

● Characteristics

- VARIOUS SENSOR - MODULAR INTELLIGENT WEATHER STATION - PRECIPITATION -

DB	- Precipitation:	Optoelectronic
	- Air pressure:	MS5534A
	- Air temperature:	Pt100, 2-wire, class A
	- Air humidity (optionally):	Transmicor 6000
	- Rail temperature:	4...20 mA
	- Heating:	2-point control for measuring head
	- Supply voltage:	24 VDC
	- Defrosting:	Down to max. -30 °C
	- Interface:	RS485 Modbus RTU, galvanically insulated
	- Enclosure:	Diecast aluminium, powder coated, silver-grey
	- Protection:	IP 65
- Optionally:	Fixing device	

● Technical data

Input

Recognition of precipitation: Optoelectronic
 Air pressure: MS5534A
 Air temperature: Pt100, 2-wire, class A
 Air humidity (optionally): Transmicor 6000
 Rail temperature: 4...20 mA

Output

Relay: 1 changeover contact: 250 VAC / 2A
 Interface: RS485 Modbus RTU, galvanically insulated
 Analog: Air temperature, Air humidity, air pressure, intensity of precipitation
 Options: 0...10 V / 0...20 mA / 4...20 mA

Power supply

Supply voltage: 24 V AC/DC +/- 10 %
 Full load current: Approx. 2,5 A

Heating

Controller: 2-point control for precipitation measuring head
 Supply voltage: 24 VDC
 Power: 50 W
 Maximum defrosting: Down to -30 °C

Ambient conditions

Operating temperature: -30 °C ... +60 °C
 Storing temperature: -40 °C ... +80 °C

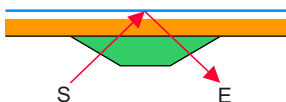
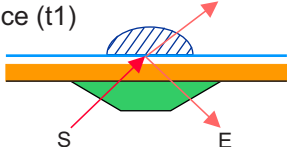
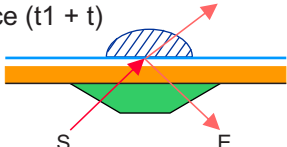
Mechanics

Enclosure: 160 x 240 x 102 mm
 Material of enclosure: Diecast aluminium
 Color: Powder coated, silver-grey
 Degree of protection: IP 65
 Connection: Spring finger connector up to 2,5 mm² via cable entry 1 x PG21 / 2 x M20x1,5
 Weight: Approx. 4,6 kg

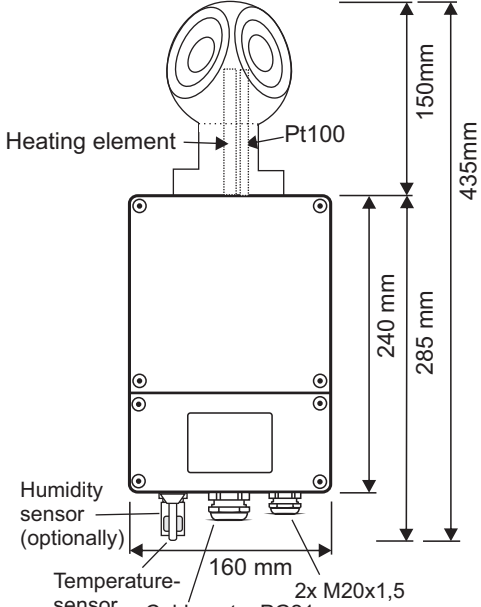


● Applications

Developed for use in traffic engineering, the MD-IWS supplies control systems / automation controls for heating systems (bridges, switch points, streets) with safe data . The detection of precipitation in connection with Air humidity, -temperature and -pressure is trouble-free possible in wintry conditions.

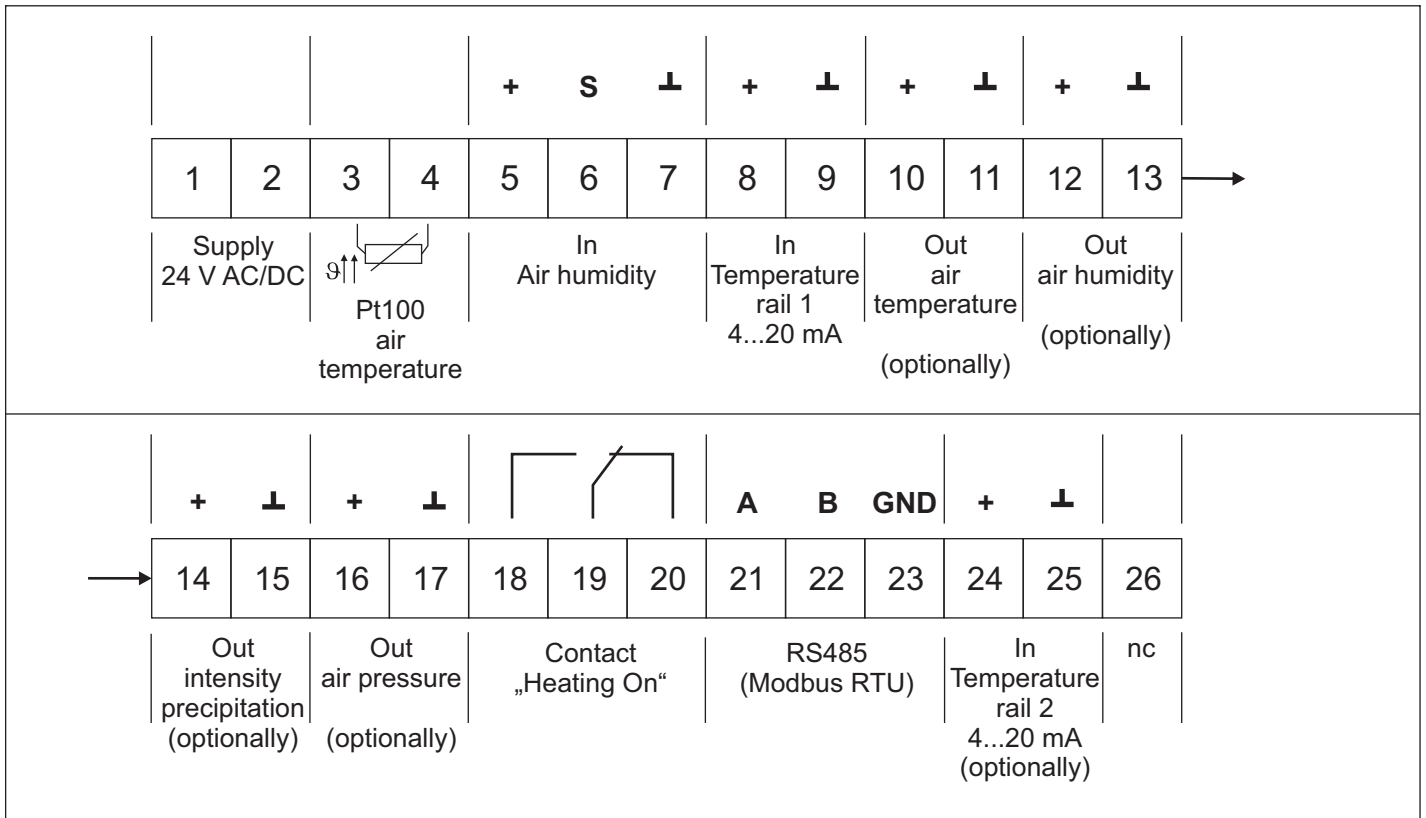
● **Principle of operation**

<p>Dry surface</p> 	<p>Moistened surface (t1)</p> 	<p>Moistened surface (t1 + t)</p> 
<p>A dry sensor surface reflects the infrared light that is emitted from the transmitter S almost completely (total reflection). The electronics only react to changes at the sensor surface, so no signal is generated for the evaluation.</p>	<p>In the moment when the surface is moistened, the signal of the infrared light to the receiver E reduces (law of refraction). The electronics will recognize this change and the evaluation will include it.</p>	<p>If this moisture is remaining in the sensor surface, the reduction of the infrared light E is still existing. The reduction causes no output signal for precipitation, because the evaluation includes only dynamic values .</p>

● **Dimensions (in mm), details**

	 <p>Massive sensor head in metal enclosure</p>	<p>27 optoelectronic sensors for safe recognition of precipitation</p> 
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● **Electrical connection**



● **Order code**

M	W	X	X	X	X	X	X	X	-	X	X	X
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Model:	MD-IWS with humidity sensor*	0										
	MD-IWS without humidity sensor	1										
Output serial:	RS485 Modbus RTU (galvanically insulated)		0									
Output relay:	Heating „On“			0								
Analog output:	Without					0						
	With (please indicate)					1						
Supply voltage:	24 V AC/DC						0					
Display:	Without										0	
Other/Accessories:	Special model (on request)											0
	Fixing device											1

*Options see technical data or price list