

Technical Features **CONECTABLE PLC RASPBERRY PI 24Vcc**

MODEL TYPE	Individual Board / Expansion Board
Input Voltage	12 to 24Vdc (Fuse protection (2.5A) Polarity protection)
Input rated voltage	24Vdc
Rated Power	30 W
I max.	15A
Size	116x101x44 (mm)
Communications	I2C, RS-232 (DB-9 Connector)

General Features

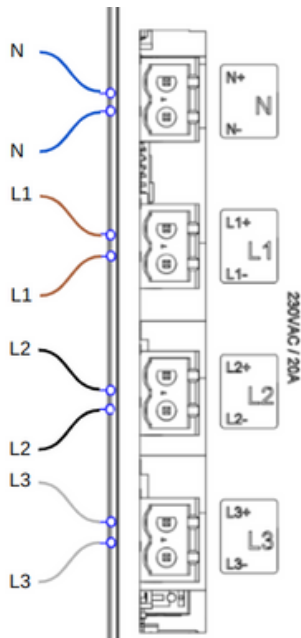
Power supply voltage	DC power supply	12 to 24Vdc
Operating voltage range	DC power supply	11.4 to 25.4Vdc
Power consumption	DC power supply	30 W MIN.
External power supply	Power supply voltage	24Vdc
Insulation resistance	20mΩ min.at 500Vdc between the AC terminals and the protective earth terminal.	
Dielectric strength	2.300 VAC at 50/60 Hz for one minute with a leakage current of 10mA max. Between all the external AC terminals and the protective ground terminal.	
Shock resistance	80m/s2 in the X, Y and Z direction 2 times each.	
Ambient temperature (operating)	0° to 50°C with Raspberry OS Lite	
Ambient humidity (operating)	10% to 90% (no condensation)	
Ambient environment (operating)	With no corrosive gas	
Ambient temperature (storage)	-20° to 60°C	
Power supply holding time	2ms min.	
Weight	208 g	

Main Feature

Reading of three-phase current	Maximum Voltage / Amperage per phase: 230VAC / 20A at 25°C
It has a neutral	Maximum Voltage / Amperage per phase: 230VAC / 20A at 25°C

Three-phase reading connection

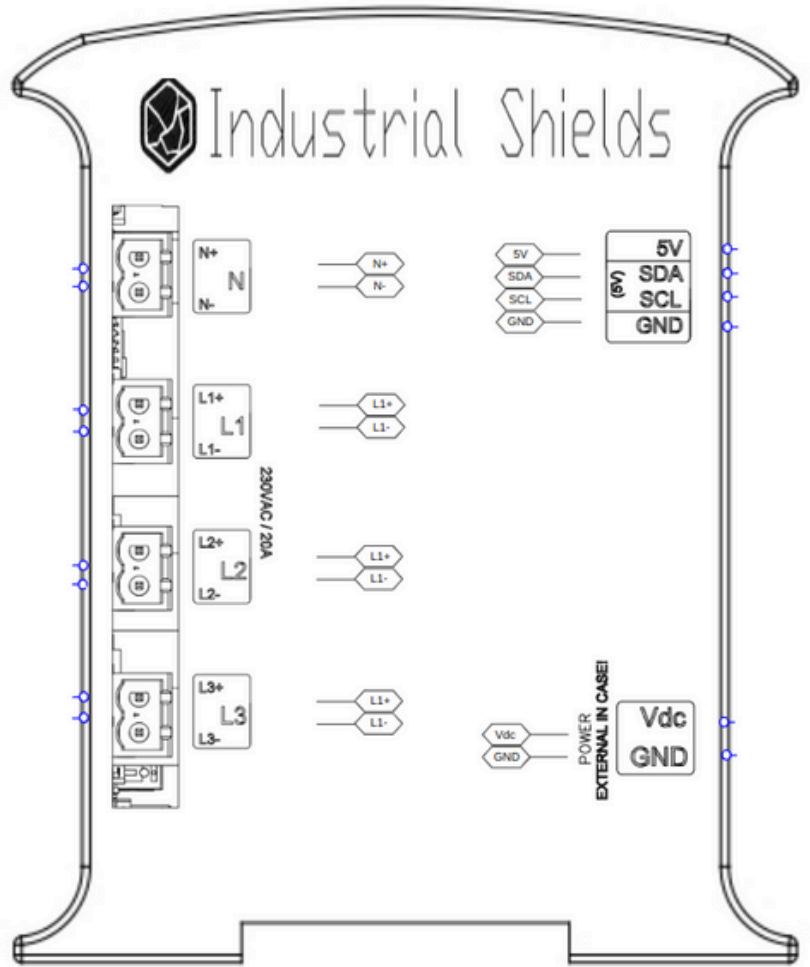
The connection for the reading of each phase and the neutral must be done as a non-invasive way, as if the connection that passes through the PLC were part of the cable assembly.



**i** It can be used as Expansion Board

In the devices of the following families:

- Raspberry PLC
- ESP32 PLC



Front side



Applications

- Redundant meter to verify the energy input by the energy distributor.
- Reporting of energy consumption to a remote system (PLC/BMS).
- Cost control to obtain consumption/unit ratio in industrial processes.
- Visualization of electrical parameters (V, A, kW, kWh, PF, etc.) per phase and three-phase."


**Warnings**

Unused pins should not be connected. Ignoring the directive may damage the controller.

Before using this product, it is the responsibility of the user to read the product's User Guide and all accompanying documentation.

Industrial Shields PLCs must be powered between 12Vdc and 24Vdc. If a higher voltage is supplied to the equipment can suffer irreversible damage.

Maintenance must be performed by qualified personnel familiarized with the construction, operation, and hazards involved with the control.

Maintenance should be performed with the control out of operation and disconnected from all sources of power.

The Industrial Shields Family PLCs are Open Type Controllers. It is required that you install the Raspberry PLC in a housing, cabinet, or electric control room. Entry to the housing, cabinet, or electric control room should be limited to authorized personnel.

Inside the housing, cabinet or electric control room, the Industrial Shields PLC must be at a minimum distance from the rest of the components of a minimum of 25 cm, it can be severely damaged.

Failure to follow these installation requirements could result in severe personal injury and/or property damage. Always follow these requirements when installing Raspberry family PLCs.

In case of installation or maintenance of the PLC please follow the instructions marked in the Installation and Maintenance section on the User Guide.

Do not disconnect equipment when a flammable or combustible atmosphere is present.









Disconnection of equipment when a flammable or combustible atmosphere is present may cause a fire or explosion which could result in death, serious injury and/or property damage.

Inside the encapsulated, there are supercapacitors if 25F which can be dangerous. Be careful with them.

This equipment does **not include galvanic isolation between the grounds** of the different systems when powered at 24 V. This means that if an external device or sensor that shares the same ground reference (GND) with the system is connected, any potential difference between these grounds could damage the connected components. This warning does not apply when the equipment is powered at 230 V. To avoid issues with interference, ground loops, or damage to external equipment, ensure that all connected devices share the same ground reference or use systems with appropriate isolation. The recommendations in this case are:

- **Connection Review:** Verify that all ground connections are properly made and that there are no significant potential differences between them.
- **Use of Isolation:** Consider using **galvanic isolators** or **isolation transformers** if it is necessary to connect equipment with different ground references.

### Symbology

	Indicates that the equipment is suitable for direct current only; to identify relevant terminals
	Indicates that the equipment is suitable for alternating current only; to identify relevant terminals
	To identify the control by which a pulse is started.
	To identify an earth (ground) terminal in cases where neither the symbol 5018 nor 5019 is explicitly required.
	To identify the switch by means of which the signal lamp(s) is (are) switched on or off.
	CE marking indicates that a product complies with applicable European Union regulations
	Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury
	To indicate hazards arising from dangerous voltages

### Technical Support

You can contact with us using the best channel for you:

 [support@industrialshields.com](mailto:support@industrialshields.com)

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