

This document is intended as a reference guide for installing a BENDER STW3 / STW4 load monitoring current transformer. This document includes installation instructions and technical details. For complete details, including installation, setup, settings, and troubleshooting, refer to the LIM2010 user manual, document number NAE2025010.

Only qualified maintenance personnel shall operate or service this equipment. These instructions should not be viewed as sufficient for those who are not otherwise qualified to operate or service this equipment. This document is intended to provide accurate information only. No responsibility is assumed by BENDER for any consequences arising from use of this document.



Use and Installation

Use

Type STW3 and STW4 current transformers are intended only for use with BENDER LIM2010 line isolation monitors. STW3 type current transformers monitor up to 100 A load current. STW4 type current transformers monitor up to 200 A load current.

Mounting

Type STW3/STW4 current transformers are designed for screw mounting. Use two (2) type M3 screws. Refer to Figure 1 below for device dimensions.

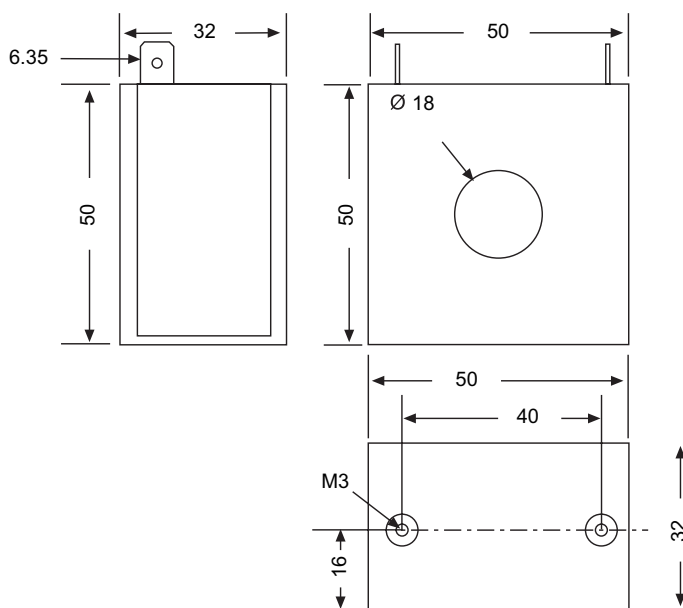


Figure 1 - STW3/STW4 dimensions in mm

Wiring - To Connector Plate

The STW3 and STW4 connect to a connector plate assembly and are designed for use with the LIM2010 only. Refer to Figure 2 for wiring diagram. Use wire conductors of size listed in Technical Data under "Conductor size / length". For more information, refer to LIM2010 user manual.

⚠ DANGER

DANGER OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH

- Disconnect all power before servicing.
- Reference NFPA Bulletin 99 for Installation Standard.

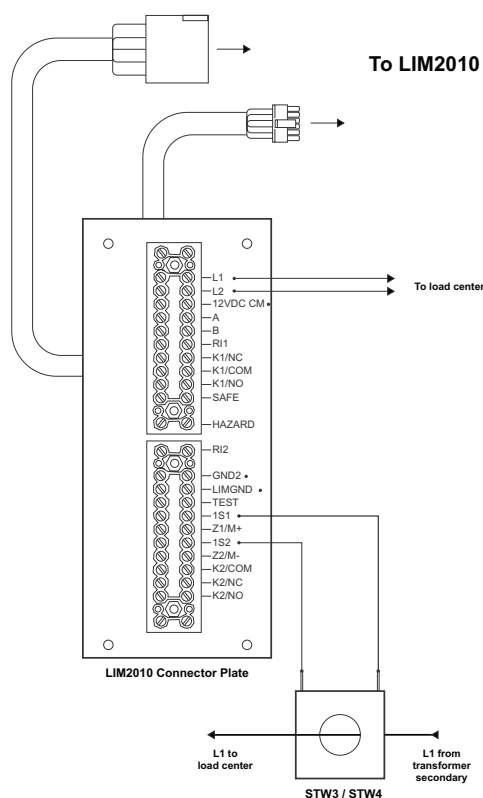


Figure 2 - Wiring diagram for connecting STW3 / STW4 to LIM2010 connector plate assembly

Wiring - Passing Conductor Through STW3 / STW4

For the STW3, up to 100 A load current may be passed through the current transformer. For the STW4, up to 200 A load current may be passed through. Route the single conductor **at a right angle and centrally** through the current transformer. Refer to Figure 3 below.

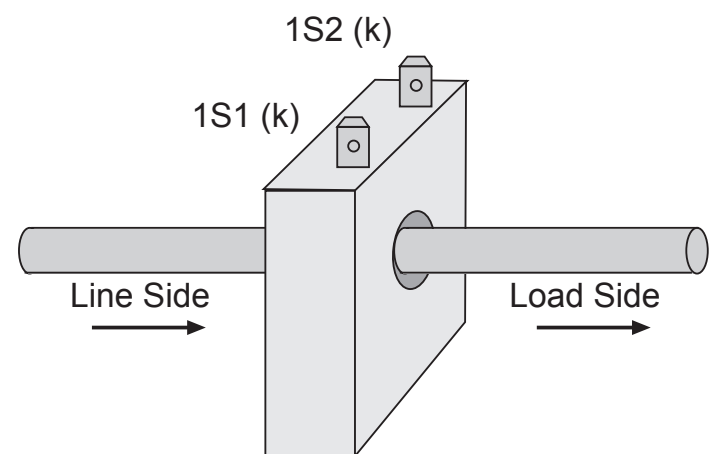


Figure 3 - Passing a conductor through the STW3 / STW4

Technical Data: STW3

Rated voltage U_m	AC 720 V
Rated impulse voltage U_{isol}	4 kV
Measuring Circuit	
Rated transformation ratio k_n	100 / 0.1 A
Rated burden	200 Ω
Maximum rated primary current	100 A
Minimum rated primary current	1 A
Nominal power	2 VA
Nominal frequency	50 ... 400 Hz
Internal resistance	17 Ω
Accuracy class	1
Rated thermal current, continuous	120 A
Rated thermal current, 1 s	1000 A
Dynamic rated current, 30 s	2500 A

Technical Data: STW4

Rated voltage U_m	AC 720 V
Rated impulse voltage U_{isol}	4 kV
Measuring Circuit	
Rated transformation ratio k_n	200 / 0.1 A
Rated burden	200 Ω
Maximum rated primary current	200 A
Minimum rated primary current	2 A
Nominal power	2 VA
Nominal frequency	50 ... 400 Hz
Internal resistance	40 Ω
Accuracy class	1
Rated thermal current, continuous	240 A
Rated thermal current, 1 s	2000 A
Dynamic rated current, 30 s	5000 A

General Data: STW3 / STW4

Standard	IEC 60044-1
Shock resistance acc. to IEC 60068-2-27 (built-in)	15 g / 11 ms
Bumping, IEC 60068-2-29 (during transport)	40 g / 6 ms
Vibration resistance, IEC 60068-2-6 (built-in)	1 g / 10 ... 150 Hz
Ambient temperature, during operation	0 °C ... +85 °C
Ambient temperature, during storage	-40 °C ... +85 °C
Climate category acc. to DIN IEC 60721-3-3	3K5
Operating mode	Continuous operation
Position	Any position
Connection	Faston plug, 6.3 x 0.8 mm
Connection type, single wires $\geq 0.75 \text{ mm}^2$	Up to 1 m
Connection type, single wires, twisted, $\geq 0.75 \text{ mm}^2$	Up to 10 m
Connection type, screened cable $\geq 0.6 \text{ mm}^2$ (single-ended connection to ground)	Up to 40 m
Screw mounting	M3
Flammability class	UL94V-0