

# Ultrastab 867-700I

Last update: 21.08.2007

Part no.:8100089156

## Current transducer

| Parameter                       | Symbol                           | Condition | Value   | Unit        |
|---------------------------------|----------------------------------|-----------|---------|-------------|
| <b>Primary current</b>          | <b><math>I_p</math></b>          |           |         |             |
| Nominal primary current         | $I_{pn}$                         |           | ± 700   | A           |
| Polarity                        |                                  |           | Bipolar |             |
| <b>Secondary current</b>        | <b><math>I_s</math></b>          |           |         |             |
| Nominal secondary current       | $I_{sn}$                         |           | ± 400   | mA          |
| <b>External burden resistor</b> | <b><math>R_b</math></b>          |           |         |             |
| Max.                            | $R_{b, max}$                     |           | 2.5     | Ω           |
| Min.                            | $R_{b, min}$                     |           | 0       | Ω           |
| <b>Current transfer ratio</b>   | <b>N</b>                         |           | 1750    |             |
| <b>Overload capacity</b>        |                                  |           |         |             |
| Max. nondestructive overload    | $I_{p, max}$                     | @ 0.1s    | 500     | % $I_{pn}$  |
| Min. overload trip value        | $I_{p, trip}$                    |           | 110     | % $I_{pn}$  |
| <b>DC accuracy</b>              |                                  |           |         |             |
| Offset                          |                                  |           |         |             |
| Initial                         | $I_{so}$                         |           | < 50    | ppm         |
| Drift vs. Temp.                 | $I_{so, temp}$                   |           | < 0.5   | ppm / K     |
| Drift vs. Time                  | $I_{so, time}$                   |           | < 0.5   | ppm / month |
| Drift vs. supply voltage        | $I_{so, supply}$                 |           | < 3     | ppm / %     |
| Linearity                       |                                  |           |         |             |
| Deviation                       | $X_d$                            |           | < 3     | ppm         |
| <b>Output noise</b>             | <b><math>I_{s, noise}</math></b> |           |         |             |
|                                 |                                  | 0 - 10Hz  | < 0.05  | ppm (RMS)   |
|                                 |                                  | 0 - 100Hz | < 0.5   | ppm (RMS)   |
|                                 |                                  | 0 - 1kHz  | < 1     | ppm (RMS)   |
|                                 |                                  | 0 - 10kHz | < 3     | ppm (RMS)   |
|                                 |                                  | 0 - 50kHz | < 6     | ppm (RMS)   |

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| <b>Dynamic response</b>             |                      |                        |           |              |
| Slew rate                           | $dI/dt$              | 10 - 90%               | > 100     | A / $\mu$ S  |
| Delay time                          | $t_d$                |                        | < 1       | $\mu$ S      |
| <b>Bandwidth</b>                    |                      |                        |           |              |
| $\pm 1$ dB                          | <b>f</b>             | <0.5%I <sub>pn</sub>   | 10        | kHz          |
| $\pm 3$ dB                          |                      | < 0.5% I <sub>pn</sub> | 100       | kHz          |
| <b>Busbar noise</b>                 |                      |                        |           |              |
| Measured on primary cable, one turn | <b>U<sub>b</sub></b> | DC - 50kHz             | < 5       | $\mu$ V RMS  |
| <b>Busbar free zone</b>             |                      |                        |           |              |
| Length                              | l                    |                        | 140       | mm           |
| Radius                              | r                    |                        | 70        | mm           |
| <b>Test voltages</b>                |                      |                        |           |              |
| Busbar to GND                       | $V_{t, b}$           |                        | 5000      | VAC RMS      |
| <b>Power supply</b>                 |                      |                        |           |              |
| Supply voltage                      | $V_s$                | $\pm 5\%$              | $\pm 15$  | V            |
| Maximum quiescent current           | $I_q$                |                        | $\pm 70$  | mA           |
| Maximum current consumption         | $I_{max}$            |                        | $\pm 470$ | mA           |
| <b>Operating environment</b>        |                      |                        |           |              |
| Temperature                         | $T_a$                |                        | 10 - 50   | $^{\circ}$ C |
| Humidity                            | RH <sub>a</sub>      | Noncondensing          | 20 - 80   | %RH          |
| <b>Storage environment</b>          |                      |                        |           |              |
| Temperature                         | $T_s$                |                        | -20 - 85  | $^{\circ}$ C |
| Humidity                            | RH <sub>s</sub>      | Noncondensing          | 20 - 80   | %RH          |

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| <b>Mechanical dimension</b> |        |           |       |      |
| Width                       | W      |           | 128   | mm   |
| Height                      | H      |           | 106   | mm   |
| Depth                       | D      |           | 67    | mm   |
| Weight (approx.)            | m      |           | 0.8   | kg   |
| Inner hole diameter         | O      |           | 30    | mm   |

#### Notes:

- 1: All ppm figures refer to nominal current
- 2: Specifications is subject to change without notice