RHEASGARD® KHSSF xx
RHEASREG® KHSSWxx

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

S+S REGELTECHNIK

Electronic duct top-hat rail airflow sensor **RHE**ASGARD® **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 **RHE**ASREG® **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:	**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)
	KHSSW-W24	24 V changeover contact (max. 5 A, cos φ = 1)
	KHSSW-W230	**230 V AC** changeover contact (max. 10 A, cos φ = 1)
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)	
Operating status indicator:	2 colour LEDs on the front of the housing (see table)	
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 mm², 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	

KHSSW	○ Relay	1. **LED** top (yellow)	**off** =	Switching point not reached (contact 5-6 open)
			illuminated =	Switching point reached (contact 5-6 closed)
			blinking =	Start-up override (s.b.) **active**
	○ On/Off	2. **LED** bottom (green)	**off** =	Device defective
			illuminated =	Device in operation
			blinking =	Fault with sensor or sensor cable
KHSSF	○ Relay	1. **LED** top (green)	**off** =	Switching point not reached (contact 5-6 open)
			illuminated =	Switching point reached (contact 5-6 closed)
	○ s.b.	2. **LED** bottom (yellow)	**off** =	Start-up override (s.b.) **inactive**
			illuminated =	Start-up override (s.b.) **active**

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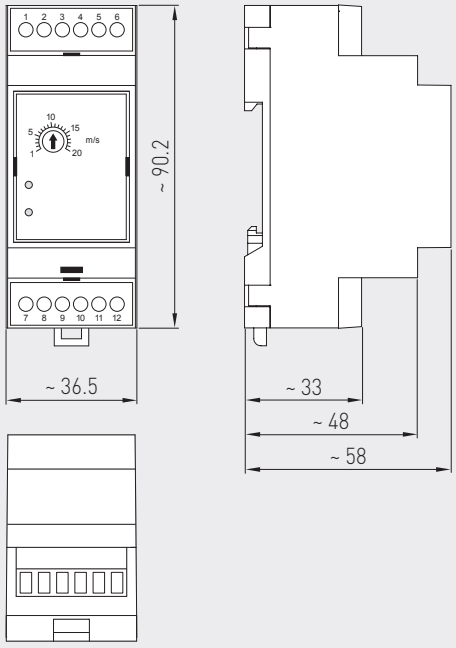
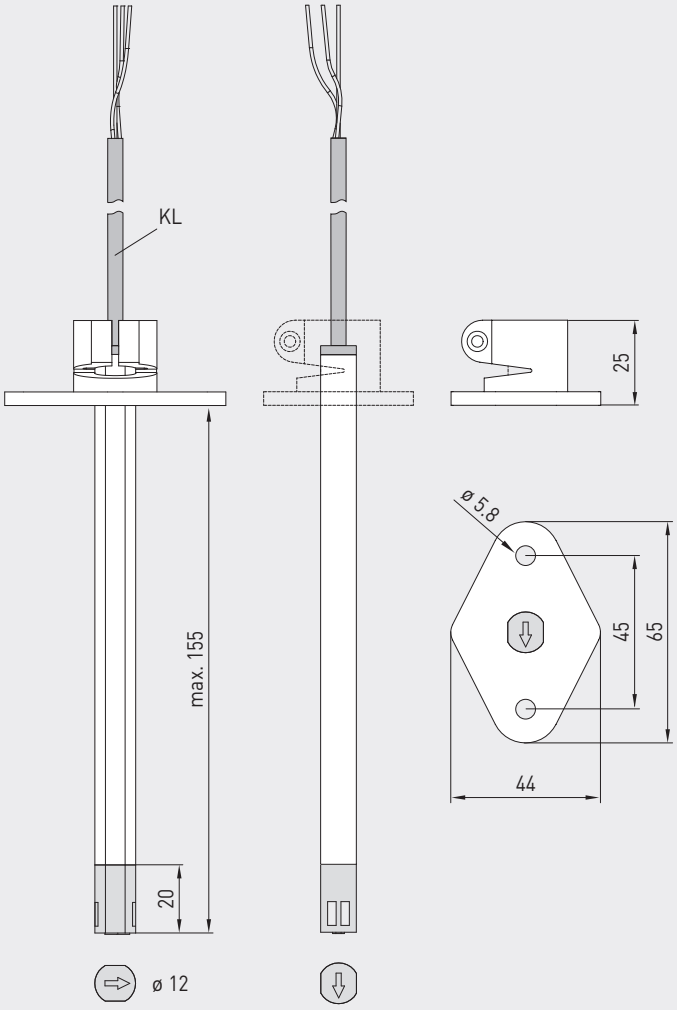
Dimensional drawing
[mm]

KHSSF xx
KHSSW xx





KHSSF xx
Housing

KHSSW xx
Housing

KHSSF xx
KHSSW xx
Probe

RHEASGARD® KHSSFxx
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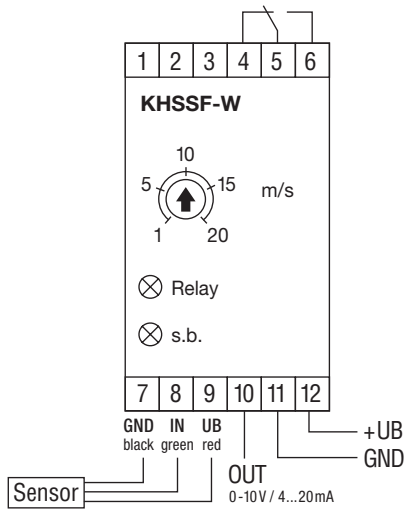
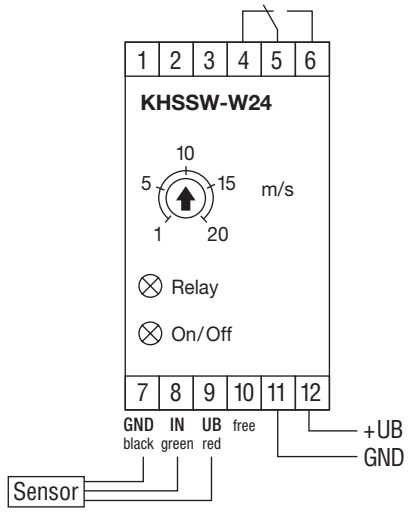
Schematic diagram **KHSSF-W**



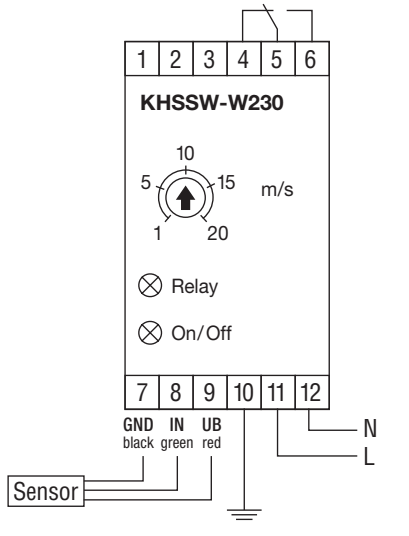
Automatic detection and switching to standard signal 0...10 V or 4...20 mA

AOS-PATENTED
AUTOMATIC OUTPUT SWITCHING

Schematic diagram **KHSSW-W24**



Schematic diagram **KHSSW-W230**



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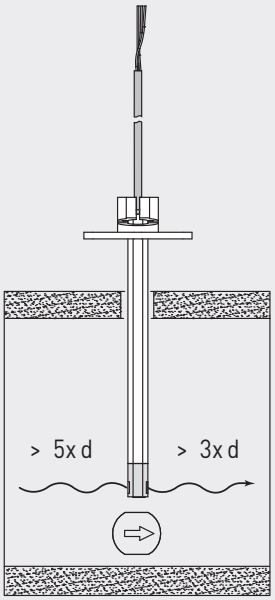
Mounting diagram **KHSSF xx KHSSW xx**



Note for mounting:
Sensor works unidirectionally. Observe the markings for the direction of flow!

KHSSF xx KHSSW xx
Probe

RHEASGARD® **KHSSF** **RHE**ASREG® **KHSSW**	Duct top-hat rail airflow sensor, with active and switching output Duct top-hat rail airflow monitor, with switching output				
Type / WG01	**Power supply**	**Output active**	**Output switching**	**Item no.**	**Price**
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:	**Changeover contact** with automatic reset (relay opens automatically when value falls below the threshold again) **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				