

EE22-T Series

Temperature Transmitter with interchangeable probes

Unique for the EE22-T series are the interchangeable sensing probes with connector.

The calibration data is stored in the probes, which are therefore interchangeable and probe replacement does not affect the performance of EE22-T.

The outstanding accuracy over the entire temperature range is based on very precise calibration methods and on the latest microprocessor technology. Well-proven E+E humidity sensor elements ensure excellent long-term stability.

For high temperature applications (up to +80°C / +176°F) or in case of limited space availability, the sensing probes can be connected to EE22-T housing with cables (2m, 5m or 10m / 6.6ft, 16.4ft or 32.8ft) without any repercussions for the overall accuracy of the instrument.

Voltage 0 - 1 / 10V or current 4 - 20mA (2 wire) outputs are available, of which the temperature output can be scaled according to the application (see ordering guide).

EE22-T is suitable for direct wall mounting and for installation on rails according to DIN EN 50022.

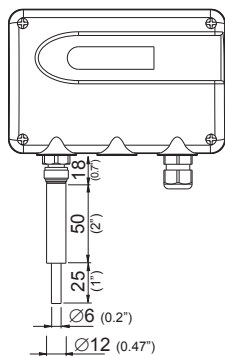
For easy duct mounting a duct mounting kit is available as an option.

An optional display indicates the actual T values.

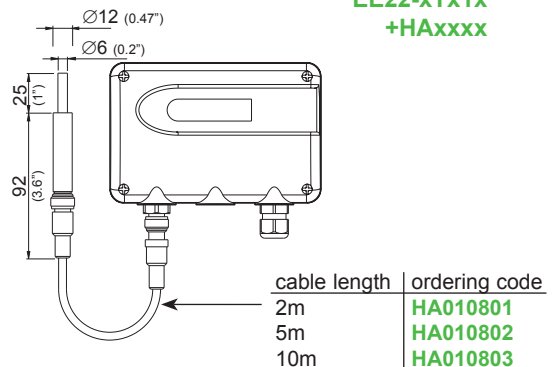


Probe Dimensions (mm)

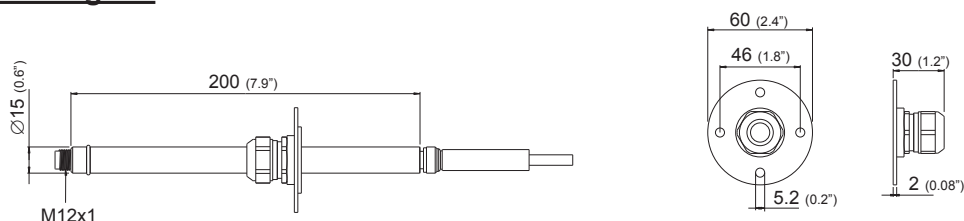
with pluggable T probe
EE22-xTx1x



with remote T probe
EE22-xTx1x
+HAxxxx



duct mounting kit:



Typical Applications

pharmaceutical industry
 clean rooms
 storage rooms
 green houses
 cooling chambers

Features

accuracy $\pm 0,1^{\circ}\text{C}$ at 20°C
 interchangeable probes
 remote sensing probe up to 10m (32.8ft)
 measuring range $-40\dots 80^{\circ}\text{C}$ ($-40\dots 176^{\circ}\text{F}$)
 optional display
 traceable calibration
 cost saving, easy loop-calibration of T probes

Technical Data

Measuring values of sensing probe

Temperature

Sensor element

Pt1000 (tolerance class A, DIN EN 60751)

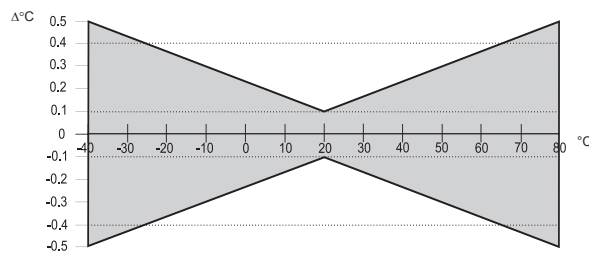
Working range sensing probe

fixed sensing probe: $-40\dots 60^{\circ}\text{C}$ ($-40\dots 140^{\circ}\text{F}$)

remote sensing probe: $-40\dots 80^{\circ}\text{C}$ ($-40\dots 176^{\circ}\text{F}$)

Accuracy

($\pm 0,1^{\circ}\text{C}$ at 20°C)



Temperature dependence of electronics

typ. $\pm 0,007^{\circ}\text{C}/^{\circ}\text{C}$

Response time

t_{63} : typ. $< 6\text{min}$

Outputs

xx...yy $^{\circ}\text{C}^1$

(temperature output scale according to

Txx ordering code)

0 - 1V

$-0,5\text{mA} < I_L < 0,5\text{mA}$

0 - 10V

$-1\text{mA} < I_L < 1\text{mA}$

4 - 20mA (two wire)

$R_L < 500\ \Omega$

Temperature dependence of

analogue outputs

max. $0,2 \frac{\text{mV}}{^{\circ}\text{C}}$ resp. $1 \frac{\mu\text{A}}{^{\circ}\text{C}}$

Resolution voltage output

0.6mV

current output

4.3 μA

General

Supply voltage

for 0 - 1V output

10 - 35V DC

or

9 - 29V AC

for 0 - 10V output

15 - 35V DC

or

15 - 29V AC

for 4 - 20mA output

10 - 35V DC

Load resistor for 4 - 20mA output

$R_L < \frac{U_V - 10\text{V}}{0,02\ \text{A}}\ [\Omega]$

Current consumption

typ. 10mA for DC supply

typ. 20mA_{eff} for AC supply

Electrical connection

screw terminals max. 2.5mm²

Cable gland

M16x1.5 or connector (type: Lumberg, RSF 50/11)

Material

housing: PC or Al Si 9 Cu 3

probe: stainless steel 1.4571 (316Ti)

Protection class of housing

IP65; Nema 4

Electromagnetic compatibility

EN61326-1 EN61326-2-3

ICES-003 ClassB

Industrial Environment

FCC Part15 ClassB



Working temperature range of probe

$-40\dots 60^{\circ}\text{C}$ ($-40\dots 140^{\circ}\text{F}$) / 80°C (176°F) for remote sensing probe

Working temperature range of electronics

$-40\dots 60^{\circ}\text{C}$ ($-40\dots 140^{\circ}\text{F}$)

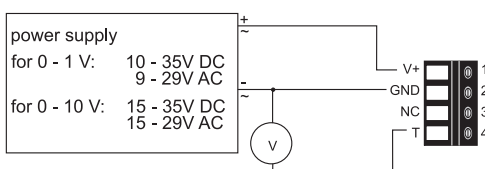
Storage temperature range

$-40\dots 60^{\circ}\text{C}$ ($-40\dots 140^{\circ}\text{F}$)

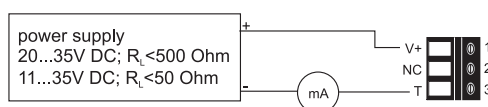
1) Refer to ordering guide

Connection Diagram

EE22-T1,3xx



EE22-T6xx



EE22-T

Housing Dimensions (mm)



For use in harsh industrial environments all models of EE22-T series are available in a robust metal housing. The smooth surface and the rounded outlines allow for the use in clean room applications.

Ordering Guide

Position 1 - Transmitter

EE22-

Hardware Configuration				
Housing	metal housing polycarbonate housing			M P
Type	temperature			T
Output	0-1V 0-10V 4-20mA			1 3 6
Model	wall mounting - cable gland M16x1.5 cable Ø 4.5 - 10 mm (0.18 - 0.39") wall mounting - rear cable outlet			A F
Probe	1 probe T			1
Display	without display with display			D07
Plug	without plug 1 plug for power supply and outputs			C03
Software Configuration				
T-Unit	°C °F			E01
Scaling of T-output in °C or °F	-40...60 (T02) -10...50 (T03) 0...50 (T04) 0...60 (T07) -30...70 (T08) -10...70 (T11) -40...120 (T12)	0...120 (T16) -30...60 (T20) 0...80 (T21) -40...80 (T22) -20...80 (T24) -20...60 (T25) -30...50 (T45)	-20...50 (T48) -40...176 (T80) 0...140 (T85) 0...176 (T86) 32...120 (T90) 32...140 (T91) 32...132 (T96)	Select according to Ordering Guide (Txx) Other T-scaling refer to page 146
Position 2 - Probe cable				
Cable length	2m (6.6ft) 5m (16.4ft) 10m (32.8ft)			HA010801 HA010802 HA010803

Accessories / Replacement Parts

(For further information see data sheet "Accessories", page 138)

- probe cable 2m (6.6ft) / 5m (16.4ft) / 10m (32.8ft) (HA0108xx)
- bracket for rail installation (HA010203)
- external supply unit (V02)
- Replacement probe T in metal (EE07-MT)
- Display + housing cover in polycarbonate (D07P)
- Display + housing cover in metal (D07M)
- Reference probes (HA010403)
- Duct mounting kit (HA010209)

Order Example

Position 1 - Transmitter:

EE22-MT3A1C03/T07

housing: metal housing
type: temperature
output: 0-10V
model: wall mounting - cable gland M16x1.5
probe: 1 probe T
display: without display
plug: 1 plug for power supply and outputs
T-Unit: °C
scaling of T-output: 0...60°C

Position 2 - Probe cable:

HA010802

cable length: 5m (16.4ft)