

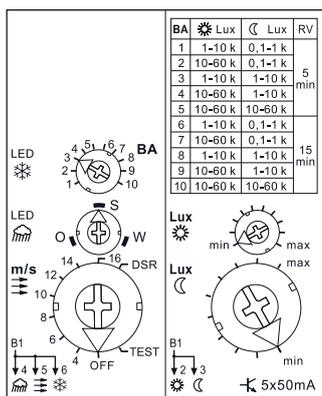
MSR12-UC

Multifunction sensor relay for brightness, twilight, wind, rain and frost, 5 OptoMOS semiconductor outputs 50 mA/12..230 V UC. Standby loss without weather data multi sensor WMS 0.5 watt only.

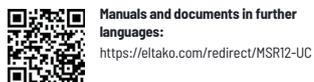
Modular device for DIN 60715 TH35 rail mounting. 2 modules = 36 mm wide, 58 mm deep. The multi-sensor switch MSR12-UC evaluates the signals from the weather data multi sensor WMS once per second, and sends appropriate control signals to the downstream EGS12Z-UC or EGS12Z2-UC actuators depending on the setting of the rotary switch on the front.

The OptoMOS semiconductor outputs switch the voltage applied to the universal voltage input terminal +B1. Only a single weather data multi sensor WMS can be connected to a multifunction sensor relay MSR12-UC. Several MSR12-UC can be connected to a weather data multi sensor WMS, e.g. for evaluating up to three directions with the light sensor of the WMS. Only a single MSR12-UC must provide the outer terminal resistance. It must be removed if there is a further MSR12-UC. Supply voltage 24 V DC from power unit WNT15-24VDC/24W (chapter 17). This power unit simultaneously supplies the weather data multi sensor WMS connected to the terminals MS1, MS2, MSA and MSB, including heating of the rain sensor surface. After installation wait for the short automatic synchronisation of approx. 1 minute. During this process three LEDs flash in a slow sequence.

Function rotary switches



Standard setting ex works.



Function rotary switches

BA = Setting the operating modes 1 to 10 from the adjacent table. 2 delay times RV - for wind and twilight - each in connection with 5 brightness ranges for light and twilight. The LED behind the rotary switch indicates Frost when the outdoor temperature drops below 2°C, at which point output 6 closes. This output opens again as soon as the temperature is over 3°C for 5 minutes.

O-S-W = If the weather data multi sensor WMS is aligned towards the south, the weighting for light and twilight can be shifted towards the east or west. If the WMS is mounted in a different direction, the desired point of the compass can be set using this rotary switch. An LED behind the rotary switch indicates **rain detection**, at which point output 4 closes. Once the rain sensor surface dries out - assisted by a heating unit - contact 4 opens immediately. This is automatically followed by a 2-second pulse on output 2 if the sun signal is applied at that moment.

m/s = This rotary switch is used to select the wind speed in metres per second at which the **wind signal** is triggered. This closes output 5. This is indicated by the LED behind the rotary switch. Opening takes place after the set delay time RV, during which the LED flashes. This is automatically followed by a 2-second pulse on output 2 if the sun signal is applied at that moment.

DSR = In this position of the wind rotary switch the MSR12-UC functions like a twilight sensor relay. The twilight signal as described under **Lux ☾** is then continuously applied to output 3 as long as the set twilight value is undershot. Output 3 opens with a delay of 5 minutes if the brightness value set is overshoot. The outputs 4 (rain) and 6 (frost) remain active as described there. Output 5 (wind) likewise remain active, but the wind signal is triggered at 10 m/s.

TEST = As long as TEST remains switched on, each switchover from the OFF position to the TEST position activates the outputs 2 to 6 in ascending order.

OFF = In the OFF position the MSR12-UC has no function.

Lux ☾ = This rotary switch is used to set the brightness at which the sun signal is immediately triggered as a 2-second pulse at output 2. The LED behind the rotary switch indicates when the brightness value is exceeded.

Lux ☼ = This rotary switch is used to set the brightness at which the 2-second twilight signal is triggered at output 3 after the set delay time RV when the value is undershot. This is indicated by the LED behind the rotary switch. It flashes during the delay time. If the twilight switching threshold is set to the same level or higher than the sun switching threshold, then the sun switching threshold is raised internally above the twilight switching threshold.

Changing light compensation: Constant changes between sun and rain clouds would result in sensitive closing and opening of the shade elements. This is prevented by a changing light compensation function.

Sensor function and open circuit monitoring: The weather data multi sensor WMS sends updated information to the MSR12-UC every second. If this signal is missing completely for 5 seconds, or if the individual signal from the wind sensor is missing for 24 hours, then an alarm is triggered: three LEDs flash rapidly and the wind output 5 is closed for 2 seconds in order to protect any awnings or windows which may be connected here. This pulse is repeated every hour. The alarm is turned off automatically when a signal is detected again.

Technical data page 16-10.
Typical connections page 16-11.
Housing for operating instructions
GBA14 page 1-50 chapter 1.

MSR12-UC	Multifunction sensor switch, 5 OptoMOS	Art. No. 22500501	100,20 €/pc.
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