

SA 05 - SA 05X + PCU ELECTRIC ACTUATOR

FEATURES

The electric actuator SA 05 PCU is intended for the motorization of 1/4 turn valves with a regulating function. The operating torque is 50 Nm. Of compact and sturdy construction with aluminum case epoxy IP67, The actuator SA is particularly well adapted to the motorization of painted ball and butterfly valves installed in workshop or outside. The SA 05 PCU is provided with a manual device by key and with a 3D visual indicator of position. Functioning 3 points. Proportional control 4-20mA. it is in accordance with the standard EN 15714-2. The SA-X version can be installed in an hazardous area.

AVAILABLE MODELS

Voltages of supply : 230V CA (50-60Hz), 24V CA/CC

Regulation board: 0-10 V / 2-10 V / 0-20 mA / 4-20 mA / Copy 4-20 mA.

LIMITS OF USE

Indication of protection	IP 67	
Room temperature	SA05 PCU	SA05X PCU
	- 20°C / +55°C	- 20°C / +70°C
Duty Factor	S2 : 15mn - S4 : 50%	



ATEX APPROVAL

Protection mode	"d" according to the EN 60079-1 standard
Category of material	2
Operation zones	1G and 2G
Marking	II 2 G Ex d IIB T4 (ON KEMA no. 0344)



SA05 + PCU

SA05X + PCU



MECHANICAL CHARACTERISTICS

Gear	Steel cogs handled	
Torque	50 Nm	
Angle of rotation	90° +/- 5°	
Declutch	Without	
Manual override	By key	

Actuator	SA05 / SA05X + PCU	
Voltage	230V CA	24V CA/CC
Torque (Nm)	50	
Time of operation (s)	17	17
ISO 5211	F03/F05/F07 Star 14	



Information given as an indication only, and subject to possible modifications



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Pages	1/8
Ref.	TDS23050
Rev.	09
Date	10/2024

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ELECTRIC CHARACTERISTICS

Protection of the motor	Thermal regulation	Resistance heater	5W heater
Limit swithes	2 adjustable swithes	Electric connecting	2 x P.E. M20x1.5
Auxiliary swithes	2 adjustable dry swithes		

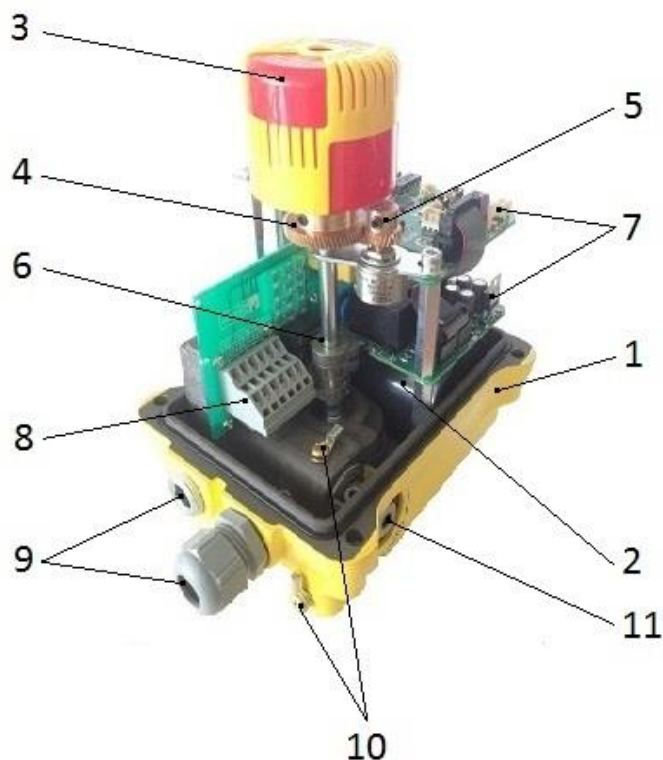
Actuator	SA05 / SA05X + PCU	
Voltages	230V CA	24V CA/CC
Power consumption (W)	6 W	15 W
Intensity (A)	0,23	1,8

SIGNALS OF REGULATION

Input signals	Signals of copy
0 - 5 V	4 - 20 mA
0 - 10 V	
2 - 10 V	
1 - 5 V	
4 - 20 mA	

CONSTRUCTION

N°	Item
1	Housing
2	Electric motor
3	Position indicator
4	Wheel
5	Potentiometer of copy
6	Cams
7	Regulation PCB
8	Terminal block
9	Cables entrances
10	Grounding
11	Manual override



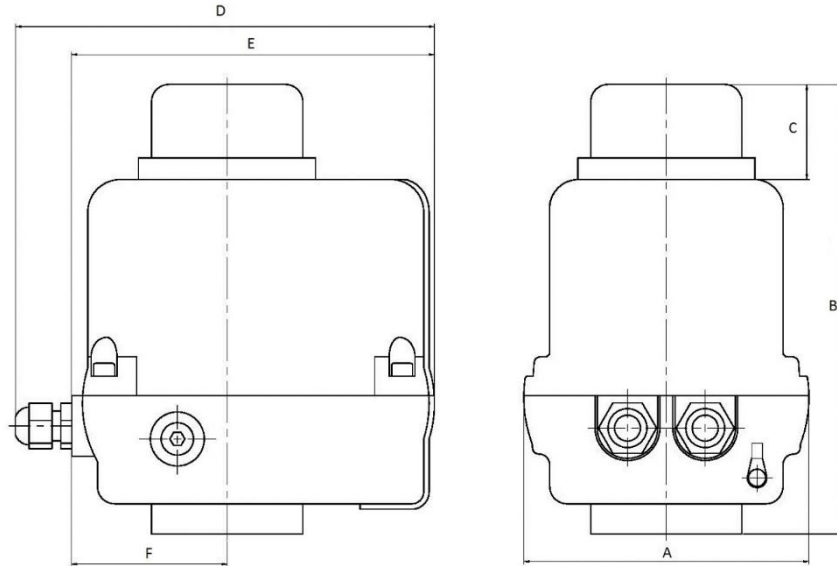
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		Ref.	TDS23050
		Rev.	09
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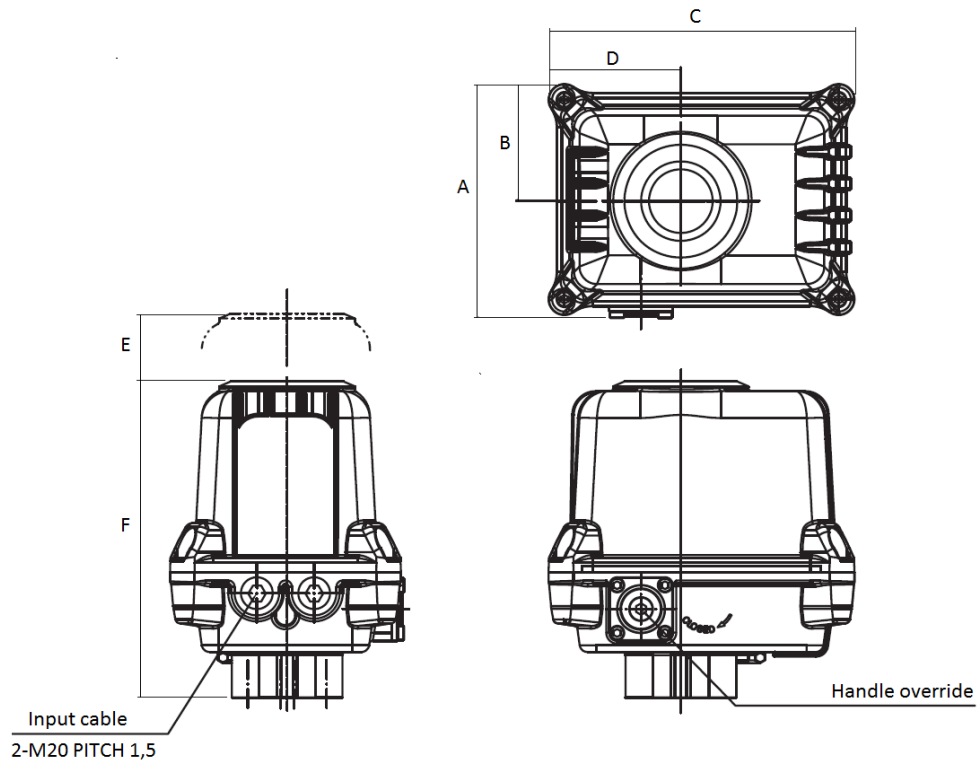
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DIMENSIONS (mm) AND WEIGHT (Kg)

Dimensions (mm)	A	B	C	D	E	F	Weight (Kg)
SA05 + PCU	132	208	44	194	168	72	4



Dimensions (mm)	A	B	C	D	E	F	Weight (Kg)
SA05X + PCU	147	73	193	83	100	199	5



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			Ref.	TDS23050
			Rev.	09
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SPARE PARTS

SA05 / SA05X + PCU Electric actuator	
Gear box	
Printed circuit board	
Electrical motor	
Transformer relay printed circuit board	
All printed circuit board kit	
https://www.sectoriel.com/fr/sa05pcu-servomoteur-electrique-de-regulation-1-4-tour-50nm-ip67.html	

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		Ref.	TDS23050
		Rev.	09
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ASSEMBLING AND MAINTENANCE INSTRUCTIONS



SA05 + PCU



SA05X + PCU



1. DESCRIPTION

- 1.1 Electric actuator for motorising 90° turn valves.
- 1.2 The full features of this device are given in sheets FT23050.
- 1.3 Before operating this device, read the present instructions carefully.

2. GUARANTEE

- 2.1 Before any contact with our services, identify the type of actuator.
- 2.2 SECTORIEL actuators have a 12-month guarantee as of the delivery date. The parts recognized as defective by an assessment at our facility, will be replaced at our expense. Complaints generated by incorrect use or a modification of the actuator cannot be taken into account.

3. VERIFICATIONS AND ACCEPTANCE

- 3.1 At acceptance, check that:
 - the packaging is in good condition;
 - the actuator is as ordered;
 - the equipment is not damaged.
- 3.2 It is recommended to install the actuator as soon as accepted and not to leave it unused. If the equipment has to be stored, it has to be in a dry place protected from weather.

4. PRECAUTIONS FOR OPERATION

- 4.1 Before installing, make sure that the installation is completely depressurized and brought to ambient temperature.
- 4.2 Do not install this actuator in a zone classified as explosive.
- 4.3 The protection class of the actuator is IP67 for indoors or outdoors installation. Do not install this actuator in a marine environment and do not immerse it.
- 4.4 The actuator must not be electrically powered during the installation and maintenance of the valve on the pipework, and of the actuator on the valve
- 4.5 Before proceeding to the electrical connection, check the supply voltage of the actuator.
- 4.6 Do not mount the actuator in series or in parallel with other electrical motors. If need be, use relays.
- 4.7 Do not mount the actuator on valves with higher torque than the nominal torque of the actuator.

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		Ref.	TDS23050
		Rev.	09
		Date	10/2024

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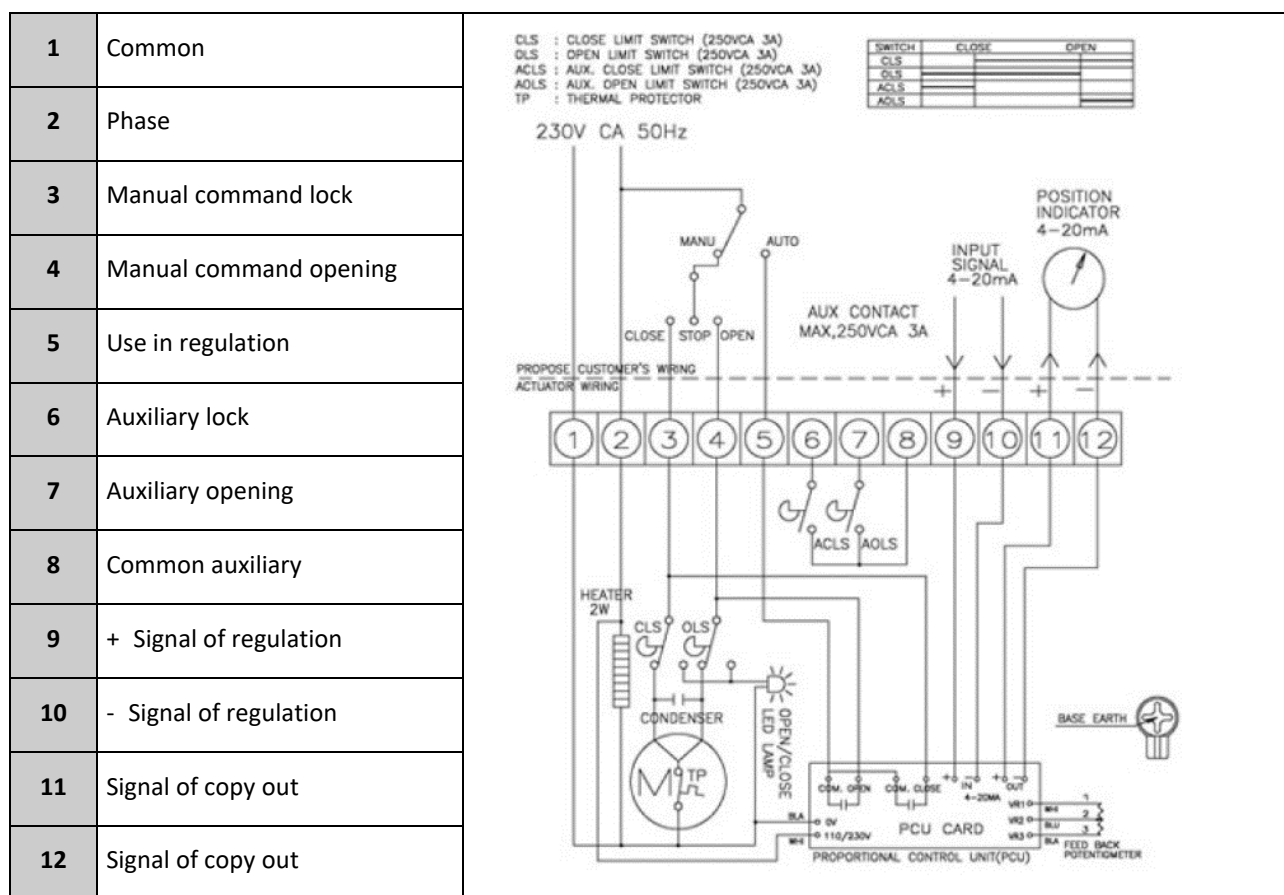
5. INSTALLATION AND OPERATION

- 5.1 Install the actuator on the valve (already done for units assembled in our workshops)
- 5.2 Perform the electrical wiring as shown in the diagram below.
- 5.3 Adjust the switch stops (already done for units assembled in our workshops).
- 5.4 View the valve's movement using the indicator light on the cover.
- 5.5 SA05 / SA05X PCU actuator: to actuate the handle override, first disconnect the electrical power supply, then turn the hollow hex-head screw with an Allen key.

6. SWITCH SETTING

- 6.1 The cams are attached to the drive stem.
- 6.2 Clockwise rotation = valve closing. The micro-switch stops the actuator.
- 6.3 Anti-clockwise rotation = valve opening. The micro-switch stops the actuator.

WIRING DIAGRAM 230V CA 50Hz



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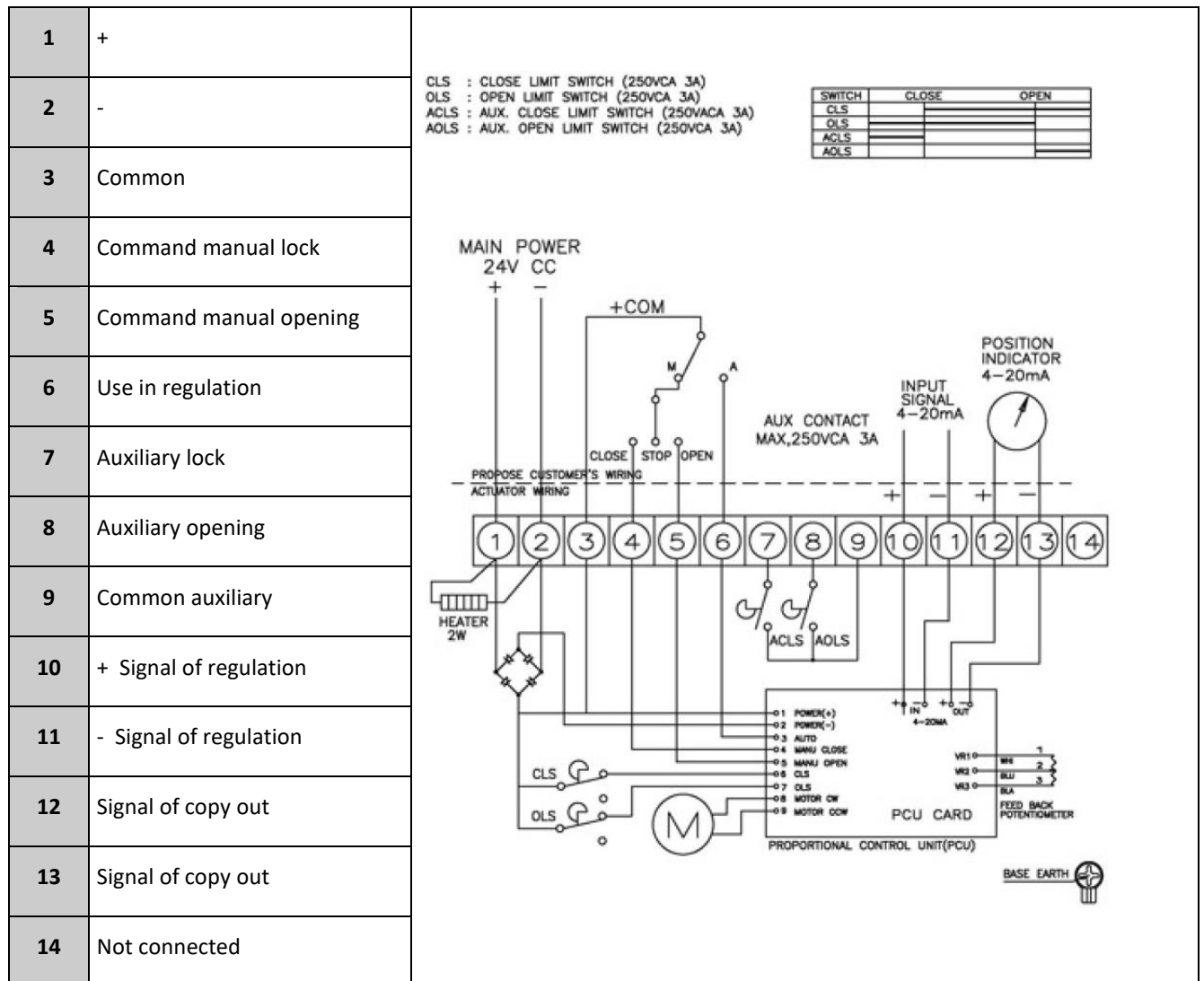


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Pages	6/8
Ref.	TDS23050
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WIRING DIAGRAM 24V CA/CC



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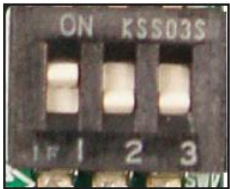
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		Ref.	TDS23050
		Rev.	09
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PCU BOARD SPECIFICATION



Name	Spec.
ZERO	Close manual control button / Input module button
SPAN	Open manual control button / Input module button
ASCN	AUTO SCAN BUTTON (ACTUATOR automatic control button) delivered from the factory the resistance value of potentiometer may can be changed if the user modifies its limit setting. Please make sure to press the autoscan button for at least 2 seconds before operating proportional control.

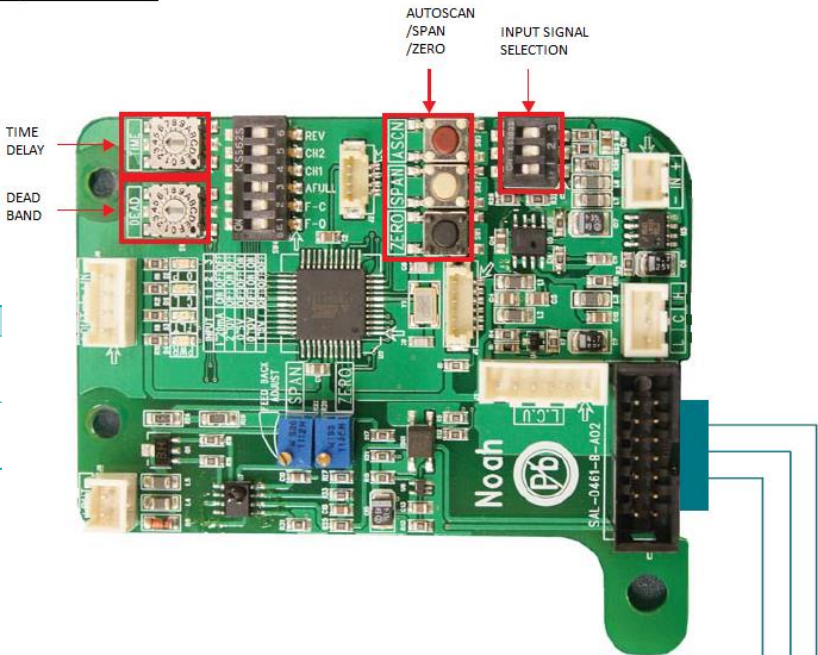


INPUT	S/W	1	2	3
4 – 20mA	ON	ON	OFF	OFF
2 – 10V	OFF	ON	ON	OFF
0 – 5V	OFF	OFF	OFF	ON
0 – 10V	OFF	OFF	ON	ON
1 – 5V	OFF	OFF	OFF	OFF

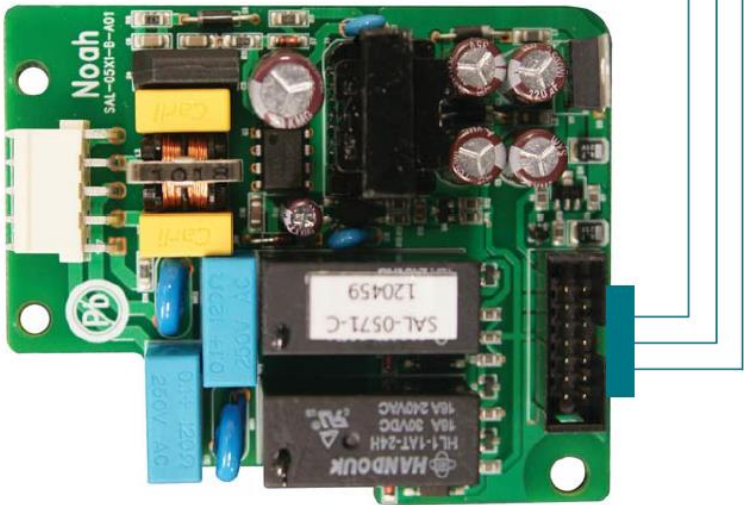
PCU Board specification



Name	Spec.
DEAD BAND	Mechanical steps at least (0,2ma)
TIME DELAY	Modulating starting time (1sec)



PCU Board



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		Ref.	TDS23050
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