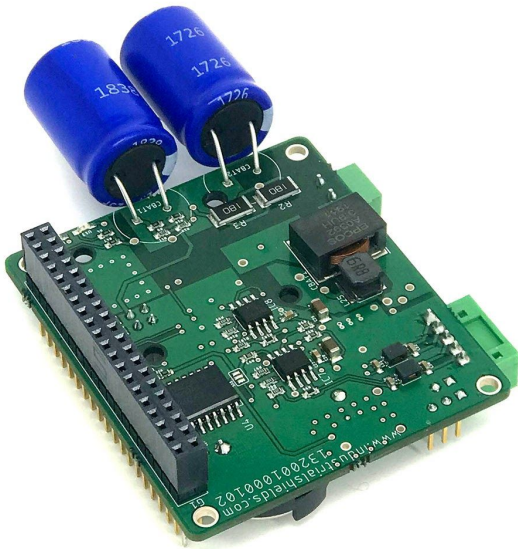




INDUSTRIAL SHIELDS

Raspberry Pi UPS & RTC Shield



- Plug&Play UPS Smart Shield and Real Time Clock (RTC) for Raspberry Pi
- Avoid any SD corruption issue
- 12Vdc or 24Vdc
- With RS485 protocol available
- Compatible in all Raspberry Pi B versions.
- Recharge Time: Less than 1 minute.
- Reconnecting time: Less than 20 seconds.

Raspberry Pi UPS & RTC Shield

Revised April 2020

Preface

This User Guide is been implemented by Boot & Work, S.L. working under the name Industrial Shields.

Purpose of the manual

The information contained in this manual can be used as a reference to operating, to functions, and to the technical data of the signal modules, power supply modules and interface modules.

Intended Audience

This User Guide is intended for the following audience:

- Persons in charge of introducing automation devices.
- Persons who design automation systems.
- Persons who install or connect automation devices.
- Persons who manage working automation installation.

Intended use or of Industrial Shields products

Consider the following:

Industrial Shields products should only be used for the cases of application foreseen in the catalogue and the associated technical documentation. If third-party products and components are used, they must have been recommended or approved by Industrial Shields.

The correct and safe operation of the products requires that your transport, storage, installation, assembly, operation and maintenance have been carried out in a correct It must respect the permissible ambient conditions. You should also follow the indications and warnings that appear in the associated documentation.

The product / system dealt with in this documentation should only be handled or manipulated by qualified personnel for the task entrusted and observing what is indicated in the documentation corresponding to it, particularly the safety instructions and warnings included in it. Due to their training and experience, qualified personnel are in a position to recognize risks resulting from the handling or manipulation of such products / systems and to avoid possible hazards.

Disclaimers

Weights and Dimensions

Dimensions and weights are nominal and they are not used for manufacturing purposes, even when tolerances are shown.

Performance Data

The performance data given in this manual is provided as a guide for the user in determining suitability and does not constitute a warranty. It may represent the result of INDUSTRIAL SHIELDS's test conditions, and the users must correlate it to actual application requirements. Actual performance is subject to the INDUSTRIAL SHIELDS Warranty and Limitations of Liability.

Change in Specifications

Product specifications and accessories may be changed at any time based on improvements and other reasons.

It is our practice to change model numbers when features are changed, or published ratings or when significant construction changes are made. However, some specifications of the products may be changed without any notice. When in doubt, special numbers may be assigned to fix or establish key specifications for your

application on your request. Please consult with your INDUSTRIAL SHIELDS representative at any time to confirm actual specifications of purchased products.

Errors and Omissions

The information in this document has been carefully checked and is believed to be accurate; however, no responsibility is assumed for clerical, typographical, or proofreading errors, or omissions.

These components may only be operated in closed housings or in higher-level control cabinets with protective covers that are closed, and when all of the protective devices are used. These components may only be handled by qualified and trained technical personnel who are knowledgeable and observe all of the safety information and instructions on the components and in the associated technical user documentation. When carrying out a risk assessment of a machine in accordance with the EU Machinery Directive, the machine manufacturer must consider the following residual risks associated with the control and drive components of a PDS.

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1 General Description

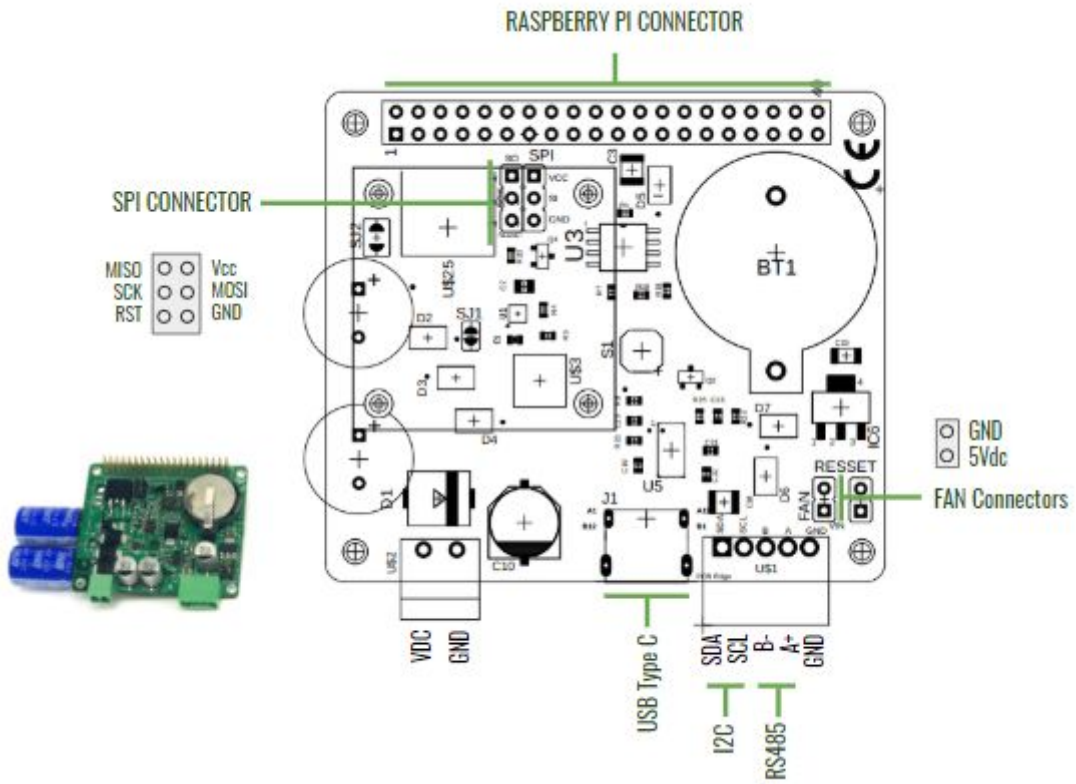
1.1. General Specifications

Operational Voltage	Current	Max. Current	Spuer Capacitors	Certificate	Possible MCU Connections	RTC
12 or 24Vdc (Antipolarity + Filter)	3 A (Autoprotected by chip)	3,5 A	x2 (25F)	CE, RoHs	-Raspberry Pi 3B+ -Raspberry Pi 4B -Tinkerboard (ASUS)	DS3231 Coin cell : CR2032

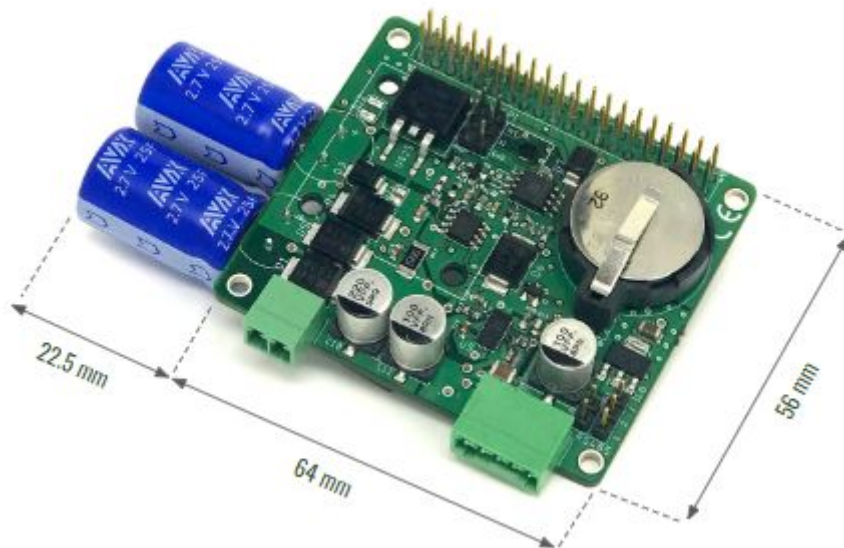
1.2. Available Communications & Accessories

- RS-485 Port
- ICSP Connector
- I2C (3,3Vdc)
- USB Type-C (Power Only)
- RTC
- Raspberry Pi Connectors
- Possibility of connecting a 5Vdc fan

1.3. UPS & RTC Shield Pinout



1.4. Mechanical dimension



1.5. Raspberry PI Pinout Connector

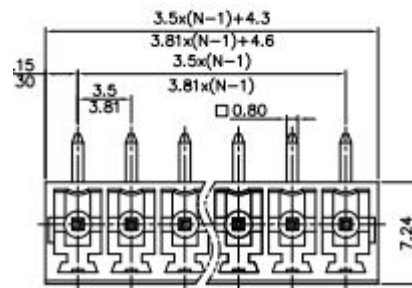
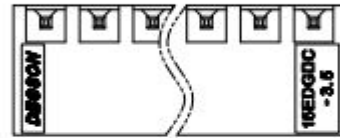
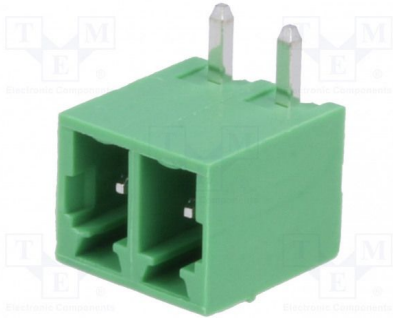
	NC	1	2	Vin	
SDA	GPI02	3	4	Vin	
SCL	GPI03	5	6	GND	
	NC	7	8	GPI014	TXD
	GND	9	10	GPI015	RXD
RE	GPI017	11	12	NC	
DE	GPI027	13	14	GND	
	NC	15	16	GPI023	UPS Control from RASPBerry
	NC	17	18	GPI024	UPS Control to RASPBerry
	NC	19	20	GND	
	NC	21	22	NC	
	NC	23	24	NC	
	GND	25	26	NC	
	NC	27	28	NC	
	NC	29	30	GND	
	NC	31	32	NC	
	NC	33	34	GND	
	NC	35	36	NC	
	NC	37	38	NC	
	GND	39	40	NC	

I2C
Serial TTL
RS485
UPS

1.6. Connectors:

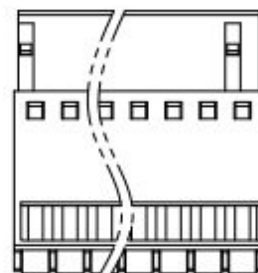
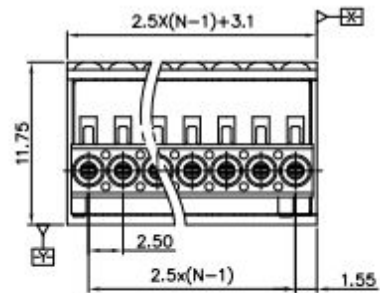
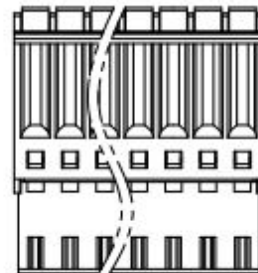
- POWER CONNECTOR:

SKU: 15EDGRC-3.81-02P-14-00A(H)



- COMMUNICATIONS CONNECTOR:

SKU: 15EDGKD-2.5-XXP-1Y-00A(H)



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