

**FUGTIGHED**

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**DUGPUNKTS- OG  
LÆKAGEFØLERE**

**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 housing made from impact-resistant plastic 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 condense. 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 ( $\pm 20\%$ ) and 15...36 V DC
Power consumption:	< 1.1 VA / 24 V DC; < 2.2 VA / 24 V AC
Switchpoint:	approx. 93 % r.H. (permanently set)
Output:	potential-free changeover contact (24 V), 1 A ohmic load
Sensor protection:	membrane filter
Medium:	clean air and non-aggressive, non-combustible gases
Housing:	plastic, UV-resistant, material polyamide, 30 % glass-globe reinforced, colour traffic white (similar to RAL 9016), housing cover is transparent! <b>KW-xx</b> with quick-locking screws (slotted / Phillips head combination), <b>KW-xx-SD</b> with snap-on lid,
Housing dimensions:	72 x 64 x 43.3 mm (Tyr 1 / Tyr 01)
Cable connection:	<b>cable gland</b> , plastic (M 16 x 1.5; with strain relief, exchangeable, inner diameter 10.4 mm) <b>or</b> <b>M12 connector</b> according to DIN EN 61076-2-101 (optional on request)
Electrical connection:	0.14 - 1.5 mm <sup>2</sup> , via terminal screws
Process connection:	endless strap with metal tightener, 300 mm, for pipes up to 3" diameter (included in the scope of delivery)
Mounting:	The mounting position should be selected so that no condensate can enter the sensor system in the event that condensation forms! <b>KW / KW-SD</b> with strap for direct mounting on pipes or for direct mounting on flat surfaces (e.g. walls, ceilings) <b>KW-external / KW-SD-external</b> with detached sensor head (cable length KL = 1.5 m) for mounting on pipes
Protection class:	III (according to EN 60730)
Protection type:	<b>KW-xx</b> <b>IP 65</b> (according to EN 60529) Housing tested, TÜV SÜD, Report No. 713139052 (Tyr 1) <b>KW-SD-xx</b> <b>IP 54</b> (according to EN 60529) Housing tested, TÜV SÜD, Report No. 713160960A (Tyr 01)
Standards:	CE-conformity, electromagnetic compatibility according to EN 61326, 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 snap-on lid  
(IP 54)



**KW-SD-extern**  
with snap-on lid  
(IP 54)





S+S REGELTECHNIK

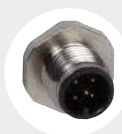
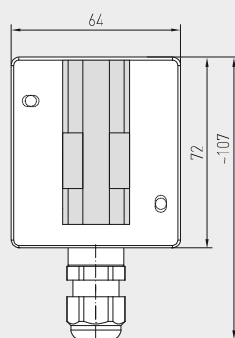
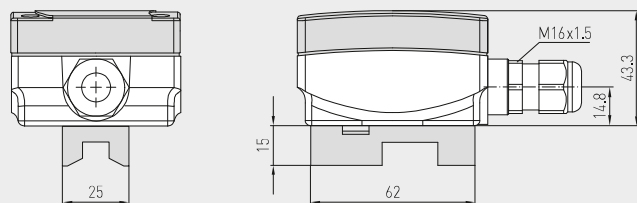
HYGRASREG® KW  
HYGRASREG® KW-SD

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



Dimensional drawing

KW  
KW-SD



M12 connector  
(optional on request)

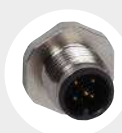
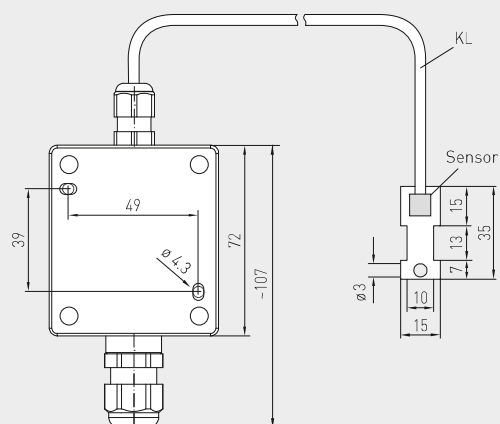
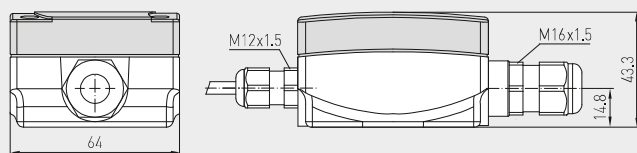


KW  
with quick-locking screws  
(IP 65)



Dimensional drawing

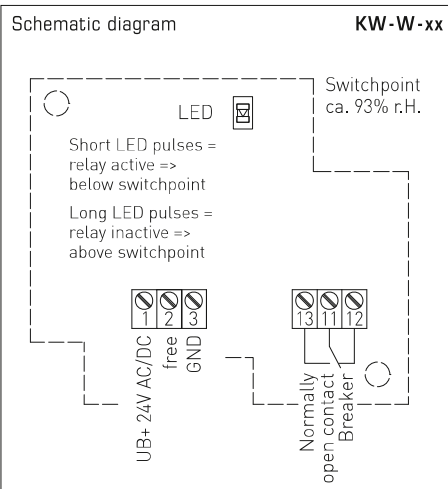
KW-external  
KW-SD-external



M12 connector  
(optional on request)

KW-extern  
with quick-locking screws  
(IP 65)

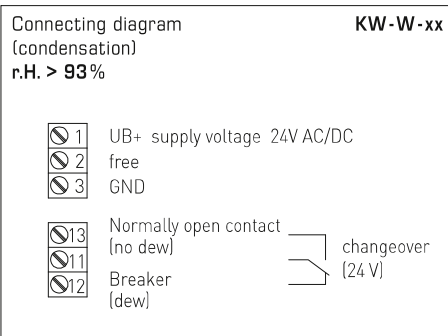
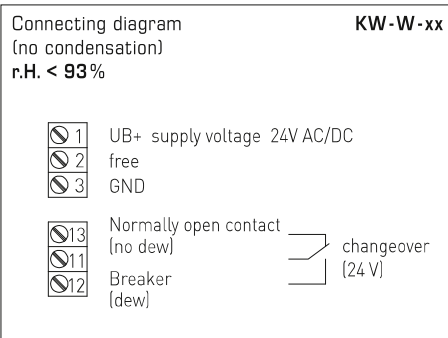




**KW**  
pro-dynamic  
cross convection



**PATENTED**



## HYGRASREG® KW - SD

### HYGRASREG® KW - SD - external

Condensation control switches including strap,, *Standard*

Condensation control switches with detached sensor head, *Standard*

Type / WG01B	Switchpoint Humidity	Output Humidity	Mounting	Item No.	Price
<b>KW - SD</b>			<b>Sensor internal</b>	<b>IP 54</b>	
KW-W-SD	ca. 93 % r. H.	Changeover contact	for direct mounting on pipes, for direct mounting on flat surfaces	1202-1075-0001-020	<b>100,58 €</b>
<b>KW - SD - external</b>			<b>Sensor external</b>	<b>IP 54</b>	
KW-W-SD extern	ca. 93 % r. H.	Changeover contact	for mounting on pipes	1202-1075-0001-040	<b>110,12 €</b>
Optional:		Cable connection with <b>M12 connector</b> according to DIN EN 61076-2-101			on request



S+S REGELTECHNIK

HYGRASREG® KW  
HYGRASREG® KW-SD

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



**KW**  
**KW-external**  
with quick-locking screws  
(IP 65)



**KW-SD**  
**KW-SD-external**  
with snap-on lid  
(IP 54)

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
<b>KW</b>			<b>Sensor internal</b>	<b>IP 65</b>	
KW-W	ca. 93 % r. H.	Changeover contact	for direct mounting on pipes, for direct mounting on flat surfaces	1202-1025-0001-020	<b>107,54 €</b>
<b>KW-external</b>			<b>Sensor external</b>	<b>IP 65</b>	
KW-W-extern	ca. 93 % r. H.	Changeover contact	for mounting on pipes	1202-1025-0001-040	<b>130,62 €</b>
Optional:		Cable connection with <b>M12 connector</b> according to DIN EN 61076-2-101			on request



## Dew point control switches

including strap / with detached sensor head,  
with active / switching outputs

## Patented quality product

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

The dew point control switch **HYGRASREG® TW** is installed on cooling / cold-water piping or on cooled surfaces. It reliably detects formation of dew by means of its humidity and temperature sensor (no conductivity measurement) and, thanks to its patented measuring method, **pro-dynamic cross convection**, yields an exact measurement result (with LED status display), **with / without display**.

Dew point temperature is that temperature at which air reaches the state of saturation and water vapour starts to condensate. Facilitated by the continuous measuring range from 0...100% r.H. of the **TW-U** and the adjustable switchpoint for the **TW-W** of 75...100% r.H., it is possible to operate cooling ceilings, for example, so that the switching output of the dew point control switch, the DDC, is activated and then triggers a heater or other control elements, thereby preventing the formation of dew on pipes or cooling ceilings or on the property to be monitored.

## TECHNICAL DATA

Power supply:	24 V AC ( $\pm 20\%$ ) and 15...36 V DC
Power consumption:	< 1.1 VA / 24 V DC; < 2.2 VA / 24 V AC
Measuring Range:	formation of dew is detected at 0...100% r.H. on the <b>TW-U</b> , continuous 75...100% r.H. on the <b>TW-W</b> , switching (switchpoint adjustable by potentiometer, factory setting 75% r.H.)
Output:	0-10 V or potential-free changeover contact (24 V), 1 A ohmic load
Sensors:	<b>digital humidity sensor with integrated temperature sensor</b> , small hysteresis, high long-term stability
Sensor protection:	membrane filter
Medium:	clean air and non-aggressive, non-combustible gases
Housing:	plastic, UV-resistant, material polyamide, 30% glass-globe reinforced, with quick-locking screws (slotted / Phillips head combination), colour traffic white (similar to RAL 9016), housing cover is transparent!
Housing dimensions:	72 x 64 x 43.3 mm (Tyr 1)
Cable connection:	<b>cable gland</b> , plastic (M 16 x 1.5; with strain relief, exchangeable, inner diameter 10.4 mm) or <b>M12 connector</b> according to DIN EN 61076-2-101 (optional on request)
Electrical connection:	0.14 - 1.5 mm <sup>2</sup> , via terminal screws
Process connection:	endless strap with metal tightener, 300 mm, for pipes up to 3" diameter (included in the scope of delivery)
Mounting:	<b>TW</b> with strap for direct mounting on pipes or for direct mounting on flat surfaces (e.g. walls, ceilings)  <b>TW-external</b> with detached sensor head (cable length KL = 1.5 m) for mounting on pipes
Protection class:	III (according to EN 60730)
Protection type:	<b>IP65</b> (according to EN 60529) Housing tested, TÜV SÜD, Report No. 713139052 (Tyr 1)
Standards:	CE conformity, electromagnetic compatibility according to EN 61326, EMC directive 2014 / 30 / EU
Optional:	two-line <b>display with illumination</b> , cutout approx. 36x15 mm (W x H), for displaying actual humidity and the switching status of the relay

## FUNCTION

The relay output is triggered (contact 13-11 closed) if the **pre-set switchpoint** (factory setting 75% r.H.) is not reached and opens (contact 12-11 closed) in the event of an error (power failure, condensation).



**LED short pulses =**  
relay active → switchpoint not reached  
ACTUAL humidity < pre-set switchpoint (no condensation)



**LED long pulses =**  
relay inactive → switchpoint exceeded  
ACTUAL humidity > pre-set switchpoint (condensation)

TW

with quick-locking screws



TW-extern

with quick-locking screws

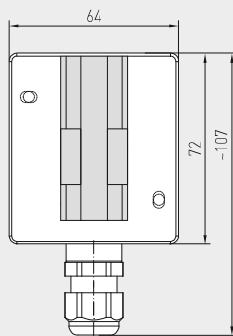
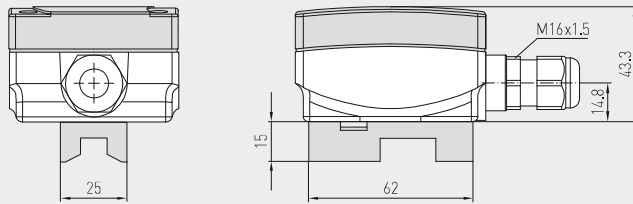


Dew point control switches  
including strap/with detached sensor head,  
with active/switching outputs



Dimensional drawing

TW



M12 connector  
(optional on request)



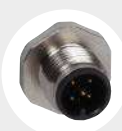
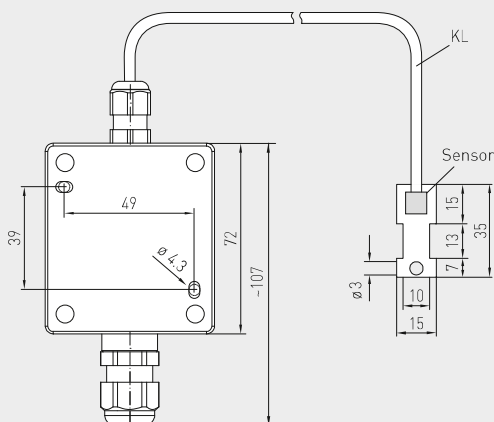
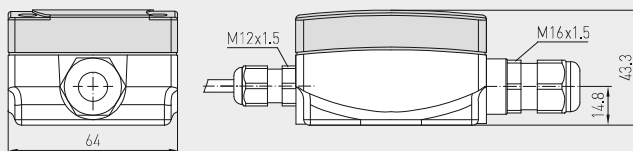
TW

with display  
and quick-locking screws



Dimensional drawing

TW-external



M12 connector  
(optional on request)

TW-extern

with display  
and quick-locking screws



Dew point control switches  
including strap / with detached sensor head,  
with active / switching outputs

TW  
pro-dynamic  
cross convection



**PATENTED**



Display  
standard TW-xx  
Display

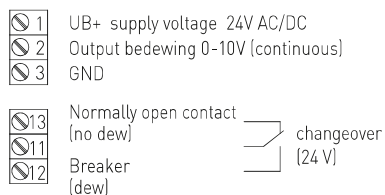


By default, the first line of the display shows the **relative humidity**.

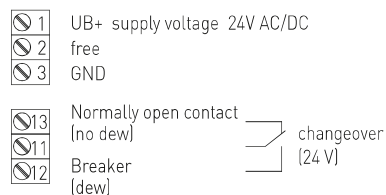
The second line shows the information about the **switching status of the relay** (as a circuit) on the left, and the respective **switching value** in % r.H. on the right (switchpoint adjustable by potentiometer, factory setting 75% r.H.).

- **Circuit, empty** = relay in idle state
- **Circuit, full** = relay energised

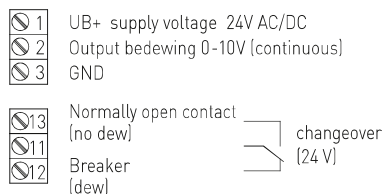
Connecting diagram  
(no condensation)  
r.H. < switchpoint TW-UW



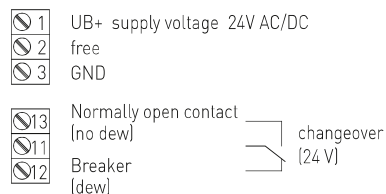
Connecting diagram  
(no condensation)  
r.H. < switchpoint TW-W



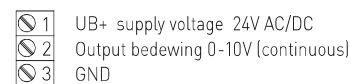
Connecting diagram  
(condensation)  
r.H. > switchpoint TW-UW



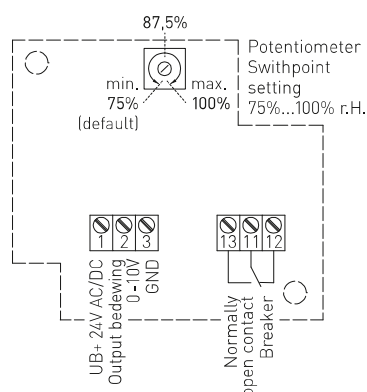
Connecting diagram  
(condensation)  
r.H. > switchpoint TW-W



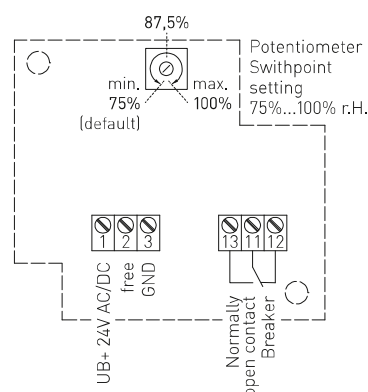
Connecting diagram TW-U



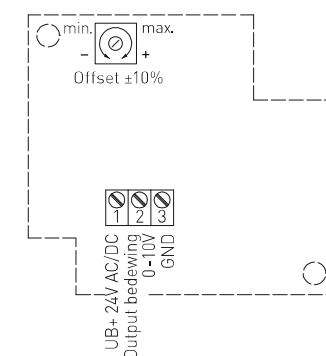
Schematic diagram TW-UW



Schematic diagram TW-W



Schematic diagram TW-U







**HYGRASREG® TW**

Dew point control switches including strap ( $\pm 3\%$ ), *Deluxe*

**HYGRASREG® TW-external**

Dew point control switches with detached sensor head ( $\pm 3\%$ ), *Deluxe*

Type/WG01	Measuring Range Humidity	Output Humidity	Mounting	Display	Item No.	Price
<b>TW</b>			<b>Sensor internal</b>	<b>IP 65</b>		
TW-W	75...100 % r. H.	Changeover contact	for mounting directly on pipes		1202-1015-0001-000	<b>120,94 €</b>
TW-W LCD	75...100 % r. H.	Changeover contact	for mounting directly on pipes	■	1202-1015-1201-020	<b>168,39 €</b>
TW-U	0...100 % r. H.	0-10 V	for mounting directly on pipes		1201-1011-1001-020	<b>125,54 €</b>
TW-U/W	0...100 % r. H.	0-10 V + Changeover contact	for mounting directly on pipes		1202-1012-1001-020	<b>143,96 €</b>
TW-U/W LCD	0...100 % r. H.	0-10 V + Changeover contact	for mounting directly on pipes	■	1202-1012-1201-020	<b>191,43 €</b>
<b>TW-external</b>			<b>Sensor external</b>	<b>IP 65</b>		
TW-W-extern	75...100 % r. H.	Changeover contact	for mounting on pipes		1202-1015-0021-030	<b>155,48 €</b>
TW-W-extern LCD	75...100 % r. H.	Changeover contact	for mounting on pipes	■	1202-1015-0221-030	<b>202,92 €</b>
Optional:		Cable connection with <b>M12 connector</b> according to DIN EN 61076-2-101				on request





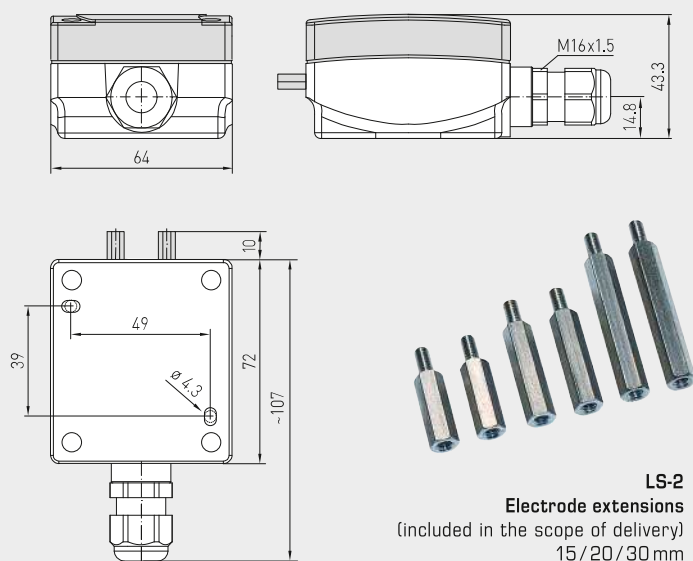
S+S REGELTECHNIK

HYGRASREG® LS

Leakage sensor / water ingress detector  
with switching output

Dimensional drawing

LS-2

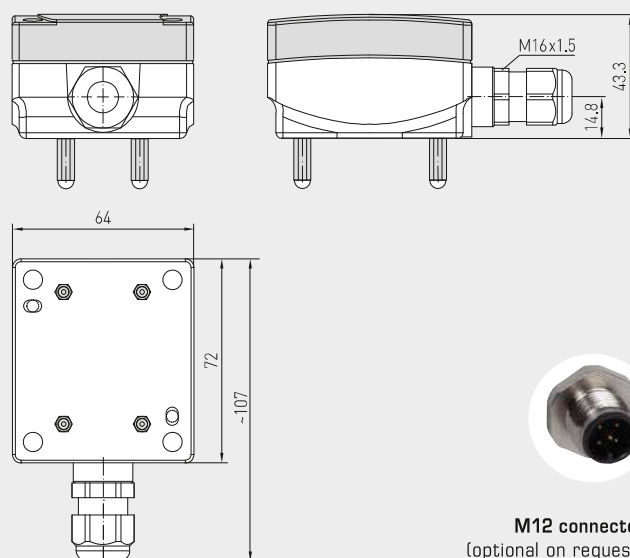


LS-2



Dimensional drawing

LS-4



LS-4



## HYGRASREG® LS Leakage sensor / water ingress detector

Type / WG01	Detection of leakage of conductive liquids	Output Humidity (relative)	Item No.	Price
<b>LS</b>				
LS-2	Conductance > switching threshold	Changeover contact	1202-1042-0000-000	<b>99,25 €</b>
LS-4	Conductance > switching threshold	Changeover contact	1202-1042-0000-100	<b>112,35 €</b>
Optional:	Cable connection with <b>M12 connector</b> according to DIN EN 61076-2-101		on request	

## ACCESSORIES

LS-Kabelsonde	<b>Cable sensor</b> , L = 1 m, for device type <b>LS-2</b>	1202-1042-0000-001	<b>24,26 €</b>
For further information, see last chapter Accessories!			



**HVAC & BYGNINGS-  
AUTOMATIK**

## **VORES PRODUKTSORTIMENT INKLUDERER:**



**FLWSWITCHE**



**PÅSPÆNDINGS- & PENDULFØLERE**



**FROSTBESKYTTELSE**



**UDEFLØLERE**



**FUGTIGHED**



**LUFTKVALITETS- & FLOWFØLERE**

## **VI FØRER PRODUKTER INDENFOR KATEGORIERNE:**



**AUTOMATIK**



**ELVARME**



**KØLEPROFILER**

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