

# **SolderTacts Contacts** One-Piece, Controlled-Solder Contacts for Fast, Reliable Terminations

# SolderTacts Contacts One-Piece, Controlled-Solder Contacts for Fast, Reliable Terminations



#### ECONOMICAL

- One-piece contact design with integrated soldering technology
- One-step installation process
- One contact fits multiple cable sizes
- No special tools required

#### RELIABLE

- 360° shielding reduces crosstalk and improves signal transmission
- Reflow solder joints are strong and reliable
- Controlled reflow soldering process yields reliable, consistent terminations
- Terminations are fully inspectable

#### VERSATILE

- Compatible with a variety of commercial and military connectors
- Termination available for coax cables, shielded pairs, twisted pairs, and triaxial cables
- 150°C temperature rating

The outer SolderSleeve termination is a cross-linked heat-shrinkable insulating sleeve supplied in the expanded state. Cables insert easily, with no spacers or other parts required.

One-piece controlled-reflow-solder SolderTacts contacts are designed to terminate coaxial cables, shielded wires and twisted pairs faster and more reliably than other methods. SolderTacts contacts help eliminate the variables of crimping. The one-step installation process helps cut down on production time while reducing handling and installed costs.

### Controlled Soldering and Strain Relief

SolderTacts contacts provide the optimum amount and type of solder and flux in a prefluxed solder preform that controls soldering and reduces operator sensitivity. The geometry of the coaxial cable is carried through the connector to eliminate separate pins, help reduce crosstalk, and supports improved shielding effectiveness and signal transmission.

These contacts contain two SolderSleeve terminations. One terminator connects the cable's signal conductor to the contact's inner pin. The other terminator connects the shield or ground lead to the contact body. When the contact is heated, the solder melts to provide a precise solder connection. SolderTacts contacts provide a simultaneous electrical connection and strain relief. Heat shrinkable tubing insulations help eliminate stress concentration on the wire within the contact.

### Improved Signal Integrity

For digital and RF signals, SolderTacts contacts offer better signal transmission than obtained with crimp contacts. They reduce crosstalk, signal attenuation, and reflections, while providing excellent protection against outside noise.

## Compatibility

SolderTacts contacts are compatible with a wide range of circular and rectangular military and commercial connectors, including MIL-DTL-38999, MIL-DTL-83723 and MIL-DTL-28748. Compatible with most standard connector cavities, SolderTacts contacts are intermateable and intermountable with contacts qualified to the above connector specifications. They use standard insertion and extraction tools.

## **TE Components . . . TE Technology . . . TE Know-how . . .**

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Get your product to market faster with a smarter, better solution.

The inner SolderSleeve termination is a heat-shrinkable sleeve with a precisely prefluxed solder preform conforming to QQ-S-571. The precision outer body meets electrical engagement and contact retention requirements of individual connector systems.  $\$ 



The outer solder preform contains precise amounts of solder and flux conforming to QQ-S-571. Inner pin and socket contacts are permanently fixed within the assembly to provide proper setback and concentricity.



#### **SolderTacts Contacts**

SolderTact

Series

### **APPLICATION TOOLING**

- Steinel HL1910E or HL2010E Raychem CV-1981
- Steinel HL1920E or HL2020E • Raychem CV-1983

• Steinel HL1802E-074616 Raychem AA-400

Part No.

(D-602-)

For more details, please see TE Application Tooling brochure 1-1773872-1

#### **SPECIFICATION**

• D-6002: SolderTacts Military-Grade Electrical Contacts for Solder Termination

#### **APPLICATIONS**

- Commercial Aerospace
- Military Marine
- Military Aerospace
- Missile Defense
- C4ISR
- Space
- Ground Defense
- Offshore/Civil Marine

- Repair Wand Part No. Part Description 050014 000

Submin	0218, 0219	ES-61170	959014-000	AD-1481-SUBMN-SLDTK-HOLDR	
Submin	0238, 0239	ES-61169	959014-000		
748	44, 45	ES-61133			
	0172, 0173	ES-61240	00 40 40 000	AD 1100	
	54, 55	ES-61132	994040-000	AD-1480	
	0126, 0127	ES-61199			
	D-610-09, -10	ES-61187	551737-000	AD-1571-1-POWERTACT-HOLDR	
	0094, 0095	ES-61128			
723	0106, 0107	ES-61134	994057-000	AD-14940723-SLTC-HLD-ASY	
	0104, 0105	ES-61129			
No. 12	16, 17	ES-61161	966800-000	AD-1508-REP-FOR-12-CONT	
482	46, 47	ES-61137	181779-000	AD-1565-1-SLDTCT-HLDR-ASY	
	56, 57	ES-61138	181779-000	AD-1505-1-SEDTCT-HEDR-AST	
999 Size 16	0140, 0141	ES-61226			
	0142, 0143	ES-61224	859747-000	AD-1572-1-SOLD-HOLDER-ASY	
	0171	ES-61226	659747-000		
	0174	ES-61124			
	0144, 0145	ES-61206			
999 Size 12	0146, 0147	ES-61218	122917-000	AD-1566-1-HOLDER-ASSEMBLY	
0120 12	0159/0151	ES-61223			
	1108/1109	ES-61172			
	1110/1111	E3-01172			
999 Size 8	1112/1113	ES-61184	635308-000	AD-1568-1-SOLDERTACT-HLDR	
0.200	0156/0157-X	ES-61231			
	0169/0170-X	ES-61235			

**Engineering Standard** 

(Termination Instructions)

In the terminated signal lead, the heat-shrink tubing shrinks tightly around the termination to insulate and strain relieve the connection. The tensile strength of the soldered terminations exceeds that of the cable itself.



The dielectric between inner and outer contacts provides concentricity, electrical integrity, precise mating dimensions, and closed entry at the inner socket.

The shield termination can be inspected through the viewing port.

# Table I: SolderTacts Contacts-to-Cable Cross Reference

	Submin Series	723 Series Size 12	723 Series Size 12	748 Series Size 16	748 Series Size 16	847 Series Size 16	748 Series Size 16
	D-602-0278 D-602-0279	D-602-0094 D-602-0095	D-602-0106 D-602-0107	D-602-44 D-602-45	D-602-0172 D-602-0173	D-602-72 D-602-73	D-602-76 D-602-77
Cheminax Coaxia	al Cables						
5021K1X1X							
5022A1X1X							
5024A1X1X	~	~					
5026A1X1X	~			<b>v</b>		~	~
5026D1X2X	~			<b>v</b>		<b>v</b>	~
5028A1X1X	~						
5028A1X2X	~						
5030A1X1X	~			✓4	~	<b>v</b>	~
7522A1X1X							
7524A1X1X							
7528A1X1X	<b>v</b>	<b>v</b>		✔4	<b>~</b>	<b>v</b>	~
7530A1X1X	<b>v</b>			✔4	~	<b>v</b>	~
7530D1X2X							
9526A1X1X							
9528A1X1X			~				
9528D1X2X			~				
9530A1X1X		~					
9530H1X1X	~	~					
9532A1X1X	~	~		✔4	~	<b>v</b>	~
RG/U Coaxial Ca	bles						
RG-58							
RG-174	<ul> <li>✓</li> </ul>	~		<b>v</b>		<b>v</b>	~
RG-178	~	~		<b>√</b> 1	~	<b>√</b> 1	1
RG-179	~	~		<b>v</b>	~	<b>v</b>	~
RG-180			~				
RG-195			<b>v</b>				
RG-316	<b>v</b>	<b>v</b>		✓		✓	~
Twisted Pair Cab	les						
	Submin	723 Series	723 Series	748 Series	748 Series	847 Series	748 Series
	Series D-602-0288	Size 12 D-602-0104	Size 12	Size 16 D-602-54	Size 16 D-602-0126	Size 16 D-602-74	Size 16
	D-602-0289	D-602-0105	_	D-602-55	D-602-0127	D-602-75	_
22-26					✓		
24-26		✓					
24-30 <sup>3</sup>	✓2			<ul> <li>✓</li> </ul>			

1. Requires use of barrier.

2. .048" maximum insulation diameter.

3. Smaller cables can be accommodated. Consult product management.

4. These cables can be accommodated by D-602-44 and D-602-45. However, the D-602-0172 and the D-602-0173 are preferred for these cables. The cross reference list above is not intended to be exhaustive. Please consult TE.

# Table I: SolderTacts Contacts-to-Cable Cross Reference

D-602-46 D-602-47	D-602-16 D-602-17	D-602-0122 D-602-0123	D-602-0144 D-602-0145	D-602-0150 D-602-0151	D-602-0140 D-602-0141 D-602-0171
V V V			✓ ✓	✓	<b>v</b> <b>v</b>
V V V			V V	✓	<b>v</b> <b>v</b>
V V V			✓ ✓	V	<b>v</b> <b>v</b>
V V V					<b>v</b> <b>v</b>
V V V	<ul> <li>✓</li> <li>✓</li> </ul>	V	V		<b>v</b> <b>v</b>
V V	~	V			
V		V			
V		~			
V	<b>~</b>	~			4
		~			~
		~			
<ul> <li></li> </ul>	<b>~</b>		~		~
	<b>v</b>		~		<b>v</b>
	<b>v</b>				
		~			
		~		<b>~</b>	
		~		<b>~</b>	
			~		
	<b>v</b>		~		
<b>v</b>	<b>v</b>		~		
		~			
<b>v</b>	<b>v</b>		~		
<b>v</b>					<b>v</b>
<b>√</b> 1	<b>~</b>		~		~
		~		~	
		~			
<b>v</b>	~		~		<b>v</b>
482 Series	No. 12	999 Series	999 Series	999 Series	999 Series
D-602-56			D-602-0146		Size 16
D-602-57	_	_	D-602-0147	_	_
			<ul> <li>✓</li> </ul>		
<ul> <li>✓</li> </ul>					
	✓ ✓ ✓ 482 Series Size 16 D-602-56 D-602-57	✓         ✓           ✓         ✓           ✓         ✓           ✓         ✓           ✓         ✓           ✓         ✓           ✓         ✓           ✓         ✓           ✓         ✓           ✓         ✓           ✓         ✓           D-602-56         —           D-602-57         —	V         V           V         V	V         V           D-602-56         D-602-0146           D-602-57         -         -         D-602-0147           V         V         V         V	V         V           P602-56         D-602-0147         D-           D-602-57         -         D-         D-           V         V         V         V

Requires use of barrier.
 .048" maximum insulation diameter.

3. Smaller cables can be accommodated. Consult product management.

4. These cables can be accommodated by D-602-44 and D-602-45. However, the D-602-0172 and the D-602-0173 are preferred for these cables. The cross reference list above is not intended to be exhaustive. Please consult TE.

# Table II: Connector Accommodation: SolderTacts Shielded Contacts

Military Specification	SolderTacts Contacts Series/Contact Size	Specification	Cable Type	Contact Type	Part No.
NAS 1599		AS39029/74	Small Coaxial	Pin	D-602-0094
MIL-DTL-26482		AS39029/73	Small Coaxial	Socket	D-602-0095
Series II SAE-AS81703	723 Series	AS39029/74	Large Coaxial	Pin	D-602-0106
Series III	Size 12 Contact	AS39029/73	Large Coaxial	Socket	D-602-0107
MIL-DTL-83723		AS39029/74	Twisted Pair	Pin	D-602-0104
Series I & III MIL-DTL-83733		AS39029/73	Twisted Pair	Socket	D-602-0105
WIL-DTE-03733	No. 12 Series	MIS-20067	Coaxial	Pin	D-602-17
MiL-DTL-26482	Size 12 Contact	(Army)	Coaxial	Socket	D-602-16
Series I			Coaxial	Pin	D-602-46
MIL-DTL-26500	482 Series	-	Coaxial	Socket	D-602-47
MIL-PRF-81733 Series II	Size 16 Contact	-	Twisted Pair	Pin	D-602-56
Oenes II		-	Twisted Pair	Socket	D-602-57
			Coaxial	Pin	D-602-44
		-	Coaxial	Socket	D-602-45
		-	Twisted Pair	Pin	D-602-54
		-	Twisted Pair	Socket	D-602-55
MIL-DTL- 28748/3,4,9,10	748 Series Size 16 Contact	MIS20067	Power	Pin	D-610-09
MIS-20065		(Army)	Power	Socket	D-610-10
(Army)			Coaxial	Pin	D-602-0173
			Coaxial	Socket	D-602-0172
			Twisted Pair (MIL-STD-1553)	Pin	D-602-0126
		-	Twisted Pair	Socket	D-602-0127
MIL-DTL-38999	999 Series Size 16 Contact	AS39029/76	Coaxial	Pin	D-602-0140
		AS39029/77	Coaxial	Socket	D-602-0141
		AS39029/77	Coaxial*	Socket	D-602-0171
		AS39029/76	Twisted Pair	Pin	D-602-0142
		AS39029/77	Twisted Pair	Socket	D-602-0143
		AS39029/77	Twisted Pair*	Socket	D-602-0174
		AS39029/28	Coaxial	Pin	D-602-0144
	999 Series Size 12 Contact	AS39029/75	Coaxial	Socket	D-602-0145
		AS39029/28	Twisted Pair	Pin	D-602-0146
		AS39029/75	Twisted Pair	Socket	D-602-0147
Series I, II*,		AS39029/28	Large Coaxial	Pin	D-602-0150
III, IV		AS39029/75	Large Coaxial	Socket	D-602-0151
		AS39029/60	Coaxial	Pin	D-602-0122
		AS39029/59	Coaxial	Socket	D-602-0122
		USAF8340712-1^	Shielded Twisted Pair (MIL-STD-1553)	Socket	D-602-0123
	999 Series	USAF8340713-1^	Shielded Twisted Pair (MIL-STD-1553)	Pin	D-602-1109
		USAF8340712-2^	Shielded Twisted Pair (MIL-STD-1553)	Socket	D-602-1112
			Shielded Twisted Pair (MIL-STD-1553)	Pin	D-602-1112
		USAF8340713-2^	Triaxial	Socket	D-602-1110
			Triaxial	Pin	D-602-1111
			Coaxial	Pin	D-602-0278
	Submin Sorias	-	Coaxial	Socket	D-602-0278
_	Submin Series Size 16	-	Twisted Pair	Pin	D-602-0279
	0.20 10	_	rwistou r all		0.07-0500

\* Size 16 contacts only for use with MTCP and MIL-DTL-38999 Series II connectors only.

^ Intermountable and intermatable, replaces crimp style termination.



# Table III: SolderTacts Contact Compatibility

Contact Military Specification	Raychem Equivalent* Part Numbers	Nature of Compatibility	SolderTacts - Compatible Connector Specifications	SolderTact Series	
M39029/73-396 M39029/73-397 M39029/73-398 M39029/73-555	D-602-0107 D-602-0095 D-602-0105 D-602-0093	Equivalent product.	MIL-DTL-26482 Series II MIL-DTL-81703 Series III MIL-DTL-83723 Series I, III	723	
M39029/74-399 M39029/74-400 M39029/74-401	D-602-0106 D-602-0094 D-602-0104	TE is a qualified vendor.	MIL-DTL-83733 NAS-1599	Series	
M39029/28	D-602-0144 D-602-0146 D-602-0150				
M39029/59	D-602-0123				
M39029/60	D-602-0122				
M39029/75	D-602-0145 D-602-0147 D-602-0151	Intermountable and intermatable. Replaces crimp-style termination.			
M39029/76	D-602-0140 D-602-0142				
M39029/77	D-602-0141 D-602-0143 D-602-0171 D-602-0174		MIL-DTL-38999 Series I, II*, III, IV *Size 16 only	999 Series	
M39029/90	DK-602-0156-N-X DK-602-0169-N-X	Intermountable and intermatable.	-		
M39029/91	DK-602-0157-N-X DK-602-0170-N-X	Replaces crimp-style termination.			
USAF8340712-1 USAF8340712-2 USAF8340713-1 USAF8340713-2	D-602-1108 D-602-1112 D-602-1109 D-602-1113	Equivalent product. TE is a qualified vendor.			
M39029/25 M39029/26	D-602-17 D-602-16	Intermountable and intermatable. Replaces crimp-style termination.	MIL-DTL-26482 Series I	No. 12	
MIS20067/5 MIS20067/6	D-602-16 D-602-17	Equivalent product. TE is a qualified vendor.	MIL-DTL-26500 MIL-DTL-81703 Series II	Series	
M39029/40 M39029/41 M39029/42 M39029/43	D-602-76 D-602-77 D-602-77 D-602-76	Intermountable and intermatable. Replaces crimp-style termination.	MIL-DTL-28748/3, /4, /9, /10	748 Series	
M39029/79	D-602-72 D-602-74	Intermountable and intermatable.		847 Series	
M39029/80	D-602-73 D-602-75	Replaces crimp-style termination.			
MIS20067/1 MIS20067/2 MIS20067/3 MIS20067/4 MIS20067/7 MIS20067/8	D-602-45 D-602-44 D-602-55 D-602-54 D-610-10 D-610-09	Equivalent products. TE is a qualified vendor.	MIS-20065 (Army)	748 Series	
	D-602-77 D-602-76 D-602-76 D-602-77	Intermountable and intermatable. Replaces crimp-style termination.		748 Series	
	D-602-0278 D-602-0279 D-602-0288 D-602-0289	Intermountable and intermatable. Replaces crimp-style termination.	Souriau Trim Trio Connector Family	Submin Series	

\* SolderTacts contacts are intermatable and interchangeable with existing MIL-spec contacts.

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1-1773722-5 12/16



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 D-602-0123
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 D-602-0172

 D-602-0173
 D-602-0278
 D-602-0279
 D-602-0289
 D-602-16
 D-602-44
 D-602-54
 D-602-55
 D-602-0104
 D-602-0104

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 D-602-1110
 D-602-1109
 D-602-1111
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 D-602-0141CS339
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 D-602-0141-C11788

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 D-602-0105CS076
 D-602-0141CS2831
 D-602-0142CS1193
 D-602-0142CS1193
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