Water leakage detector

KSWL

Description

The KSWL probe detects and reports the presence of water leaks or high condensation levels via dedicated sensor cables.

Technical specifications

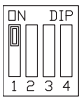
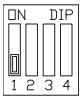
Power supply	24 V AC (±5%), 50-60 Hz, 15...35 V DC
Consumption	< 2 W
Relay	SPTD dry contact, potential-free
Contact rating	max 1 A a 230 V AC
Buzzer	> 90 db
Sensitivity	adjusted by DIP Switch as HIGH or LOW
Response time	5-10 sec, depending on moisture level
Electrical connection	Screw terminal, max. 1,5 mm^2
Cable gland	M16
Weight	125 g
IP rating	IP54
Standards	CE conformity, RoHS, EN 61326-1

Order matrix

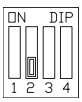
Model	Input		Option	
KSWL	**10**	1x cable	**M**	Modbus
	31	3x cable + external contact	**R**	Relay
			B	Buzzer
			P	Probe
KSWL.DC		detector cable		

DIP Switch

SW1 - Sensitivity

	ON	HIGH, responds to lower level of moisture
	OFF	LOW, responds to higher level of moisture

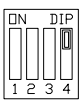
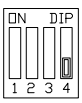
SW2 - Alarm mode

	ON	PERMANENT Alarm, until a manual reset
	OFF	TEMPORARY Alarm, resets automatically whenever alarm is off

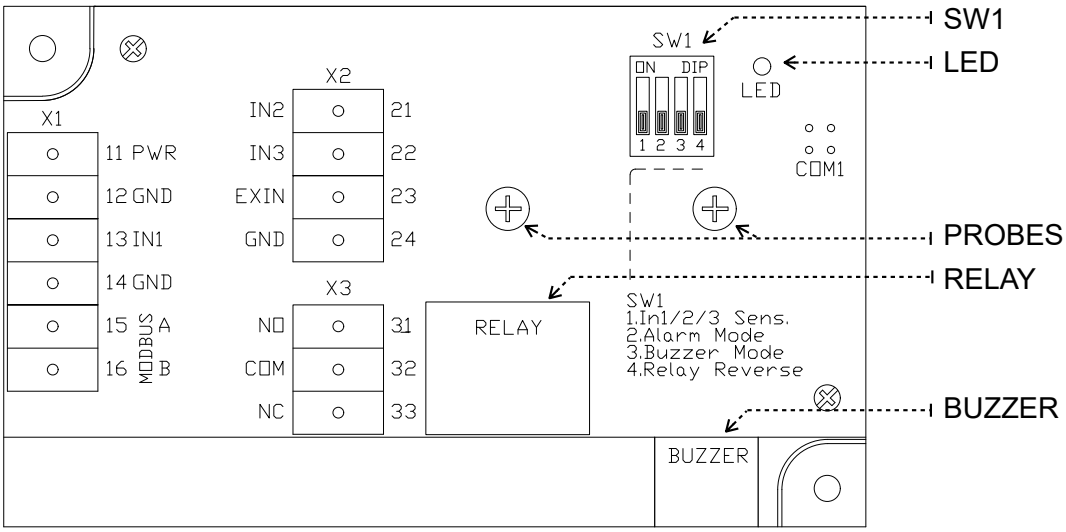
SW3 - Buzzer mode

	ON	Intermittent (pulsed) signal
	OFF	Continuous signal

SW4 - Relay reverse

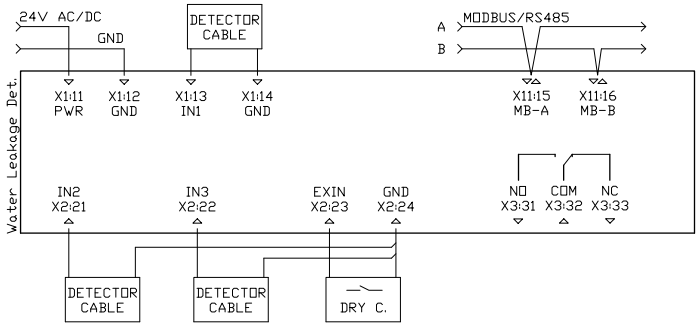
	ON	Reversed, relay is normally closed and de-activates with alarm
	OFF	Normal, relay is normally open and activates with alarm

Transmitter hardware



SW1	config	see DIP switch
LED	working	blinks periodically
	modbus	blinks for each Modbus transmitting
	alarm	on when buzzer signals
PROBES		adjustable probes
RELAY		max. rating 1A @ 220 Vac
BUZZER	silent	normal working
	alarm	sounds continuous or intermittent
X1	11 PWR	14…35 Vdc or 24 Vac (± %5, 50-60 Hz)
	12 GND	ground for power and reference for outputs
	13 IN1	detector cable input 1
	14 GND	reference for IN1
	15 modbus-A	modbus communication positive pair
	16 modbus-B	modbus communication negative pair
X2	21 IN2	detector cable input 2
	22 IN3	detector cable input 3
	23 EXIN	external input, only dry contact
	24 GND	reference for IN2, IN3 and EXIN
X3	31	normally open
	32	common
	33	normally closed

Electrical wirings



Relay contact rating is max. 1A at 230 VAC.
We kindly advise using 24V on relay contacts and using external power relay for bigger loads to avoid high voltage harmonics.
Please use shielded and twisted paired cables for modbus connections.

Modbus Configuration

Default Settings: Modbus ID:1, 9600, 8bit, None, 1. Register Table starts from Base 1.
Use Function 3 for Reading and Function 6 for Writing Holding Registers. Whenever changing any Modbus Parameter, the new parameter is activated instantly and you should have to configure the master device according to the new parameters.
ID:254 is the common address for all units.

Register	R/W	Default	Range	Description
1	R & W	1	1…253	Modbus Address
2	R & W	0	0 or 1	Baudrate, 0: 9.600, 1: 19.200
3	R & W	0	0…3	Bit_Parity_Stop, 0: 8bit_None_1, 1: 8bit_None_2, 2: 8bit_Even_1, 3: 8bit_Odd_1
4	R & W	500	0...1023	Threshold for HIGH sensitivity, lower values for higher sensitivity
5	R & W	1000	0...1023	Threshold for LOW sensitivity, higher values for lower sensitivity
6	R	0	0...1023	IN1, Analog value
7	R	0	0...1023	IN2, Analog value
8	R	0	0...1023	IN3, Analog value
9	R	0	0 or 1	IN1, Alarm situation, 0: normal, 1: alarm
10	R	0	0 or 1	IN2, Alarm situation, 0: normal, 1: alarm
11	R	0	0 or 1	IN3, Alarm situation, 0: normal, 1: alarm
12	R	0	0 or 1	EXIN, Alarm situation, 0: normal, 1: alarm
13	R	0	0 or 1	TOTAL ALARM, any alarm will be enough for total alarm, 0: normal, 1: alarm
14	R	0	0	Empty, for future use
15	R	0	0	Empty, for future use

Dimensions (mm)