

**Duct top-hat rail airflow sensor / airflow monitor,
electronic, external flow probe incl. mounting flange,
with active / switching output**

Electronic duct top-hat rail airflow sensor **RHEASGARD® KHSSF** with active / switching output, housing for installation in distributor boxes or control cabinets with 35 mm mounting rail, external flow probe incl. mounting flange, for determining the flow velocity (0.1...20 m/s). The measuring transducer automatically detects the required output type and converts the measurands into the required standard signal of 0–10 V or 4...20 mA (**Automatic Output Switching**).

Electronic duct top-hat rail airflow monitor **RHEASREG® KHSSW** with switching output, housing for installation in distributor boxes or control cabinets with 35 mm mounting rail, external flow probe incl. mounting flange, for determining the flow velocity (0.1...20 m/s).

The flow sensors / flow monitors are suitable for monitoring or controlling airflows in ducts, at fans and dampers, for flow-dependent monitoring of humidifiers and electric heating registers according to DIN 57100, Sect. 420, or for use in connection with DDC systems.

TECHNICAL DATA

Power supply:	24 V AC / DC (± 10 %) (KHSSW-W24, KHSSF-W) 230 V AC (± 10 %), 50 Hz (KHSSW-W230)
Current consumption:	approx. 3 VA
Outputs:	<p>KHSSF-W 0–10 V / 4...20 mA (via Automatic Output Switching – the unit recognises the required output type and automatically switches to U or I output); 24 V changeover contact (max. 5 A, cos φ = 1)</p> <p>KHSSW-W24 24 V changeover contact (max. 5 A, cos φ = 1)</p> <p>KHSSW-W230 230 V AC changeover contact (max. 10 A, cos φ = 1)</p>
Data point:	flow velocity [m/s]
Sensor:	calorimetric, temperature compensated, sensor breakage protection
Measuring range:	0.1...20 m/s
Accuracy:	0.5 m/s + 3 % measured value
Long-term stability:	± 0.5 % of final value per year
Reproducibility:	± 1.0 % of final value
Switching point:	1...20 m/s, threshold can be adjusted via potentiometer
Switching hysteresis:	2.0 % of final value
Warm-up time:	< 2 min
Response time:	< 5 s
Start-up override:	60 s (changeover contact switched or 10 V / 20 mA at output, after applying the supply voltage)
LED operating status indicator:	<p>Yellow LED off: switching point not reached (contact 5-6 open) on: switching point reached (contact 5-6 closed) flashing: start-up override is active</p> <p>Green LED on: Unit is ready for operation flashing: error in sensor or sensor line</p>
Housing:	PC / ABS (UL94-V0) material, light grey colour, 36 mm (2TE) wide for 35 mm mounting rail, approx. 90 x 36 x 58 mm (H x W x D)
Probe/sensor:	Polyamide (PA6) material, white colour (blue sensor holder), with torsion protection, Ø 12 mm, EL = approx. 20–155 mm, v _{max} = 30 m/s (air)
Sensor cable:	PVC LiYY, 3-wire, KL = approx. 2.4 m
Electrical connection:	0.14–2.5 mm ² , via screw terminal
Process connection:	by means of mounting flange with seal (included in the scope of delivery)
Ambient temperature:	storage –20...+50 °C; operation 0...+60 °C
Medium temperature:	0...+70 °C
Permitted humidity:	< 98 % RH, non-precipitating air free of harmful substances
Protection class:	II (according to EN 60 730) with UB = 230 V (KHSSW-W230) III (according to EN 60 730) with UB = 24 V (KHSSW-W24, KHSSF-W)
Protection type:	IP 30 (according to EN 60 529) housing IP 20 (according to EN 60 529) sensor technology
Standards:	CE conformity according to EMC Directive 2014 / 30 / EU



S+S REGELTECHNIK

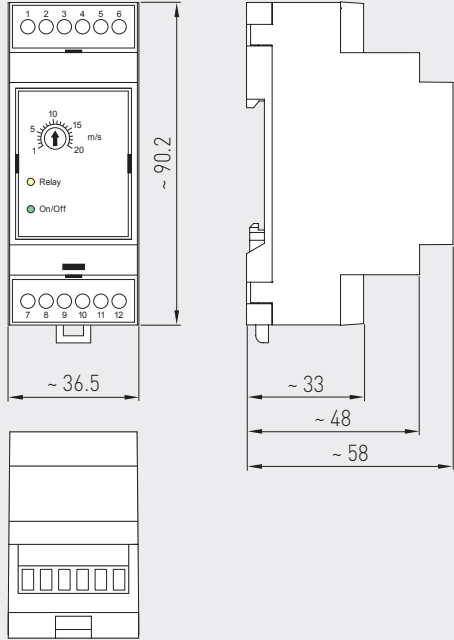
RHEASGARD® KHSSFxx
RHEASREG® KHSSWxx

Duct top-hat rail airflow sensor / airflow monitor,
electronic, external flow probe incl. mounting flange,
with active / switching output

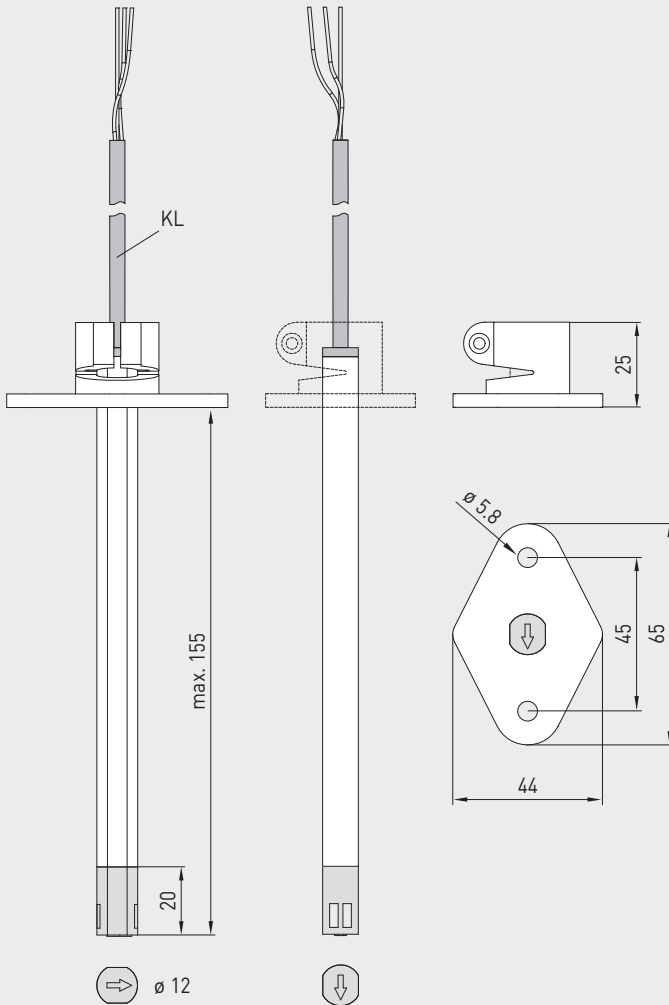


Dimensional drawing
[mm]

KHSSF xx
KHSSW xx



KHSSF xx
KHSSW xx
Housing



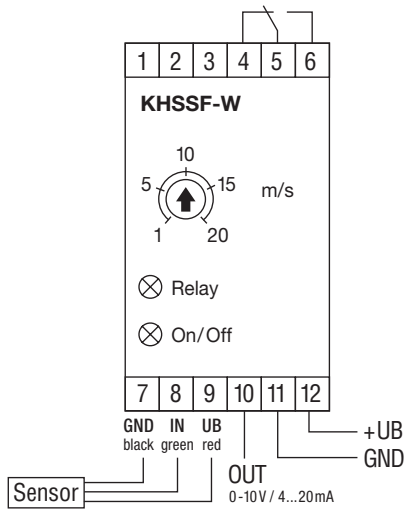
KHSSF xx
KHSSW xx
Probe



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Schematic diagram

KHSSF-W

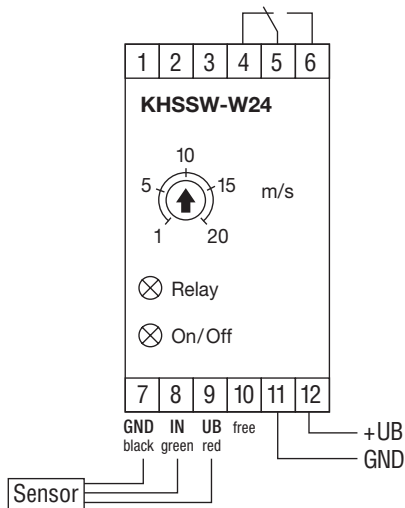


Automatic detection and switching
to standard signal 0...10V or 4...20mA

AOS-PATENTED
AUTOMATIC OUTPUT SWITCHING

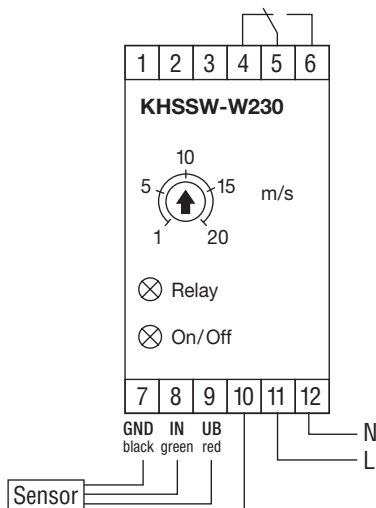
Schematic diagram

KHSSW-W24



Schematic diagram

KHSSW-W230

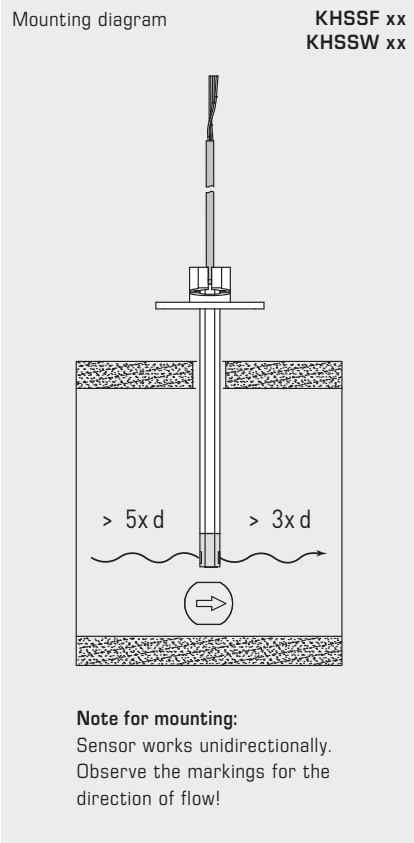




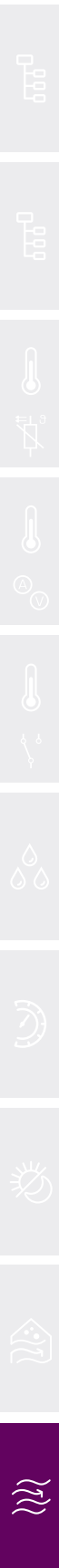
S+S REGELTECHNIK

RHEASGARD® KHSSFxx
RHEASREG® KHSSWxx

Duct top-hat rail airflow sensor / airflow monitor,
electronic, external flow probe incl. mounting flange,
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KHSSF xx
KHSSW xx
Probe



Type / WG01	Power supply	Output active	Output switching	Item no.	Price
RHEASGARD® KHSSF RHEASREG® KHSSW		Duct top-hat rail airflow sensor, with active and switching output Duct top-hat rail airflow monitor, with switching output			
KHSSF		AOS			
KHSSF-W	24 V AC / DC	0-10 V / 4...20 mA	1 changeover contact	1701-5118-0102-001	352,42 €
KHSSW					
KHSSW-W24	24 V AC / DC	-	1 changeover contact	1701-5113-0102-001	235,66 €
KHSSW-W230	230 V AC	-	1 changeover contact	1701-5133-0102-001	235,66 €
Note:	<p>Changeover contact with automatic reset (relay opens automatically when value falls below the threshold again)</p> <p>AOS (Automatic Output Switching) = patented analogue interface (patent no. DE 10 2015 015 941 B4), the unit automatically detects the required output type 0-10 V or 4...20 mA</p>				