



S+S REGELTECHNIK

THERMASREG® FST-K

Bedienungs- und Montageanleitung

Kanal-Frostschutzthermostat,
incl. Montageflansch, mechanisch, einstufig,
mit schaltendem Ausgang

Operating Instructions, Mounting & Installation

Duct frost protection thermostat,
incl. mounting flange, mechanical, one-step,
with switching output

Notice d'instruction

Thermostat anti-gel, pour montage en gaine
y compris bride de montage, mécanique, à un étage,
avec sortie en tout ou rien

Руководство по монтажу и обслуживанию

Канальный термостат защиты от замерзания,
вкл. присоединительный фланец,
механический, одноступенчатый,
с релейным выходом



FST-K



FST-K-HR



S+S REGELTECHNIK

S+S REGELTECHNIK GMBH
 PIRNAER STRASSE 20
 90411 NÜRNBERG / GERMANY

FON +49 (0) 911 / 5 19 47-0

FAX +49 (0) 911 / 5 19 47-70

mail@SplusS.de

www.SplusS.de



Herzlichen Glückwunsch!

Sie haben ein deutsches Qualitätsprodukt erworben.

Congratulations!

You have bought a German quality product.

Félicitations!

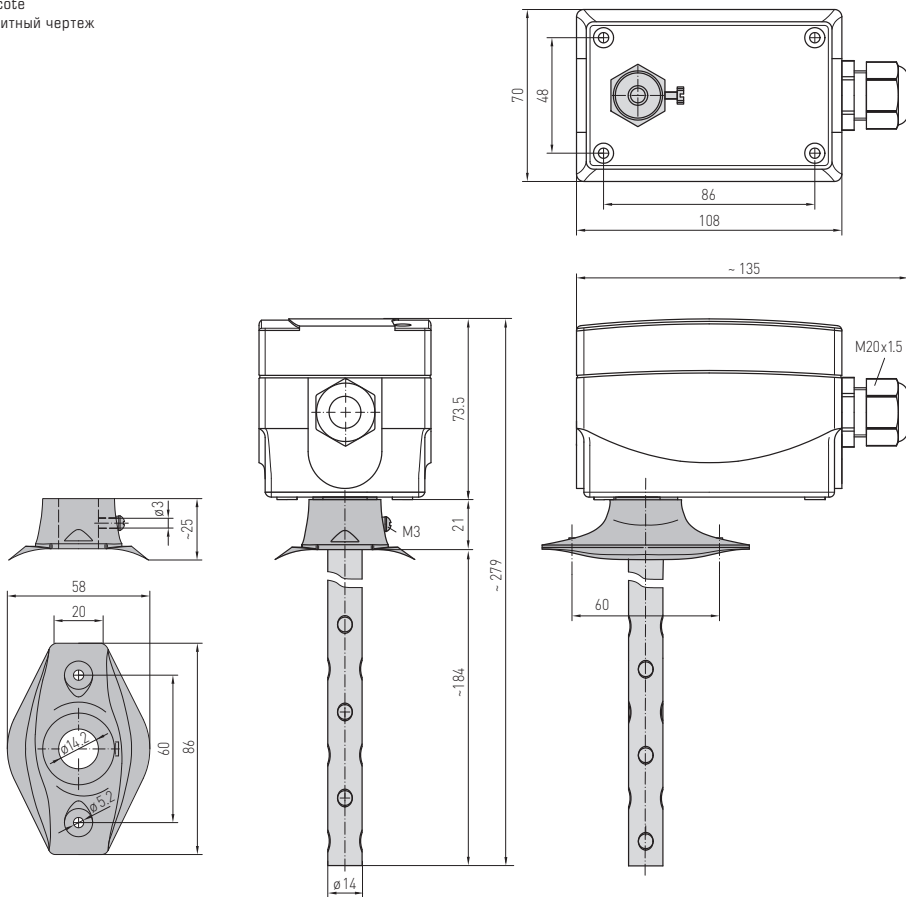
Vous avez fait l'acquisition d'un produit allemand de qualité.

Примите наши поздравления!

Вы приобрели качественный продукт, изготовленный в Германии.

Maßzeichnung
Dimensional drawing
Plan coté
Габаритный чертеж

FST-K



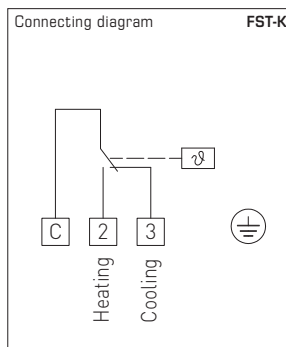
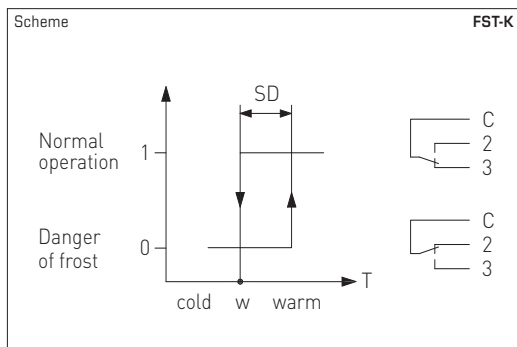
MF-14-K

Montageflansch
aus Kunststoff
Mounting flange,
plastic
bride de montage en
matière plastique
Присоединительный
фланец из пластика

Mechanical frost protection thermostat /frost monitor **THERMASREG® FST-K** with switching output, duct tube monitored across the entire length, with automatic reset or with mechanical locking, with/without optional manual reset. The frost protector is suitable for air or water-side temperature monitoring at heat exchangers, water circulation systems and heating registers to prevent freezing up and to avoid frost damage, e.g. in ventilation and air conditioning ducts. The FST-K is intrinsically safe and is equipped with sensor breakage detection. In the event of damage to the capillary membrane system, the frost sensor automatically switches to the heating function. The scope of delivery includes the mounting flange **MF-14-K**.

TECHNICAL DATA	
Switching capacity:	10 (2) A, AC 250 V; because of gold-plated switching contacts also switching of signal voltages < 24 V
Setting range:	−10...+15 °C / +14 °F...+59 °F, factory setting to w = +5 °C (+41 °F)
Operating difference:	2 ± 1 K (3.6 ± 1.8 °F)
Reproducibility:	± 0.5 K (± 0.9 °F)
Contact:	dust-proof micro switch as single-pole potential-free changeover contact
Resetting:	FST-K automatic FST-K-HR manual
Permissible medium:	Air
Ambient temperatures:	maximum operating temperature: +70 °C (+158 °F) minimum operating temperature: w + min. +2 °C (min. +3.6 °F) storage / transport: −30...+70 °C (−22...+158 °F)
Enclosure:	plastic, UV-stabilised, material polyamide, 30 % glass-globe reinforced, colour traffic white (similar to RAL 9016)
Enclosure dimensions:	108 x 70 x 73.5 mm (Thor 2)
Cable gland:	M20 x 1.5; with strain relief
Process connection:	by mounting flange, plastic (included in the scope of delivery)
Electrical connection:	0.14 - 2.5 mm ² , via screw terminals
Protective tube:	metal , material CuZn37 (2.0321), Ø 14 mm, NL = 205 mm
Other materials:	mechanical sheet metal parts: galvanised steel capillary tube: copper capillary tube filling: R507 switching contacts: Ag / Ni (90% / 10%) gold-plated (3 µm)
Protection class:	I (according to EN 60730-1)
Protection type:	IP 65 (according to EN 60529)
Standards:	CE conformity, EMC directive 2014 / 30 / EU, low-voltage directive 2014 / 35 / EU
FUNCTION	Contact C - 2: danger of frost / sensor breakage Contact C - 3: normal operation

THERMASREG® FST-K – Duct frost protection thermostat, mechanical					
Type/ WG02	Temperature Range	Thermal Operating Difference (fixed) approx.	Function	Permissible Medium	Item No.
FST-K					TW
FST-K	−10...+15 °C	2 K (± 1 K)	TW	air	1102-1064-0100-001
FST-K- HR					TB
FST-K HR	−10...+15 °C	2 K (± 1 K)	TB	air	1102-1064-1100-000
Equipment:	FST-K FST-K- HR	TW = temperature monitor (automatically switching) TB = temperature limiter (manual reset)			
Accessories					
MF-14-K	Mounting flange, plastic				7100-0030-2000-000



FUNCTION

The switch in the **FST-K** duct frost protection thermostat responds if the temperature across the entire length of the duct tube falls below the preset temperature setpoint (closes contact C-2). Contact C-3 opens at the same time and can be used as a signal contact. Resetting occurs automatically (contact closes C-3) if the temperature rises above the preset setpoint again (on type **FST-K-HR**, resetting must be performed manually using the reset button).

The **FST-K** is "intrinsically safe", i.e., in the event of damage to the capillary tube-membrane system, it automatically switches to the heating function. Contact C-2 closes and can therefore be used as an operating contact. The air temperature is detected over the entire length of the sensor (capillary tube). The gas-filled (R507) membrane system and the capillary tube constitute one measuring unit, which is mechanically coupled to the microswitch.

Notes regarding FST-K

A preset setpoint value can be lead-sealed at the adjusting screw. It is absolutely necessary to ensure that ambient temperature at the device does not drop below the preset setpoint temperature.

This device must be operated in a non-precipitating pollutant-free ambience.

General notes

Our "General Terms and Conditions for Business" together with the "General Conditions for the Supply of Products and Services of the Electrical and Electronics Industry" (ZVEI conditions) including supplementary clause "Extended Retention of Title" apply as the exclusive terms and conditions.

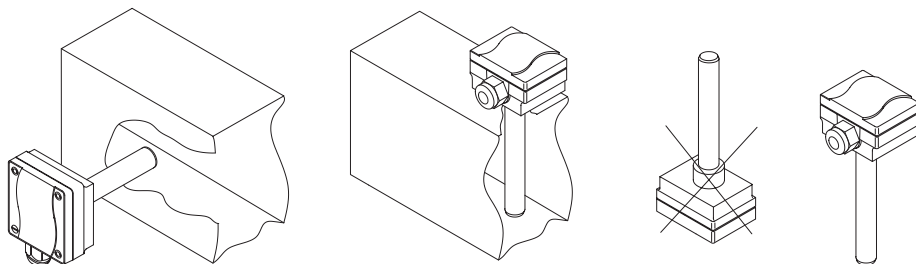
In addition, the following points are to be observed:

- These instructions must be read before installation and putting in operation and all notes provided therein are to be regarded!
- Devices must only be connected to safety extra-low voltage and under dead-voltage condition. To avoid damages and errors the device (e.g. by voltage induction) shielded cables are to be used, laying parallel with current-carrying lines is to be avoided, and EMC directives are to be observed.
- This device shall only be used for its intended purpose. Respective safety regulations issued by the VDE, the states, their control authorities, the TÜV and the local energy supply company must be observed. The purchaser has to adhere to the building and safety regulations and has to prevent perils of any kind.
- No warranties or liabilities will be assumed for defects and damages arising from improper use of this device.
- Consequential damages caused by a fault in this device are excluded from warranty or liability.
- These devices must be installed by authorised specialists only.
- The technical data and connecting conditions of the mounting and operating instructions delivered together with the device are exclusively valid. Deviations from the catalogue representation are not explicitly mentioned and are possible in terms of technical progress and continuous improvement of our products.
- In case of any modifications made by the user, all warranty claims are forfeited.
- This device must not be installed close to heat sources (e.g. radiators) or be exposed to their heat flow. Direct sun irradiation or heat irradiation by similar sources (powerful lamps, halogen spotlights) must absolutely be avoided.
- Operating this device close to other devices that do not comply with EMC directives may influence functionality.
- This device must not be used for monitoring applications, which serve the purpose of protecting persons against hazards or injury, or as an EMERGENCY STOP switch for systems or machinery, or for any other similar safety-relevant purposes.
- Dimensions of enclosures or enclosure accessories may show slight tolerances on the specifications provided in these instructions.
- Modifications of these records are not permitted.
- In case of a complaint, only complete devices returned in original packing will be accepted.

These instructions must be read before installation and putting in operation and all notes provided therein are to be regarded!

Montageschema
 Mounting diagram
 Schéma de montage
 Схема монтажа

FST-K



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