CLAMP-ON CURRENT SENSOR

MODEL

CLSE

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

- 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.

(X): This indicates not to mount this equipment around UNINSULATED HAZARDOUS LIVE conductors, which may render electric shock, electric burn, or arc flash.

N WARNING

- To avoid short-circuit accidents or personal injury, use this equipment in electrical circuits with:
 - Ground voltage (voltage to ground): Rated 277V AC or less
 - Line voltage (line to line): Rated 480V AC or less.

Also, do not use on 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 II (CAT II) or III (CAT III) (input, transient voltage 4000V)

CAT	II	III			
Ground voltage	Rated 400V AC or less	Rated 277V AC or less			
Line voltage	Rated 480V AC or less				

- (2) Pollution Degree 2
- (3) The maximum voltage for use between the primary side of measured wire and output terminal:

Less than Ground voltage

- To avoid short-circuit accidents or personal injury, use an insulated conductor (dielectric strength 1500V or more) that satisfies basic insulation in the above items (1), (2), (3) on the primary side of the measured wires.
- If the instruction manual of the product to be connected to this equipment describes about the measurement category, use it according to that product.
- 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.

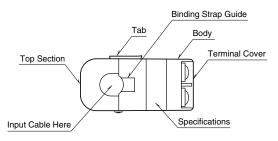
■ ENVIRONMENT

- Indoor use.
- When heavy dust or metal particles are present in the air, install the module inside proper housing with sufficient
- 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 30 to 90% 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.

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.

INPUT SPECIFICATION

■ 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

TERMINAL CONNECTIONS

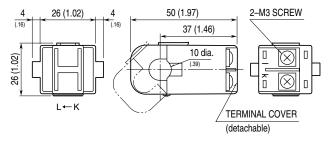
Connect the unit as in the diagram below.

■ EXTERNAL DIMENSIONS

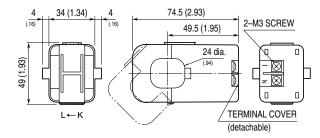
	CLSE-R5	CLSE-05	CLSE-10	CLSE-20	CLSE-40	CLSE-60
External dimensions	Figure A		Figure B	Figure C	Figure D	
Weight	approx. 45g (1.6 oz)	approx. 40g (1.4 oz)	approx. 75g (2.6 oz)	approx. 180g (6.3 oz)	approx. 300g (10.5 oz)	approx. 330g (11.6 oz)
Maximum applicable cable diameter	10 dia.	10 dia.	16 dia.	24 dia.	36 dia.	36 dia.

unit: mm (inch)

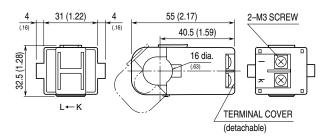
• Figure A



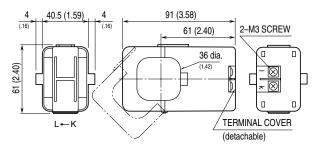
• Figure C



• Figure B



• Figure D



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.