

HYGRASGARD® RPFTF - Modbus-T3

HYGRASGARD® RPFTF - 20 - Modbus-T3

Pendulum room humidity and temperature sensors ($\pm 1.8\%$ / $\pm 2.0\%$), for mixture ratio, relative/absolute humidity, dew point, enthalpy and temperature, calibratable, with Modbus connection

NEW



S+S REGELTECHNIK

Calibratable pendulum room humidity and temperature sensor **HYGRASGARD® RPFTF-Modbus-T3** ($\pm 2,0\%$) or **RPFTF-20-Modbus-T3** ($\pm 1.8\%$), with plastic sinter filter (optional metal sinter filter), with Modbus connection, enclosure made from impact-resistant plastic with quick-locking screws, **with/without optional display**.

The universal pendulum room sensor is used to determine various characteristic variables in humidity measurement. It is used to measure the relative humidity and the temperature of the surrounding air. These measurands are used to calculate various parameters internally. The Modbus can be used to retrieve the following parameters: relative humidity [% r.h.], absolute humidity [g/m³], mixture ratio [g/kg], dew point temperature [°C], enthalpy [kJ/kg] (ignoring atmospheric air pressure) and ambient temperature [°C].

It is used in non-aggressive dust-free environments in refrigeration, air conditioning, ventilation and clean room technology, hotels, technical rooms, meeting rooms and convention centres. The measuring transducers are designed for exact detection of temperature and humidity. A digital long-term stable sensor is used as measuring element for humidity and temperature measurement. Fine adjustment by the user is possible. The sensor is suitable for ceiling and duct installation, or for integration into equipment.

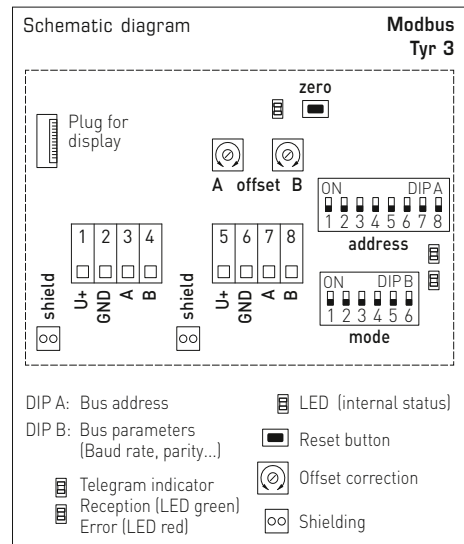
RPFTF-Modbus-T3 ($\pm 2,0\%$)
RPFTF-20-Modbus-T3 ($\pm 1,8\%$)



TECHNICAL DATA

Voltage supply:	24 V AC ($\pm 20\%$) and 15...36 V DC
Power consumption:	< 2 W / 24 V DC; < 3.5 VA / 24 V AC
Data points:	Temperature [°C], relative humidity [% r.h.], dew point [°C], absolute humidity [g/m ³], mixture ratio [g/kg], enthalpy [kJ/kg]
Sensors:	digital humidity sensor with integrated temperature sensor , low hysteresis, high long-term stability
Sensor protection:	plastic sinter filter, \varnothing 16 mm, L = 35 mm, exchangeable (optional metal sinter filter, \varnothing 16 mm, L = 32 mm)
Measuring range:	0...100% r.H. (humidity) -35...+80 °C (temperature)
Deviation, humidity:	RPFTF-Modbus: typically $\pm 2.0\%$ (20...80% r.h.) at +25 °C, otherwise $\pm 3.0\%$ RPFTF-20-Modbus: typically $\pm 1.8\%$ (10...90% r.h.) at +25 °C, otherwise $\pm 2.0\%$
Temperature deviation:	typically ± 0.2 K at +25 °C
Zero point offset:	$\pm 10\%$ r.h. (humidity) ± 10 °C (temperature)
Ambient temperature:	-30...+70 °C
Medium:	clean air and non-aggressive, non-combustible gases
Bus protocol:	Modbus (RTU mode), address range 0...247 selectable
Signal filtering:	4 s / 32 s
Enclosure:	plastic, UV-stabilised, material polyamide, 30% glass-globe reinforced, with quick-locking screws (slotted / Phillips head combination), colour traffic white (similar to RAL 9016), enclosure cover for display is transparent!
Enclosure dimensions:	108 x 78.5 x 43.3 mm (Tyr3 without display) 108 x 78.5 x 45.8 mm (Tyr3 with display)
Cable gland:	2x M20 x 1.5; with strain relief, exchangeable, inner diameter 8 - 13 mm
Connection cable:	PVC, LiYY, 6 x 0.14 mm ² , cable length (KL) = approx. 2 m (other lengths optional)
Protective tube:	stainless steel V2A (1.4301), \varnothing 16 mm, NL = 142 mm
Electrical connection:	0.2 - 1.5 mm ² , using push-in terminals
Permissible air humidity:	< 95% r.H., non-precipitating air
Protection class:	III (according to EN 60 730)
Protection type:	IP 65 (according to EN 60 529)
Standards:	CE conformity, electromagnetic compatibility according to EN 61326, according to EMC Directive 2014 / 30 / EU
Optional:	Display with illumination , three-line, programmable, cutout approx. 51 x 29 mm (W x H), for displaying the actual humidity and actual temperature (cyclic) or a selectable parameter (static) or an individually programmable display value (The Modbus interface allows the display to be individually configured in the 7-segment area and in the dot-matrix area.)

ACCESSORIES see table



Programmable display screen **Modbus Tyr 3**



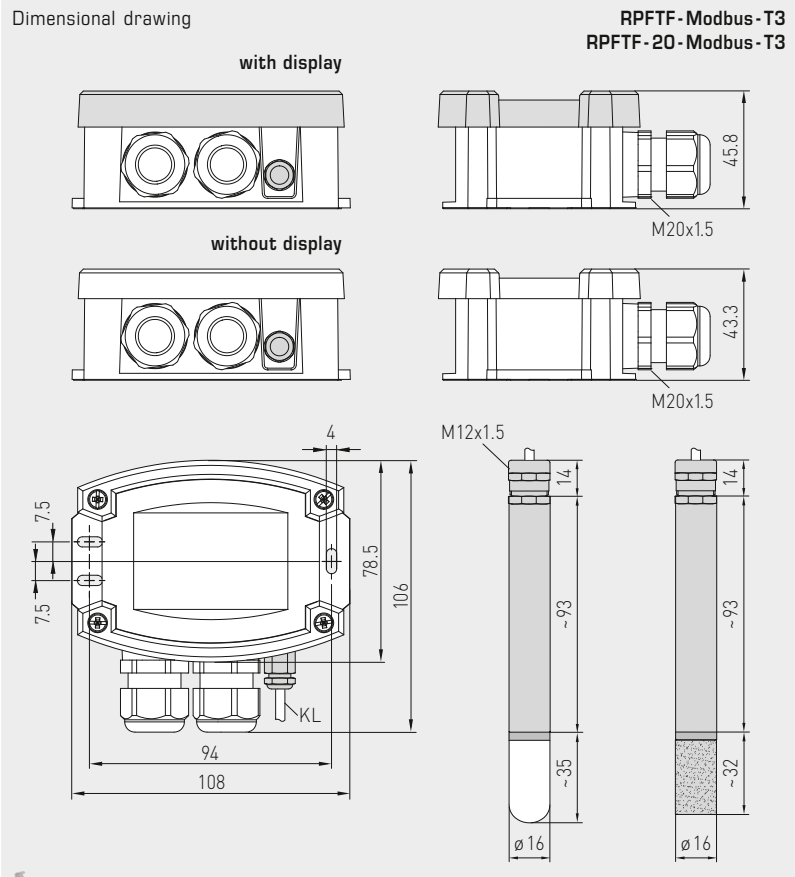


NEW

S+S REGELTECHNIK

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for mixture ratio, relative/absolute humidity, dew point, enthalpy
and temperature, calibratable, with Modbus connection



RPFTF-Modbus-T3 ($\pm 2.0\%$)
RPFTF-20-Modbus-T3 ($\pm 1.8\%$)
with display



MF-16-K
Mounting flange,
plastic (optional)

SF-K
plastic sinter filter
(standard)

SF-M
metal sinter filter
(optional)



HYGRASGARD® RPFTF-Modbus-T3 Pendulum room humidity and temperature sensors ($\pm 2.0\%$)
HYGRASGARD® RPFTF-20-Modbus-T3 Pendulum room humidity and temperature sensors ($\pm 1.8\%$)

Type / WG01	Measuring Range / Readout Humidity (switchable)	Temperature	Output	Display	Item No.	Price
RPFTF-Modbus-T3						
RPFTF-MODBUS-T3	0...100% r. H. (default) 0...80 g/kg (MR) 0...80 g/m ³ (A.H.) 0...85 kJ/kg (ENT.) -20...+80 °C (DP)	-35...+80 °C	Modbus	($\pm 2.0\%$)	1201-6246-1000-000	249,94 €
RPFTF-MODBUS-T3 LCD	(5 x as above)	(1 x as above)	Modbus	■	1201-6246-1400-000	296,08 €
RPFTF-20-Modbus-T3						
RPFTF-20-MODBUS-T3	(5 x as above)	(1 x as above)	Modbus	($\pm 1.8\%$)	1201-6246-1000-001	299,82 €
RPFTF-20-MODBUS-T3 LCD	(5 x as above)	(1 x as above)	Modbus	■	1201-6246-1400-001	346,44 €
Extra charge:	per running metre of connecting lead (PVC)				on request	
ACCESSORIES						
KA-2	Modbus communication adapter with USB/RS485 interface				on request	
SF-M	Metal sinter filter , \varnothing 16 mm, L = 32 mm, exchangeable, stainless steel V4A (1.4404)				7000-0050-2200-100	35,70 €
MF-16-K	Mounting flange made of plastic (optional)				7100-0030-0000-000	8,06 €

For further information, see last chapter Accessories!

