

ADD-ON ACCESSORY · INTEGRATES WITH PJ-C / PJ-D MAIN POWER DRIVE

LD-A Radar Sensor

Touch-free motion-activated privacy
for PRIVASEE® smart film and smart glass panels



Main power drive (PJ-C / PJ-D) + LD-A radar sensor (white dome) + RF remote handset

DOCUMENT

PVS-SGS-MAN-LDA-INT-01 · Rev 1.0

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ISSUED BY

PRIVASEE® Group · UK
UAE/GCC: S O R S Reflective LLC
info@privasee.uk

01 What it is

★ IN ONE SENTENCE

The **LD-A radar sensor** is a small dome-shaped accessory that detects body movement and automatically switches the PRIVASEE® smart-film panel between transparent and opaque — without anyone touching a switch. It connects to the main power drive's SWITCH terminals exactly the same way a wall switch would.

WHAT IT DOES

- Detects a person entering the room or approaching the panel
- Closes its internal contact while motion is present — the panel switches to the privacy / transparent state per the project setup
- Releases the contact after a configurable hold time once motion stops — the panel returns to its default state
- Eliminates the need to find or touch a wall switch — ideal for hands-free hygiene-sensitive rooms

WHERE IT IS TYPICALLY USED

- Healthcare consultation rooms · clinical washrooms · operating-theatre antechambers
- Hotel suite bathrooms · spa cabins
- Retail fitting rooms · changing cubicles
- Private executive offices where the user wants automatic privacy on entry
- Smart villa bathrooms · wet-area panels

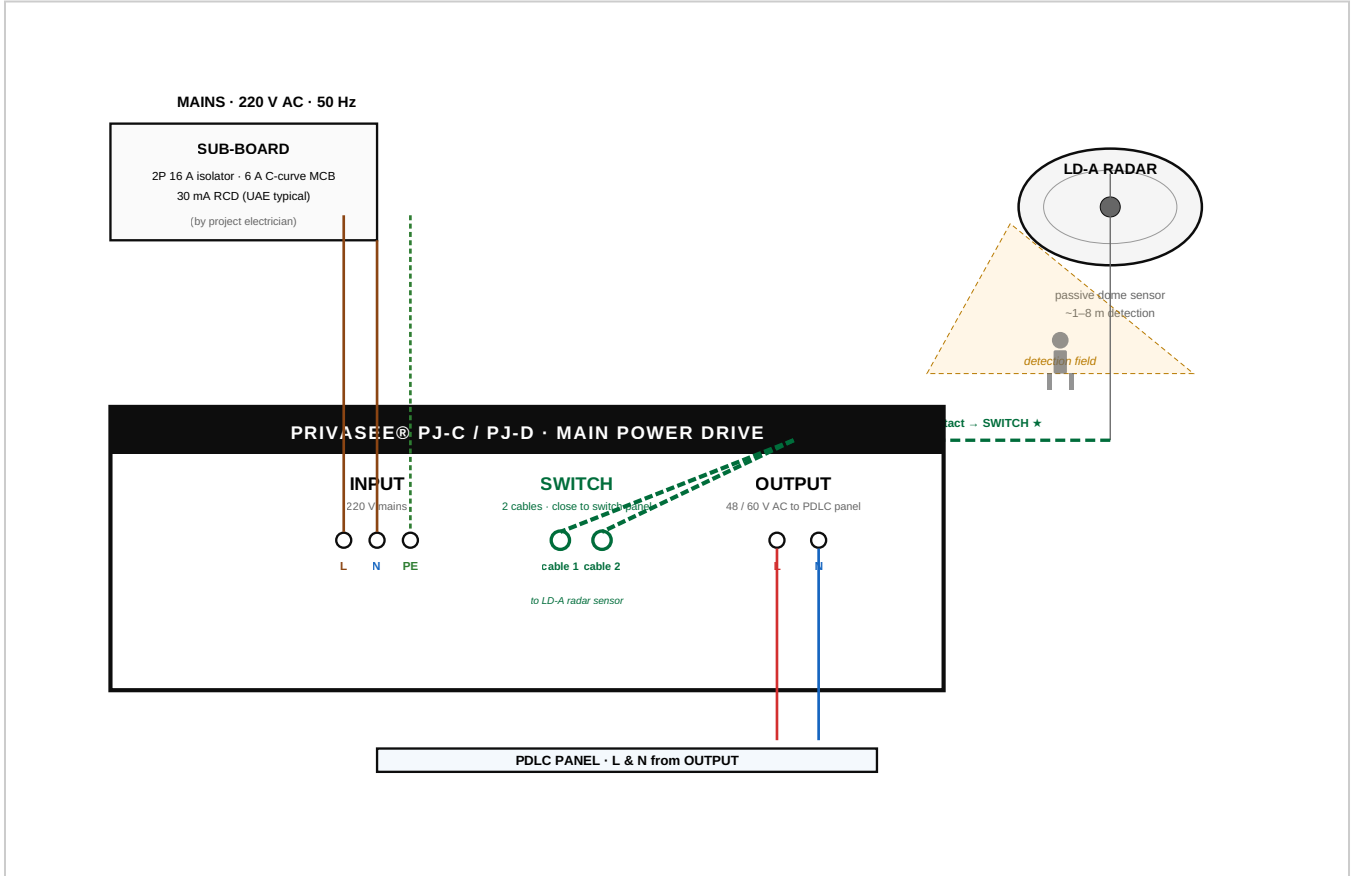
WHAT IT WORKS WITH

MAIN POWER DRIVE	COMPATIBLE?
PRIVASEE® PJ-C (any wattage)	Yes — LD-A wires to the SWITCH terminals
PRIVASEE® PJ-D (any wattage)	Yes — LD-A wires to the SWITCH terminals
Other power drive families	If the drive has the same passive dry-contact SWITCH input, yes

The LD-A is supplied as a kit: the radar dome + a short multi-core cable. The main power drive, the PDLC panel and the upstream mains supply are unchanged from a standard installation.

02 How it connects

The LD-A radar sensor has a low-voltage cable that connects to the SWITCH terminals on the main power drive (PJ-C or PJ-D). The radar's internal contact is voltage-free — same kind of dry contact as a wall switch.



★ THE WIRING RULE IN PLAIN WORDS

The LD-A radar's 2-cable dry-contact pair connects to the main power drive's SWITCH terminals. When the radar detects motion, its contact closes and the panel switches — exactly as if a wall switch had been pressed. When motion stops, the contact opens and the panel reverts.

03 Specifications & bill of materials

LD-A RADAR SENSOR SPECIFICATIONS

PARAMETER	VALUE
Detection method	Microwave / radar (passive Doppler-shift sensor)
Detection range (typical)	1 to 8 metres · sensitivity-tunable
Detection field shape	Cone, approx 120° horizontal × 60° vertical (mounted on ceiling or top of frame)
Output type	Voltage-free dry contact (NO) · same as a wall-switch contact
Hold time after motion stops	Configurable · typically 5 to 60 seconds
Power supply to sensor	Drawn from the main power drive's internal LV supply via the connection cable (no separate mains feed needed)
Mounting	Ceiling, wall above the door, or top of the glazing frame — aim the dome toward the entry approach
Operating temperature	-10 °C to +60 °C (matches the main power drive)
Housing	White polymer dome · IP20 indoor

BILL OF MATERIALS · PER PANEL INSTALLATION

REF	ITEM	QTY
U1	Main power drive · PRIVASEE® PJ-C or PJ-D (any wattage matching the panel)	1
R1	LD-A radar sensor (this annex)	1
—	Radar-to-drive cable (supplied with LD-A) · 2-core dry-contact pair + LV supply cores	1
—	PRIVASEE® PDLC smart film panel	1
—	Upstream MCB / RCD per the main power drive's installation manual	per project

▲ WARNING · DO NOT FEED MAINS TO THE RADAR

The radar sensor receives its small low-voltage supply through the cable that comes with it, drawn from the main power drive. Do not run a separate mains feed to the radar; do not connect 230 V to any of the radar's wires.

04 Installation & tuning

WHERE TO MOUNT THE RADAR

- Above the door or above the panel itself, aimed toward the entry approach
- Mounting height typically 2.0 to 2.5 m
- Avoid placing the dome behind glass or behind any metal screen — radar passes through plaster, wood and most polymer surfaces but is blocked by metal mesh
- Avoid mounting near rotating ceiling fans, vibrating HVAC ducts or moving curtains — these can trigger false positives

WIRING SEQUENCE

1. Isolate the main power drive at the upstream MCB. Verify dead.
2. Open the radar-supplied cable end. Identify the two dry-contact wires (typically labelled or colour-coded per the supplier guide that ships with the LD-A).
3. Land the two dry-contact wires onto the main drive's SWITCH terminals (cable 1 and cable 2 — order does not matter).
4. Land the LV supply cores onto the radar's supply terminals on the main drive (or per the LD-A wiring sheet supplied with the kit).
5. Restore mains. The main drive LED should come solid green within 5 seconds.

SENSITIVITY TUNING

The LD-A typically has two small potentiometers under a removable cover on the dome:

POT	FUNCTION	TYPICAL SETTING
SENS	Detection sensitivity / range	Mid-range to start; reduce if false triggers from corridor traffic
TIME	Hold time after motion stops	15 to 30 seconds for bathroom / consultation room use

BEHAVIOUR AFTER INSTALL

EVENT	BEHAVIOUR
Person enters detection field	Radar contact closes → panel switches per main drive's initial-state logic
Person stays still inside field	Radar holds contact closed (small periodic motion such as breathing keeps the sensor active)
Person leaves field · TIME hold elapses	Radar contact opens → panel reverts to its other state
RF remote pressed manually	Manual override remains available — operates exactly as without the LD-A fitted

★ CUSTOMER-FRIENDLY SUMMARY

The LD-A is a smart "automatic wall switch" for the panel. Wire it once into the main drive's SWITCH terminals and the panel responds to the room being used — no buttons, no apps, no programming.

05 Contact & document close

PRIVASEE® GROUP

UK OFFICE	PRIVASEE® Group · Sandbach, England · United Kingdom
EMAIL	info@privasee.uk
TELEPHONE	+44 7729 534416
UAE / GCC	S O R S Reflective LLC · United Arab Emirates

COMPANION DOCUMENTS

DOC NUMBER	TITLE
PVS-SGS-MAN-PJC-01	PJ-C Power Adapter Full Manual (use as the main drive specification)
PVS-SGS-MAN-PJD-01	PJ-D Power Adapter Full Manual (alternative main drive)
PVS-SGS-MAN-PJC-HA-01	HA Integration Annex (for projects combining radar AND home-automation control)
PVS-SGS-MAN-PJC-UAE-01	UAE Local Market Edition (typical UAE values + simplified sign-off)

REVISION HISTORY

REV	DATE	DESCRIPTION
1.0	2026-05-05	Initial release · LD-A radar sensor as add-on to PJ-C / PJ-D main power drive

DOCUMENT APPROVAL

ROLE	NAME	DATE
PRIVASEE® preparer	PRIVASEE® Smart Glass Engineering	2026-05-05 · DRAFT
PRIVASEE® approver	[awaiting founder approval]	—
Project licensed electrician	[name · date]	—

The LD-A radar sensor is an add-on accessory to the main power drive. The main drive's Full Manual / UAE Edition / HA Integration Annex remain unchanged — this annex sits alongside them. Comments to info@privasee.uk referencing *PVS-SGS-MAN-LDA-INT-01 Rev 1.0*.