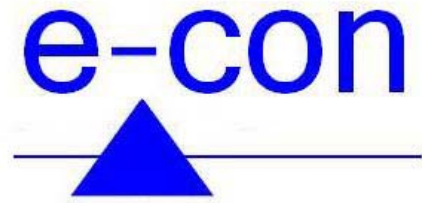# SMART Pt-100 TRANSMITTER

e-con

Resistance Thermometer Programmable via USB-interface

The e-con series is a two-wire transmitter for Pt-100. The measuring range can be programmed according to the customers demands with especially developed software.

The unit converts temperature spans between −100 to +300 °C to a linearized, 4-20mA, process current loop.

There are two models of the e-con series was designed to be housed in an integrated sensor-transmitter stainless steel housing having **M12** or **DIN** connector.

e-con is supplied carefully checked and fully calibrated PCB

to program the measuring range, it is not necessary to remove the electronic board from the housing.

while programming the e-con. You do not have to remove the sensor from the process, and you do not have to stop your process.

All mechanical parts included a Different process connections, adjustable compression fittings, various stem-diameters and lengths are available. To achieve very fast response times, we provide a version with a tapered stem. All medium-affecting parts as well as the housing are made of stainless steel.

Features

- simple programming, without programming unit
- integrated USB-interface
- high accuracy: 0,1% of measuring range
- reprogrammable
- Output signal: 4..20 mA 2 wire
- Temperature Linearized
- Low Cost

Applications

This configuration is widely used in hygienic and non-hygienic industries as:

- Pharmaceutical & labs
- Food industry
- breweries
- water and steam industries
- heating and cooling circuits
- air condition technology
- plant construction
- environment engineering

CE

Specifications

e-con

INPUT:	2-wire Pt-100 according to BS 1904 and DIN 43760 characteristics.
INPUT SPAN:	-100 ~ +300°C
INPUT SPAN CHANGE:	10 to 400°C
SENSOR EXCITATION:	< 0.2 mA
OUTPUT CURRENT:	4-20 / 20-4 mA (28 mA limited)
SUPPLY VOLTAGE:	8-36 Vdc reverse polarity protected
SUPPLY VARIATION EFFECT:	< ±0.03% of span for full change

ACCURACY: < ±0.1% of span

LOAD RESISTANCE: $Rmax\ (\Omega) = (Vsupply - 8)/0.02$

SOFTWARE PACKAGE: CONCAL

MODEM CORD CON-USB - LENGTH: 1.50m

CONFIGURED PARAMETERS:
Tag information, Input range, °C / °F, Burnout type, Output current mode, Sensor calibration

TEMPERATURE STABILITY: < ±0.01% of span/1°K
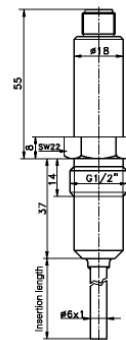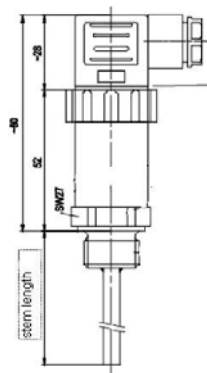
OPERATING TEMPERATURE: -40 to 70°C
Storage: -40 to +90°C

Dimensions (mm)

Connection Diagram
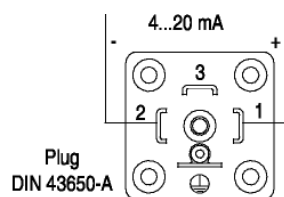
DIN

M12

Process connection

| G1/2B DIN 3852 | M12x1,5 | G1/2B dead-zone free | G1B dead-zone free |

tapered coupling with
groove union nut DIN 11851
DN25 G=Rd.52x1/6
DN32 G=Rd.58x1/6

clamp connection
Tri-Clamp 1"/1½"
ISO 2852 DN25/38
DIN 32676 DN25/40

Varivent connection
D=31 for Varivent-case DN10 and DN15
D=50 for Varivent-case DN25 and 1"
D=68 for Varivent-case
DN 40-125 und 1 1/2"...6"

G1/2B dead-zone free
(conical taper)
design flush mounted
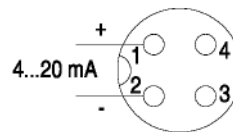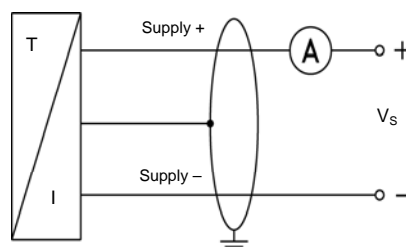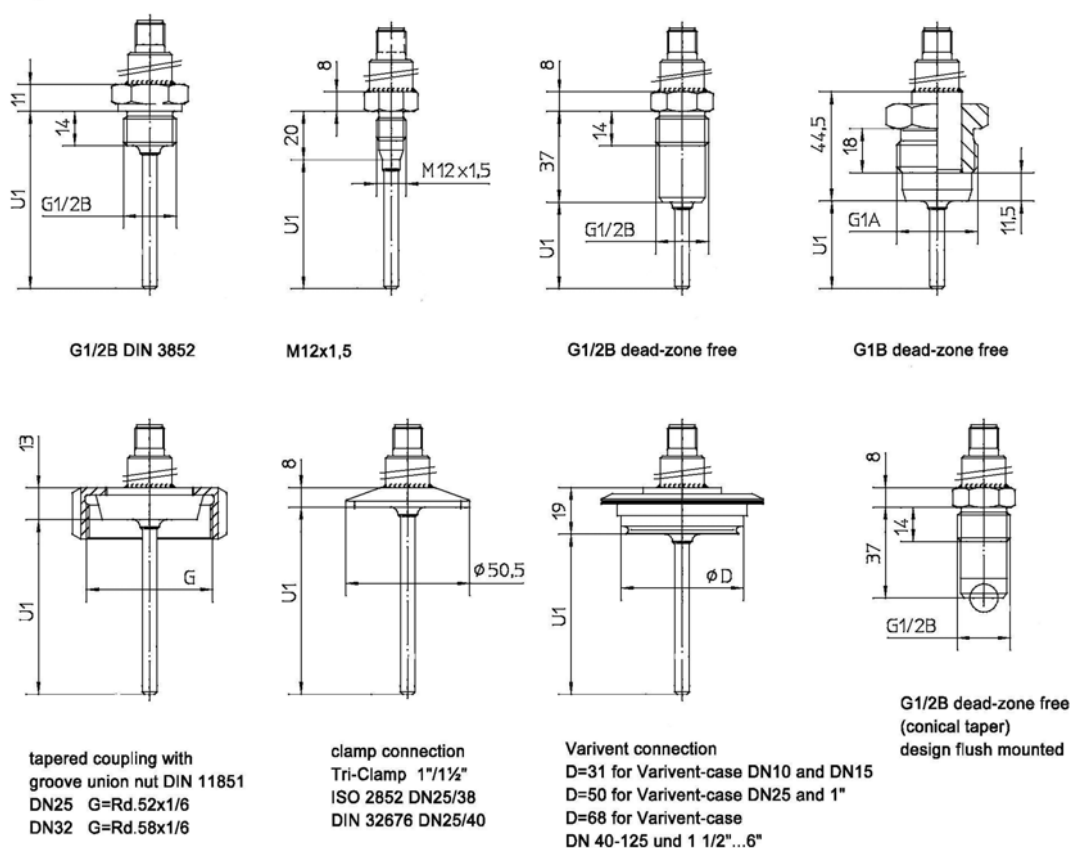
CONCAL - Programming-Software for setting the measuring range via USB

The CONCAL configuration and calibration software is a PC-based software package.

The PC is connected to the transmitter via CON-USB, communication cable for USB port. This communication cables contains the electronic interface circuitry for DRY-CONFIGURATION®.

The DRY CONFIGURATIONTM feature makes the
configuration process very easy, as it does not require the transmitter to be wired to an external power supply.

The Windows® based software conducts the user to the configuration steps in a friendly and simple interactive way.

The PC requirements are:
PC Operating System:
Microsoft Windows 98 , Windows XP®, Windows NT® , Vista®.

Display: Color display with screen resolution of 1024x768. Lower resolution will require scrolling for accommodation of the configuration window.
Free Disk Space: 15

E-CON				E-CON-					
	·M12			**M12**					
	DIN			**DIN**					
process connection	threaded connection	· G 1/2 B		**G 1/2**					
		· G 1/2 B conical, metal-to-metal joint		**G ½ M**					
		· G 1 A, conical, metal-to-metal joint		**G 1 M**					
		· ½ NPT		**N 1/2**					
	coupling nut DIN 11851	· DN 25		**DN25**					
		· DN 32		**DN32**					
	SMS 32676	· DN 25/40, Ø 50.5 mm		**DSxx**					
	RTJ	· DN 25/38 (1"/ 1 1/2"), Ø 50.5 mm		**DJxx**					
	TriClamp	· 1" / 1.5 " / 2"		**TCXX**					
	Varivent	· D=31 for Varivent housing DN 10 and DN 15		**V31**					
		· D=50 for Varivent housing DN 25 and DN 1"		**V50**					
		· D=68 for Varivent housing DN 40...DN 125 and 1 1/2"...6"		**V68**					
temperature detecting element	· flush mounted				**F**				
	· Ø 6 mm				**6**				
	· Ø 1/4 "				**4**				
insertion length (MM)						**999**			
	Insertion length - included threaded (U1) or without (U)						**U**		
additional features (to be indicated in case of need, only)									
type of protection	none							**000**	
	extension for high temp							**E50**	
	elctropolish							**EP**	
Transmitter range (°c)									**99/99**
order code (example):				**E-CON M12 - N 1/2 - 6 - 100- U - 000- 0/50**					

e-con