

CLAMP-ON CURRENT SENSOR	MODEL	CLSE
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BEFORE USE

Thank you for choosing us. Before use, please check contents of the package you received as outlined below. If you have any problems or questions with the product, please contact our sales office or representatives.

This equipment is an easy-to-install, spring-loaded, clamp-on type current sensor.
For safety, installation and maintenance of this equipment must be conducted by qualified personnel.

■ PACKAGE INCLUDES:

Clamp-on current sensor(1)

■ MODEL NO.

Confirm Model No. marking on the product to be exactly what you ordered.

■ INSTRUCTION MANUAL

This manual describes necessary points of caution when you use this product, including installation, connection and basic maintenance procedures.

■ SYMBOLS USED ON THE PRODUCT AND IN THIS MANUAL

⚠ The symbol indicated on the equipment, means that the user must refer to the related parts in the manual for safe operation of the equipment. It is essential to read the instructions wherever the symbol appears in the manual.

⚠ WARNING: is reserved for conditions and actions that can cause serious or fatal injury.

⚠ CAUTION: is reserved for conditions and actions that can cause injury or instrument damage.

⚠ WARNING

- To prevent short circuits and potentially life-threatening hazards, never attach the product to a circuit that operates at more than 480 V AC, or over bare conductors.

⚠ CAUTION

■ REGARDING SAFETY

If the equipment is used in a manner not specified by us, the protection provided by the equipment may be impaired.

■ CONFORMITY WITH EU DIRECTIVES

- This equipment is suitable for
 - (1) Measurement Category III
(input, transient voltage 6000V)
 - (2) Pollution Degree 2
 - (3) With the maximum operating voltage of 480 V AC.
- To prevent short circuits and potentially life-threatening hazards, make sure that the primary conductors are insulated with material conforming to basic insulation requirements for above items (1), (2), and (3).
- Altitude up to 2000 meters.

■ GENERAL PRECAUTIONS

- Before you remove the sensor module or mount it, turn off the input signal for safety. While the line is alive, the module's cores, attracted to each other, may be hard to separate.
- The over-voltage clamp element is incorporated at the output for safety. However, leaving the circuit open for an extended time period is not recommended.
- Keep the joint surface of the clamp core clean.

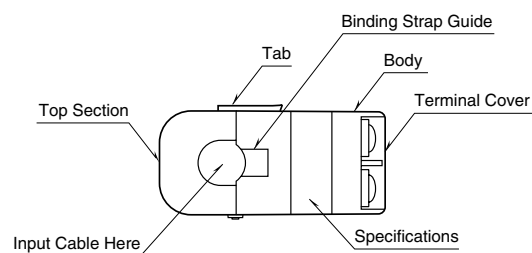
■ ENVIRONMENT

- Indoor use.
- When heavy dust or metal particles are present in the air, install the module inside proper housing with sufficient ventilation.
- Do not install the module where it is subjected to continuous vibration. Do not subject the module to physical impact.
- Environmental temperature must be within -10 to +55°C (14 to 131°F) with relative humidity within 0 to 95% RH in order to ensure adequate life span and operation.

■ WIRING

- Do not install cables close to noise sources (relay drive cable, high frequency line, etc.).
- Do not bind these cables together with those in which noises are present. Do not install them in the same duct.

COMPONENT IDENTIFICATION



Individual models have different shapes.

INPUT SPECIFICATION

Maximum working voltage: 480 V AC (primary side)

OVERLOAD CAPACITY

- CLSE-R5: 10 A continuous, 4000% of rating for 1 second
- CLSE-05: 60 A continuous, 4000% of rating for 1 second
- CLSE-10: 120 A continuous, 4000% of rating for 1 second
- CLSE-20: 240 A continuous, 4000% of rating for 1 second
- CLSE-40: 480 A continuous, 4000% of rating for 1 second
- CLSE-60: 720 A continuous, 4000% of rating for 1 second

OPERATIONAL RANGE

- CLSE-R5: 5 A maximum
- CLSE-05: 50 A maximum
- CLSE-10: 100 A maximum
- CLSE-20: 200 A maximum
- CLSE-40: 400 A maximum
- CLSE-60: 600 A maximum

Caution 1: The output values may vary depending on the accuracy of engagement at the clamp connection.

Caution 2: The sensor's mechanical construction may cause it to generate resonance sound. However, it does not affect the performance of the sensor

INSTALLATION

CONNECTING THE INPUT CABLE

- 1) Pull the tab and open the top section. Place the input cable inside. If it is used for a transducer input with polarity, confirm the direction (K, L).
- 2) Put back the top section and push in the tab securely.
- 3) Fix the sensor module at the input cable with a binding strap.

TERMINAL CONNECTIONS

Connect the unit as in the diagram below.

EXTERNAL DIMENSIONS unit: mm (inch)

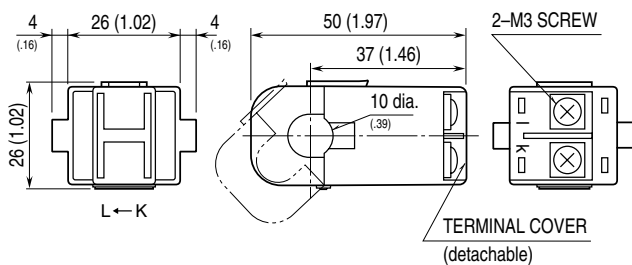
- CLSE-R5, 05 ($\leq 5A$ or $\leq 50A$ use)

Applicable cable diameter: ≤ 10

Weight

CLSE-R5: 45 g (1.6 oz)

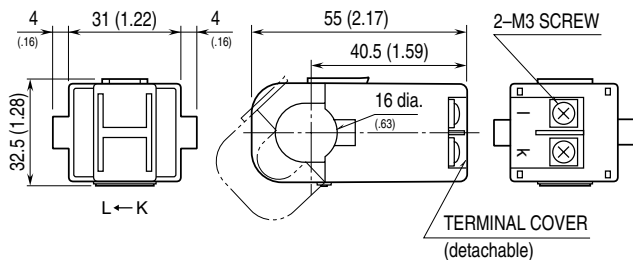
CLSE-05: 40 g (1.4 oz)



- CLSE-10 ($\leq 100A$ use)

Applicable cable diameter: ≤ 16

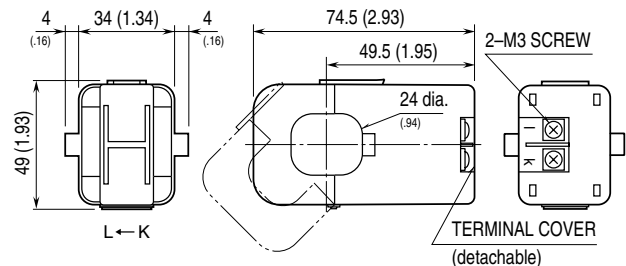
Weight: 75 g (2.6 oz)



- CLSE-20 ($\leq 200A$ use)

Applicable cable diameter: ≤ 24

Weight: 180 g (6.3 oz)



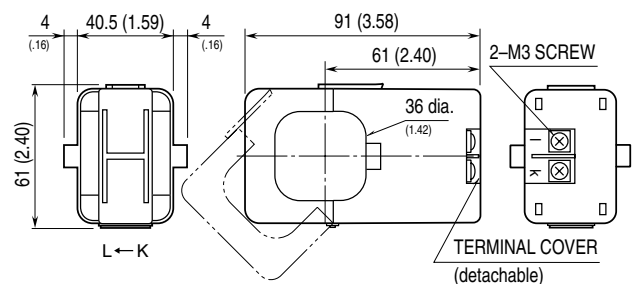
- CLSE-40, 60 ($\leq 400A$ or $\leq 600A$ use)

Applicable cable diameter: ≤ 36

Weight

CLSE-40: 300 g (10.5 oz)

CLSE-60: 330 g (11.6 oz)



WIRING INSTRUCTIONS

■ OUTPUT WIRING

Use AWG22 or thicker wires for the output. Twist the paired wires, extendable up to 30 meters.

If the module is used for a transducer input with polarity, confirm the direction (K, L).

■ SCREW TERMINAL

Torque: 0.3 N·m

CHECKING

- 1) Terminal wiring: Check that all cables are correctly connected according to the connection diagram.
- 2) Input: Check the input signal.
- 3) Output: Check the output signal.