Light Stream Relay 6 LITE

Product datasheet

Six-channel DIN-rail relay module with RS-485 (Modbus RTU), part number LS-MR6C. Light Stream Relay 6 LITE turns lighting and other loads on and off: six outputs rated up to 10 A (2 kW) each. It is controlled over RS-485 (Modbus RTU) and directly from standard switches — seven dry-contact inputs. It can drive curtain/blind actuators, run on timers, and automatically switches to a safe mode if communication is lost.



Features

Six powerful outputs

Six relays rated 10 A (2 kW) per output, with inrush current up to 80 A. Suitable for LED, fluorescent, and incandescent lamps, fans, and water heaters.

Works with standard switches

Latching switches and push-buttons can be connected to the seven inputs. The light turns on from the switch even if the controller is unavailable.

Scene buttons

The module distinguishes short press, long press, double press, and "short then long" press. Each can be assigned its own action — a single button can control several lines.

Curtain control

Up to three curtain, blind, roller shutter, or damper actuators. The module prevents "Open» and "Close" from being activated at the same time and automatically waits before reversing direction.

"Turn off everything»

A separate input turns off all six outputs with a single press — for example, a switch by the front door.

Timers

For each output: on or off delay, timed on or off, cyclic switching.

Safe mode

If communication with the system is lost, the outputs automatically switch to a preset state, and control can be handed over to standard switches. When communication is restored, the module returns to normal operation.

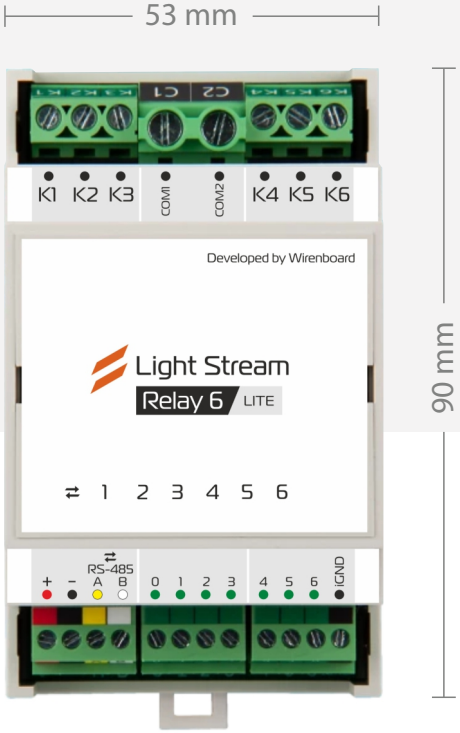
Network and load protection

After power is applied, the outputs turn on one after another so as not to overload the network with inrush currents. A reconnection delay protects compressors and pumps from frequent starts.

Pulse counting and frequency

The inputs count pulses and measure frequency up to 5 kHz — the module can also be used as an I/O module.

Dimensions



Technical specifications

Ergonomics

Mounting	35 mm DIN rail
Overall dimensions (L × W × H)	53 mm • 90 mm • 58 mm
Weight (with box)	155 g
Indication	S — Modbus communication; 1–6 — output status

Outputs

Number of outputs	6, mechanical relays, normally open
Groups	2 groups of 3 outputs, common terminals COM1 and COM2
Switched voltage	up to 250 V AC, up to 30 V DC
Rated current per output (230 V AC)	10 A
Maximum current per output (230 V AC)	16 A
Inrush current (20 ms)	up to 80 A
Total current per group of 3 outputs	30 A
Contact life	100,000 switching cycles at 10 A / 230 V AC
Contact material	AgSnO2
Coil-to-contact insulation	4000 V AC (1 min)
Power-on delay	0–999 s, per output
Reconnection delay	0–999 s, per output

Inputs

Number of inputs	7 (0–6), dry contact, common terminal iGND
Input voltage / current	~12 V DC / ~2 mA when closed
Permissible voltage	–20 to +40 V
Pulse frequency	up to 10 Hz by default, up to 5 kHz without debounce suppressiona
Press types	short, long, double, "short then long"

Interfaces

Control interface	RS-485, no galvanic isolation
Power and RS-485 terminals	V+, GND, A, B; 3.5 mm pitch
Wire cross-section with ferrule	inputs: 0.35–1 mm^2; outputs: up to 2.5 mm^2; COM1, COM2: up to 4 mm^2
Tightening torque	0.2 N·m (inputs), 0.5 N·m (outputs)

Modbus

Protocol	Modbus RTU
Address	1–247, factory address on the label
Baud rate	1200–115,200 bps, default 9600
Default format	8N2
Firmware update	over RS-485, settings are preserved

Power supply

Supply voltage	9–28 V DC
Consumption	0.1 W (relays off), 1 W (all relays on)
Peak consumption	up to 4 W for 20 ms
Ready after power-on	~2 s

Operating conditions

Temperature	–40 to +80 °C
Humidity	up to 95%, non-condensing
Climatic category (GOST 15150-69)	O2.1*
Service life	5 years

Wiring

Terminals	Purpose
V+, GND	power supply 9–28 V DC
A, B	RS-485 bus

COM1, COM2	common wires for the two groups of three outputs
K1–K6	relay outputs
0–6	dry-contact inputs; by default input N controls output N, input 0 turns off all outputs
iGND	common input terminal

Different phases can be supplied to the COM1 and COM2 groups. A curtain actuator occupies two adjacent outputs: 1–2, 3–4, or 5–6.

Attention

- Total current per group of three outputs is no more than 30 A: all six outputs cannot be loaded simultaneously at 10 A each.
- When a relay switches on, the module briefly draws up to 4 W — choose a power supply with margin and account for voltage drop over a long cable.
- Before connecting a curtain actuator, enable "Actuator control" mode for its outputs, otherwise both directions could turn on at the same time.

Maintenance

Connecting cables and wires must be in good condition and securely fastened. If the device works properly and no new features are needed, installing updates is not required. Before updating, it is recommended to back up the settings so that you can return to the previous version.

Safety

- Do not expose the device to rain or moisture — this will void the warranty.
- Do not remove the cover: there are no user-serviceable parts inside.
- Never connect the device to a dimmer.
- Never connect 0 V to electrical ground.

Package contents

- Light Stream Relay 6 LITE

Warranty

1-year limited manufacturer's warranty

Warranty service is not provided:

- for mechanical and other damage to the product caused by the buyer;
- for lamps, fuses, galvanic isolation and protection components;
- if the product was repaired by the buyer or by third parties;
- if the design of the product was modified;
- for equipment operated in violation of the power quality and capacity requirements of GOST 13109-97, under emergency conditions, or exposed to lightning strikes, fire or other extreme conditions;
- for product accessories (including cables, external power supplies, packaging) and parts not included in the delivery;
- if the wiring diagram or the rules of storage, transportation and operation were violated;
- if the product was exposed to chemicals or abrasive cleaning agents;
- if the product was used for purposes other than those stated in the datasheet;
- for damage caused by natural disasters or fire;
- if the manufacturer's (supplier's) label is missing.