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GREISINGER
Member of GHM GROUP

Flow measuring probe for water or air

Operating Manual

STS 005
STS 020

CE

WEEE-Reg.-Nr.: DE93889386

GHMGROUP
Specialists by Competence.

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1 Intended use

The flow measuring probes of the type **STS** are probes for the handheld instruments of the device series GMH 3300. The **STS 005** is suitable for measuring in water and the **STS 020** is suitable for measuring in air.

2 Required accessory

For displaying the measured value is a handheld instrument of the type GMH 3330 or GMH 3350 required.

3 Safety instructions

This device has been designed and tested in accordance with the safety regulations for electronic devices. However, its trouble-free operation and reliability cannot be guaranteed unless the standard safety measures and special safety advises given in this manual will be adhered to when using the device.

1. Trouble-free operation and reliability of the device can only be guaranteed if the device is not subjected to any other climatic conditions than those stated under 'Specification'.
2. General instructions and safety regulations for electric, light and heavy current plants, including domestic safety regulations (e.g. VDE), have to be observed.
3. If device is to be connected to other devices (e.g. via PC) the circuitry has to be designed most carefully. Internal connection in third party devices (e.g. connection GND and earth) may result in not-permissible voltages impairing or destroying the device or another device connected.
4. If there is a risk whatsoever involved in running it, the device has to be switched off immediately and to be marked accordingly to avoid re-starting.
   Operator safety may be a risk if:
   - there is visible damage to the device
   - the device is not working as specified
   - the device has been stored under unsuitable conditions for a longer time

   In case of doubt, please return device to manufacturer for repair or maintenance.
5. **Warning:**
   Do not use this product as safety or emergency stop devices, or in any other application where failure of the product could result in personal injury or material damage.

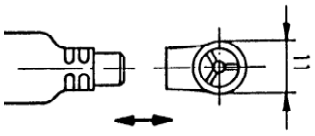
   Failure to comply with these instructions could result in death or serious injury and material damage!
6. This device must not be used at potentially explosive areas! The usage of this device at potentially explosive areas increases danger of deflagration, explosion or fire due to sparking.
7. This device is not constructed for use in medical applications.
8. This device must not be run with a defective or damaged power supply unit. Danger to life due to electrical shock!

4 Operating and maintain instruction

- The probe are calibrated at free jet condition.
  I.e. the duct for the measurement must have a minimum diameter of 3 x probe-diameter (>45 mm).
- Avoid moisture, extreme temperatures and vibrations. Do not shake!
- Strong electromagnetic interference (e.g. transformers, radio transmitting equipment) may affect the accuracy of the measurement.
- As the probes are highly sensitive measuring instruments, they must be cleaned with very great care.
  Fibres or other foreign bodies can be carefully removed with fine tweezers. When doing so, take care not to bend or otherwise damage the vanes or the spindle.

  Cleaning agents witch extract the plasticizer from the plastic are never to be used for plastic probes (practically all solvents!).
  - We recommend the following to cleaning: running water, soapy water, pure benzene
  - Cleaning example:
    - carefully swish the top part of the impeller back and forth in clean, pure benzene for approx. 10 min.
    - then swish the top part of the impeller back and forth in clean kerosene for approx. 1 min to relubricate the impeller bearings.
    - rub probe dry externally with a clean, dry, fluff-free cloth
    - leave the top part of the impeller to dry for ca. 30 minutes
- The adjustment of the bearing screws must never be changed. This can result in erroneous measurements.
- Never allow hard objects to contact rotating impellers!

- If the rotating impeller is damaged as replacement part a spare sensor head **STE 005** or **STE 020** is available.
  Demounting of sensor head: pull snap-on head in axial direction.
  Attention: don´t distort head!



5 Specification

	STS 005	STS 020
Sensor type:	windmill-type anemometer	windmill-type anemometer
Head:	snap-on head (exchangeable)	snap-on head (exchangeable)
Type spare head:	STE 005	STE 020
Measuring media:	water	air
Measuring range:	0.05 ... 5.00 m/s (water)	0.55 ... 20.00 m/s (air)

Accuracy: ± 3% of measured value ±1% of measuring range

Permissible angle flow: ±20°, without additional measuring faults

Nominal temperature: +25 °C

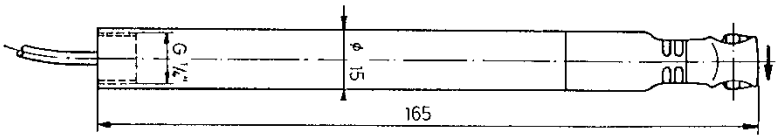
Working conditions: 0 … +70 °C / 0 ... 100 %RH

Storage temperature: -20 … +85 °C

Device connection: 5 m connection cable with 6-pin Mini-DIN-plug

Dimensions:

Insertion opening: Ø16 mm
Measuring head: Ø11 x 15 mm
Length tube + head: 165 mm



Directives / standards: The instruments confirm to following European Directives:

2014/30/EU EMC Directive
2011/65/EU RoHS

Applied harmonized standards:

EN 55022 : 2011, VDE 0878-22 : 2011
EN 61000-6-1 : 2007, VDE 0839-6-1 : 2007
EN 50581 : 2012

6 Disposal instructions

The device must not be disposed in the regular domestic waste. Send the device directly to us (sufficiently stamped), if it should be disposed. We will dispose the device appropriate and environmentally sound.