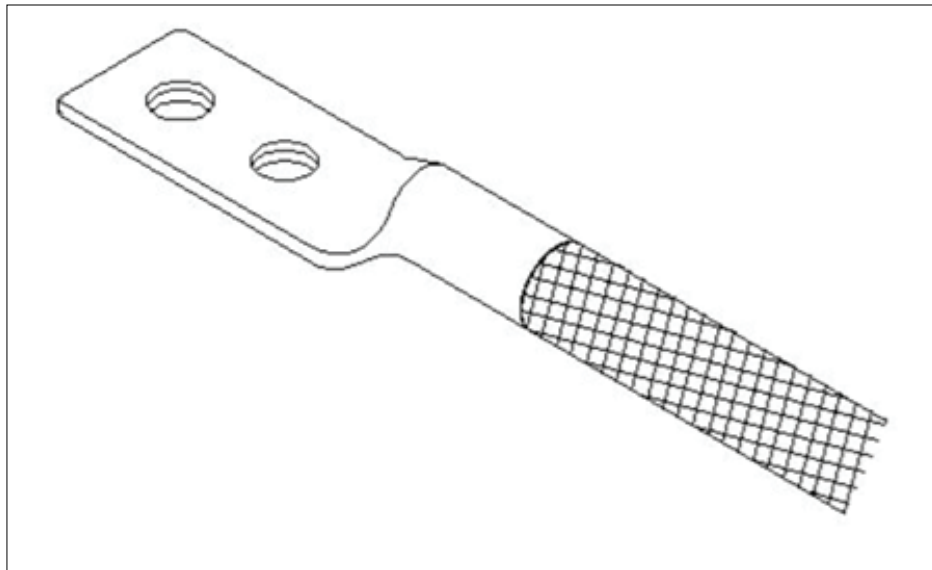


STS Skin-effect Tracing System

STS-MT and STS-HT Wire Termination Instructions



Throughout the instructions the following symbol: ⚠ **WARNING:** identifies particularly important safety warnings that must be followed.

⚠ **WARNING:** Shock Hazard

Ensure that the STS Skin-effect Tracing System power supply is either disconnected from the heater, or locked and tagged out before handling STS Skin-effect Tracing System wire or making terminations or splices!

⚠ **WARNING:** Shock Hazard

The STS Skin-effect Tracing System wire and heat tube act like a large capacitor and will hold the test voltage for a considerable length of time after dielectric testing. Be sure any residual charge has been safely dissipated before handling STS Skin-effect Tracing System wire or making terminations or splices!

⚠ **INSTALLATION CONDITIONS:**

Ensure the work area is protected from rain, snow, wind or other adverse weather conditions. Ensure the work area is clean and protected from wind-blown dust and dirt. Ensure the work space temperature is kept above the minimum installation temperature.
Minimum installation temperature: 0°C

⚠ **WARNING:** Shock Hazard

When installing electrical power system accessories, failure to follow applicable personal safety requirements and written installation instructions could result in fire or explosion and serious or fatal injuries.

1. MATERIALS REQUIRED

There is a different end termination kit for each size of STS Skin-effect Tracing System wire. The kit can be used with either STS-MT or STS-HT wire. See Table 1 below for kit part numbers. Each kit will complete (1) one end termination. Each kit requires the use of different crimping and stripping tools – see Table 2.

Table 1

Item	Part Number	Quantity	Description
	T1250031	1	STS-MT/HT-TERM-KIT-13, 6AWG
1		1	STS-TERM-LUG13, 6AWG
2		1	STS-HV-HP-CLEANING-WIPES
3		2	1/4x20x0.75-HEX-CAP-SCREW-316SS
4		2	1/4x0.500-OD-BELLVILLE-WASHER-316SS
5		2	1/4x0.625-OD-FLAT-WASHER-316SS
6		1	STS-MT/HT-INSTALLATION-INSTR-TERM-KIT-13, 6AWG
	T1250032	1	STS-MT/HT-TERM-KIT-21, 4AWG
1		1	STS-TERM-LUG21, 4AWG
2		1	STS-HV-HP-CLEANING-WIPES
3		2	1/4x20x0.75-HEX-CAP-SCREW-316SS
4		2	1/4x0.500-OD-BELLVILLE-WASHER-316SS
5		2	1/4x0.625-OD-FLAT-WASHER-316SS
6		1	STS-MT/HT-INSTALLATION-INSTR-TERM-KIT-21, 4AWG
	T1250033	1	STS-MT/HT-TERM-KIT-33, 2AWG
1		1	STS-TERM-LUG33, 2AWG
2		1	STS-HV-HP-CLEANING-WIPES
3		2	1/4x20x0.75-HEX-CAP-SCREW-316SS
4		2	1/4x0.500-OD-BELLVILLE-WASHER-316SS
5		2	1/4x0.625-OD-FLAT-WASHER-316SS
6		1	STS-MT/HT-INSTALLATION-INSTR-TERM-KIT-33, 2AWG

Table 2

Description	Conductor Size	Lug Width	Die Index	Color Code	Die Number	Strip Tool		Strip Length
						HT	MT	
STS-TERM-LUG13, 6AWG	#6 AWG (13 mm ²)	0.48" (12 mm)	7	Blue	U5CRTW	Red #6	Blue #6	1-5/16" (33 mm)
STS-TERM-LUG21, 4AWG	#4 AWG (21 mm ²)	0.55" (14 mm)	8	Gray	U4CRTW	Red #4	Blue #4	1-5/16" (33 mm)
STS-TERM-LUG33, 2AWG	#2 AWG (33 mm ²)	0.68" (17 mm)	10	Brown	U2CRTW	Red #2	Blue #2	1-7/16" (37 mm)

*Note: STS-HT and STS-MT use the same termination lug and crimp die, but different stripping tools.

Figure 1



Other items required but not included:

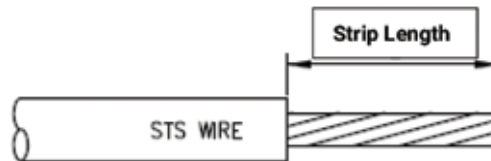
- T1015912 → STS-CRIMP-KIT*
- H87227 → Crimp Kit Work Instructions
- H58914 – STS Installation and Construction Manual

*Note: Chemelex requires the use of an STS Field Crimping Kit which includes a battery operated hydraulic crimping tool, crimping dies and wire stripping tools necessary to perform splices and terminations in the field. This kit is required by Chemelex to ensure high quality STS tracing wire splices and terminations. A force gauge is included in the kit to verify that the hydraulic crimping tool is applying sufficient force during crimping, thus ensuring a good connection.

2. INSTALLATION

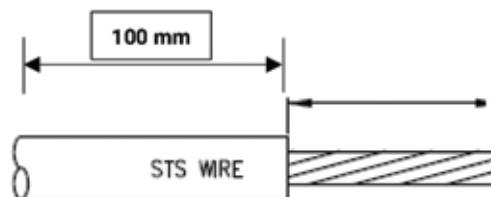
1

Refer to H87227 Crimp Kit Work Instructions and use the insulation strip length dimensions shown in Table 2 to prepare the STS wire. Use the appropriate STS-MT or STS-HT wire stripping tool (see Table 2) to strip the insulation.



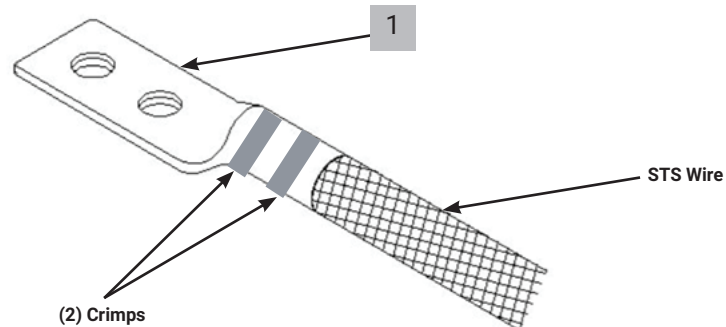
2

Clean and dry the conductor and 100mm of the wire jacket using the HP Wipes, working from the jacket toward the conductor.



3

Refer to H87227 Crimp Kit Work Instructions to ensure the crimper is calibrated, the termination lug **1** is fully inserted, and proper crimping technique is used. Crimp in 2 locations, as shown. Once complete, deburr the termination lug before bolting.

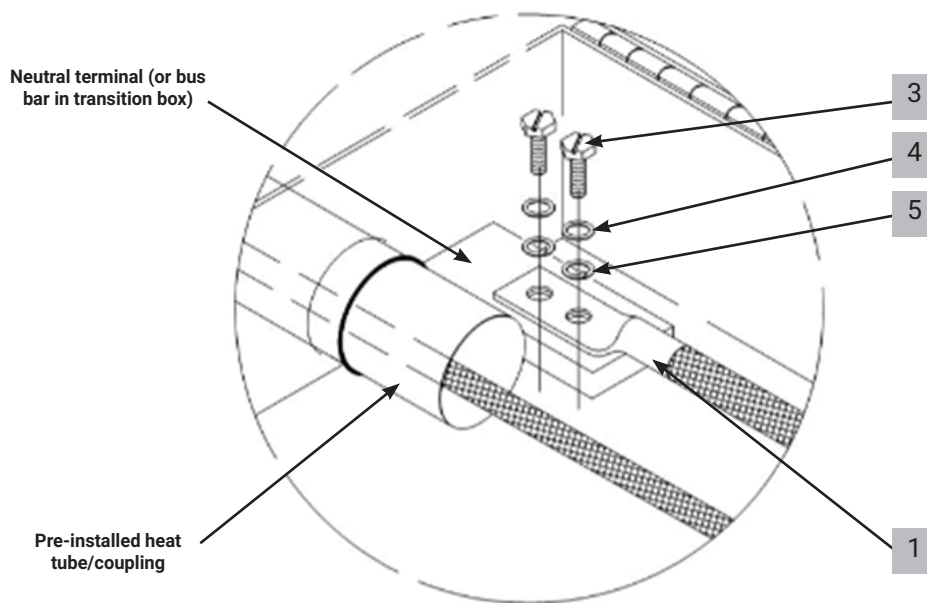


4

Clean the tube terminal surface, removing any dirt, grease or corrosion.

Clean the connector and exposed STS wire using the HP wipes.

Bolt the lug **1** to the terminal using 2 sets of ¼" bolt hardware from the hardware kit as shown below. Be sure to place the washers as shown, and ensure that the Belleville washer has the cone toward the bolt head with the flat washers **5** against the termination lug **1**. Tighten the bolt **3** until the Belleville washer **4** has just flattened.



North America

Tel +1 800 545 6258
info@chemelex.com

Latin America

Tel +1 713 868 4800
info@chemelex.com

Europe, Middle East, Africa, India

Tel +32 16 213 511
Fax +32 16 213 604
info@chemelex.com

Asia Pacific

Tel +86 21 2412 1688
infoAPAC@chemelex.com

chemelex
excellence is everything

Raychem

Tracer

Pyrotenax

Nuheat