
20-19	S	3	8	TCIP200053	28-21	S	37	16	TCIP200092
20-23	S	2	8	TCIP200054	32-5	S	2	0	TCIP200093
20-25	S	13	16	TCIP200055	32-17	S	4	4	TCIP200094
20-27	S	14	16	TCIP200056	32-22	S	54	16	TCIP200095
20-29	S	17	16	TCIP200057	36-4	S	3	0	TCIP200096
20-30	S	13	16	TCIP200058	36-5	S	4	0	TCIP200097
20-33	S	11	16	TCIP200059	36-10	S	48	16	TCIP200098
22-2	S	3	8	TCIP200061	36-15	S	35	16	TCIP200101
22-7	S	1	0	TCIP200062	36-52	S	52	16	TCIP200102
22-14	S	19	16	TCIP200067	40-56	S	85	16	TCIP200103

Teledyne Part Numbers: Enclosure Mount Receptacle Connector **PIN**

ENCLOSURE MOUNT RECEPTACLE CONNECTOR: PIN					ENCLOSURE MOUNT RECEPTACLE CONNECTOR: PIN				
LAYOUT	PIN/SOCKET	# OF CONTACTS	CONTACT SIZE	TELEDYNE PART NUMBER	LAYOUT	PIN/SOCKET	# OF CONTACTS	CONTACT SIZE	TELEDYNE PART NUMBER
10S-2	P	1	16	TCEN100002	22-18	P	8	16	TCEN100068
10SL-3	P	3	16	TCEN100003	22-19	P	14	16	TCEN100069
10SL-4	P	2	16	TCEN100004	22-20	P	9	16	TCEN100070
14S-1	P	3	16	TCEN100008	22-23	P	8	12	TCEN100072
14S-2	P	4	16	TCEN100009	22-28	P	7	12	TCEN100073
14S-5	P	5	16	TCEN100011	22-33	P	7	16	TCEN100074
14S-6	P	6	16	TCEN100012	22-36	P	8	12	TCEN100075
14S-7	P	3	16	TCEN100013	24-2	P	7	12	TCEN100076
16S-1	P	7	16	TCEN100018	24-5	P	16	16	TCEN100077
16S-8	P	5	16	TCEN100023	24-6	P	8	12	TCEN100078
16-10	P	3	12	TCEN100025	24-9	P	2	4	TCEN100079
16-11	P	2	12	TCEN100026	24-10	P	7	8	TCEN100080
16-13	P	2	12	TCEN100028	24-22	P	4	8	TCEN100081
18-1	P	10	16	TCEN100029	24-27	P	7	16	TCEN100082
18-10	P	4	12	TCEN100034	24-28	P	24	16	TCEN100083
18-11	P	5	12	TCEN100035	28-12	P	26	16	TCEN100086
18-12	P	6	16	TCEN100036	28-13	P	26	16	TCEN100087
18-19	P	10	16	TCEN100039	28-15	P	35	16	TCEN100088
20-7	P	8	16	TCEN100050	28-16	P	20	16	TCEN100089
20-11	P	13	16	TCEN100051	28-17	P	15	16	TCEN100090
20-15	P	7	12	TCEN100052	28-18	P	12	16	TCEN100091
20-19	P	3	8	TCEN100053	28-21	P	37	16	TCEN100092
20-23	P	2	8	TCEN100054	32-5	P	2	0	TCEN100093
20-25	P	13	16	TCEN100055	32-17	P	4	4	TCEN100094
20-27	P	14	16	TCEN100056	32-22	P	54	16	TCEN100095
20-29	P	17	16	TCEN100057	36-4	P	3	0	TCEN100096
20-30	P	13	16	TCEN100058	36-5	P	4	0	TCEN100097
20-33	P	11	16	TCEN100059	36-10	P	48	16	TCEN100098
22-2	P	3	8	TCEN100061	36-15	P	35	16	TCEN100101
22-7	P	1	0	TCEN100062	36-52	P	52	16	TCEN100102
22-14	P	19	16	TCEN100067	40-56	P	85	16	TCEN100103

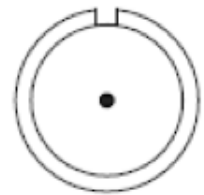
Teledyne Part Numbers: Enclosure Mount Receptacle Connector **SOCKET**

ENCLOSURE MOUNT RECEPTACLE CONNECTOR: SOCKET					ENCLOSURE MOUNT RECEPTACLE CONNECTOR: SOCKET				
LAYOUT	PIN/SOCKET	# OF CONTACTS	CONTACT SIZE	TELEDYNE PART NUMBER	LAYOUT	PIN/SOCKET	# OF CONTACTS	CONTACT SIZE	TELEDYNE PART NUMBER
10S-2	S	1	16	TCEN200002	22-18	S	8	16	TCEN200068
10SL-3	S	3	16	TCEN200003	22-19	S	14	16	TCEN200069
10SL-4	S	2	16	TCEN200004	22-20	S	9	16	TCEN200070
14S-1	S	3	16	TCEN200008	22-23	S	8	12	TCEN200072
14S-2	S	4	16	TCEN200009	22-28	S	7	12	TCEN200073
14S-5	S	5	16	TCEN200011	22-33	S	7	16	TCEN200074
14S-6	S	6	16	TCEN200012	22-36	S	8	12	TCEN200075
14S-7	S	3	16	TCEN200013	24-2	S	7	12	TCEN200076
16S-1	S	7	16	TCEN200018	24-5	S	16	16	TCEN200077
16S-8	S	5	16	TCEN200023	24-6	S	8	12	TCEN200078
16-10	S	3	12	TCEN200025	24-9	S	2	4	TCEN200079
16-11	S	2	12	TCEN200026	24-10	S	7	8	TCEN200080
16-13	S	2	12	TCEN200028	24-22	S	4	8	TCEN200081
18-1	S	10	16	TCEN200029	24-27	S	7	16	TCEN200082
18-10	S	4	12	TCEN200034	24-28	S	24	16	TCEN200083
18-11	S	5	12	TCEN200035	28-12	S	26	16	TCEN200086
18-12	S	6	16	TCEN200036	28-13	S	26	16	TCEN200087
18-19	S	10	16	TCEN200039	28-15	S	35	16	TCEN200088
20-7	S	8	16	TCEN200050	28-16	S	20	16	TCEN200089
20-11	S	13	16	TCEN200051	28-17	S	15	16	TCEN200090
20-15	S	7	12	TCEN200052	28-18	S	12	16	TCEN200091
20-19	S	3	8	TCEN200053	28-21	S	37	16	TCEN200092
20-23	S	2	8	TCEN200054	32-5	S	2	0	TCEN200093
20-25	S	13	16	TCEN200055	32-17	S	4	4	TCEN200094
20-27	S	14	16	TCEN200056	32-22	S	54	16	TCEN200095
20-29	S	17	16	TCEN200057	36-4	S	3	0	TCEN200096
20-30	S	13	16	TCEN200058	36-5	S	4	0	TCEN200097
20-33	S	11	16	TCEN200059	36-10	S	48	16	TCEN200098
22-2	S	3	8	TCEN200061	36-15	S	35	16	TCEN200101
22-7	S	1	0	TCEN200062	36-52	S	52	16	TCEN200102
22-14	S	19	16	TCEN200067	40-56	S	85	16	TCEN200103

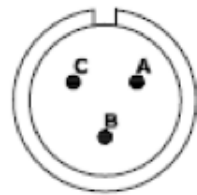
Pinout by Size of Connectors:

The layout is front face of pin inserts or rear face of socket inserts

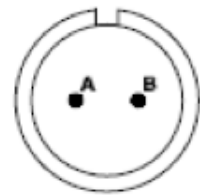
SIZE 10



10S-2
1#16

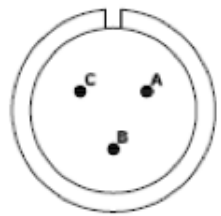


10SL-3
3#16

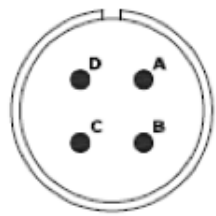


10SL-4
4#16

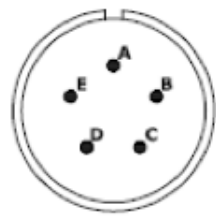
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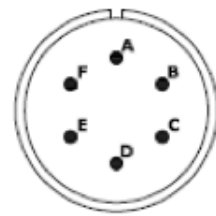
14S-1
3#16



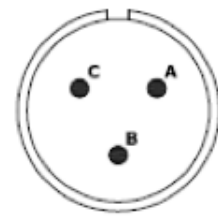
14S-2
4#16



14S-5
5#16

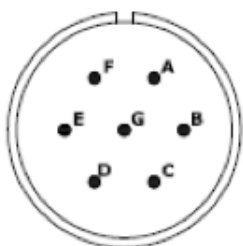


14S-6
6#16

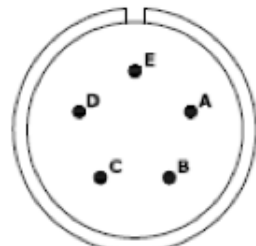


14S-7
3#16

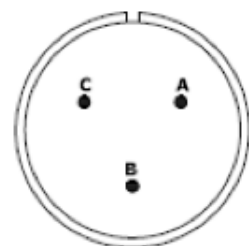
SIZE 16



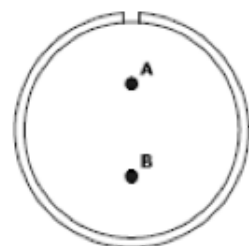
16S-1
7#16



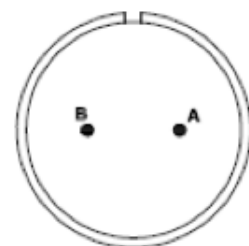
16S-8
5#16



16-10
3#12



16-11
2#12

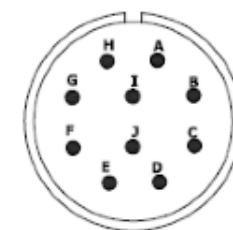


16-13
2#12

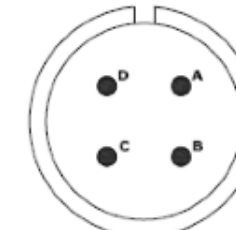
Pinout by Size of Connectors:

The layout is front face of pin inserts or rear face of socket inserts

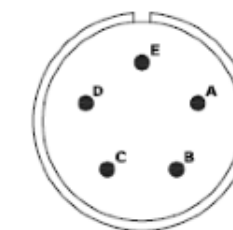
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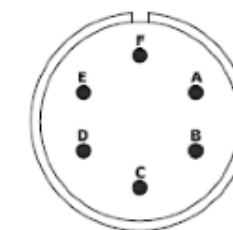
18-1
10#16



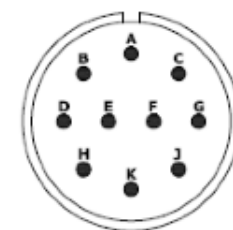
18-10
4#12



18-11
5#12

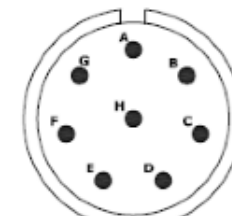


18-12
6#16

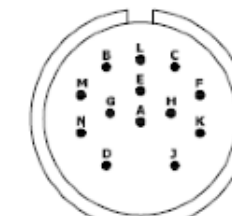


18-19
10#16

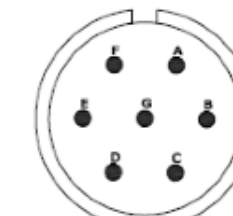
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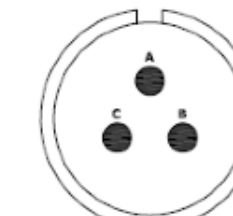
20-7
8#16



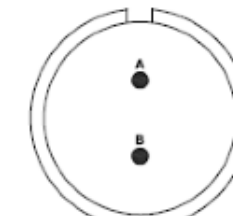
20-11
13#16



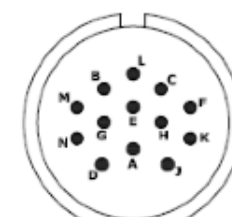
20-15
7#12



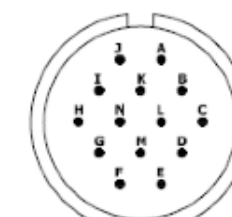
20-19
3#16



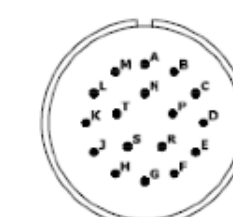
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2#8



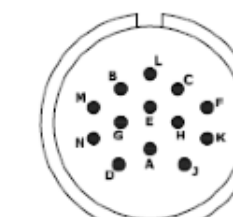
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13#16



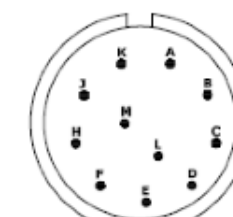
20-27
14#16



20-29
17#16



20-30
13#16

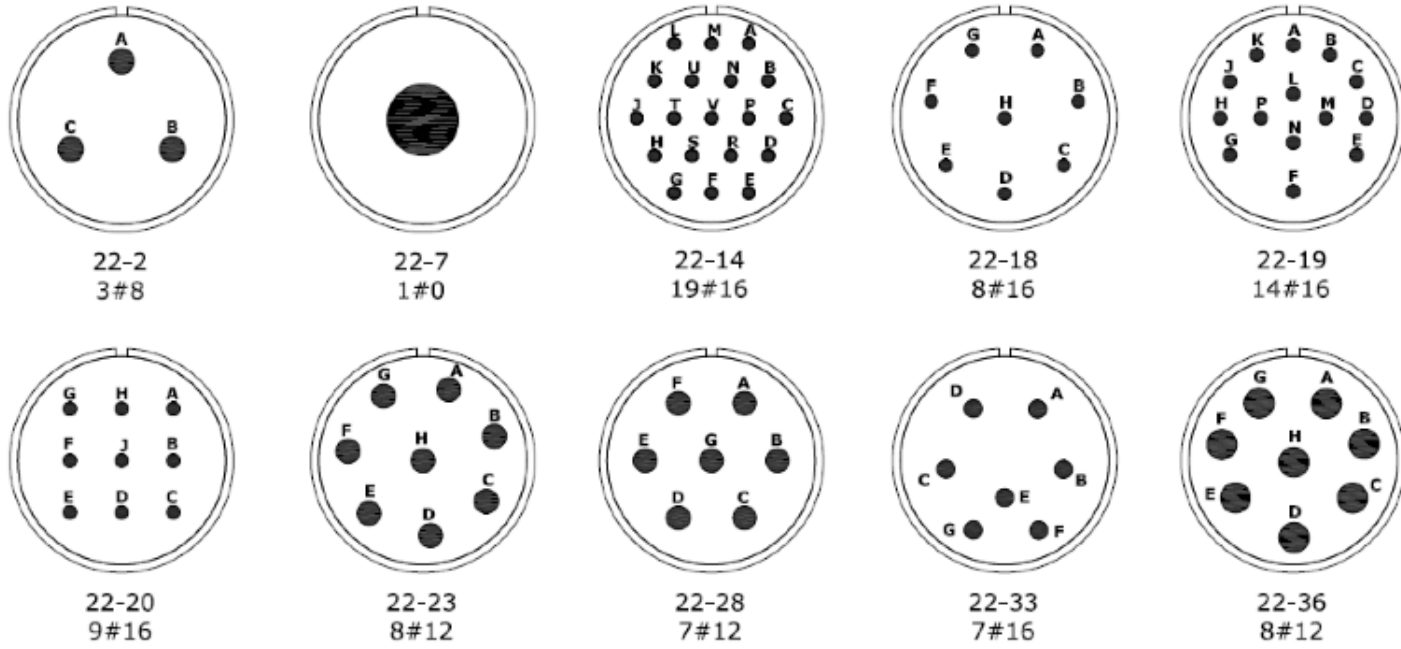


20-33
11#8

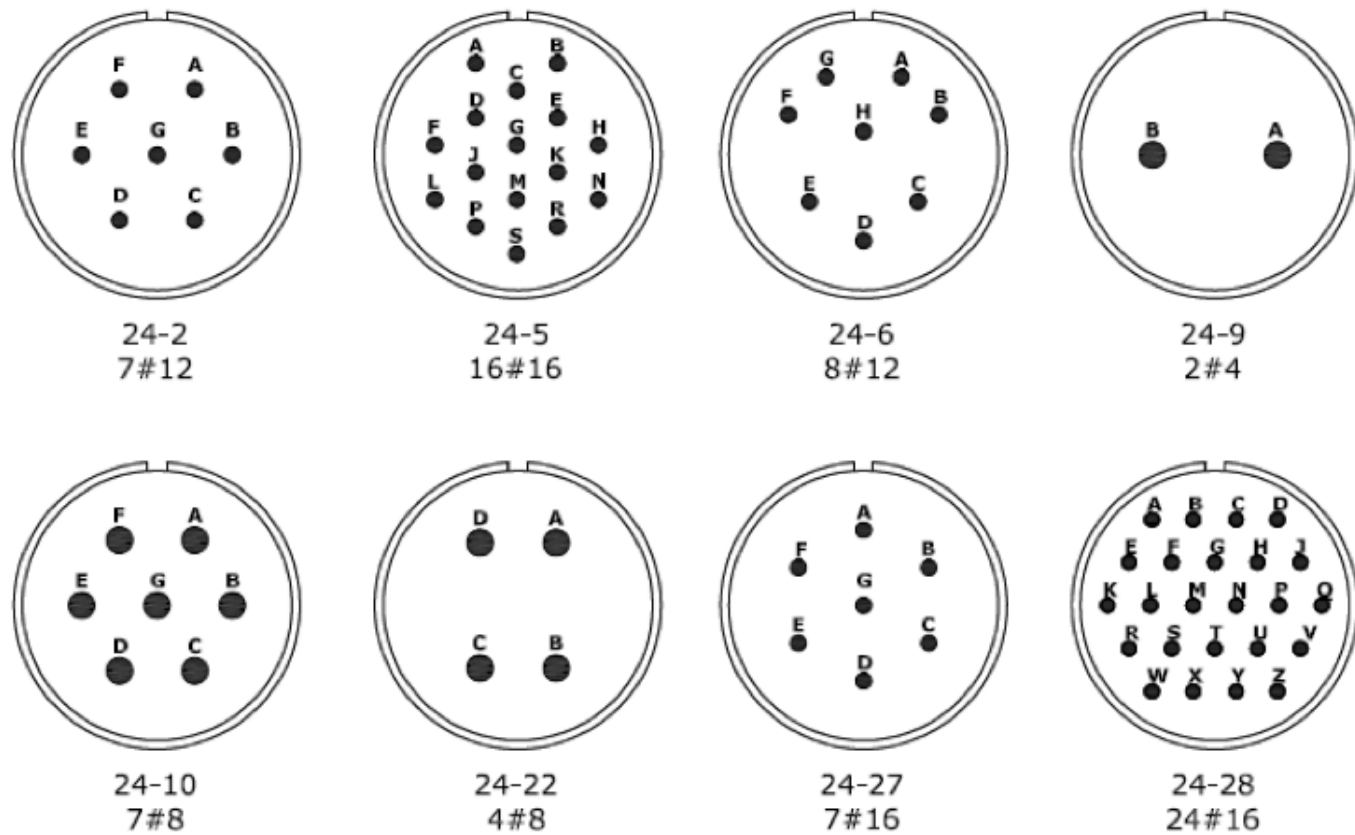
Pinout by Size of Connectors:

The layout is front face of pin inserts or rear face of socket inserts

SIZE 22



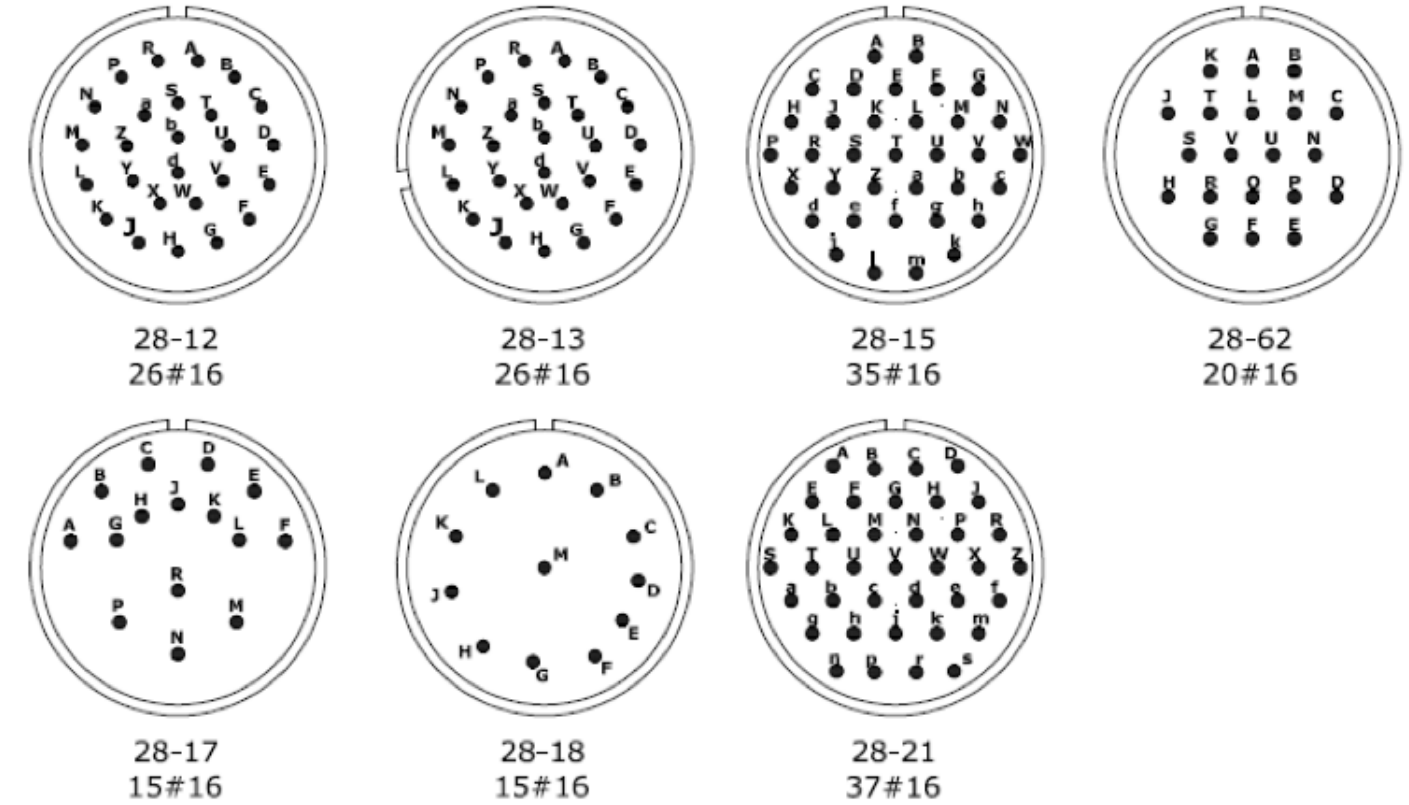
SIZE 24



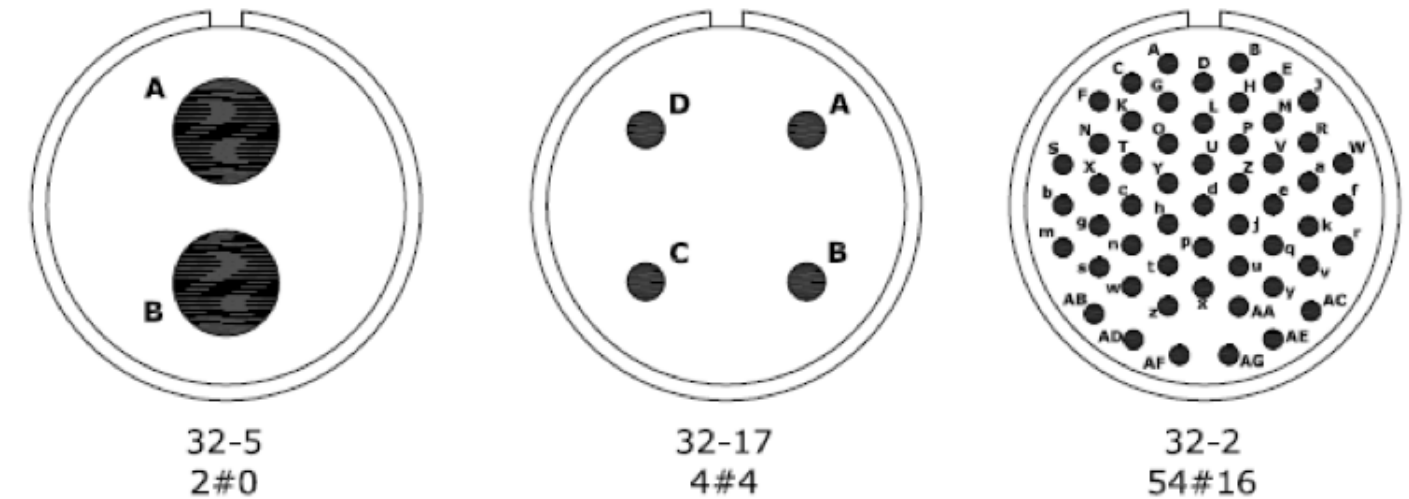
Pinout by Size of Connectors:

The layout is front face of pin inserts or rear face of socket inserts

SIZE 28



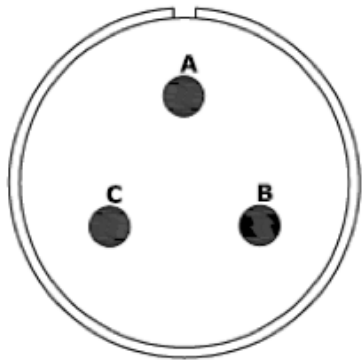
SIZE 32



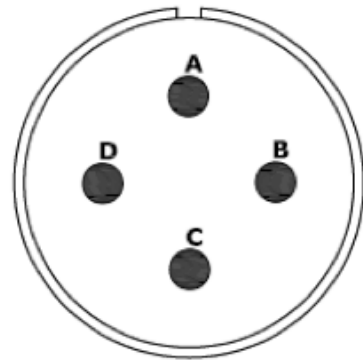
Pinout by Size of Connectors:

The layout is front face of pin inserts or rear face of socket inserts

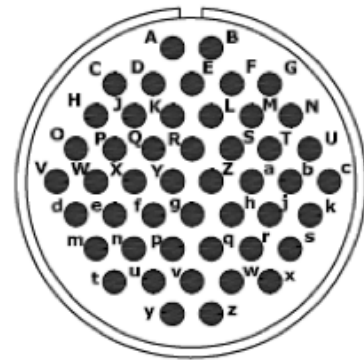
SIZE 36



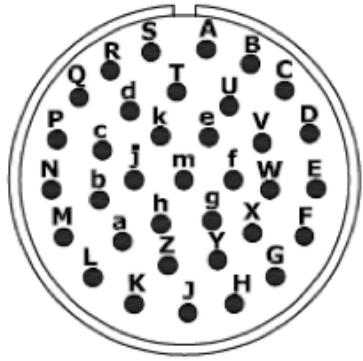
36-4
3#0



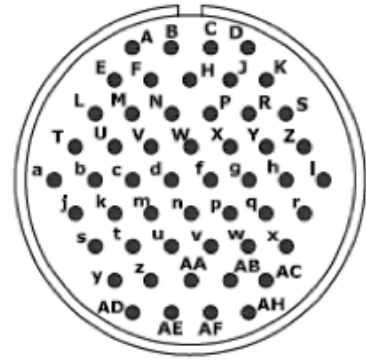
36-5
4#0



36-15
35#16

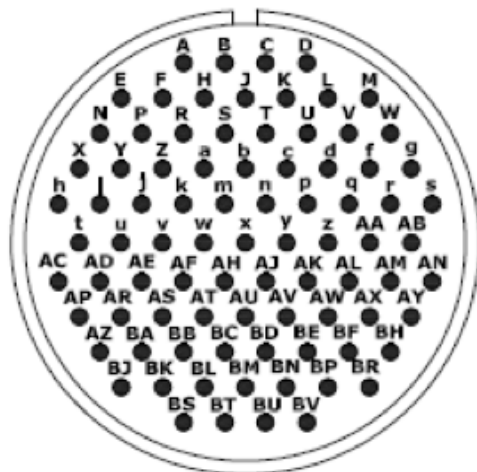


36-10
48#16



36-52
52#16

SIZE 40



40-56
85#16

Additional Solutions from Teledyne Cable Solutions



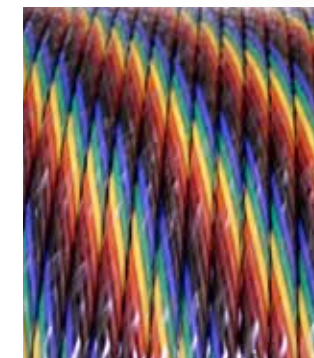
BULK CABLE

Teledyne Cable Solutions also offers a variety of cable in stock or custom manufactured, ranging from two conductors to 20 pairs in a variety of AWGs, all in Polyurethane jacketing for cold weather reliability and flexibility. This cable is available in any length or spool quantities.



CUSTOM CABLE

All Teledyne Cable Solutions products may be custom ordered to fit most applications. Teledyne Cable Solutions will custom manufacture our 4, 6, and 7-Way conductor products in any quantity or color required, from a single prototype to fleet requirements. TCS also overmolds custom assemblies using circular connectors.





LOCATIONS KEY

- Teledyne Cable Solutions Locations
- Teledyne Marine Locations
- Headquarters

Teledyne Cable Solutions, a partnership formed by Teledyne Storm Cable and Teledyne VariSystems, provides bulk cable and custom assemblies to the oil and gas, marine, defense, and transit industries. With over 50 years of dedicated experience providing cable and interconnect solutions for harsh environments, TCS meets challenges for application-specific multi-core cables and complex overmolded cable assemblies and harnesses.

Cable Solutions is a member of Teledyne Marine.



TELEDYNE
CABLE SOLUTIONS



TELEDYNE STORM CABLE



TELEDYNE VARISYSTEMS

9215 Premier Row
Dallas, TX 75247
Tel: +1 214 637 1381

www.teledynecablesolutions.com
cablesolutions@teledyne.com



TELEDYNE MARINE
Everywhere you look™

Teledyne Marine | Cable Solutions

9215 Premier Row, Dallas, TX 75247 USA
Tel. +1 214 637 1381 • E-mail: cablesolutions@teledyne.com

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