

Contact Specifications

TC Series • High-Performance Crimp Connectors

Wire & Crimp Dimensions

Contact Size	Wire Range		Potential Drop (Millivolts)	Crimp Well Diameter	Min Crimp Well Depth	Finished Wire Diameter Sealing Range		Contact Retention Min Axial Load Pounds (Newtons)
	AWG	Dia				Min	Max	
#16	16, 18, 20	.032-.050 (.81-1.29)	<50	.067 (1.70)	.250 (6.35)	.053 (1.35)	.103 (2.62)	25 (111.2)
#12	12, 14	.064-.080 (1.62-2.05)	<42	.100 (25.4)	.250 (6.35)	.097 (2.46)	.158 (4.01)	30 (133.4)
#8	8, *10	.102-.128 (2.58-3.26)	<26	.181 (4.6)	.485 (12.3)	.132 (3.4)	.255 (6.5)	50 (222.4)
#4	4, *6	1.16-.204 (4.11-5.18)	<23	.281 (7.1)	.485 (12.3)	.237 (6.0)	.370 (9.4)	60 (266.9)
#0	*2, 0	.257-.325 (6.54-8.25)	<21	.453 (11.5)	.580 (14.7)	.360 (9.1)	.550 (14.0)	75 (333.6)

Dimensions are in inches (mm) unless otherwise noted. * Contact reducing bushings are required for crimp barrel to accommodate 10, 6, and 2 AWG wire gauges. Bushings are ordered separately, see Contact Reducing Bushing table below.

Current Rating By Contact Size & Wire Size

Wire Size	Contact Size				
	#16/16S	#12	#8	#4	#0
20	7.5A				
16	13A				
14		17A			
12		23A			
10			33A		
8			46A		
6				60A	
4				80A	
2					100A
0					150A

Test ratings only. A connector cannot withstand maximum current through all contacts continuously. Please note that the establishment of electrical safety factors is left entirely in the designer's hands, since he or she is in the best position to know what peak voltage, switching surges, transients, etc. can be expected in a particular circuit.

Torque Values For Cable Clamp Screws

Screw Size	Recommended Torque	
	Min	Max
#2-56	1.5 (.2)	2.5 (.3)
#4-40	3.5 (.4)	4.5 (.5)
#6-32	5 (.6)	7 (.8)
#8-32	7 (.8)	9 (1.0)
#10-32	9 (1.0)	11 (1.2)
#.250-20	11 (1.2)	13 (1.5)

Units are in inch pounds (Newton meters).

Contact Derating Specifications

Service Rating	Max Operating Voltage at Sea Level		Nominal Distance in Inches (mm)		Mechanical Spacing Nominal	Standard Sea Level Conditions		Pressure Altitude 50,000 ft		Pressure Altitude 70,000 ft	
	AC (RMS)	DC	Airspace	Creepage		Min Flashover Voltage AC (RMS)	Test Voltage AC (RMS)	Min Flashover Voltage AC (RMS)	Test Voltage AC (RMS)	Min Flashover Voltage AC (RMS)	Test Voltage AC (RMS)
Inst.	200	250	.0312 (.8)	.063 (1.6)	—	1,400	1,000	500	400	325	260
A	500	700	.063 (1.6)	.125 (3.2)	.063 (1.6)	2,800	2,000	800	600	450	360
D	900	1,250	.125 (3.2)	.188 (4.8)	.125 (3.2)	3,600	2,800	900	675	500	400
E	1,250	1,750	.188 (4.8)	.250 (6.4)	.188 (4.8)	4,500	3,500	1,000	750	550	440
B	1,750	2,450	.250 (6.4)	.313 (8.0)	.250 (6.4)	5,700	4,500	1,100	825	600	480
C	3,000	4,200	.313 (8.0)	1.000 (25.4)	.313 (8.0)	8,500	7,000	1,300	975	700	560

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Torque Values for Accessory Threads

Shell Size	Recommended Torque	
	Min	Max
8	51 (5.8)	61 (6.9)
10	71 (8.0)	81 (9.2)
12	103 (11.6)	113 (12.8)
14	111 (12.5)	121 (13.7)
16	111 (12.5)	121 (13.7)
18	111 (12.5)	121 (13.7)
20	131 (14.8)	141 (15.9)
22	131 (14.8)	141 (15.9)
24	131 (14.8)	141 (15.9)

Units are in inch pounds (Newton meters).

Contact Reducing Bushings

Bushing Part Number	Contact Size	Wire Size	Bushing Inner Diameter	Bushing Outer Diameter
CRB6-10	#6	#10	.136 (3.5)	.225 (5.7)
CRB6-9	#6	#9	.155 (3.9)	.225 (5.7)
CRB6-8	#6	#8	.185 (4.7)	.225 (5.7)
CRB4-8	#4	#8	.185 (4.7)	.272 (6.9)
CRB4-6	#4	#6	.225 (5.7)	.272 (6.9)
CRB4-5	#4	#5	.250 (6.6)	.272 (6.9)
CRB1-6	#1	#6	.225 (5.7)	.396 (10.1)
CRB1-2	#1	#2	.359 (9.1)	.396 (10.1)
CRB0-2	#4/0	#2/0	.500 (12.7)	.629 (16.0)

Contact reducing bushings are required when crimping a smaller wire than the contact is designed for. Dimensions are in inches (mm) unless otherwise noted.

Rev. 1302.1

Standard Contacts, Sealing Plugs, & Tooling

Contact Size	Contact Style	Part Number	Wire Size (AWG)	Wire Range (Dia)	Jacket Strip Length	Crimping Tool	Positioner (Turret)	Die Set	Locator	Insertion Tool	Extraction Tool	
#16	Pin	TCPP16	16, 18, 20	.032-.050 (.81-1.29)	.236 (6.0)	TK101 (Hand Crimper)	TP102	—	—	TN207	TX208	
	Socket	TCSS16										
	Socket (Short Shell)*	TCSS16S										
	Sealing Plug	TCSP16										
#12	Pin	TCPP12	12, 14	.064-.080 (1.62-2.05)	.236 (6.0)			—	—	TN209	TX210	
	Socket	TCSS12										
	Sealing Plug	TCSP12										
#8	Pin	TCPP08	8, 10	.102-.128 (2.58-3.26)	.512 (13.0)			—	TD2302	TL2309	—	TX1501
	Socket	TCSS08										
	Sealing Plug	TCSP08										
#4	Pin	TCPP04	4, 6	1.16-.204 (4.11-5.18)	.512 (13.0)	TU2301 (Pneumatic Crimper)		—	TD2304	TL2311	—	TX1502
	Socket	TCSS04										
	Sealing Plug	TCSP04										
#0	Pin	TCPP00	0, 2	.257-.325 (6.54-8.25)	.630 (16.0)			—	TD2305	TL2313	—	TX1503
	Socket	TCSS00										
	Sealing Plug	TCSP00										

Dimensions are in inches (mm) unless otherwise noted. * Size 16 short shell sockets are required on short shells designated as 10S, 10SL, 12S, 14S, and 16S. No short pins required.

Thermocouple Contacts & Tooling

Contact Size	Contact Style	Part Number	Wire Size (AWG)	Wire Range (Dia)	Jacket Strip Length	Crimping Tool	Positioner (Turret)	Insertion Tool	Extraction Tool	
#16 Alumel	Pin	TCPA16	16, 18, 20	.032-.050 (.81-1.29)	.236 (6.0)					
	Socket	TCSA16								
	Socket (Short Shell)*	TCSA16S								
#16 Chromel	Pin	TCPR16	16, 18, 20	.032-.050 (.81-1.29)	.236 (6.0)					
	Socket	TCSR16								
	Socket (Short Shell)*	TCSR16S								
#16 Constantan	Pin	TCPK16	16, 18, 20	.032-.050 (.81-1.29)	.236 (6.0)	TK101 (Hand Crimper)	TP102		TN207	TX208
	Socket	TCSK16								
	Socket (Short Shell)*	TCSK16S								
#16 Iron	Pin	TCPE16	16, 18, 20	.032-.050 (.81-1.29)	.236 (6.0)					
	Socket	TCSE16								
	Socket (Short Shell)*	TCSE16S								
#12 Alumel	Pin	TCPA12	12, 14	.064-.080 (1.62-2.05)	.236 (6.0)					
	Socket	TCSA12								
#12 Chromel	Pin	TCPR12	12, 14	.064-.080 (1.62-2.05)	.236 (6.0)					
	Socket	TCSR12								
#12 Constantan	Pin	TCPK12	12, 14	.064-.080 (1.62-2.05)	.236 (6.0)				TN209	TX210
	Socket	TCSK12								
#12 Iron	Pin	TCPE12	12, 14	.064-.080 (1.62-2.05)	.236 (6.0)					
	Socket	TCSE12								

Dimensions are in inches (mm) unless otherwise noted. * Size 16 short shell sockets are required on short shells designated as 10S, 10SL, 12S, 14S, and 16S. No short pins required.