Digitron

HLX22-T Series

Temperature Transmitter with interchangeable probes

Unique for the HLX22-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 HLX22-T.

The outstanding accuracy over the entire temperature range is based on very precise calibration methods and on the latest microprocessor technology. Well-proven 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 HLX22-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).

HLX22-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.

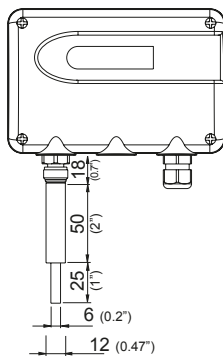An optional display indicates the actual T values.
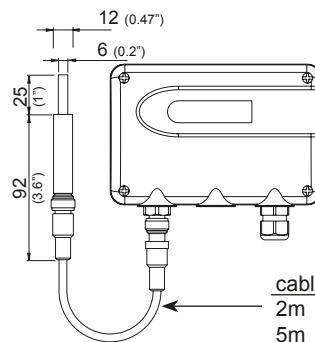

polycarbonate housing

metal housing
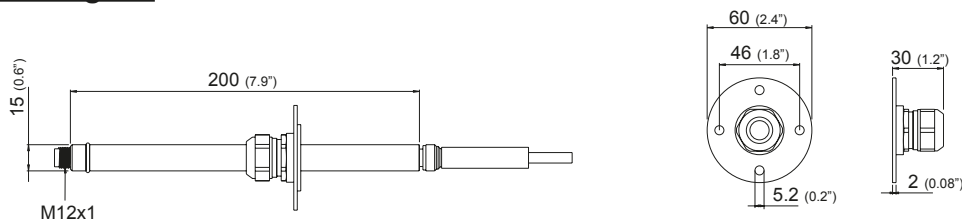
Probe Dimensions (mm)

with plugable T probe
HLX22-xTx1x

with remote T probe
HLX22-xTx1x
+HAxxxx

cable length	ordering code
2m	HA010801
5m	HA010802
10m	HA010803

duct mounting kit:

HLX22-T

Typical Applications

pharmaceutical industry
clean rooms
storage rooms
green houses
cooling chambers

Features

accuracy ±0,1°C at 20°C
interchangeable probes
remote sensing probe up to 10m (32.8ft)
measuring range -40...80°C (-40...176°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...60°C (-40...140°F)
	remote sensing probe: -40...80°C (-40...176°F)

Accuracy
(±0.1°C at 20°C)
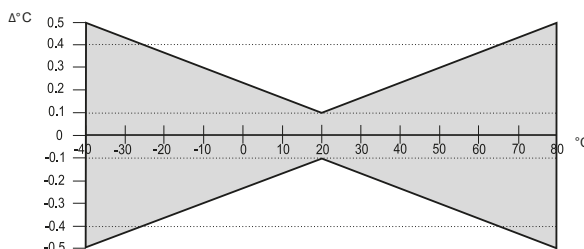
Temperature dependence of electronics	typ. ± 0.007°C/°C
Response time	t_{63}: typ. < 6min

Outputs

xx...yy°C[1]	0 - 1V	-0.5mA < I_L < 0.5mA
(temperature output scale according to	0 - 10V	-1mA < I_L < 1mA
Txx ordering code)	4 - 20mA (two wire)	R_L < 500 Ohm

Temperature dependence of analogue outputs	max. 0.2 $\frac{mV}{°C}$ resp. 1 $\frac{\mu A}{°C}$
Resolution voltage output	0.6mV
current output	4.3µA

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 $\quad R_L < \dfrac{U_v - 10V}{0.02\,A}$ [Ω]

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...60°C (-40...140°F) / 80°C (176°F) for remote sensing probe	
Working temperature range of electronics	-40...60°C (-40...140°F)	
Storage temperature range	-40...60°C (-40...140°F)	

1) Refer to ordering guide

CE

Connection Diagram

HLX22-T1,3xx

power supply	
for 0 - 1 V:	10 - 35V DC
	9 - 29V AC
for 0 - 10 V:	15 - 35V DC
	15 - 29V AC

V+   1
GND   2
NC   3
T   4

HLX22-T6xx

power supply	
20...35V DC; R_L<500 Ohm	
11...35V DC; R_L<50 Ohm	

V+   1
NC   2
T   3

HLX22-T

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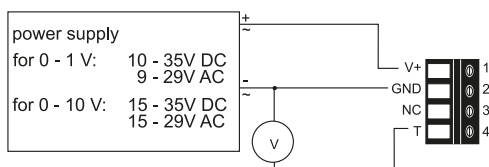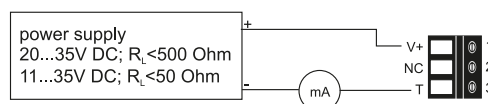
Housing Dimensions (mm)

polycarbonate housing

135 (5.3") 50 (2") 90 (3.5")

metal housing

135 (5.3") 50 (2") 90 (3.5") 163 (6.4")
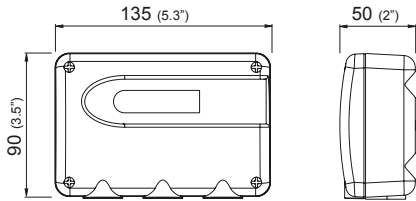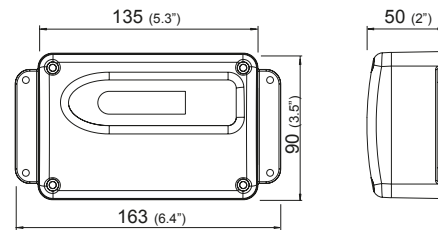
For use in harsh industrial environments all models of HLX22-T series are available in a robust metal housing.
The smooth surface and the rounded outlines allow for the use in clean room applications.

Ordering Guide

Position 1 - Transmitter   **HLX22-**

Hardware Configuration				
Housing	metal housing			**M**
	polycarbonate housing			**P**
Type	temperature			**T**
Output	0-1V			**1**
	0-10V			**3**
	4-20mA			**6**
Model	wall mounting - cable gland M16x1.5	cable Ø 4.5 - 10 mm (0.18 - 0.39")		**A**
	wall mounting - rear cable outlet			**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)**	0...120 **(T16)**	-20...50 **(T48)**	**Select according to Ordering Guide (Txx)**
	-10...50 **(T03)**	-30...60 **(T20)**	-40...176 **(T80)**	
	0...50 **(T04)**	0...80 **(T21)**	0...140 **(T85)**	
	0...60 **(T07)**	-40...80 **(T22)**	0...176 **(T86)**	**Other T-Scaling refer to data sheet "T-Scalings"**
	-30...70 **(T08)**	-20...80 **(T24)**	32...120 **(T90)**	
	-10...70 **(T11)**	-20...60 **(T25)**	32...140 **(T91)**	
	-40...120 **(T12)**	-30...50 **(T45)**	32...132 **(T96)**	

Position 2 - Probe cable

Cable length	2m (6.6ft)	**HA010801**
	5m (16.4ft)	**HA010802**
	10m (32.8ft)	**HA010803**

Accessories / Replacement Parts
(For further information see data sheet "Accessories")

- 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 (HLX07-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:

HLX22-MT3A1C03/T07

housing:	metal housing
type:	temperature
output:	0-10V
model:	wall mounting - cable gland M16x1.5
probe:	1probe 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)