

Y-CASE WIRELESS HUMIDITY AND TEMPERATURE TRANSDUCERS



Y-Case Wireless Humidity & Temperature Transducers ZigBee 868 use ZigBee interface with frequency 868 MHz for data transfer. The transducer works by the following sequence: turning on, measuring, data transferring, turning off. In other words, the frequent measuring make quicker the batteries out. Transducer operation require an G2-CP Data Logger and a wireless Y6.05-K-868 Net Coordinator.

The transducer uses high contrast OLED display for indications. It displays measurements for each transducer's measuring channel. In addition, it's able to display radio signal level, battery charge, serial number and network settings. The transducer may be supplied with magnetic holder and a mounting board, that may mounted with screws.

The transducer may have several sensors depending on a model. A humidity & temperature sensor SHT31 is set up inside of transducer's case. In addition, depending on a model, the transducer can be connected by one or two external temperature analogue Pt1000 probes with a cable and M5/M8 connectors.

TECHNICAL SPECIFICATIONS

Model Name	2-01, 2-02	2-15	2-21	2-18	2-19
Specifications of Transducer					
Number of Channe	2	2, 4	2	3	3, 4
Available channel configuration ¹	EHT	IHT, IHT+2ET	IHT	IHT + ET	IHT + ET
Output Signal	ZigBee (868 MHz)				
Stable Connection Distance, meters	Up to 100 (indoor), up to 300 (outdoor, no obstacles, by any weather)				
Indication	OLED 0.96', resolution is 128x64 pixels, display by pressing a button				
Battery Type	2 batteries (½ AA 3,6 V 1Ah 14250)				
Battery Life Time	5 years (request each 1 min, T = 25°C), 9 years (request each 2 mins, T = 25°C)				
Response Time	Between 1 minute to 1 hour				
Magnetic Holder	N/A	Vertical	Horizontal	Horizontal	Vertical
Operating Temperature, °C	-30...60				

Specifications of External Humidity and Temperature Probe / External Temperature Probe

Sensor Curve	SHT31	Pt1000	N/A	Pt1000	XA (K)	Pt1000
Operating Temperature / Humidity Range	-30...120 °C / 0...100% (at temp. 0...120 °C)	-196...100, -50...100, -50...250, -50...500		-196...100, -50...100, -50...250, -50...500	0...250, 0...500, 0...850, 0...1250	-196...100, -50...100, -50...250, -50...500
Accuracy	0,5 °C (up to 100 °C), 0,8 °C (100...120 °C) / ≥ 4% (0...10% and 90...100%), 3% (10...90%)	$± (0,4 + 0,002 \times T ^2)$		$± 2,5 (\Delta \theta 375 \text{ °C})$ or $± 0,0075 \times T ^2$ (over 375 °C)		
Transducer Connection	N/A	M5 (IP52)	N/A	M12 (IP67)	M8 (IP67)	
Response Time for Temperature, min	4 (air, V=0 m/sec)	Determines by a chosen external probe		Determines by a chosen external probe		
Response Time for Humidity, min	12 (air, V=0 m/sec)					
Thermowell Material	Steel 321 & polyamide					
Hex Fitting M20 x 1,5	N/A (2-01), Free Moving (2-02)					
Immersion Length, mm	80, 100, 120, 160, 200, 250					
Thermowell / Filter Diameter, mm	Ø6 / Ø12					

Specifications of Internal Humidity and Temperature Probe

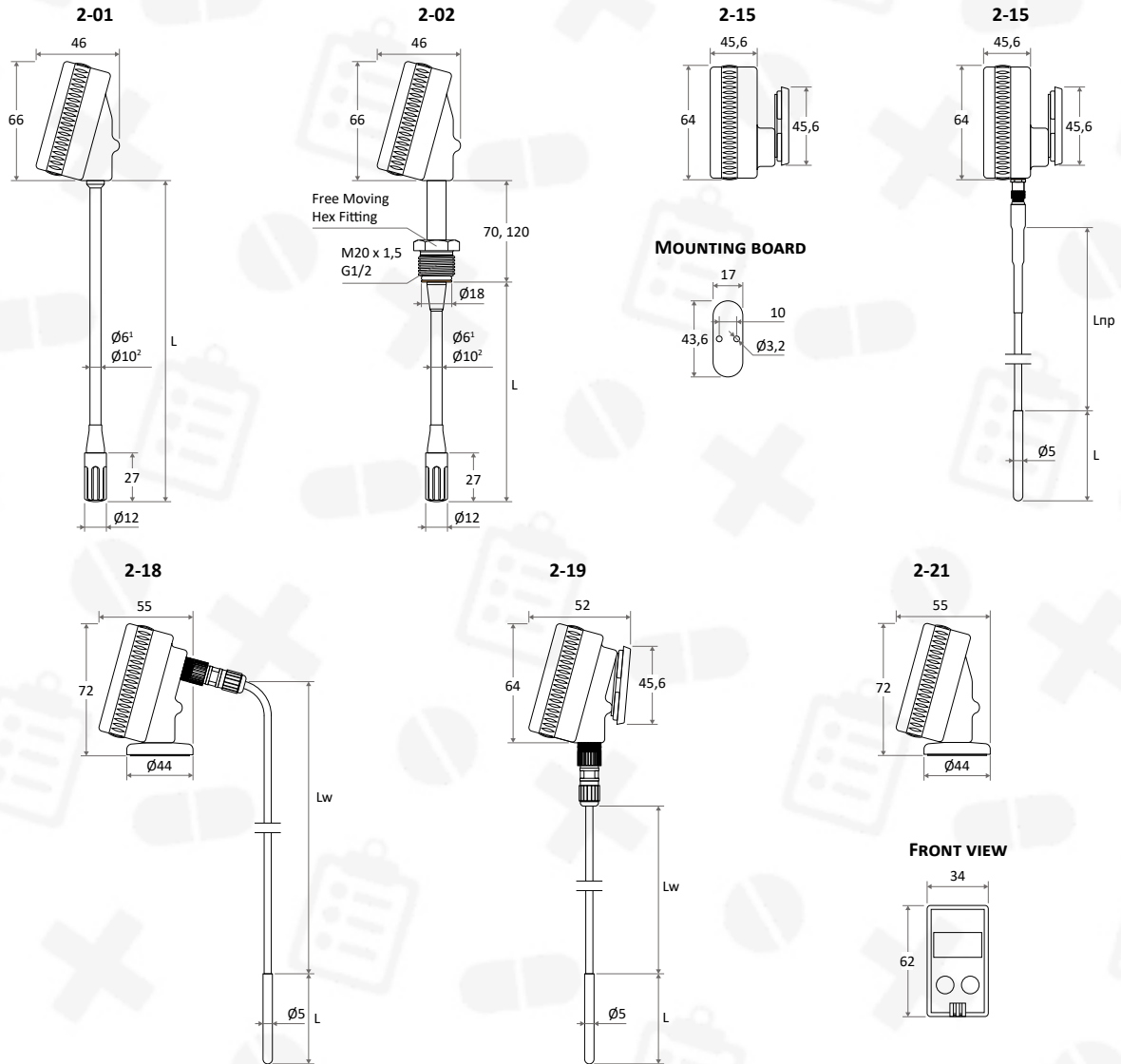
Sensor Curve	N/A	SHT31
Operating Temperature / Humidity Range		-20...60 °C / 0...100% (at temp. 0...60 °C)
Accuracy		0,5 °C / ≥ 4% (0...10% and 90...100%), 3% (10...90%)
Response Time for Temperature, min		4 (air, V=0 m/sec)
Response Time for Humidity, min		12 (air, V=0 m/sec)

¹ - ET - external temperature probe, 2ET - two external temperature probes, IHT - internal humidity and temperature probe, EHT - external humidity and temperature probe

² - T - value of operating temperature, that accuracy is calculating for

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DIMENSIONS



¹ - Immersion length is up to 500 mm.
² - Immersion length is over 500 mm.

FEATURES



Two rechargeable batteries LS14250



External antenna 3dBi with a magnetic holder



External probe with a connector



Horizontal magnetic holder



Vertical magnetic holder with a mounting board

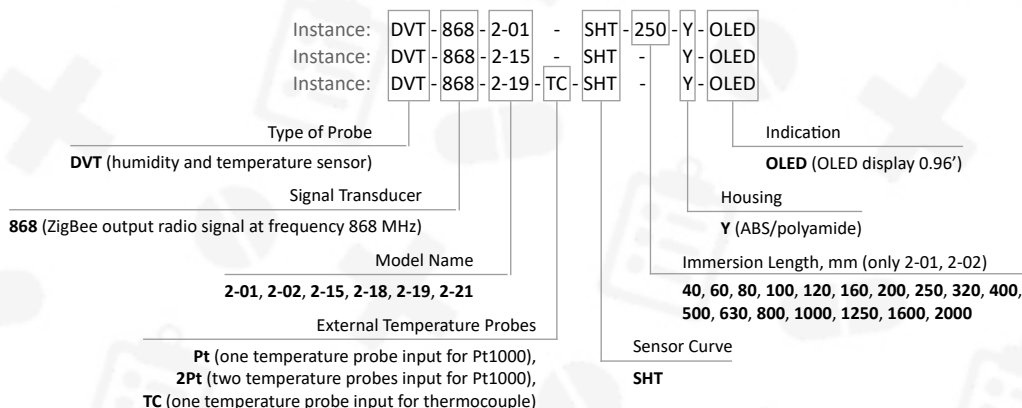


Protective rubber case

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ORDER INFO

Order Info for 2-01, 2-02, 2-15, 2-18, 2-19, 2-21



Order Info for External Temperature Probe for 2-15, 2-18, 2-19

Instance: TSP - 1-11 - Pt1000 - B - 2 - 120 - 4 - M12x1.5 - 2000 - RE - M8 - /-50...250/
 Instance: TXA - 1-26 - K - 1 - I - 2500 - 6 - INC - 5000 - RE - M8 - /-0...1100/
 Instance: TSP - 2-8 - Pt1000 - B - 2 - - - 4000 - RE - M5 - /-50...250/
 Instance: TSP - 1-6 - Pt1000 - A - 2 - 80 - 5 - - - 8000 - RE - M12 - /-50...250/

An order of external probe is determined by using an instance of order info of chosen transducer's series presented in category "Temperature Probes". Any of our probes may serve as an external probe with RE cable and Pt1000 / XA (type K) sensor. The following should be specified in the order info before operating temperature range:

- For models 2-15 with two **2Pt OUTs** – IP52 a M5 (male, straight) connector for a cable: **M5**
- For model 2-18 with **Pt OUT** – IP67 a M12 (female, straight) connector for a cable: **M12**
- For models 2-19 with **Pt OUT** or **TC OUT** – IP67 a M8 (male, straight) connector for a cable: **M8**

Order Info for calibration and verification

Instance:	VERIFICATION, MODUL B+F
Instance:	VERIFICATION IN OPERATION
Instance:	CALIBRATION, 4 POINTS
Instance:	CALIBRATION BY ISO 17025, 3 POINTS

Number of calibration points
2, 3, 4, 5 ...