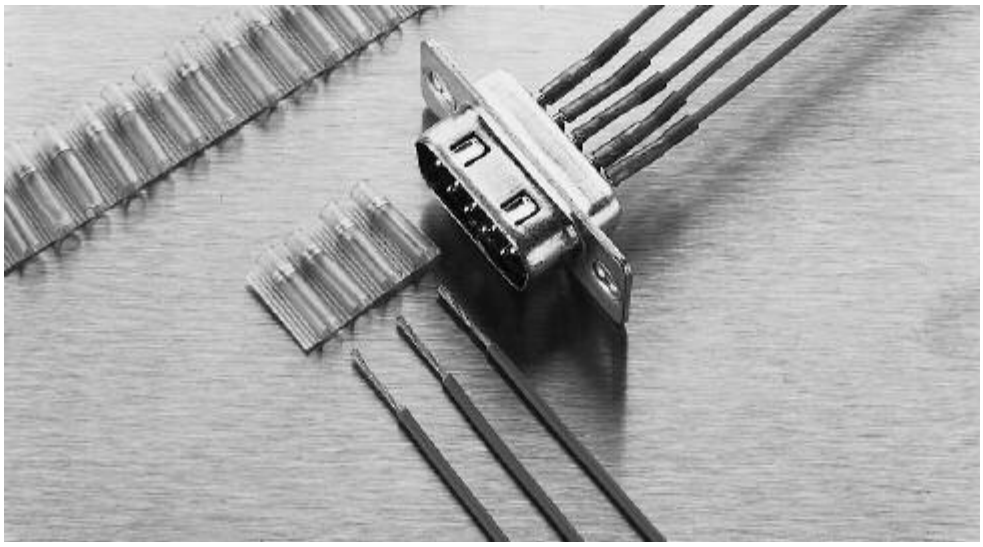
SolderSleeve Discrete Wire Terminators

Product Facts

- Transparent polyvinylidene fluoride or polyolefin insulation sleeve provides encapsulation, inspectability, strain relief, and insulation
- Prefluxed solder preform offers a controlled soldering process
- One-piece design means easy installation and low installed cost
- Optional tape carrier provides convenience and ease of installation
- UL and CUL Recognized



Applications

Used for terminating wires to component terminals, such as motor tabs, connector pins, and switch terminals.

Product selection process

1. Determine the application operating temperature.
2. From the Product Options table on the next page, select the product series appropriate for the application, based on the temperature required.
3. Determine your component connection point type (pin, post, or tab) and dimensions.
4. Determine your wire gauge.
5. Optional: Select tape carrier center-to-center spacing (D-71X series only). This should match center spacing of component terminals.
6. Select part number from the appropriate table:
   - For CWT series (applications with low-temperature wires—below 125°C [257°F]), use Table A.
   - For D-129/141/71X series (applications with wires rated higher than 125°C [257°F]), use Table B.

Installation

For proper installation of these devices, the correct heating tool and reflector attachment must be used. Either of the following Raychem heating tools are recommended:

- HL1802E
- AA-400 Super Heater

Refer to Raychem installation procedure RCPS 200-12 (for D-129, D-141, D-71X) or RPIP 824-00 (for CWT) for detailed instructions and recommended reflector attachment.

You will find ordering information for these tools see section 10.

Available in:	
Americas	■
Europe	■
Asia Pacific	■

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Dimensions are in millimeters and inches unless otherwise specified. Values in brackets are U.S. equivalents.

Dimensions are shown for reference purposes only. Specifications subject to change.

USA: 1-800-522-6752
Canada: 1-905-470-4425
Mexico: 01-800-733-8926
C. America: 52-55-5-729-0425

South America: 55-11-3611-1514
Japan: 81-44-900-5102
Singapore: 65-4866-151
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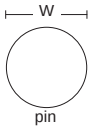
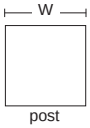
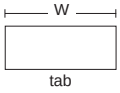
SolderSleeve Discrete Wire Terminators (Continued)

Product Options

Product Series	Max. Operating Temperature	Min. Wire Temperature Rating
CWT	125°C [257°F]	85°C [185°F]
D-129, D-141, D-71X	150°C [302°F]	125°C [257°F]

Note: Cadmium-free option (B-152 series) is available for operating temperature of 125˚C [257˚F]. Consult Tyco Electronics for details.

Table A. CWT Series (125°C [257°F] rated)

Connection-point Type and Size	Terminal Dimensions	Wire AWG/mm²	Part No.
	W = up to 0.63 [.025]	24 [0.24] 20 [0.61]	CWT-1501 CWT-1502
	W = 0.63 [.025] to 0.89 [0.035]	24 [0.24] 22 [0.38] 20 [0.61]	CWT-1501 CWT-1502 CWT-1503
	W = 0.89 [0.035] to 1.14 [.045]	24–22 [0.24–0.38] 20–18 [0.61–0.95]	CWT-1502 CWT-1503
	W = 1.14 [.045] to 1.52 [.060]	24–22 [0.24–0.38] 20–18 [0.61–0.95]	CWT-1503 CWT-1504
	W = up to1.52 [.060]	24–20 [0.24–0.61]	CWT-1501
	W = 1.27 [.050] to 2.28 [.090]	24-18 [0.24–0.95]	CWT-1502
	W = 1.77 [.070] to 2.79 [.110]	24-18 [0.24–0.95]	CWT-1503
	W = 2.54 [.100] to 3.80 [.150]	24-18 [0.24–0.95]	CWT-1504
	W = 2.28 [.090] to 4.70 [.187]	22-16 [0.38–1.21]	CWT-1505

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SolderSleeve Discrete Wire Terminators (Continued)

Table B. D-129/141/71X Series (up to 150°C [302°F] rated)

Connection-point Type and Size

Terminal Dimensions		Wire AWG	Wire mm²	Tape Carrier Spacing of Sleeves (Center-to-Center) None	1.27 [0.050]	2.54 [0.100]	3.17 [0.125]	4.0 [0.156]
W pin	W = up to 0.61 [.024]	30–26	[0.05–0.15]	D-141-30	D-713-03	—	—	—
		24–22	[0.24–0.38]	D-141-07	—	D-711-00	—	—
	W = 0.63 [.025] to 0.81 [.032]	20	[0.61]	D-141-31	—	D-711-04	D-711-07	D-711-08
W post	W = 0.76 [.030] to 1.27 [.050]	24–20	[0.24–0.61]	D-141-56	—	—	—	—
	W = up to 1.52 [.060]	24–20	[0.24–0.61]	D-129-05	—	D-714-01	—	—
W tab	W = 1.27 [.050] to 2.28 [.090]	24–20	[0.24–0.61]	D-129-03	—	—	—	D-714-00
	W = 2.28 [.090] to 3.55 [.140]	24–20	[0.24–0.61]	D-129-0043	—	—	—	—

For Fine Wire Terminations 0.15 mm² (26 AWG) and Smaller*

Part No.*	Inside Diameter As Supplied**	Fully Recovered†	Length††
D-110-0062	1.0 [0.040]	0.6 [0.025]	16.0 [0.630]
D-110-0217	1.0 [0.040]	0.6 [0.025]	9.0 [0.360]
D-141-13	0.75 x 1.65 [0.030 X 0.065]	0.75 [0.030]	4.7 [0.185]
D-141-22	0.75 x 1.65 [0.030 X 0.065]	0.75 [0.030]	6.0 [0.240]
D-141-30	0.75 x 1.65 [0.030 X 0.065]	0.75 [0.030]	9.5 [0.375]

Note: Micro SolderSleeve terminators are used for attaching leads smaller than 26 AWG (0.15 mm²) to terminals less than 0.6 [.025] wide.

*The D-110 series sleeves are primarily for single wire terminations and do not have a wire stop. The D-141 series will accept either one or two wires; the parts have a built-in wire stop that will locate the wire approximately 0.76 [0.03] from bottom of terminal.

**Minimum. Wire insulation must be smaller than this. When using the D-141 parts for two-wire terminations, the combined wire insulation diameters must be less than 1.5 [.060].

†Maximum. The combination of conductor diameter and terminal width and the wire insulation must be greater than this.

††The terminal length should be at least 1.2 [0.05] shorter than this. The wire strip length must be adjusted so that, when terminated, the exposed conductor is covered by the sleeve.

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SolderSleeve Discrete Wire Terminators (Continued)

Product Characteristics

Material		
Insulation [D-129, D-141, D-71X]	Radiation-crosslinked, heat-shrinkable polyvinylidene fluoride	
Insulation [CWT]	Radiation-crosslinked, heat-shrinkable polyolefin	
Solder and flux [D-129, D-141, D-71X]	Solder: Sn63 Pb37	Flux: ROL1 per ANSI -J - 004 [RMA flux]
Solder and flux [CWT]	Solder: Sn50 Pb32 Cd 18	Flux: ROM1 per ANSI -J - 004 [RA flux]
Typical Performance		
Voltage drop	2.0 mV	
Tensile strength	Exceeds strength of conductor	
Dielectric strength	2.0 kV	
Temperature rating [CWT]	-55°C to 125°C [-67°F to 257°F]	
Temperature rating [D-129, D-141, D-71X]	-55°C to 150°C [-67°F to 302°F]	
Insulation resistance	1000 megohms	

Specifications/Approvals

Series	Agency	Raychem
CWT	UL and CUL E87681	D-5023
D-129, D-141	UL and CUL E87681	RT-1404

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