# SOLAR GUARDIAN KIT edition 00 : data 23/01/2025 BREMAS BETTER SWITCHES KA1503005MUAEC **SOLAR GUARDIAN KIT FOR 5 INPUTS** Kit for DIN rail for vertical or horizontal mounting supplied as spare parts N Ò 0 t WIRING DIAGRAM + + + + + + -+ -

IN IN +3 -3

FROMPV

IN +1 IN -1 IN +2 IN -2

FROM PV

IN IN +4 -4

FROM PV FROM PV

IN IN +5 -5

FROM PV

FB1

DC 24V

GND

50/60Hz 100+240V

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+1

+2

OUT OUT OUT OUT OUT OUT OUT OUT OU

+4 TO TO TO TO TO TO TO INVERTER INVERTER INVERTER INVERTER

+3

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ISO 9001 Certified Quality System

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Static

window

## DX150305MUAEDSC

#### **Disconnect switch**

Technical data according to IEC 60947-3:2021					
Utilization category			PV1 (DC-21B)	PV2	
Rated operational voltage	Ue	V dc	1500	1500	
Rated operational current	le	Α	20	8	
Rated operational voltage (second rating)	Ue	V dc	1300	1300	
Rated operational current (second rating)	le	Α	25	10	
Rated operational voltage (third rating)	Ue	V dc	1250	1250	
Rated operational current (third rating)	le	Α	30	12	
Rated operational voltage (fourth rating)	Ue	V dc	1000	1000	
Rated operational current (fourth rating)	le	Α	50	20	
Rated operational voltage (fifth rating)	Ue	Vdc	-	800	
Rated operational current (fifth rating)	le	Α	-	30	
Rated operational voltage (sixth rating)	Ue	V dc	-	700	
Rated operational current (sixth rating)	le	Α	-	40	
Rated thermal current	lth	Α	50		
DC Poles		Nr.	10		
Rated conditional short-circuit current		kA	5		
Rated insulation voltage	Ui	V dc	1500		
Rated impulse withstand voltage	Uimp	kV	8		
Rated short-time withstand current (1 s)	Icw	A	780		
Rated short-circuit making capacity	Icm	kA	1,4		
Power loss per layer at 20 A / 50 A		W	0,2/1,25		
Maximum size of the fuse for the short-circuit protection	gPV	Α	50		
Mechanical characteristics					
Type of mounting			Base mounting Back-side for DIN rail or 2 screws fixin For direct operation With pre-mounted status indicator		
Layers		Nr.	12		
Terminal screws orientation			Head	•	
External metal parts (screws, shaft)			Stainless		
Cross-section of flexible/solid wires	Max.	mm² AWG	2x 6 2x 10		
Cross-section of wires with fork lug	Max.	mm² AWG	1x 16 1x 6		
Connection cable length from PCB to motor (+/-)	Length	mm	~250		
and connection cable length of NO-NC auxiliary switches	Section	mm <sup>2</sup> / AWG	0,5/	20	
FB1 and FB2 signal connection cables	Note		Not sup	plied	
	solid wire/stranded	mm <sup>2</sup>	0,129-1,31 26-16		
	wire - min. / max. maximum length	AWG	50		
Minimum required fine wire cross section: IEC 60047.4. table 6	allowed				
Minimum required fine wire cross-section: IEC 60947-1, table 9 Terminal screws type	2		МА Г	040	
Terminal screws type Terminal screws tightening torque		Nm	M4 – PH2		
			1,7±1	1,7±10%	
Net weight		g	620	J	
Protection degree IEC 529 EN 60529					
To the terminal			IP2	U	
Ambient conditions					
Pollution degree ins.			2		
Operational ambient temperature		°C	-30 ÷ +50		
Storage ambient temperature		°C		-30 ÷ +85	
Damp heat test IEC 60068-2-30			90-100% RH at +55 °C		

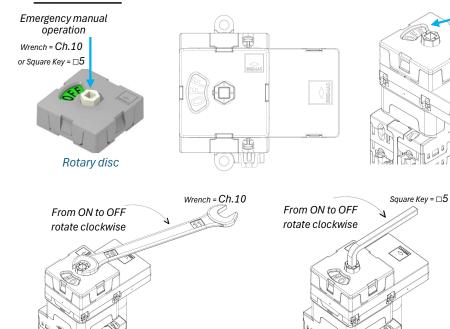
#### Motor driven actuator

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Rated operational voltage	Ue	Vdc	24 ±5%	
Rated operational current	le	A	0,4	
Stall current	Max.	A	1,4	
Free-load current		A	0,10	
Free-load speed	Max.	rpm	20 ±3	
Rated load current		A	0,15	
Rated load speed		rpm	17,6 ±2	
Output power at Max. efficiency		W	1,55	
Terminal type			Solder (supplied with wiring)	
Pre-soldered cables length		mm	300	
Protection degree to the terminals			IP00*	
Operating features				
Rotation direction		Clockwise (90deg)		
Position (status indicator)		Rotary disc with static window at 09:00 o'clock		

\* Pre soldered wiring with heat-shrink sheath

### Status indicator



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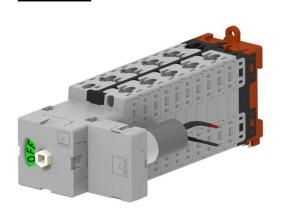


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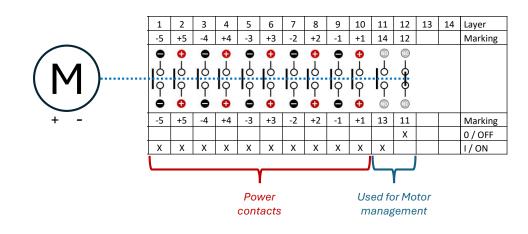
Product image

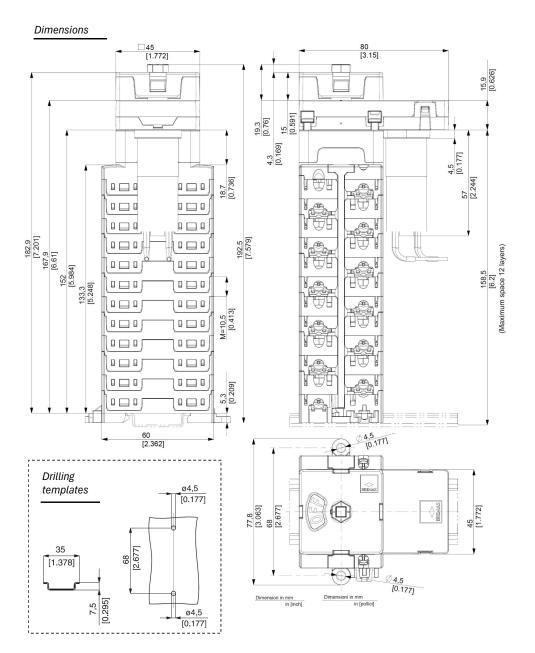




Screwdriver orientation for terminal fixing

### Electrical Diagram





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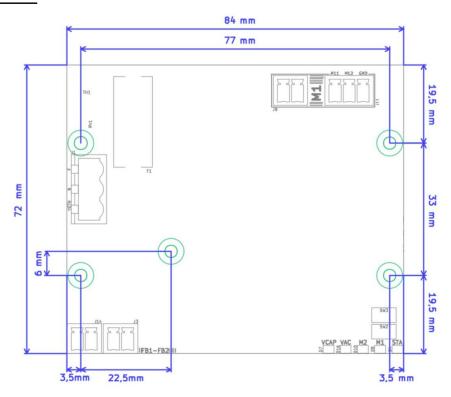
# FSEB1M

**Electronic board** 

Product image



Dimensions



### Technical data

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AC supply			
Voltage range		V ac	100240
Rated operational voltage		V ac	230 ±5%
Frequency range		Hz	50/60
Rated operational current (stand-by)		mA	≅ 20
Rated operational current (peak)	Max.	mA	≅ 400
Overvoltage protection		V ac	275 (varistor)
Functional data			
Capacitors charging time	Max.	S	÷18
FB terminals (J3-J14) – Electrical parameters	Max.		24 Vdc – 100 mA
Temperature for automatic shutdown		°C	+100
Mechanical characteristics			
Dimensions (L x H x P)		mm	84 x 72 x 25
Net weight		g	76 (FSEB1M) – 81 (FSEB2M)
	Max	mm <sup>2</sup>	2
Cross-section of flexible/solid wires (J1 terminal)		AWG	14
Cross section of flouible (solid using (10, 10, 10, 111, 110, 114 terminals)	Max.	mm²	1,3
Cross-section of flexible/solid wires (J2-J3-J9-J11-J12-J14 terminals)		AWG	16
Ambient conditions			
Operational ambient temperature		°C	-30 ÷ +50
Storage ambient temperature		°C	-30 ÷ +85
Humidity			90-100% RH at +55 °C

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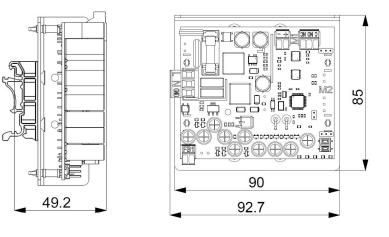


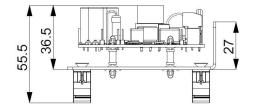
#### **DIN support**

Horizontal mounting



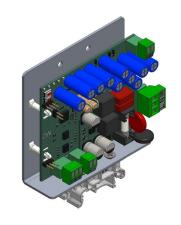


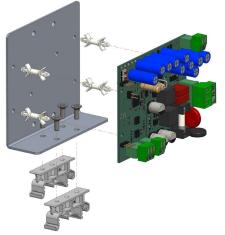




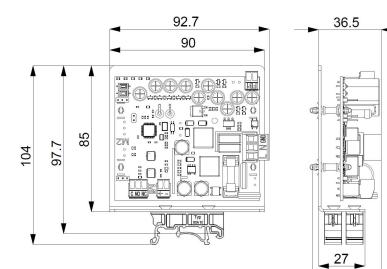
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