

DRAFT

VARIABLE / DIMMING

220 V MAINS IN · SMOOTHLY VARIABLE 0-48 / 60 V AC OUT · BMS-READY

# DZD-NO Variable Power Drive

Adjustable transparency from clear to opaque (not just on / off)  
RS-485 BMS · App control · Wall knob · RF remote



DOCUMENT

PVS-SGS-MAN-DZD-INT-01 · Rev 1.0

ISSUED BY

PRIVASEE® Group · UK

ISSUE DATE PRIVASEE® DZD-NO Variable Power Drive · 3 wattages (DZD50NO · DZD100NO · DZD200NO)  
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2026-05-05 · DRAFT



# 01 What it is

★ IN ONE SENTENCE

The **DZD-NO Variable Power Drive** is the PRIVASEE® premium adapter that lets you set the smart-film panel **anywhere between clear and opaque** — not just on/off. It accepts the same 220 V mains as the standard drives but adjusts the AC output level to give smooth dimming control, with a wide choice of user interfaces from a wall knob through to BMS / app integration.

## WHAT MAKES IT DIFFERENT FROM PJ-C / PJ-D

FEATURE	PJ-C / PJ-D (STANDARD)	DZD-NO (THIS DRIVE)
Output behaviour	On / off only	<b>Variable 0 – 100 %</b> · smooth dimming
User interface options	Wall switch + RF remote	<b>Wall knob (CONTROL PANEL port) · RS-485 cascade · 0–10 V dim · RF remote · App</b>
BMS-ready	via dry-contact only	<b>Native RS-485</b> for direct BMS integration
Door-state aware	via magnetic switch on SWITCH terminals	Same · plus pairs with induction lock for door-state-aware privacy
Best for	Standard privacy on/off	Premium installations · mood lighting effect · BMS-controlled buildings

## THREE SUB-VARIANTS

MODEL	RATED POWER	RECOMMENDED PANEL AREA	BEST FOR
DZD50NO	50 W	up to ~4.0 m <sup>2</sup> (80 % rule)	Single residential / villa panel · meeting room
DZD100NO	100 W	up to ~8.0 m <sup>2</sup> (80 % rule)	Larger meeting room · hospitality / spa
DZD200NO	200 W	up to ~16 m <sup>2</sup> (80 % rule)	Multi-panel feature wall · BMS-controlled commercial space

## WHERE IT IS TYPICALLY USED

- Premium residential bathrooms / dressing rooms / executive offices where the user wants to set a partial-privacy "frosted" level rather than just clear/opaque
- Hospitality — hotel suite glazing where the front-of-house automation system sets the panel based on room occupancy or guest preference
- Healthcare — consultation rooms where the clinician adjusts opacity through a procedure
- BMS-integrated commercial buildings where the entire glazing wall responds to the building's schedule, occupancy or solar-control logic
- Mood-lighting installations — using the smooth transition for theatrical effect

## 02 What's in the kit · what you can see

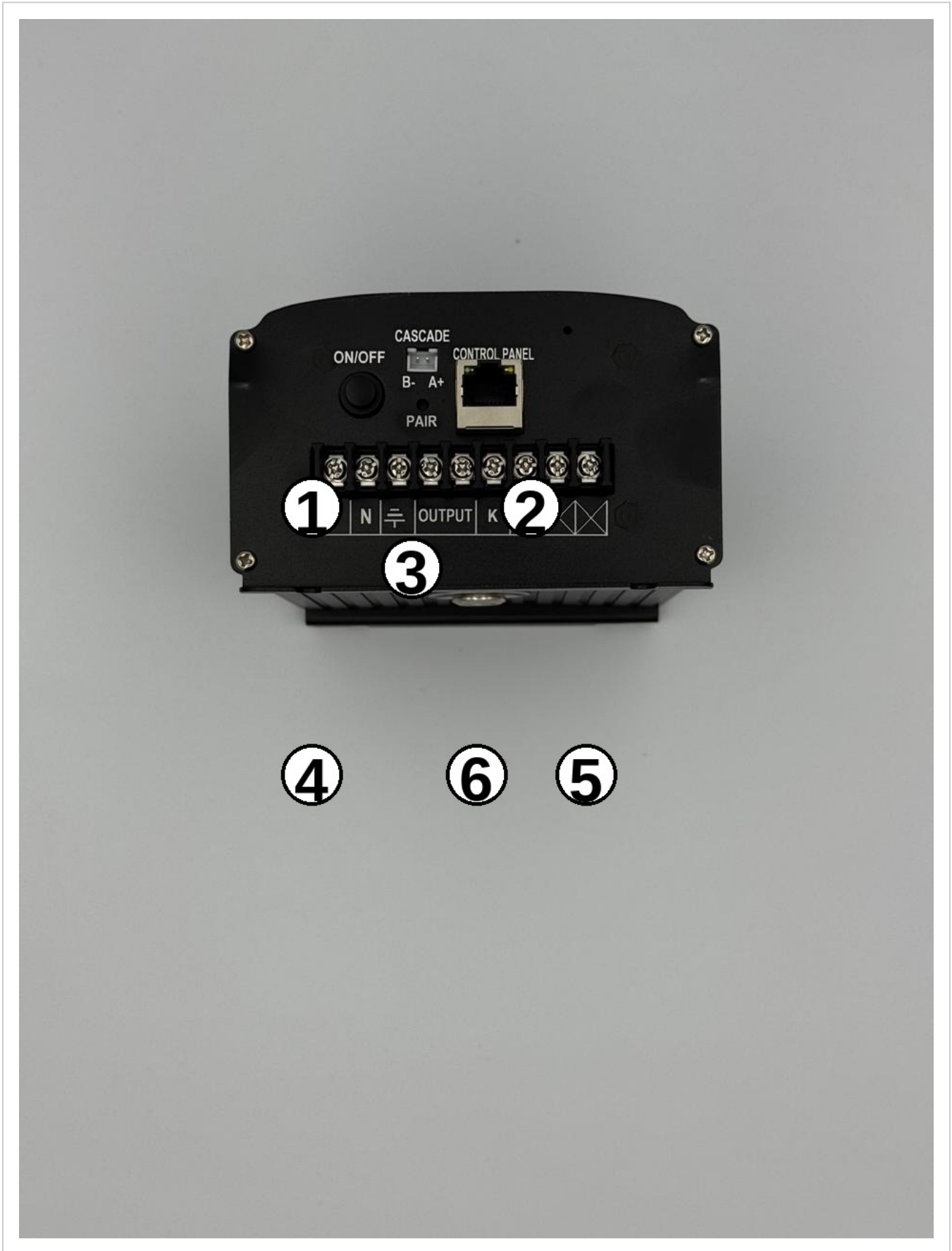
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The DZD-NO ships as a complete kit with the drive itself plus the user interfaces in the box. The PRIVASEE-branded housing carries the labels printed directly on the front face — what the installer sees on the product is exactly what the schematics call out.



DZD-NO complete kit · drive · user-interface options · cabling

## FRONT FACE — PRINTED LABELS



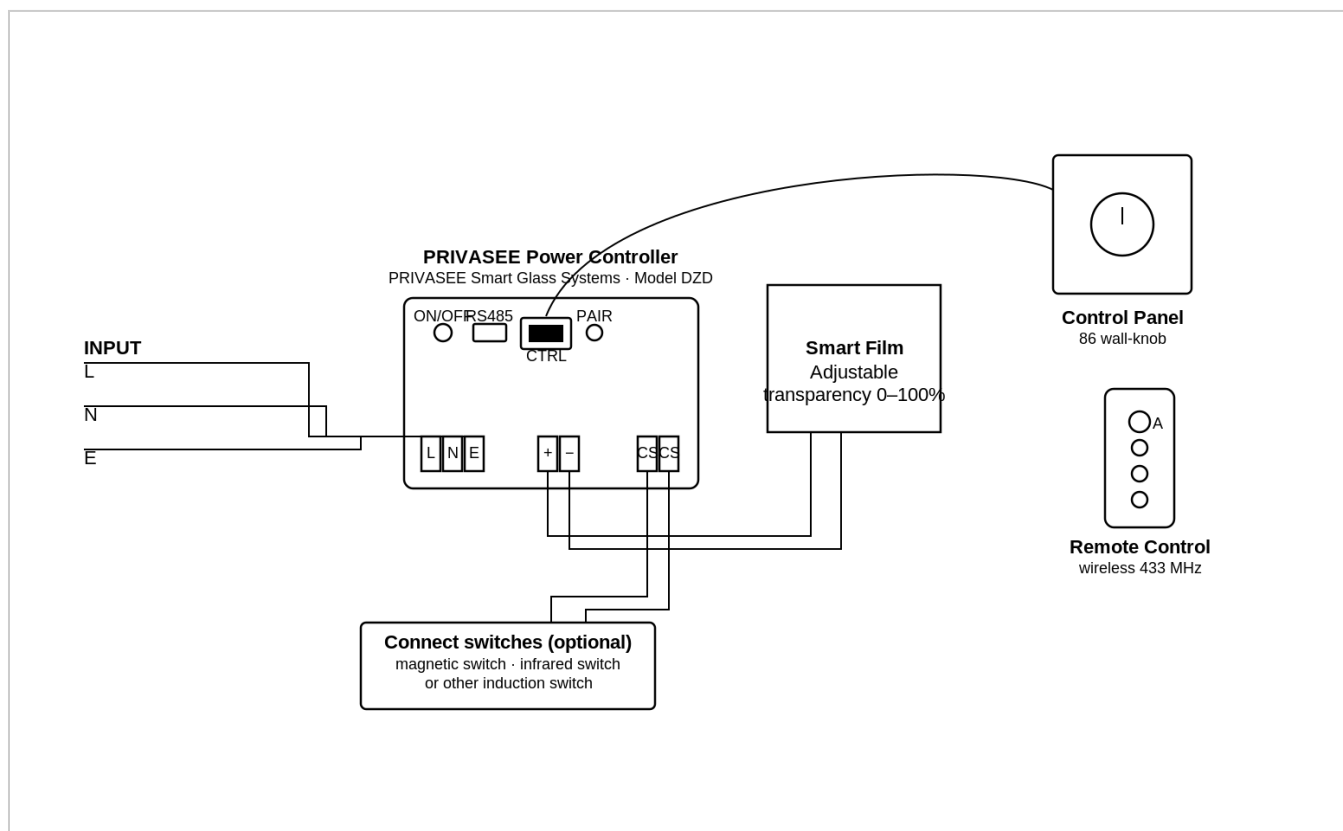
DZD-NO front face · all labels printed on the housing — ON/OFF · CASCADE B- A+ · PAIR · CONTROL PANEL · L · N · OUTPUT · K · ☒

## WHAT EACH LABEL MEANS

LABEL ON HOUSING	FUNCTION
<b>ON/OFF</b>	Master power-on button on the housing · press to wake / sleep the drive
<b>PAIR</b>	RF pairing button + status LED · same role as on PJ-C / PJ-D
<b>CASCADE B- A+</b>	RS-485 multi-drop port for cascading multiple DZD drives on a single bus · goes to the BMS
<b>CONTROL PANEL</b>	RJ-style port for the optional 86-style wall knob (smooth rotary dimmer)
<b>L · N</b>	220 V AC mains input terminals (Live · Neutral)
⏏(earth symbol)	Protective earth terminal
<b>OUTPUT</b>	Variable AC output to the PDLC panel (smooth dimming applied here)
<b>K</b>	Auxiliary key / induction-switch input (for door-state-aware operation)
⊠	Test / spare terminal · not used in standard installations

### 03 How it connects

The standard DZD-NO installation drawing below shows mains in (L · N · E), the variable output to the smart film panel, the optional CONTROL PANEL wall knob, the optional connect-switches input, and the supplied RF remote.



PRIVASEE® DZD master wiring · INPUT (L · N · E) · OUTPUT (+ -) · Connect Switches CS · Control Panel · Remote Control 433 MHz

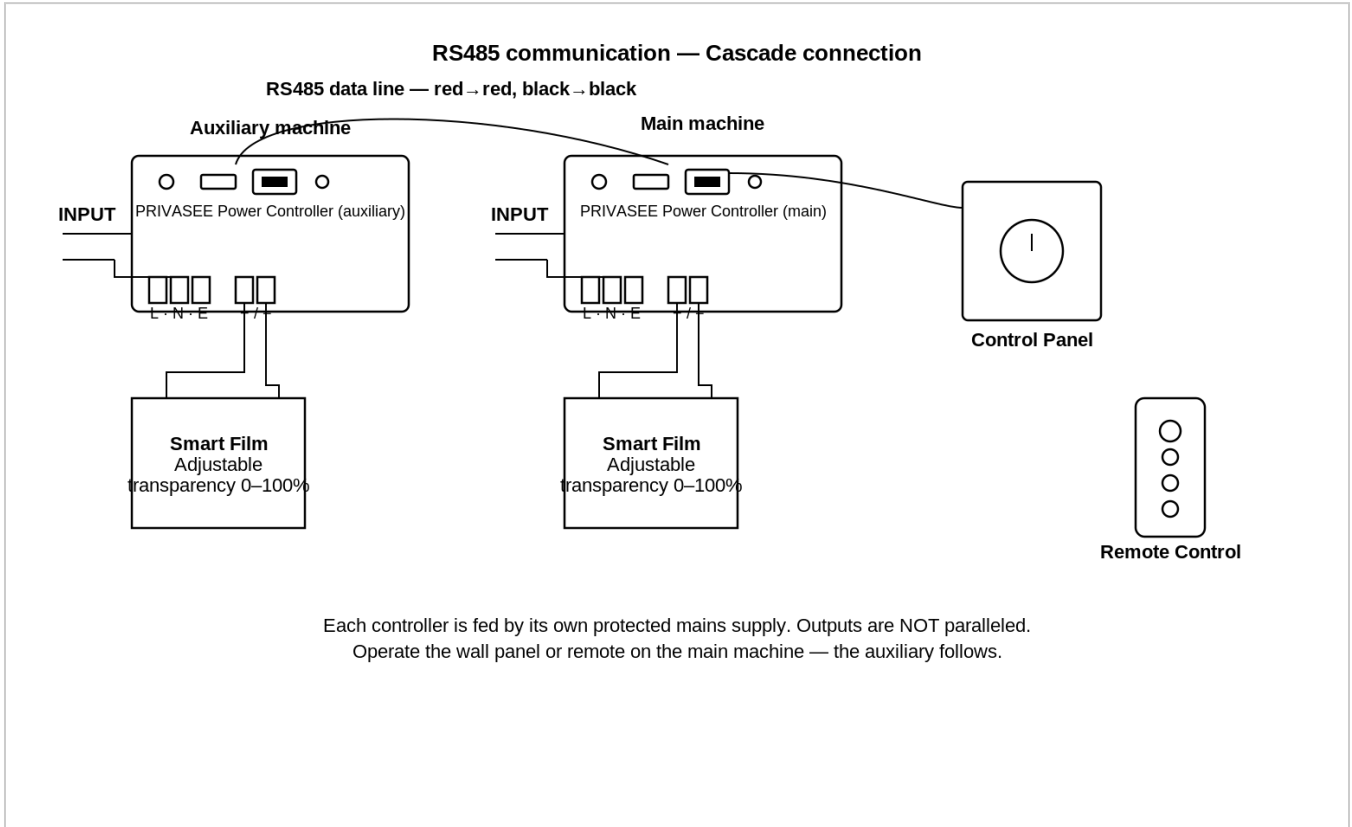
#### WHAT THE CUSTOMER-FRIENDLY SUMMARY IS

★ **READING THE DRAWING IN PLAIN WORDS**

Mains 220 V comes into INPUT terminals L · N · E. The drive converts and dims it as needed and sends the variable AC out through the OUTPUT terminals to the smart-film panel. A small 8-pin Control Panel knob plugs into the CONTROL PANEL port for manual dimming. The CS terminal pair takes a magnetic / infrared / induction switch (just like the SWITCH terminals on PJ-C / PJ-D) for door-state-aware automation. The supplied 4-button RF remote pairs to the drive ex-works.

#### CASCADE FOR MULTI-DRIVE / BMS INSTALLATIONS

The CASCADE port (B- A+) is an RS-485 bus output that lets you connect multiple DZD drives on a single backbone, controllable from one master point or from a BMS controller. Useful when an entire glazing wall has several panels each on its own DZD drive.



DZD multi-drive cascade · one bus from BMS controller · multiple drives · synchronised dimming

## 04 Specifications & install rules

### COMMON ELECTRICAL SPECIFICATIONS

PARAMETER	VALUE
Input voltage	220 V AC nominal · 110 / 220 V AC selectable variant
Input frequency	50 / 60 Hz
Output voltage	0 – 48 V AC or 0 – 60 V AC (smoothly variable, specified at order)
Output behaviour	Variable / dimmable · 0 % = opaque · 100 % = transparent (or reverse, configurable)
Operating temperature	–10 °C to +60 °C
Cooling	Convection · vented housing · 50 mm clearance recommended on all sides
IP rating	IP20 (indoor / dry-zone only)

### PER-MODEL RATED POWER

MODEL	RATED	APPROX. WEIGHT	RECOMMENDED MAX PANEL AREA
DZD50NO	50 W	~0.7 kg	~5 m <sup>2</sup> @ full-rated · ~4.0 m <sup>2</sup> @ 80 % rule
DZD100NO	100 W	~1.0 kg	~10 m <sup>2</sup> · ~8.0 m <sup>2</sup> @ 80 %
DZD200NO	200 W	~1.4 kg	~20 m <sup>2</sup> · ~16 m <sup>2</sup> @ 80 %

### CONTROL INTERFACES · IN SUMMARY

INTERFACE	USE
Front-panel ON/OFF button	Local manual master switch on the housing
RF remote (supplied 4-button)	Wireless on/off + dim up / dim down
CONTROL PANEL port	RJ-style connector for the optional 86-format wall-knob (smooth rotary dim)
CS terminals (Connect Switches)	Voltage-free dry-contact input for magnetic / infrared / induction door switch · same rule as PJ-C / PJ-D SWITCH
CASCADE B– A+	RS-485 bus for BMS / multi-drive cascade · BACnet / Modbus via translator on the BMS side
K terminal	Auxiliary key / induction-lock input · pairs with PRIVASEE induction lock for door-state-aware privacy

### BILL OF MATERIALS · PER PANEL INSTALL (TYPICAL UAE VALUES)

REF	ITEM	QTY
U1	PRIVASEE® DZD-NO drive (50 / 100 / 200 NO per panel size)	1

—	4-button RF remote handset (supplied with drive)	1
—	86 wall-knob (optional · plugs into CONTROL PANEL)	0–1
—	Magnetic / infrared / induction switch (optional · CS terminals)	0–1
W0	Mains feed cable from sub-board to INPUT (L · N · E) · 3-core 1.5 mm <sup>2</sup>	1
W1	Output cable from drive to PDLC panel busbar · 2-core 1.5 mm <sup>2</sup> LV (≤ 10 m typical)	1
W2	RS-485 CASCADE cable (optional, for BMS) · shielded twisted pair	0–1
Q1, F1, RCD	Upstream isolator + 6 A C-curve MCB + 30 mA Type AC RCD (UAE typical)	per project
E1	PRIVASEE® PDLC smart film panel	1

**▲ WARNING · CS TERMINAL IS VOLTAGE-FREE**

The CS (Connect Switches) terminal pair is passive dry-contact input — same rule as PJ-C / PJ-D SWITCH terminals. Never apply mains, low-voltage AC or DC to CS. Connect only voltage-free contacts (magnetic switch · infrared sensor · induction relay).

**▲ WARNING · OUTPUT IS VARIABLE AC**

The OUTPUT terminals deliver a variable AC waveform (chopped or amplitude-modulated for dimming). Use only with PRIVASEE® PDLC panels designed to accept variable drive. Do not connect to lighting, motors or other AC loads — the variable output is purpose-built for PDLC dimming and may damage other equipment.

## 05 Contact & document close

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### COMPANION DOCUMENTS

DOC NUMBER	TITLE
PVS-SGS-DAT-DZD	DZD-NO Variable Power Drive — Product Datasheet (compact spec sheet)
PVS-SGS-TEC-01a/b	FM Smart Film Datasheet series (panel side)
PVS-SGS-TEC-02	SG-01 / LG-01 / LG-02 Smart Glass Datasheet
PVS-SGS-QUA-01b	PRIVASEE® Smart Glass Warranty (GCC edition)
PVS-SGS-TEC-11b	Smart Film & Smart Glass Maintenance Guide (GCC edition)

### REVISION HISTORY

REV	DATE	DESCRIPTION
1.0	2026-05-05	Initial release · DZD-NO family (DZD50NO / DZD100NO / DZD200NO) variable / dimming integration annex · uses PRIVASEE-branded Canva assets

### DOCUMENT APPROVAL

ROLE	NAME	DATE
PRIVASEE® preparer	PRIVASEE® Smart Glass Engineering	2026-05-05 · DRAFT
PRIVASEE® approver	[awaiting founder approval]	—
Project licensed electrician	[name · qualification · date]	—
Project BMS / HA integrator (when CASCADE used)	[name · qualification · date]	—

The DZD-NO variable / dimming annex is a standalone document and does not reference other power drives. Comments to info@privasee.uk referencing *PVS-SGS-MAN-DZD-INT-01 Rev 1.0*.