

SPECIFICATION CONTROL DRAWING

**CONTACTS, ELECTRICAL CONNECTOR, CONCENTRIC, TRIAX,
TWINAX CABLE, PIN, SOLDER TACT®, SIZE 8, 20 AWG CABLE
(FOR MIL-C-38999 SERIES I, III and IV)**

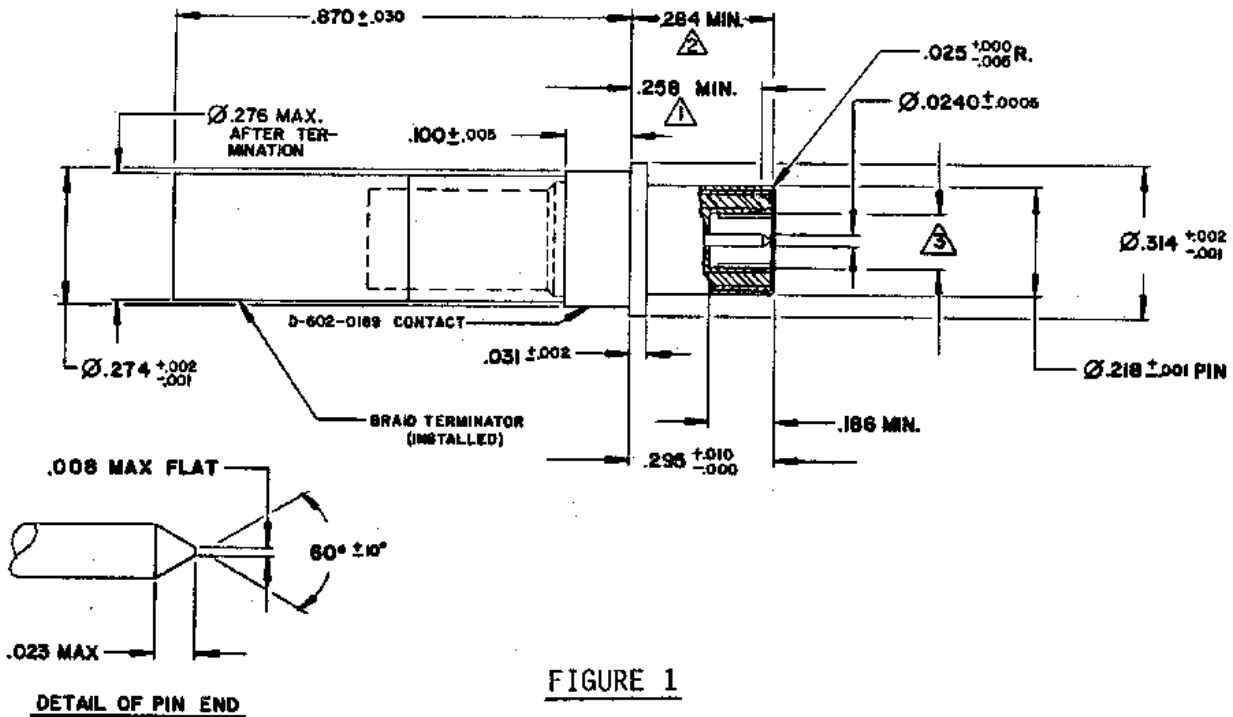


FIGURE 1

TABLE I

Inch	MM	Inch	MM	Inch	MM	Inch	MM
.0005	0.013	.0230	0.58	.1860	4.72	.2950	7.49
.0010	0.03	.0240	0.61	.2180	5.54	.3140	7.98
.0020	0.05	.0250	0.64	.2580	6.55	.8700	22.10
.0050	0.13	.0300	0.76	.2740	6.96		
.0080	0.20	.0310	0.79	.2760	7.01		
.0100	0.25	.1000	2.54	.2840	7.21		

NOTES:

- ① To point of engagement with a .113 basic diameter pin.
- ② To end of inner pin contact.
- ③ Socket mates with a .113 ± .001 diameter pin.
- 4. Dimensions are in inches after plating.
- 5. Metric dimensions are for information only.

PREPARED BY	APPROVED	APPROVED	APPROVED	DOCUMENT NUMBER
Cerdan	IM 5-16-85	DT 5-16-85	DS 5-17-85	DK-602-0169 Series

tyco
Electronics

Tyco Electronics Corporation
300 Constitutional Drive
Menlo Park, CA 94025 USA

Raychem

DOCUMENT NUMBER

DK-602-0169 Series

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Configuration: DK-602-0169-Series Kit contains a Raychem D-602-0169 contact and a Braid Terminator as described in Table II. Note the dash number following the part number.

TABLE II

Part Number	Braid Terminator	Cable O.D. Ref.
DK-602-0169-1	D-600-0054-1	.184 max.

See Materials paragraph for closed entry bushing on DK-602-0169-2, -3, and -4.

Qualification: Qualification Test Report is on file at Raychem.

Designs and Construction: Dimensions (Figure 1), design characteristics and configurations meet the functional requirement of M39029/90 for cable listed in Table III.

TABLE III. DESIGN CHARACTERISTICS

Contact Cavity Size	Cables Accommodated ^{1/}	Type	Class
8	<u>Raychem</u> 7820D0111	(D) Copper Alloy Shielded	(A) 125°C

^{1/} Other applications should be submitted to Raychem for evaluation.

Mating Contact: D-602-0157, D-602-0170 and M39029/91.

Tools: See Table IV.

TABLE IV. TOOLS

Heating Tools ^{2/}	Reflectors ^{2/}	Holding Fixtures ^{2/}	Installing Tools	Removal Tools
AA-400 Super Heater	Mini Solder Sleeve	Raychem	M81969/14-06	M81969/14-06
CV-5300 Mini Gun	MG-1 Solder Sleeve	AD-1319 with AT-1319-22	M81969/46-06	M81969/46-12

^{2/} See Termination Procedure: Raychem ES 61235.

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Electrical Performance:

Contact Resistance: See Table V.

TABLE V. CONTACT RESISTANCE

Test Cable	Maximum Voltage Drop (millivolts)									Test Current (Amps)		
	25° +3° -0°C			^{3/} 25° +3° -0°C			125° +3° -0°C					
	CONTACT											
	I N N E R	M I D D L E	O U T E R	I N N E R	M I D D L E	O U T E R	I N N E R	M I D D L E	O U T E R	I N N E R	M I D D L E	O U T E R
<u>Raychem</u> 7820D0111	55	55	75	66	66	90	94	94	128	1	1	12

^{3/} After conditioning.

Low Signal Level Contact Resistance: See Table VI.

TABLE VI. LOW SIGNAL LEVEL CONTACT RESISTANCE
(INNER CONTACT ONLY)

Test Cable	Maximum Contact Resistance (milliohms)	
	Initial	After Conditioning
<u>Raychem</u> 7820D0111	55	66

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Dielectric Withstanding Voltage: See Table VII.

TABLE VII. DIELECTRIC WITHSTANDING VOLTAGE

Contacts	Altitude	Test Voltages ac rms
Inner to Middle	Sea Level	1000
Middle to Outer	Sea Level	500

Operating Frequency: 0 to 20 MHz (operating frequency range)

Voltage Rating: 500 volts rms maximum at sea level; 125 volts at 70,000 feet

Mechanical Performance:

Contact Engagement and Separation Force (Socket Contacts Only): See Table VIII.

TABLE VIII. CONTACT ENGAGEMENT AND SEPARATION FORCE

Test Pin Diameter (inch)	Minimum Separation Force (ounces)		Maximum Engagement Force (ounces)	
	Initial	After Conditioning	Initial	After Conditioning
.1140 +.0000 -.0001	NA	NA	18	22
.1120 +.0001 -.0000	0.5	0.4	NA	NA

Tensile Strength: See Table IX.

TABLE IX. TENSILE STRENGTH (AT AMBIENT)

Test Cable	Tensile Strength (pounds) (minimum) ^{4/}		
	Inner Contact	Middle Contact	Outer Contact
<u>Raychem</u> 7820D0111	8	8	25

^{4/} Cable may break before the termination.

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Vibration: Per MIL-C-39029/90A.

High Impact Shock: Per MIL-C-39029/90A.

Environmental Performance:

Operating Temperature: -65°C to +125°C.

Humidity: Per MIL-C-39029/90A.

Materials:

Raw Material and Plating: Per MIL-C-39029, Type D.

Dielectric: Fluoropolymer.

Insulation Sleeve: Polyvinylidene Fluoride.

Solder: Sn63 per QQ-S-571 with RMA flux.

Closed Entry Bushing: Glass Reinforced Aromatic Polyester

tyco Electronics		Tyco Electronics Corporation 300 Constitutional Drive Menlo Park, CA 94025 USA		Raychem		DOCUMENT NUMBER	REVISION
						DK-602-0169 Series	F
REV. LETTER	PAGE	DETAILS OF REVISION				DATE	BY
N/C	1-6	Released per E.O. D-3159				02/21/85	IM
A	1-6	Revised per E.O. D-3338				05/16/85	IM
B	1	Revised per E.O. D-3456				06/05/85	IM
C	1-6	Revised per ECN T-06287				05/27/86	IM
D	1,2,5	Revised per ECN T- 06287				06/10/86	<i>[Signature]</i>
E	1,4	Revised per ECN T-06767				10/19/87	<i>[Signature]</i>
F	5, 2	Revised per ECN# T-11212				12/1/88	M. H. Higg

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