THERMASGARD® HFTM-EtherCAT P

Sleeve sensor with temperature measuring transducer,
Bluetooth-enabled,
with EtherCATP port

S+S REGELTECHNIK

Networkable sleeve temperature measuring transducer **THERM**ASGARD® **HFTM-EtherCAT P** with M8 plug-in connector (EtherCATP-encoded), Bluetooth-enabled, in an impact-resistant plastic housing with quick-locking screws, optionally with/without display and bar graph, cable sensor with stainless steel sleeve.
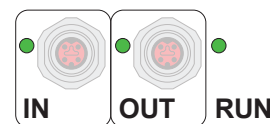
The sleeve sensor is used to detect the temperature in liquid and gaseous media. It is used as a duct sensor or, if installed in an immersion sleeve **THE** (accessory), as an immersion and screw-in sensor in liquids. The sensor is factory-calibrated.

EtherCATP-enabled measuring transducer for industrial requirements with maximum reliability: includes easy PLC integration using the device's ESI configuration file, diagnostics (such as communication failure counter), advanced settings options, access to historical data (min / max) and establishing the sensor's service interval. Optionally with large illuminated display (3-line, customised programming in the 7-segment and dot-matrix range) and bar graph (7-digit, LEDs freely configurable) for graphical display, e.g., as a traffic light indicator.
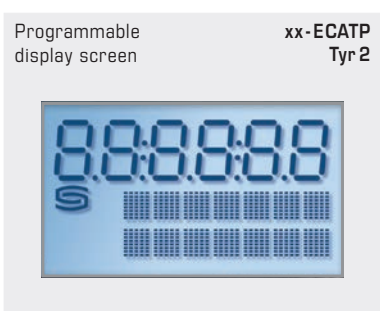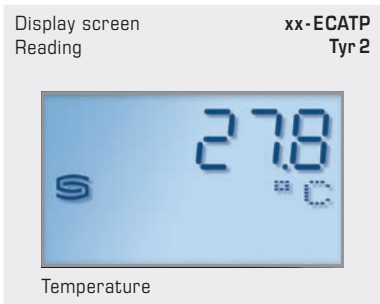
HFTM-EtherCAT P

TECHNICAL DATA

Power supply:	24 V DC via EtherCATP (U$_S$)
Power consumption:	< 3 W
Bus protocol:	**EtherCAT**
Radio technology:	**Bluetooth** (LE)
Sensor:	Pt1000, DIN EN 60751, class B (**Perfect Sensor Protection** at IP68)
Measuring range:	−50...+150 °C; **T$_{max}$ up to +150 °C**
Accuracy in temperature:	typically ± 0.2 K at +25 °C
Medium:	clean air and non-aggressive, non-combustible gases; liquids depending on selected immersion sleeve (accessory)
Sensor protection:	sensor sleeve made from stainless steel V4A (1.4571), Ø = 6 mm, nominal length (NL) = 50 mm (optional 30...400 mm)
Sensor cable:	Silicone, SiHF, 2 x 0,25 mm²; cable length (KL) = 1.5m (other lengths and jacket materials, e.g. PTFE or glass fibre with steel mesh, available on request)
Housing:	Plastic, UV-resistant, polyamide material, 30 % glass-globe reinforced, with quick-locking screws (slotted / Phillips head combination), colour traffic white (similar to RAL 9016), housing cover for display is transparent!
Housing dimension:	126 x 90 x 50mm (Tyr 2)
Cable connection:	**M8 plug-in connector**, EtherCATP-encoded
Ambient temperature:	measuring transducer −30...+70 °C
Permitted humidity:	< 95 % RH, non-precipitating air
Protection class:	III (according to EN 60 730)
Protection type housing:	**IP 54** (according to EN 60 529)
Protection type sensor:	**IP 65** (according to EN 60 529) **sleeve** humidity-tight (standard) **IP 68** (according to EN 60 529) **sleeve** water-tight (optional) **IP 54** (according to EN 60 529) with **glass fibre** cable (optional)
Standards:	CE conformity, according to EMC Directive 2014 / 30 / EU, according to RED 2014 / 53 / EU
Equipment:	**Display with illumination,** 3-line, customised programming, cutout approx. 51 x 29 mm, to display the actual temperature or a customised display value. **Bar graph**, 7-digit, LEDs freely configurable, to graphically display the reading.
ACCESSORIES	see table

EtherCAT P
Cable connection and
LED status display

IN   OUT   RUN

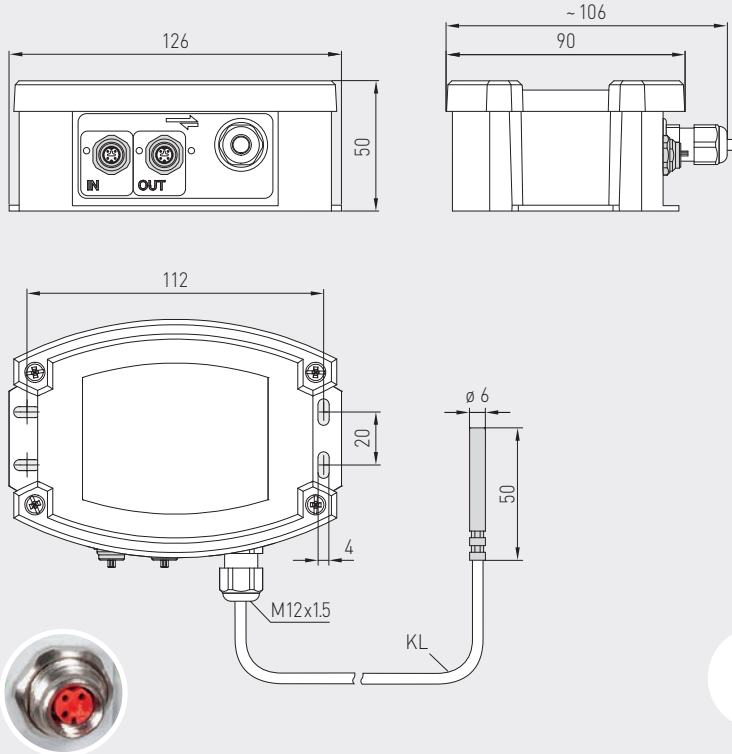| EtherCAT P	LED status display
1. LED	**"IN"**
off	no connection to upstream EtherCAT module
illuminated	LINK: connection to upstream EtherCAT module
blinking	ACT: communication with upstream EtherCAT module
2. LED	**"OUT"**
off	no connection to downstream EtherCAT module
illuminated	LINK: connection to downstream EtherCAT module
blinking	ACT: communication with downstream EtherCAT module
3. LED	**"RUN"**
off	EtherCAT module is in "Init" state
quickly blinking	EtherCAT module is in "Pre-Operational" state
slowly blinking	EtherCAT module is in "Safe-Operational" state
illuminated	EtherCAT module is in "Operational" state
The status LEDs are next to the cable connection.	

Display screen   xx-ECATP
Reading   Tyr 2

27.8

Temperature

Programmable   xx-ECATP
display screen   Tyr 2

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Dimensional drawing

HFTM-EtherCAT P

126

~ 106

90

50

IN   OUT

112

20

ø 6

50

4

M12x1.5

KL

M8-plug-in connector
EtherCATP-encoded

HFTM-EtherCAT P
with display and bar graph

23.1 °C

IP 65 (standard)
humidity-tight

IP 68 (optional)
watertight
Perfect Sensor Protection

IP 54 (optional)
with **glass fibre** cable

High-performance encapsulation against
vibration, mechanical stress and humidity

PS-PROTECTION
PERFECT SENSOR PROTECTION

THERMASGARD® **HFTM-EtherCAT P**	Sleeve sensors with temperature measuring transducer with EtherCATP port					
Type / WG02	Measuring Range Temperature	Sensor	Output	Bar graph Display	Item No.	Price
HFTM-ECATP xx						
HFTM-ECATP	−50...+150 °C	Pt1000	EtherCAT P		2001-2161-9100-001	**379,75 €**
HFTM-ECATP **LCD**	−50...+150 °C	Pt1000	EtherCAT P	□ ■	2001-2162-9100-001	**429,28 €**
Note:	Cable connection with **M8 plug-in connector** (EtherCATP-encoded)					
Extra charge:	Protection type **IP68** (sensor sleeve watertight compound-filled)					**3,64 €**
	per running metre of connecting lead (**silicone** / **PTFE** / **glass fibre**)				on request	
	other protection sleeve lengths (optional 30...400 mm)				on request	

ACCESSORIES

THE-xx   **Immersion sleeve**, stainless steel **V4A** (1.4571) or nickel-plated brass, Ø = 9 mm
Inner diameter of socket 5.2 mm, with **adjusting screw** M12 x 1.5

For further information, see last chapter Accessories!