



## IT 600-S

### HIGH ACCURACY CURRENT TRANSDUCER

| Basic specifications                                                                     |                                                                                                                    |
|------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------|
| Primary current I (max.)                                                                 | 0 .. 600 A                                                                                                         |
| Polarity                                                                                 | Bipolar                                                                                                            |
| Output current (max.)                                                                    | 0 .. 400 mA                                                                                                        |
| Overload capacity :<br>Normal operation<br>Basic function maintained<br>Fault            | 100 %<br>110 %<br>500 % (0.1 s)                                                                                    |
| External Burden resistor - see fig. 1 :<br>Max.<br>Min.                                  | 100 $\Omega$<br>2.5 $\Omega$                                                                                       |
| Current transfer ratio                                                                   | 1500 : 1                                                                                                           |
| Linearity                                                                                | < 1 ppm                                                                                                            |
| Measuring/ratio stability :<br>Initial<br>v.s. temperature<br>v.s. time                  | < 2 ppm<br>< 0.3 ppm/°C<br>< 1 ppm/month                                                                           |
| Offset :<br>Initial<br>v.s. temperature                                                  | 4 $\mu$ A<br>0.1 $\mu$ A/°C                                                                                        |
| Output noise (RMS) :<br>DC .. 10 Hz<br>DC .. 10 kHz<br>DC .. 50 kHz                      | < 0.02 $\mu$ A<br>< 1.2 $\mu$ A<br>< 4 $\mu$ A                                                                     |
| Feedback noise (RMS), DC .. 50 kHz<br>(measured on the primary current cable - one turn) | < 10 $\mu$ V<br>(typ 5 $\mu$ V)                                                                                    |
| Busbar free zone (from center)                                                           | r > 70 mm                                                                                                          |
| di/dt accurately followed                                                                | > 100 A/ $\mu$ s                                                                                                   |
| Bandwidth (3 dB, small signal 0.5 %)                                                     | DC .. 100 kHz                                                                                                      |
| Test voltage (pin 4 - ground to a $\varnothing$ 25 busbar)                               | 5 kV AC (RMS)                                                                                                      |
| Operating temperature                                                                    | 10 .. 50°C                                                                                                         |
| Input power requirement                                                                  | max. power consumption 5 VA<br>$\pm$ 15 V < $\pm$ 5 %<br>+ 15 V : 200 mA, - 15 V : 50 mA<br>+ compensation current |
| Mechanical dimensions                                                                    | 122 x 98 x 57 mm<br>hole for busbar or cable : $\varnothing$ 26 mm                                                 |
| Weight                                                                                   | $\approx$ 1 kg                                                                                                     |

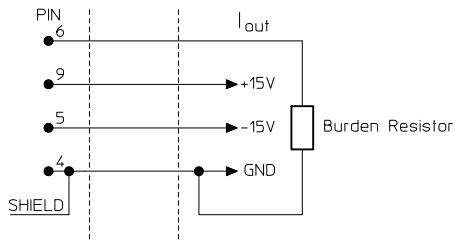
All ppm figures refer to max. output current. Specifications are subject to change without notice.  
We recommend that a shielded output cable and plug are used to ensure the maximum immunity against electrostatic fields.

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# IT 600-S INSTALLATION

## IT 600

## USER SIDE



Connection of Burden Resistor.  
Burden Resistor value : see fig. 1

## MAX BURDEN RESISTOR

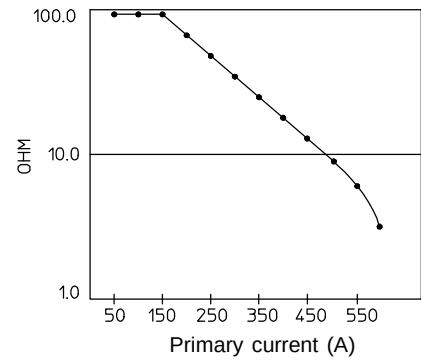


Fig. 1.  
Relationship between the externally connected Burden Resistor and the primary current.

## BURDEN RESISTOR VOLTAGE

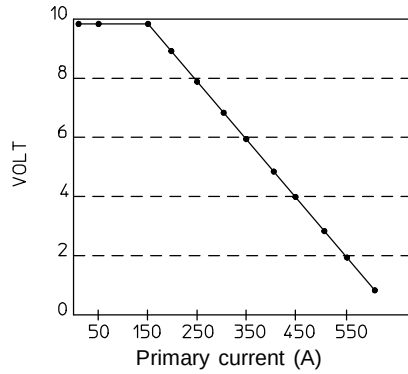
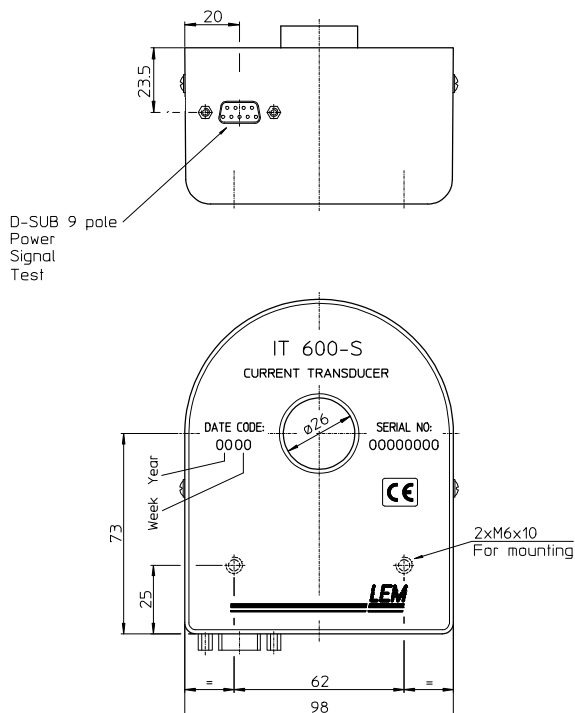


Fig. 2.  
The Voltage that can be achieved across the externally connected Burden Resistor as a function of the primary current.

## Dimensions IT 600-S



## 9-POLE D-SUB

- Pin 1 : (For factory use only)
- Pin 2 : (Test pin for zero detector)
- Pin 4 : 0 V and electrostatic shield
- Pin 5 : - 15 V/50 mA  
+ compensation current
- Pin 6 : Current output
- Pin 7 : (For factory use only)
- Pin 9 : + 15 V/200 mA  
+ compensation current.

