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HLX160

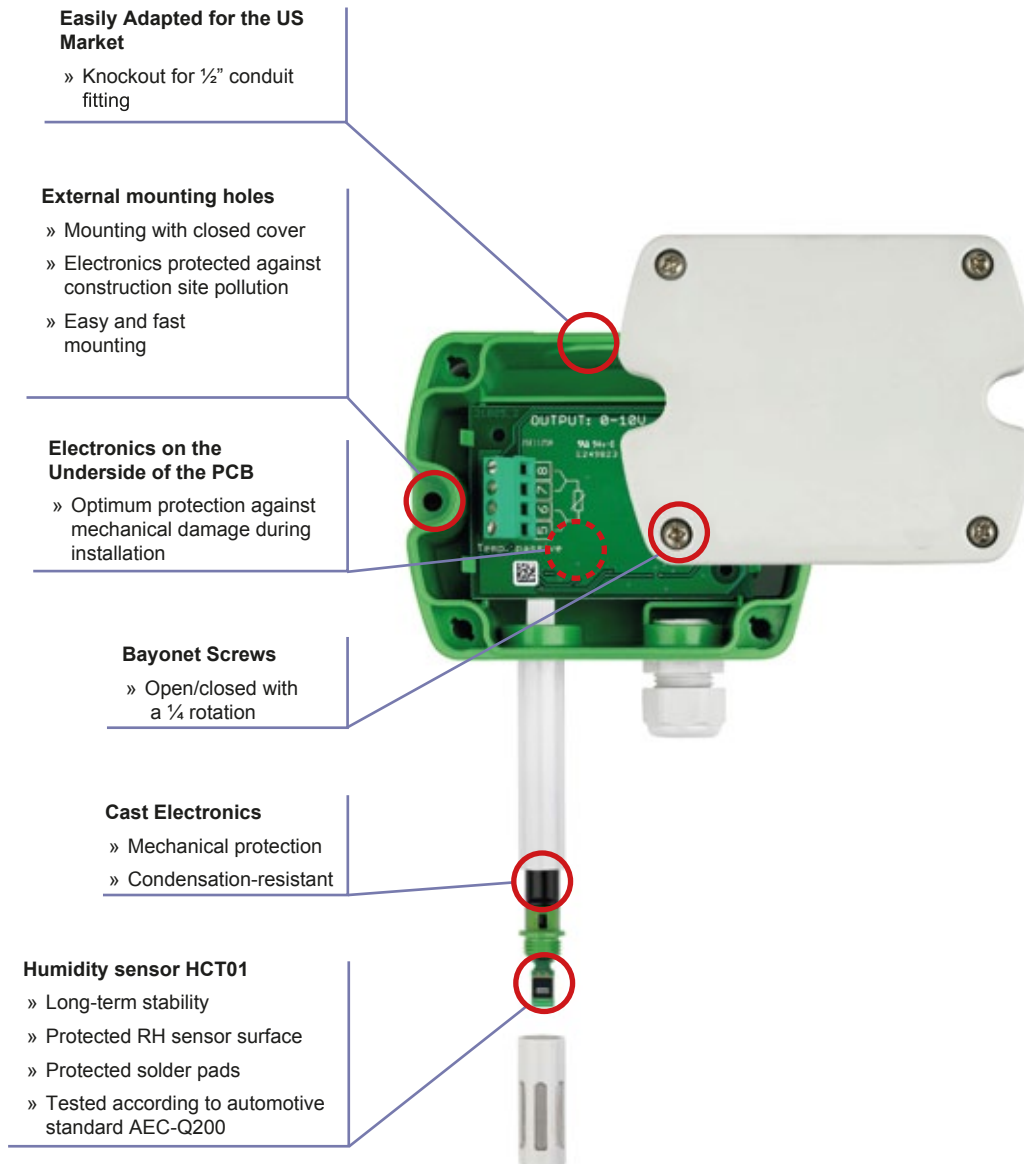## HVAC Humidity and Temperature Transmitter

Specially designed for HVAC, the HLX160 sensor is a coste effective highly accurate and reliable solution for measuring relative air humidity and temperature.
The enclosure minimizes installation costs and provides outstanding protection against contamination and condensation, thus ensuring flawless operation.

The HLX160 employs the new humidity/temperature sensor element HCT01 with excellent long term stability and resistance against pollutants. In combination with a long calibration experience, the HLX160 provides a measurement accuracy of ±2.5%RH and is available for wall or duct-mounted with current, voltage or Modbus RTU output.

HLX160

A configurator makes it possible to freely select the scaling of the temperature output and configure the Modbus parameters. The configurator software, which is free of charge, allows additionally for an on-site adjustment of the humidity and temperature.

Easily Adapted for the US Market

» Knockout for ½" conduit fitting

External mounting holes

» Mounting with closed cover
» Electronics protected against construction site pollution
» Easy and fast mounting

Electronics on the Underside of the PCB

» Optimum protection against mechanical damage during installation

Bayonet Screws

» Open/closed with a ¼ rotation

Cast Electronics

» Mechanical protection
» Condensation-resistant

Humidity sensor HCT01

» Long-term stability
» Protected RH sensor surface
» Protected solder pads
» Tested according to automotive standard AEC-Q200

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Technical data

Measured values

Relative Humidity

Sensor	Sensor HCT01-00D
Analog output 0...100% RH	0-10 V $-1\ mA < I_L < 1\ mA$ oder
	4-20 mA (two-wire) $R_L < 500\ Ohm$
Digital output*	RS485
Working range	10...95% RH
Accuracy at 20°C	±2.5% RH
Temperature dependency	typ. ±0.03% RH/°C

Temperature

Sensor	Pt1000 (tolerance class B, DIN EN 60751)
Analog output[1]	0-10 V
	4-20 mA
Digital output*	Modbus RTU
T-Accuracy at 20°C	±0.3°C
passive T-output	see ordering code

General

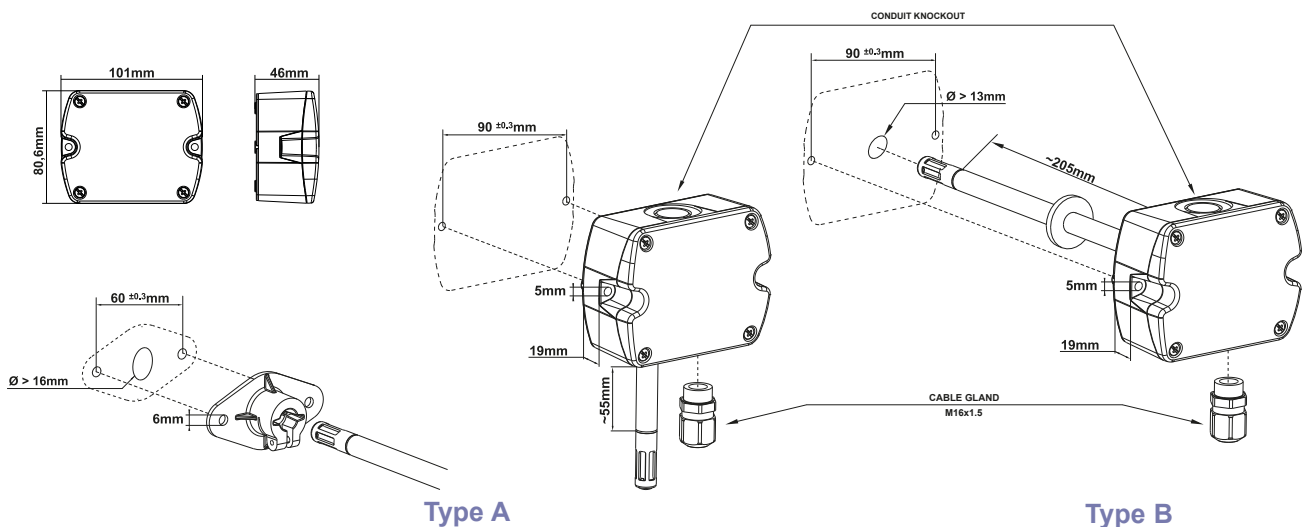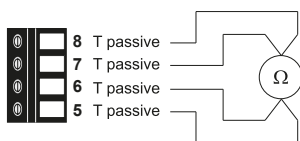|	
Power supply	
for 0 - 10 V / RS485	15 - 35V DC or 24V AC ±20%
for 4 - 20 mA	$10V + R_L \times 20\ mA < U_v < 35V\ DC$
Current consumption	
Analog	with DC power supply typ. 5mA
	with AC power supply typ. $13mA_{eff}$
Digital*	with AC power supply typ. 2mA
Connection	Screw terminals, max. 1.5 mm²
Housing / protection class	Polycarbonate (UL listed) / IP65
Cable gland	M16 x 1.5
Sensor protection	membrane filter
Electromagnetic compatibility	EN61326-1
	EN61326-2-3
Temperature ranges	Operating temperature: -15...60°C (5...140°F)
	Storage temperature: -25...60°C (-13...140°F)

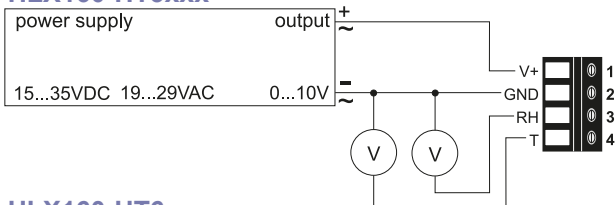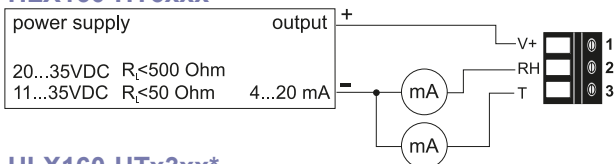* Available from Q4/2012
[1] Output scaling see Ordering Guide

Dimensions (mm)

Type A

Type B

HLX160

![Digitron logo]

Connection diagram

HLX160-HT3xxx

power supply	output
15...35VDC 19...29VAC	0...10V

8 T passive
7 T passive
6 T passive
5 T passive

V+ 1
GND 2
RH 3
T 4

HLX160-HT6xxx

power supply	output
20...35VDC R$_L$<500 Ohm	
11...35VDC R$_L$<50 Ohm	4...20 mA

V+ 1
RH 2
T 3

HLX160-HTx3xx*

power supply	output
15...35VDC 19...29VAC	

V+ 1
GND 2
A-RS485 3
B-RS485 4

Ordering Guide

Configuration

MODEL		ANALOG[1])		DIGITAL[1])*		PASSIVE T-SENSOR[2])		HOUSING		TYPE		FILTER	
humidity + temperature	**(HT)**	0-10V	**(3)**	RS485	**(3)**	Pt 100 DIN A	**(A)**	polycarbonate **(P)**		wall mount	**(A)**	membrane filter	**(B)**
		4-20mA	**(6)**	none	**(x)**	Pt 1000 DIN A	**(C)**			duct mount	**(B)**		
		none	**(x)**			NTC 10k	**(E)**						
						none	**(x)**						

EE160-

Interface parameter - analog output

OUTPUT SCALING		SCALING		UNIT	
temperature	**(Tx)**	-30...40°	**(001)**	metric	**(M)**
		-40...60°	**(002)**	non-metric	**(N)**
		-10...50°	**(003)**		
		0...50°	**(004)**		
		other	**(xxx)**		

Interface parameter - digital output*

PROTOCOL		BAUDRATE		PARITY		STOPBITS		UNIT	
modbus	**(1)**	9600	**(A)**	odd	**(O)**	1 stopbit	**(1)**	metric	**(M)**
		19200	**(B)**	even	**(E)**	2 stopbit	**(2)**	non-metric	**(N)**
		38400	**(C)**	no parity	**(N)**				

[1]) a combination of analog and digital version is not possible [2]) analogue version only
* Available from Q4/2012

Accessories

- HLX160 Cable for configuration adapter   (HA011059)*
- Configuration adapter   (HA011050)
* only for HLX160 analog version

Order example

Analog output

HLX160-HT6xAPAB/Tx001M

Model:	humidity + temperature transmitter
Analog output:	4-20mA
Passive T-Sensor:	Pt 100 DIN A
Housing:	polycarbonate
Type:	wall mounting
Filter:	membrane filter
Output scaling:	temperature
Scaling:	-30...40°
Unit:	metric

Digital output

HLX160-HTx3xPBB/1AE1N

Model:	humidity + temperature transmitter
Digital output:	RS485
Housing:	polycarbonat
Type:	duct mounting
Filter:	membrane filter
Protocol:	Modbus
Baudrate:	9600
Parity:	even
Stopbits:	1
Unit:	non-metric