RHEASGARD® KLGF xx
RHEASREG® KLSWxx

**Duct air flow sensors / air flow monitors,
incl. mounting flange, electronic,
with active / switching output**

NEW

S+S REGELTECHNIK

Electronic duct air flow sensor **RHE**ASGARD® **KLGF** with active output, housing made of impact-resistant plastic with quick-locking screws, with cable gland, with/without display, to determine the flow velocity (0.1...20 m/s). The measuring transducer converts the measurement signal into a standard signal of 0 - 10 V.

Electronic duct air flow sensor/monitor **RHE**ASGARD® **KLGFT** (without display) and **KLGFVT** (with display) with active and switching output, housing made of impact-resistant plastic with quick-locking screws, with cable gland, to determine the flow velocity (0.1...20 m/s) and temperature (0...+50 °C). For device type **KLGFVT**, the calculated volume flow parameter can be retrieved as an alternative to the flow (configurable on the display). 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 airflow monitor **RHE**ASREG® **KLSW** with switching output, housing made of impact-resistant plastic with quick-locking screws, with cable gland, with/without display, to determine the flow velocity (0.1...20 m/s).

The flow sensors 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.

Protective tube (NL) **120 mm**



Protective tube (NL) **220 mm**



TECHNICAL DATA

Power supply:	24 V AC / DC (± 10 %) (**KLSW-W24, KLGF xx**) 230 V AC, 50 Hz (**KLSW-W230**)
Current consumption:	approx. 3 VA (**KLGF, KLSW-W24, KLSW-W230**) approx. 4 VA (**KLGFT, KLGFVT**)
Data points:	flow velocity [m/s], volume flow [m³/h], temperature [°C]
Outputs:	**KLGF** **1x** 0-10 V (U variant) **KLGF(V)T** **2x** 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); changeover contact 24 V (max. 5 A, cos φ = 1.0) **KLSW-W24** changeover contact 24 V (max. 5 A, cos φ = 1.0) **KLSW-W230** changeover contact **230 V AC** (max. 5 A, cos φ = 1.0)
AIR FLOW	
Sensor:	calorimetric, temperature compensated, sensor breakage protection, with manual zero-point calibration (via button)
Measuring range:	0.1...20 m/s
Accuracy:	0.5 m/s + 3 % measured value
Long-term stability:	± 0.5 % final value per year
Reproducibility:	± 1.0 % 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:	0 / 60 s (**KLGF/KLSW** without display), can be activated via DIP switch 0...120 s (**KLGF/KLSW** with display, **KLGFT/KLGFVT**), can be adjusted via potentiometer
TEMPERATURE	**KLGF(V)T**
Sensor:	NTC 10k
Measuring range:	0...+50 °C
Accuracy:	typical ± 0.5 K at +25 °C
Protective tube:	**PLEUROFORM**™, material polyamide (PA6), with torsion protection, Ø 20 mm, NL = 120 mm / 220 mm, v_{max} = 30 m/s (air), optional on request made of **stainless steel V2A** (1.4301), Ø 16 mm
Housing:	plastic, UV-resistant, polyamide material, 30 % glass-globe reinforced, with quick-locking screws (slotted / Phillips head combination), colour traffic white (similar to RAL 9016), housing cover for display is transparent!
Housing dimensions:	126 x 90 x 50 mm (Typ 2)
Cable connection:	**cable gland** , plastic (M 16 x 1.5; with strain relief, exchangeable, max. inner diameter 10.4 mm)
Electrical connection:	0.2 - 1.5 mm², via push-in terminal
Process connection:	by means of plastic mounting flange (included in the scope of delivery)
Ambient temperature:	storage –20...+50 °C; operation 0...+50 °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 (**KLSW-W230**) III (according to EN 60 730) with UB = 24 V (**KLSW-W24, KLGF xx**)
Protection type:	**IP 65** (according to EN 60 529) housing; IP 20 sensor technology
Standards:	CE conformity according to EMC Directive 2014 / 30 / EU, according to EN 61326-1, according to EN 61326-2-3
Optional:	**display with illumination,** three-line, cutout approx. 70 x 40 mm (W x H), to display the flow velocity, volume flow and temperature

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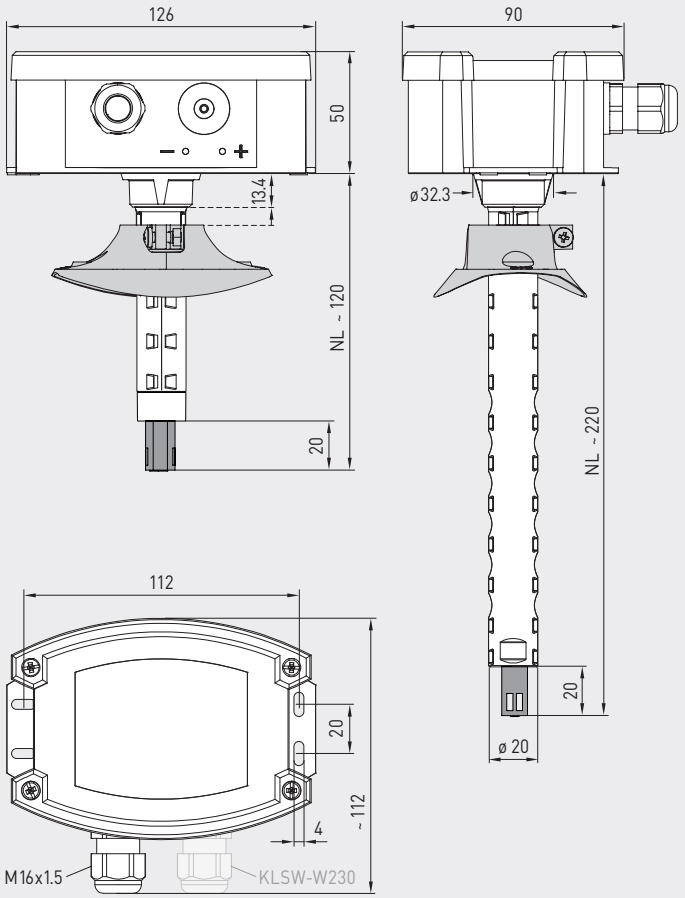
NEW

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Duct air flow sensors / air flow monitors, incl. mounting flange, electronic, with active / switching output

Dimensional drawing [mm]

KLGF xx
KLSW xx



KLGF xx
KLSW xx
without display



KLSW-W230
without display



KLSW / KLGF
with display

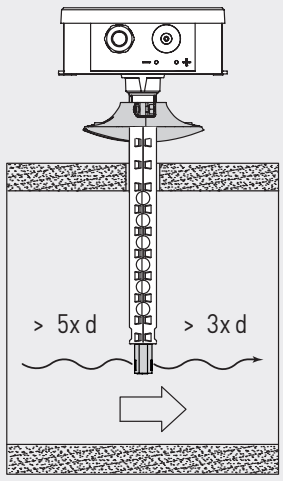


KLGFVT
with display



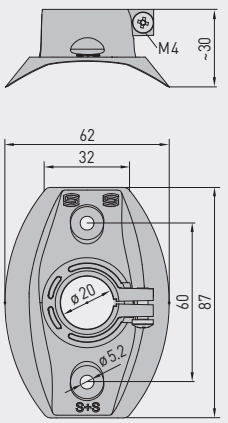
Installation diagram

KLGF xx
KLSW xx



Dimensional drawing [mm]

MFT-20-K





MFT-20-K
Mounting flange made of plastic

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

AOS-PATENTED
AUTOMATIC OUTPUT SWITCHING

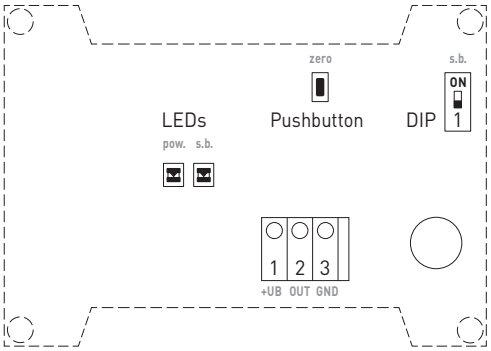
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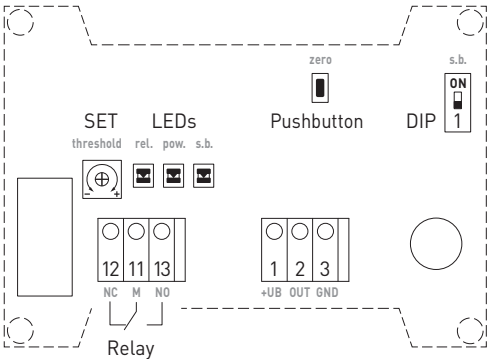
Schematic diagram **KLGF-U**



Connecting diagram **KLGF-U**
without display

1	+UB 24 V AC/DC
2	Output 0 - 10 V Flow velocity
3	–UB GND

Schematic diagram **KLSW-W24**

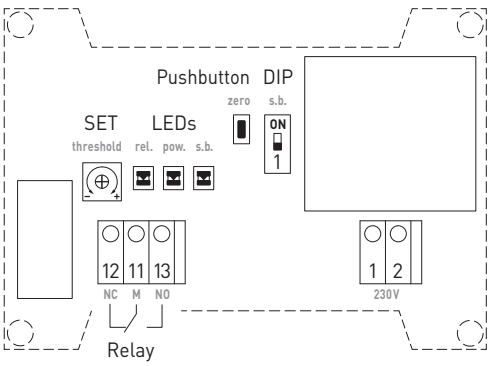


Connecting diagram **KLSW-W24**
without display

1	+UB 24 V AC/DC
2	free
3	–UB GND

12	NC Normally Closed
11	M Common
13	NO Normally Open

Schematic diagram **KLSW-W230**



Connecting diagram **KLSW-W230**
without display

1	L
2	N

230 V AC

12	NC Normally Closed
11	M Common
13	NO Normally Open

KLSW-W230
with changeover contact,
UB = 230 V



KLSW-W24
with changeover contact,
UB = 24 V



KLGF-U
with output 0 - 10 V,
UB = 24 V



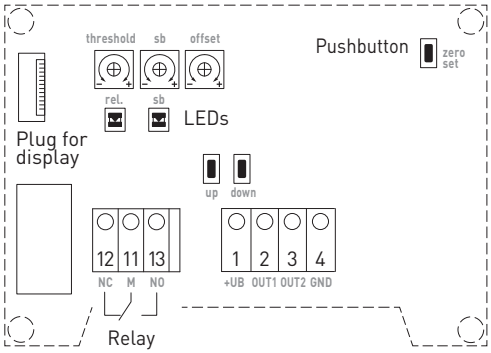
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Duct air flow sensors / air flow monitors, incl. mounting flange, electronic, with active / switching output

Schematic diagram — **KLGF/KLSW-xx LCD KLGFT-W**



Connecting diagram — **KLGF-U LCD**

1 +UB 24 V AC/DC
2 Output 0-10 V Flow velocity
3 free
4 –UB GND

Connecting diagram — **KLSW-W24 LCD**

1 +UB 24 V AC/DC
2 free
3 free
4 –UB GND

12 NC Normally Closed
11 M Common
13 NO Normally Open

Connecting diagram — **KLGFVT-W LCD KLGFT-W**

1 +UB 24 V AC/DC
2 Output 0-10 V / 4...20 mA Flow velocity *
3 Output 0-10 V / 4...20 mA Temperature
4 –UB GND

12 NC Normally Closed
11 M Common
13 NO Normally Open

* **KLGFVT-W LCD:**
Switching from flow measurand to the alternative **volume flow** parameter is menu-controlled on the display.

RHEASGARD® KLGF Duct air flow sensor, electronic, with active output
RHEASGARD® KLGF(V)T Duct air flow sensor, electronic, with active and switching output
RHEASREG® KLSW Duct air flow monitor, electronic, with switching output

Type / WG01	Power supply	Output active	Output switching	Display (NL)		Item no.	Price
KLGF		**U variant**					
KLGF-U 120mm	24 V AC / DC	**1x** 0-10 V	–	**120 mm**		1701-4111-0102-000	**258,79 €**
KLGF-U	24 V AC / DC	**1x** 0-10 V	–	220 mm		1701-4111-0101-000	**243,34 €**
KLGF-U **LCD**	24 V AC / DC	**1x** 0-10 V	–	220 mm	■	1701-4111-1101-000	**306,06 €**
Optional:	Cable connection with **M12 connector** according to DIN EN 61076-2-101					on request	
KLGF(V)T		**AOS**					
KLGFT-W	24 V AC / DC	**2x** 0-10 V / 4...20 mA	1 changeover contact	220 mm		1701-4118-0201-001	**308,23 €**
KLGFVT-W **LCD**	24 V AC / DC	**2x** 0-10 V / 4...20 mA	1 changeover contact	220 mm	■	1701-4118-1401-001	**379,61 €**
KLSW-W24							
KLSW-W24 120mm	24 V AC / DC	–	1 changeover contact	**120 mm**		1701-4113-0102-001	**228,51 €**
KLSW-W24	24 V AC / DC	–	1 changeover contact	220 mm		1701-4113-0101-001	**213,06 €**
KLSW-W24 **LCD**	24 V AC / DC	–	1 changeover contact	220 mm	■	1701-4113-1101-001	**264,97 €**
KLSW-W230							
KLSW-W**230** 120mm	**230 V** AC	–	1 changeover contact	**120 mm**		1701-4133-0102-001	**230,13 €**
KLSW-W**230**	**230 V** AC	–	1 changeover contact	220 mm		1701-4133-0101-001	**214,68 €**

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

KLGFT, KLGFVT

T = temperature (0...+50 °C) – additional measurand
V = volume flow (0...200,000 m³/h) – alternative parameter, can be configured via display!