

Condensation control switches
including strap / with detached sensor head,
with switching output

Patented quality product
(pro-dynamic cross convection patent no. DE 10 2012 015 726.6)

The condensation control switch **HYGRASREG® KW** with terminal box enclosure made of impact-resistant plastic and with an enclosure cover with quick-locking screws or the cost-effective **HYGRASREG® KW-SD** with snap-on lid is installed on cooling ceilings, on cooling /cold-water piping or on cooled surfaces and is designed to prevent the formation of condensation.

It reliably detects formation of dew by means of its humidity and temperature sensor (no conductivity measurement) and, thanks to its measuring method, **pro-dynamic cross convection**, yields an exact measurement result (with LED status indicator).

Dew point temperature is that temperature at which air reaches the state of saturation and water vapour starts to condensate. The KW condensation control switch can be operated as a monitor on cooling ceilings or pipes so that the switching output is activated when dew builds up on the cooling ceilings of the property to be monitored and e.g. a heating system is started, or other actuators are initiated.

TECHNICAL DATA

Power supply:	24 V AC (± 20 %) 15...36 V DC
Switchpoint:	approx. 93% r.H. (permanently set)
Power consumption:	< 1.1 VA / 24 V DC < 2.2 VA / 24 V AC
Output signal:	potential-free changeover contact (24 V), 1 A ohmic load
Process connection:	endless metal strap with metal tightener, 300 mm, for pipes up to 3" diameter (included in the scope of delivery)
Electrical connection:	0.14 - 1.5 mm ² , via terminal screws
Enclosure:	plastic, UV-stabilised, material polyamide, 30% glass-globe reinforced, colour traffic white (similar to RAL 9016), KW-xx-SD with snap-on lid, KW-xx with quick-locking screws (slotted / Phillips head combination), enclosure cover is transparent!
Enclosure dimensions:	KW-xx-SD 72 x 64 x 37.8 mm (Tyr 01) KW-xx 72 x 64 x 43.3 mm (Tyr 1)
Cable gland:	M 16 x 1.5; including strain relief, exchangeable, max. inner diameter 10.4 mm
Mounting:	The mounting position should be selected so that no condensate can enter the sensor system in the event that condensation forms! KW / KW-SD with strap for direct mounting on pipes or for direct mounting on flat surfaces (e.g. walls, ceilings) KW-external / KW-SD-external with detached sensor head (cable length KL = 1.5 m) for mounting on pipes
Protection class:	III (according to EN 60 730)
Protection type:	KW-xx-SD IP 43 (according to EN 60 529) KW-xx IP 65 (according to EN 60 529)
Standards:	CE-conformity, electromagnetic compatibility according to EN 61 326, EMC Directive 2014 / 30 / EU

FUNCTION

The relay output is triggered (contact 13-11 closed) if the **switchpoint (93% r.H.)** is not reached and opens (contact 12-11 closed) in the event of a fault (power failure, condensation).



LED short pulses =
relay active → switchpoint not reached
ACTUAL humidity < 93% r.H. (no condensation)



LED long pulses =
relay inactive → switchpoint exceeded
ACTUAL humidity > 93% r.H. (condensation)

KW-SD
with strap and
snap-on lid
(IP 43)



KW-SD-external
with detached sensor head and
snap-on lid
(IP 43)



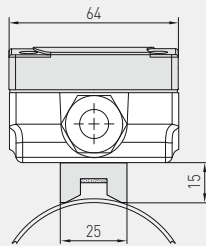
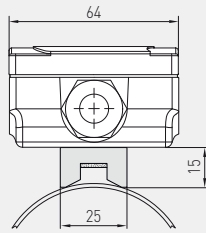
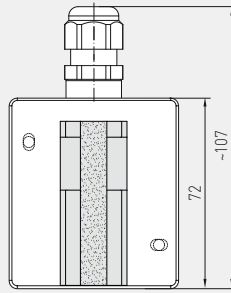


KW
with strap and
quick-locking screws
(IP65)

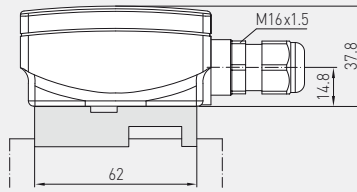


Dimensional drawing

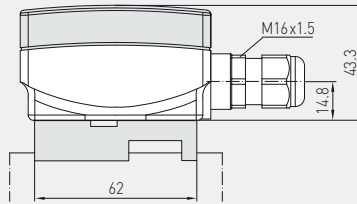
KW-xx



with snap-on lid



with quick-locking screws

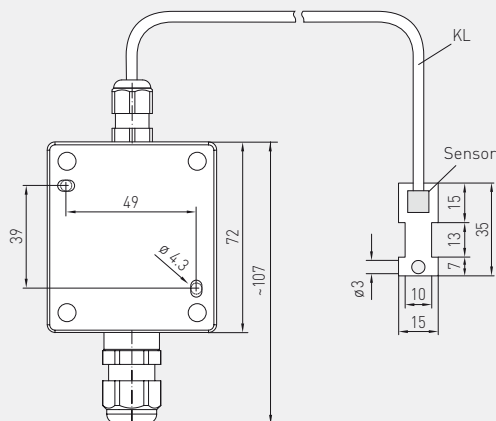
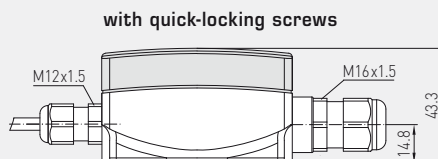
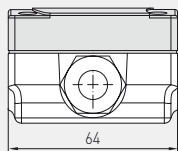
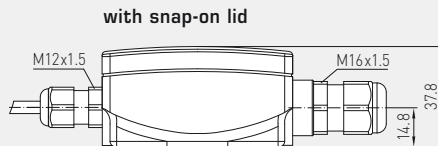
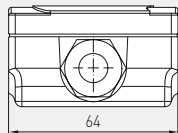


KW-external
with detached sensor head and
quick-locking screws
(IP65)

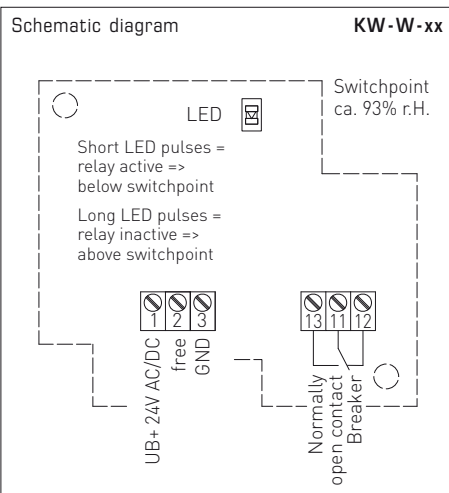


Dimensional drawing

KW-xx-external



Condensation control switches
including strap / with detached sensor head,
with switching output



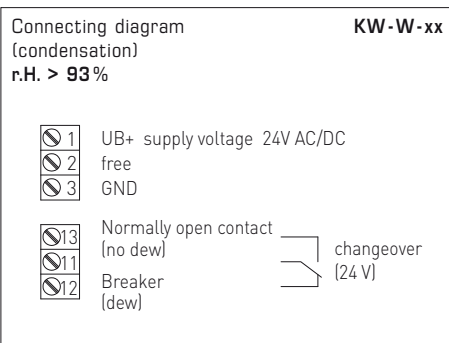
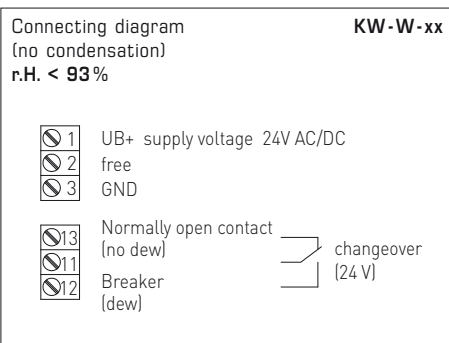
KW
pro-dynamic
cross convection



KW-SD
pro-dynamic
cross convection



PATENTED



HYGRASREG® KW-SD – Condensation control switches including strap,, *Standard*

HYGRASREG® KW-SD-external – Condensation control switches with detached sensor head, *Standard*

Type / WG01	Switchpoint Humidity	Output Humidity	Mounting	Item No.	Price
KW-SD			Sensor internal	IP 43	
KW-W-SD	ca. 93% r. H.	Changeover contact	for direct mounting on pipes, for direct mounting on flat surfaces	1202-1075-0001-020	89,07 €
KW-SD-external			Sensor external	IP 43	
KW-W-SD EXTERN	ca. 93% r. H.	Changeover contact	for mounting on pipes	1202-1075-0001-040	97,52 €



KW
with quick-locking screws
(IP 65)



KW-SD
with snap-on lid
(IP 43)



HYGRASREG® KW – Condensation control switches including strap, *Premium*
HYGRASREG® KW-external – Condensation control switches with detached sensor head, *Premium*

Type /WG01	Switchpoint Humidity	Output Humidity	Mounting	Item No.	Price
KW			Sensor internal	IP 65	
KW-W	ca. 93 % r. H.	Changeover contact	for direct mounting on pipes, for direct mounting on flat surfaces	1202-1025-0001-020	95,24 €
KW-external			Sensor external	IP 65	
KW-W EXTERN	ca. 93 % r. H.	Changeover contact	for mounting on pipes	1202-1025-0001-040	115,68 €