

RL250

CP/LP Polarization Controller

RADEUS LABS
PRELIMINARY

Description

The Radeus Labs RL250 is a 1RU rack-mount polarization controller that independently drives two polarization switch motors, selecting circular polarization (CP) or linear polarization (LP) on each feed when commanded. The RL250 connects to the indoor unit (IDU) over TCP/IP Ethernet, executes polarization change commands, and reports the current polarization selection status of each switch back to the IDU.

Key Features

- Independent CP/LP selection for two polarization switch motors (POL 1 and POL 2).
- Positive polarization position feedback via switch indicator contacts, reported to the IDU.
- Compatible with standard and latching (Circuit #2) polarization switch motor circuits.
- IEC 320-C14 inlet with internal 24 VDC supply and forced-air cooling.

Specifications

POLARIZATION CONTROL

Channels	2 independent (POL 1, POL 2), CP/LP selection per channel.
Motor drive output	250VAC/30VDC; 4A peak.
Position indication	Two indicator inputs per channel (LP / CP), +24 V sense loop.
Switch compatibility	Standard polarization switch circuit and latching

MONITOR & CONTROL

Remote M&C	Entirely through the ACU.
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ELECTRICAL

AC input	80–260 VAC, 50/60 Hz, IEC power entry module.
Internal supply	24 VDC, 90 W; regulated +24 / +12 / +5 VDC rails.
Auxiliary output	24 VDC; 3A power output (rear-panel terminal block).

PROTECTION

Over Voltage/ Temperature	Shut down voltage, re-power on to recover.
Overload	Hiccup mode; recovers automatically after fault condition is removed.
Fuse	F2.5AL250P.

MECHANICAL

Form factor	1RU rack mount.
Dimensions	16.13" W × 16.75" D × 1.75" H (410 × 425 × 44.5 mm).
Finish	Black matte powder-coated chassis.
Cooling	Forced air (internal fan).

REAR PANEL

Ethernet	2× RJ45 (M&C).
Motor connections	POL 1 / POL 2 motor: 3-position terminal block each (LP / COM / CP).
Indicator connections	POL 1 / POL 2 indicators: 4-position terminal blocks (IND / +24 V per position).
Power	IEC 320-C14 Inlet, +24 VDC auxiliary output, chassis ground stud.

ENVIRONMENTAL

Operating temperature	-10°C ~ 55°C (14°F ~ 131°F).
Storage temperature	-40°C ~ 70°C
Humidity	40% ~ 80%.

