ETHERNET TEMPERATURE,HUMIDITY,PRESSURE SENSORS Hx531 WITH RELAY OUTPUTS

New !

Transmitter H3531, H7531

Transmitter H4531

APPLICATION: monitoring of temperature, humidity, pressure and three binary signals:

- server and computer rooms
- building management and automation
- industrial Ethernet
- telecommunication devices
- warehouses, glasshouses
- air-conditioned rooms
- weather stations

Transmitter is equipped with three binary inputs for detection of two-state events - e.g. water, smoke, glass break detection, door contact. Fully equipped transmitter contains temperature, humidity, pressure sensors. Measured temperature and relative humidity is recalculated to other humidity interpretations - dew point temperature, absolute humidity, specific humidity, mixing ratio or specific enthalpy. Reading and pressure output available in these units: hPa, kPa, mbar, mmHg, inHg, inH_2O, PSI, oz/in^2. Degrees Celsius and Fahrenheit are user selectable.
Large dual line LCD for simultaneous display of temperature, pressure or relative humidity or other calculated humidity interpretation is an advantage. Parameters are easy adjustable from transmitter keyboard or from the computer.
State-of-the-art capacitive polymer sensor ensures excellent calibration long term stability, inertia against water and condensation. Transmitter is designed for use in non-aggressive environment.
Transmitter is equipped with two relay outputs for alarm indication or control of external devices. Each relay can be assigned to any measured or computed value. For each relay setting of delay, hysteresis, audible alarm is enabled.

COMMUNICATION MODES	
ModBus TCP:	Modbus TCP protocol enables to read measured values and binary input states, set alarm limits, adjust the probe.
Telnet:	Port 9999 enables to set alarm limits (lower, upper limits, hysteresis for measured values and time delay), e-mail addresses, SNMP addresses, probe description, refresh of www pages (10s to 65535s), set storing interval to history (10s to 65535s), enable each communication channel. Capacity of the history memory is 100 sets of temperature, humidity, pressure + computed values. Password protection of this port is enabled. Automatic IP address assignment from DHCP server is also enabled.
www pages:	User selectable design of www pages enabling to display curves of measurement history and binary input states. User can design the look of www pages and temperature, humidity, pressure + computed values
SNMP:	It is possible to read actual values, alarm limits and binary input states. In case of alarm creation warning message (trap) is sent to addresses defined by the user (maximum three addresses).
SOAP:	Online transmitter enables to send actual measured data in the format of SOAP message to selected web server in preset interval 10-65535 s. In case message is not received by the server till next message is sent, warning trap 1/3 is sent.

ALARM INDICATION OPTIONS	
E-mail:	In case of alarm creation warning e-mail message is sent to addresses defined by the user (maximum three addresses).
www pages:	In case of exceeding of adjusted temperature, humidity, pressure + computed value limits active alarm is displayed on www page.
SNMP:	In case of exceeding of adjusted temperature, humidity, pressure + computed value limits or binary input change alarm is activated and warning trap is sent to user specified IP addresses (maximum 3 addresses).
syslog:	Online transmitter enables to send text messages to selected syslog server after different events appear. E.g. after transmitter restart, alarm activation, communication error with SNTP, write to transmitter via mdb, sntp, after firmware change, after alarm termination, after communication error with SOAP server.

TECHNICAL PARAMETERS	
Maximum switching voltage, current and power of the relay contact:	50 V, 2 A, 60 VA, resistive load
Audible alarm:	from built-in beeper - switchable
Operating relative humidity range:	0 to 100%
Accuracy of relative humidity:	±2.5% relative humidity from 5 to 95% at 23˚C
Accuracy of temperature:	±0.4˚C from -30 to +100˚C, ±0.4% from reading over +100˚C
Accuracy and range of dew-point temperature:	±1.5˚C at ambient temperature < 25˚C and RH>30%,range-60 to+80˚C
Accuracy and range of absolute humidity:	±3g/m^3 at ambient temperature T < 40˚C, range 0 to 400 g/m^3
Accuracy and range of specific humidity:	±2g/kg at ambient temperature T < 35˚C, range 0 to 550 g/kg
Accuracy and range of mixing ratio:	±2g/kg at ambient temperature T < 35˚C, range 0 to 995 g/kg
Accuracy and range of specific enthalpy:	± 3kJ/kg at ambient temperature T < 25˚C, range: 0 to 995 kJ/kg

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TECHNICAL PARAMETERS - continuation	
Accuracy and range of atmospheric pressure:	±1.3hPa at 23˚C, range 600 to 1100hPa
Supported pressure units:	hPa, kPa, mbar, mmHg, inHg, inH_2O, PSI, oz/in^2
Signal for binary inputs:	from voltage-less contact, open collector or two-state voltage signal. Inputs are not galvanically isolated.
Minimum pulse length at binary input:	500 ms (shorter pulse may not be detected)
Voltage at open contact:	3.3 V
Low voltage level:	0 to +0.2 V
High voltage level:	+3.0 to +30V
Operating temperature range of the case:	-30 to +80˚C
Operating temperature range of the LCD	readable to operating temperature +70˚C
Temperature range of RH sensor compensation:	-30 to +105˚C
Filtering ability of RH sensor cover:	0.025mm, filter from stainless steel mesh
Protection:	case with electronics IP30, protection of T+H probe IP40
LAN connector:	connector RJ-45
Power:	9-30Vdc, maximum consumption approximately 1W
Power connector:	co-axial, diameter 5.5 x 2.1 mm
Mechanical dimensions of the case (W x H x D):	135 x 136 x 45 mm

AVAILABLE MODELS:

MODEL	MEASURED VALUE	MAXIMUM RANGE OF MEASURED VALUES	DESCRIPTION
H4531	temperature+ 3 binary inputs	-200 to +600˚C	**Temperature transducer** for external probe with Pt1000/3850ppm sensor (not included), accuracy of the input without probe ±0.2˚C.
H3531	temperature+ humidity+ 3 binary inputs	-30 to +105˚C* probe including cable relative humidity 0 to 100%	**Thermometer-hygrometer**. T+RH probe of 18mm diameter, 88mm length with 1m cable. Cable lengths 2m or 4m available optionally. Measured values are also converted to other humidity interpretation - dew point temperature, absolute humidity, specific humidity, mixing ratio or specific enthalpy.
H7531	temperature+ humidity+ atmospheric pressure+ 3 binary inputs	-30 to +105˚C* probe including cable relative humidity 0 to 100% pressure: 600 to 1100hPa accuracy: ±1,3hPa at 23˚C	**Thermometer-hygrometer-barometer**. T+RH probe of 18mm diameter, 88mm length with 1m cable. Cable lengths 2m or 4m available optionally. Measured values are also converted to other humidity interpretation - dew point temperature, absolute humidity, specific humidity, mixing ratio or specific enthalpy. Reading and pressure output in these units: hPa, kPa, mbar, mmHg, inHg, inH_2O, PSI, oz/in^2 . Barometer enables to measure sea level pressure by setting of correction to altitude above sea level.

* Relative humidity at temperature over +85˚C is limited in accordance with the graph. Near plastic case with electronics and probe cable maximum temperature is +80˚C.

Included accessories:

Traceable calibration certificate from the manufacturer, instruction manual. Calibration certificate with declared metrological traceability of etalons is based on requirements of EN ISO/IEC 17025 standard.
Free program TSensor for configuring of the transmitter is ready to download from www.cometsystem.cz.
Free program SensorReader for logging values from one transmitter to a PC disk file is ready to download from www.cometsystem.cz.
Recorded values in CSV format are easy to process in e.g. Excel.

Optional accessories:

Probes with RTD Pt1000 sensors are directly compatible with H4531 transducer - see end of catalogue for Comet probes without connector - probe marking is followed by symbol /O.
Other accessories - see further in catalogue.