

# ELECTRIC PROTECTION AND CONTROL PANELS

E.BOX



## TECHNICAL DATA

### Nominal power input voltage:

e.box plus 1x 230 V / 3 x 230 V - 3 x 400 V (automatic selection)

e.box basic 1x 230 V

**Frequency:** 50 - 60 Hz

### Maximum power of use:

e.box plus 5,5 kWatt + 5,5 kW

e.box basic 2,2 kWatt + 2,2 kW

**Maximum current of use:** 12 A + 12 A

**Starting capacitor:** Supplied as accessory KIT

**Ambient temperature operation limits:** -10 °C + 40 °C

**Air relative humidity:** 90 % at 20 °C

**Max. altitude:** 1000 a.s.l.

**Protection class:** IP 55

**Display:** 1,6" for e.box PLUS D and e.box BASIC D models

Standard of reference for the construction of the control panels EN 60335-1.

## APPLICATIONS

E.box is an electronic control panel that provides all the functions and protections required for the installation of a pumping set for draining, filling, and pressurisation purposes.

**E.BOX PLUS** is an electric control panel for automatic protection and operation of one or more submersible electric pumps or pressure booster pumps, both single and three phase, for domestic, civil, and industrial applications. Thanks to the current regulation possibility, the e.box control panel is compatible with all pump models with current between 1 and 12 A, with power up to 5,5 kW.

**E.BOX BASIC** is an electric control panel for automatic protection and operation of one or more single phase submersible electric pumps or pressure booster pumps for domestic applications. The e.box control panel is compatible with all single phase pump models with current between 1 and 12 A, with power up to 2,2 kW, as indicated in the product compatibility table.

## CONTROL PANEL CONSTRUCTION

Supplied in an IP 55 protection class self-extinguishing thermoplastic material box, the control panel protects the electric pumps from abnormal conditions such as: overload and overtemperature (with automatic reset), short circuit (with fuses - Plus model only), pump current surges (amperometric protection), abnormal voltage, dry run, quick starts, pressure sensor fault, or inconsistency of the external protection commands.

## FRONT PANEL COMPONENTS

- General disconnecter with padlockable door lock.
- AUT-O-MAN operation selection pushbuttons.
- Alarm RESET pushbutton.
- Operation, stop, alarm notification lamps.
- Display, for PLUS D or BASIC D models.

## PANEL INTERNAL COMPONENTS

- Electronic control card with protection fuses and contactors.
- Power input connection terminals, single phase (L-N in the Basic version), or three phase (L1-L2-L3 in the Plus version).
- Electric pump connection terminals, single phase (L-N in the BASIC version), or three phase (L1-L2-L3 in the PLUS version).
- Terminals for the connection of pressure switches, sensors, KK thermal protection, alarm notification N.O. contacts. Operation selection dip switch: level floats or sensor, tank filling and emptying, operation with one or two pumps also for the version with display.

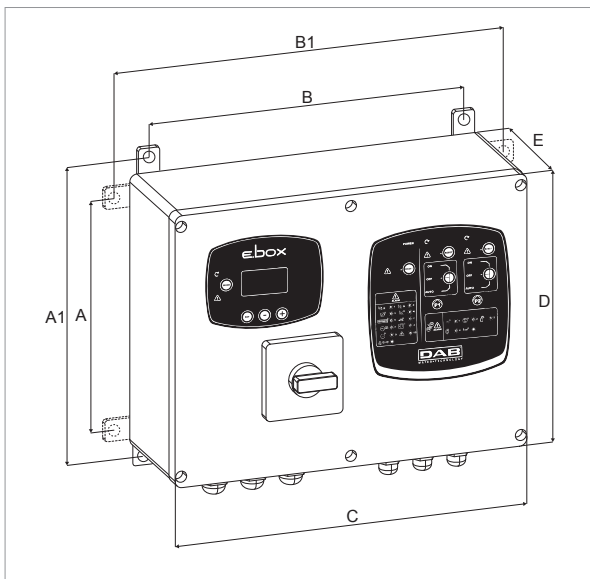
## SOFTWARE

For the models with display, the software

- During the first installation, provides step by step guidance in the selection of the correct settings based on the actual application.
- Makes the status of the control panel and the pumps clearly and immediately visible.
- When compared to the previous model, makes it easier to change the level settings, as operation of the control panel dip switch is no longer required.

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E.BOX



MODEL	A	A1	B	B1	C	D	E	PACKING DIMENSIONS			WEIGHT kg
								L/A	L/B	H	
<b>E.BOX BASIC 230/50-60</b>	212	265	282	337	320	260	120	250	430	310	4
<b>E.BOX PLUS 230-400V/50-60</b>	212	265	282	337	320	260	120	250	430	310	5
<b>E.BOX BASIC D 230/50-60</b>	212	265	282	337	320	260	120	250	430	310	4
<b>E.BOX PLUS D 230-400V/50-60</b>	212	265	282	337	320	260	120	250	430	310	5

MODEL	ELECTRICAL DATA					
	POWER INPUT 50 HZ	STARTING	P2 NOMINAL		MAX CURRENT A	DISPLAY
			kW x2	HP x2		
<b>E.BOX BASIC 230/50-60</b>	1X230 V~	direct	2,2	3	12+12	
<b>E.BOX PLUS 230-400V/50-60</b>	1X230 V~	direct	2,2	3	12+12	
	3X230 V~		3	4		
	3X400 V~		5,5	7,5		
<b>E.BOX BASIC D 230/50-60</b>	1X230 V~	direct	2,2	3	12+12	•
<b>E.BOX PLUS D 230-400V/50-60</b>	1X230 V~	direct	2,2	3	12+12	•
	3X230 V~		3	4		
	3X400 V~		5,5	7,5		