5V Photoresistor Light-Control Relay Module

Electrical data, terminals and nominal dimensions

1 ELECTRICAL CHARACTERISTICS

PARAMETER	VALUE	UNIT	CONDITIONS / SCOPE
Supply	5	V DC	Nominal; observe polarity
Adjustment	Trimmer	-	Sets light switching threshold
Dark / bright	Energised / released	-	Relative to the set threshold; verify during setup

2 CONNECTIONS

MARKING	FUNCTION
VCC	Positive 5V DC module supply
GND	Supply return
COM	Common contact for the separate load circuit
NO	Connected to COM when the relay is energised
NC	Connected to COM when the relay is released

3 MECHANICAL DATA

PARAMETER	VALUE	SCOPE
PCB outline	50 x 26 mm	Nominal; allow connector and wire clearance
Assembly	Fitted components and terminals	One module
Mounting	Four PCB holes	Check actual hole positions before drilling

Component rating scope. The fitted relay case carries 10 A at 250 V AC and 15 A at 125 V AC contact markings. These are component markings, not a verified working rating for the assembled board. Load type, inrush, PCB clearance, wiring and enclosure design determine suitability. Use low-voltage DC for initial tests.

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Connection, expected results and troubleshooting

4 INITIAL CONNECTION AND FUNCTIONAL CHECK

1. **Connect the supply.** With power off, connect 5V DC to VCC and supply return to GND. Keep the load disconnected for the first test.
2. **Set the threshold.** Power the module and adjust the trimmer while shading and uncovering the photoresistor. Check the relay click and contact continuity as the light changes.
3. **Connect a small DC load.** Turn power off. Route the separate load circuit through COM and NO for switching when the relay energises, or COM and NC for the opposite state. Keep the sensor clear of light from the controlled load.

5 CONTACT STATES

RELAY STATE	COM TO NC	COM TO NO
Released	Closed	Open
Energised	Open	Closed



Functional contact diagram, not a physical terminal-order drawing. Follow the labels on your board. Test continuity with all load power disconnected.

6 TROUBLESHOOTING

SYMPTOM	CHECK
Relay does not click	Check the correct module supply, polarity and control state. Keep the load disconnected while diagnosing.
Relay clicks but load stays off	Check the separate load supply and COM/NO/NC wiring. The relay contacts do not supply power.
Rapid switching near threshold	Keep the controlled light away from the sensor and adjust the trimmer away from the transition point.

7 REVISION HISTORY

REVISION	DATE	CHANGE
1	2026-09-25	Initial variant-specific issue; connection and contact/signal checks.

Electrical and dimensional values are based on the supplier module parameter sheet and reference photographs. Setup steps describe expected behaviour; they are not a record of Click IT bench testing.