
INSTRUCTIONS LEAFLET FOR THERMO-SENSOR, CATEGORY 2

CS-07/2010

Ex d / e / i ATEX EXECUTIONS

In order to comply with the Ex ATEX certification, assembly has to be executed according to the applicable Ex ATEX (RL 99/92/EG (ATEX 137)) as well as EN 60079-14 & EN 50281-1-2 requirements.
All insets/probes suitable for explosion-proof applications are provided with marking plates.

RÜEGER SA shall not be responsible for the consequences of any application or installation not conforming to the regulations or recommendations concerning explosive environments as defined in the 94/9/CE directive.

In all cases, please refer to our insets/probes data sheets before installation. Those are available on our website www.rueger.com or on CD's upon request.

- Type of protection "flameproof enclosure", for Ex(d) execution according to EN 60079-1. All screwed parts must be engaged by at least 5 threads: **Ex d IIC T6 ***
- Type of protection "intrinsic safety", for Ex(i) execution according to EN 60079-11. The connection head is provided with a screw terminal for connecting to ground.: **Ex ia IIC T6 ***
- Type of protection "increased safety", for Ex(e) execution according to EN 60079-7. The use of cable terminals with safety device for required cable section for wiring the Ex (e) execution is imperative:
Ex e II T6

*For executions with transmitters see transmitters' Ex-protection and datas.

ASSEMBLY

Warning: Before any installation, always check the technical data relative to the corresponding equipment supplied. Always mount according to ATEX (RL 99/92/EG (ATEX 137)) as well as EN 60079-14 & EN 50281-1-2 prescriptions.

TECHNICAL INFORMATIONS FOR INSETS/PROBES TYPE S ..

For technical specifications please refer to the technical data sheet

1. Limiting temperatures (°C) for insets:

Inset dia.	Ø1.5 to 3.2 mm	Ø 3.3 to 8 mm	Ex(i), Ex(d), Ex(e)
Pt 100 *	- 200...+ 550	- 200...+ 600	- 200...+ 500
Pt 1000	- 40... + 400	- 40... + 400	- 40... + 500
J,	- 200...+ 600	- 200...+ 750	- 40... + 500
E	- 200...+ 700	- 200...+ 800	- 200...+ 500
K, N	- 200...+ 800	- 200...+ 1100	- 200...+ 500

For higher temperatures, please inform manufacturer

2. Precision classes:

- RTD according to IEC 60 751
- TC according to IEC 60 584-2. For temperatures between -130°C and -40°C, the tolerances may exceed those for class 3.

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3. Identification of measurement circuits on terminal block and/or marking plate:

- RTD: colour coding, according to IEC 60 751
- TC: type of thermocouple is identified by colour code for thermocouples according to IEC 60 584-3, ANSI M96.1, BS 1843-1981, NFE 18001, JIS C 1640-1981 depending on the order. So please refer to the purchase order.

4. Indicative values for internal resistances of conductors for temperatures +15 to +35°C (for cable length):

For 3 mm diameters: approx. 0.28 Ω /m. For 6 mm diameters: approx. 0.07 Ω /m.

5. Dielectric strength +15 to +35°C (according to IEC 60 751): $\geq 100 M\Omega$ with $U \leq 100 VDC$

6. Immersion length:

To avoid errors due to heat conduction and radiation, the following minimum immersion lengths are recommended:

Inset	in liquid (water)	in gas/vapour	Inset	in liquid (water)	in gas/vapour
RTD \varnothing 3 mm	45 mm	55 mm	RTD \varnothing 6 mm	60 mm	75 mm
TC \varnothing 3 mm	15 mm	25 mm	TC \varnothing 6 mm	30 mm	50 mm

7. Vibration resistance:

The resistance to vibration of these insets is at least as required under the "severe conditions" accredited to IEC 60 751, par. 4.4.

TECHNICAL INFORMATIONS FOR TRANSMITTERS S95.2

Power supply (with LED indicator)	4-40 V DC
Power supply effect	0.002%/V
Output	4-20 mA
PT 100 or Thermocouple specifications	please refer to the appropriate data sheet
Explosion protection:	none

TECHNICAL INFORMATIONS FOR TRANSMITTER S95.2 Ex i

Power supply	12-36 V DC
Power supply effect	0.002%/V
Output	4-20 mA
Explosion protection:	Ex ia IIC T4

TECHNICAL INFORMATIONS FOR TRANSMITTER S95.3..




Power supply (2-wire-execution: power supply wires = signal wires)

Supply voltage	$U_s = 11.5...30 V DC$
For explosion protected	$U_i = 11.5...29.4 V DC$
Output digital signal (temperature linear)	4...20 mA

Input signals for RTD and Thermocouple

Refer to appropriate technical data sheet

Explosion protection

Hart®	 II 2G Ex [ia] ib IIC T6
	 II 2G Ex d IIC T6
	 II 2G Ex e II T6