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

@2017 Copyright Bremas Ersce. Subject to change without notice and errors excepted. Data reported in this paper are carefully checked and represent typical values of series productions. The descriptions of the device and its applications, contexts of use, details of external controls, information and operation are provided to the best of our knowledge. In any case, this does not mean from the features described it may derive legal responsibilities that extend beyond the "Terms and Conditions of sales" of Bremas Ersce. The customer / user must examine our information and recommendations and the relevant technical regulations before using the products its own purpose.

+1

+2

OUT OUT OUT OUT OUT OUT OUT OUT OU

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

+3

Bremas Ersce S.p.A.

CE

Via Castellazzo 9 - 20040 Cambiago (MI) Tel +39 02 95651611 Fax +39 02 95651639 www.bremas.it info@bremas.it

ISO 9001 Certified Quality System

edition 00 : data 23/01/2025 BREMAS

BETTER SWITCHES

Bremas Ersce S.p.A. Via Castellazzo 9 - 20040 Cambiago (MI) Tel +39 02 95651611 Fax +39 02 95651639 www.bremas.it info@bremas.it ISO 9001 Certified Quality System

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 ² / AWG	0,5/	20	
FB1 and FB2 signal connection cables	Note		Not sup	plied	
	solid wire/stranded	mm ²	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		

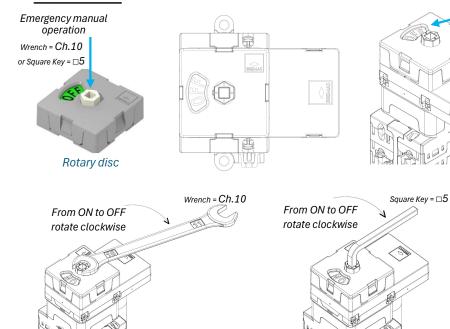
Motor driven actuator

CE

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



@2017 Copyright Bremas Ersce. Subject to change without notice and errors excepted. Data reported in this paper are carefully checked and represent typical values of series productions. The descriptions of the device and its applications, contexts of use, details of external controls, information and operation are provided to the best of our knowledge. In any case, this does not mean from the features described it may derive legal responsibilities that extend beyond the "Terms and Conditions of sales" of Bremas Ersce. The customer / user must examine our information and recommendations and the relevant technical regulations before using the products its own purpose.

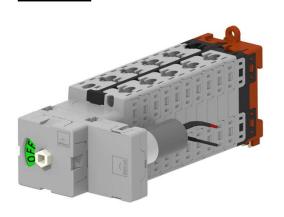


edition 00 : data 23/01/2025

Bremas Ersce S.p.A. Via Castellazzo 9 – 20040 Cambiago (MI) Tel +39 02 95651611 Fax +39 02 95651639 www.bremas.it info@bremas.it ISO 9001 Certified Quality System

DX150305MUAEDSC

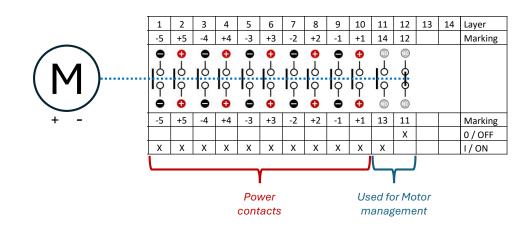
Product image

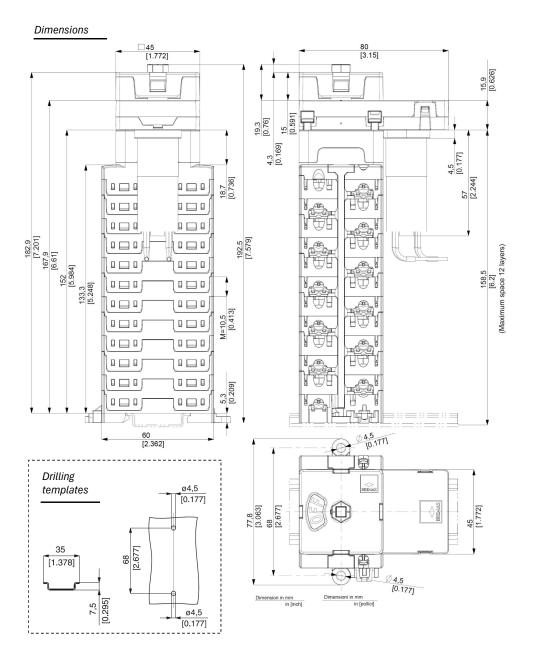




Screwdriver orientation for terminal fixing

Electrical Diagram





@2017 Copyright Bremas Ersce. Subject to change without notice and errors excepted. Data reported in this paper are carefully checked and represent typical values of series production. The descriptions of the device and its applications, contexts of use, details of external controls, information and operation are provided to the best of our knowledge. In any case, this does not mean from the features described it may derive legal responsibilities that extend beyond the "Terms and Conditions of sales" of Bremas Ersce. The customer / user must examine our information and recommendations and the relevant technical regulations before using the products its own purpose.



BETTER SWITCHES

Bremas Ersce S.p.A. Via Castellazzo 9 - 20040 Cambiago (MI) Tel +39 02 95651611 Fax +39 02 95651639 www.bremas.it info@bremas.it ISO 9001 Certified Quality System

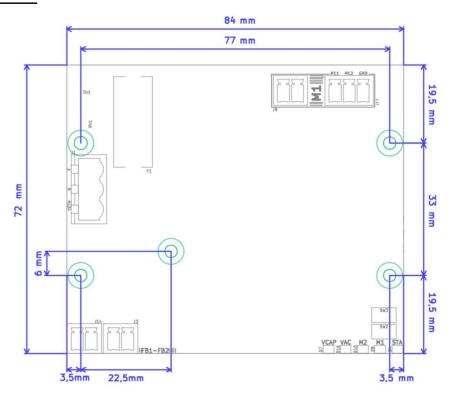
FSEB1M

Electronic board

Product image



Dimensions



Technical data

CE

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 ²	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

edition 00 : data 23/01/2025

@2017 Copyright Bremas Ersce. Subject to change without notice and errors excepted. Data reported in this paper are carefully checked and represent typical values of series production. The descriptions of the device and its applications, contexts of use, details of external controls, information on installation and operation are provided to the best of our knowledge. In any case, this does not mean from the features described it may derive legal responsibilities that extend beyond the "Terms and Conditions of sales" of Bremas Ersce. The customer / user must examine our information and recommendations and the relevant technical regulations before using the products its own purpose.



BREMAS

BETTER SWITCHES

Bremas Ersce S.p.A. Via Castellazzo 9 – 20040 Cambiago (MI) Tel +39 02 95651611 Fax +39 02 95651639 www.bremas.it info@bremas.it ISO 9001 Certified Quality System

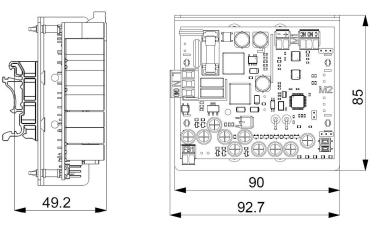


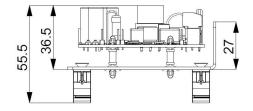
DIN support

Horizontal mounting



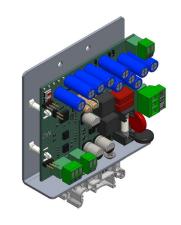


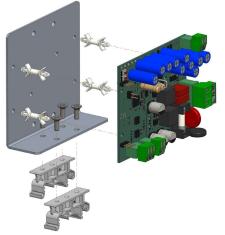




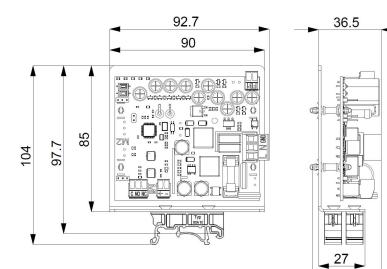
CE







40



edition 00 : data 23/01/2025

@2017 Copyright Bremas Ersce. Subject to change without notice and errors excepted. Data reported in this paper are carefully checked and represent typical values of series production. The descriptions of the device and its applications, contexts of use, details of external controls, information and operation are provided to the best of our knowledge. In any case, this does not mean from the features described it may derive legal responsibilities that extend beyond the "Terms and Conditions of sales" of Bremas Ersce. The customer / user must examine our information and recommendations and the relevant technical regulations before using the products its own purpose.