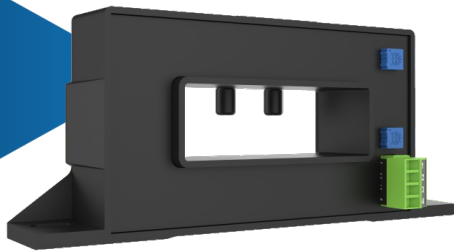


LUMEL

OPEN LOOP
CURRENT TRANSDUCER

T25CT



USER MANUAL



Installation & Operating Instructions

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2.	Brief Description
3.	Product Features
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1. Read First and Then

The proper and safe operation of the device assumes that the Operating Instructions are read and the safety warnings given in the various sections Mounting, Electrical Connections, Commissioning are observed.

All operations concerning installation, electrical connections and commissioning must be carried out by qualified, skilled personnel, and national regulations for the prevention of accidents must be observed.

2. Brief Description

The transducer converts a sinusoidal AC Current or DC current into a corresponding AC or DC Voltage proportional to the measured value. The transducer output is galvanically isolated from the input signal and auxiliary supply.

3. Product Features

Measuring Input: AC Current, DC Current, Pulsating DC

Measuring Input Frequency: DC to 25kHz

Auxiliary Power Supply: $\pm 15V$

Analog Output: $\pm 4V$

Accuracy: $\pm 1\%$

Load Resistance (R_L): $1k\Omega < R_L < 10k\Omega$



Fig 1 - Front View of Transducer

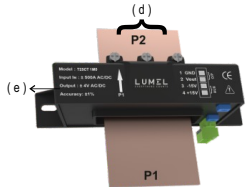


Fig 1.1 - Top View of Transducer

4. Overview of the Parts

Figures 1 and 1.1 show those parts of the device that are used for mounting, electrical connections, and other operations described in the Operating instructions.

Figure 1.2 shows the connection diagram of the connector.

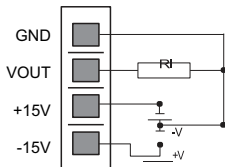
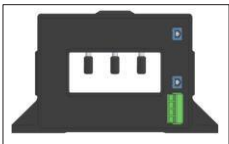


Fig 1.2 – Connection Diagram

- a) Offset Adjustment
- b) Gain Adjustment
- c) Input Supply and Output Port
- d) Screw Placement for Busbar Mounting
- e) Screw Placement for Panel Mounting

5. Scope of Supply

1. Transducer 1pc
2. Female Connector 1pc
3. Bus Bar Mounting Kit 1pc



1.



2.



3.

6. Technical Data

1) Measuring Input

Nominal Measuring RMS Current (In)	Measuring RMS Current Range (Im)
$\pm 500\text{A}$	$\pm 1500\text{A}$
$\pm 600\text{A}$	$\pm 1800\text{A}$
$\pm 850\text{A}$	$\pm 2550\text{A}$
$\pm 1000\text{A}$	$\pm 3000\text{A}$

2) Measuring Output

Output Type: AC/DC Voltage

Output Range: $\pm 4\text{V}$

Rate of change of output:

500A	8mv/A
600A	6.7mv/A
850A	4.7mv/A
1000A	4mv/A
1200A	3.3mv/A
1500A	2.6mv/A

Rated Operating Voltage: $\pm 15\text{V}$

Operating Voltage Range: $\pm 15\text{V}$ to $\pm 20\text{V}$

Current Consumption: 20mA

Note:

- a) The measuring range will be reduced if auxiliary voltage $\pm 12\text{V} < V < \pm 15\text{V}$.
- b) To use the device at maximum measuring range auxiliary voltage = $\pm 18\text{V}$.

3) Accuracy

- 1) Accuracy: 1%
- 2) Reference conditions for accuracy: Ambient Temperature: 25°C, Input Variable: Rated Voltage range
- 3) Additional Error: Temperature Influence $< \pm 1 \text{ mV/K}$

4) Load Resistance R_L

- 1) $1 \text{ k}\Omega < R_L < 10 \text{ k}\Omega$
- 2) For optimum performance: $R_L = 10 \text{ k}\Omega$

5) Safety

- 1) Protection Class: II
- 2) Pollution Degree: 2

6) Installation Data

Mechanical Housing: Polycarbonate, Flammability Class V-0 acc. to UL 94

- 1) Mounting Position: Rail Mounting
- 2) Weight: 450g approx.

7) Connection Terminal

- 1) Connection Element: Screw Terminal or Mounting Pin
- 2) No of pins: 4

8) Environmental

- 1) Normal Range of Use: -20 ... +80°C
- 2) Storage Temperature: -40 ... +85°C
- 3) Ambient Operating Temperature: 23 ... 26°C
- 4) Humidity Range: 0 to 95% RH (Without Condensation)

9) Ambient Tests

Test Standard	Description
IEC 60068-2-1	Vibration Test
IEC 60068-2-6	Cooling Test
IEC 60068-2-14	Temperature Cycle Test
IEC 60068-2-32	Free fall

10) EMI EMC Tests

IEC EMC Standard	Test Description
IEC EMC 61000-4-3	Radiated electromagnetic field immunity test
IEC EMC 61000-4-4	EFT Test
IEC EMC 61000-4-6	Immunity to conducted disturbances induced by radio frequency
IEC EMC 61000-4-8	PFMF test

11) Performance Parameters

- 1) The primary busbar fixed in the center of the aperture is recommended. The position of the busbar has an impact on the accuracy of the transducer.
- 2) For higher currents, the maximum voltage through the bus bar should be between 0 to 5V 50Hz/DC.
- 3) Maximum Voltage rating of bus bar: 600V AC for Installation Category III.

7. Mounting

The transducer can be mounted on the rail or directly on to a mounting.

Caution:

- a) In the interest of safety and functionality, this product must be installed by a qualified engineer, abiding by any local regulations.
- b) Voltages dangerous to human life are present at some of the terminal connections of the unit. Ensure that all supplies are de-energized before attempting any connection or disconnection.



8. Electrical Connections

Input connections are made directly to screw-type terminals with indirect wire pressure. Choice of cable should meet local regulations.

- a) Make sure that the cables are not live when making the connections.
- b) Make sure that the mains supply for SMPS is off when making the connections.
- c) The 230V supply is potentially dangerous!

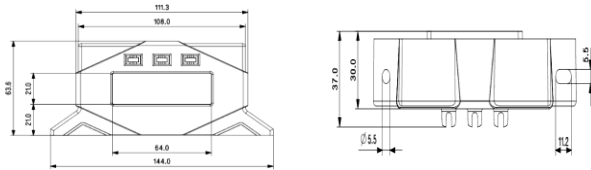


This is an open type PECS does not provide comprehensive mitigation for hazards (pre-circuit). It is intended to be installed inside a supplementary enclosure in restricted access area which provides appropriate protection against access to hazardous live parts.

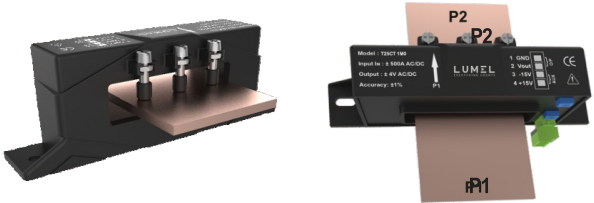
Terminal Details

Connection	Terminal
GND	1
VOUT	2
-15V	3
+15V	4

9. Dimensional Drawings



10. Busbar Mounting Guidelines



- a) It is recommended to fix the primary busbar at the center of the aperture as the accuracy of the transducer is influenced by the position of the busbar.
- b) The temperature of the primary conductor must not exceed 100 °C.

The Information contained in these installation instructions is for use only by installers trained to make electrical power installations and is intended to describe the correct method of installation for this product. However, Manufacturer has no control over the field condition which influence product installation.

It is the user's responsibility to determine the suitability of the installation method in the user's field conditions. Manufacturer only obligations are those in Manufacturer standard Conditions of Sale for this product and in no case will Manufacturer be liable for any other Incidental, indirect or consequential damages arising from the use or misuse of the products.

10. Ordering code

Open loop current transducer		T25C	X	X	X	XXXX
Current input:	500A	1				
	600A	2				
	850A	3				
	1000A	4				
	1200A	5				
	1500A	6				
Language version:	polish/english			M		
	other ¹			X		
Acceptance tests:	without extra requirements				0	
	with calibration certificate				2	
	acc to customer's request ²				X	
Version:	standard					
	Molex type connector					A000
	custom-made ³					XXXX

Example of order:

the code: **T25CT 3M0** means:

T25CT - current transducer T25CT

3 - input 850 A

M - multilanguage version

0 - without extra requirements

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