# Product datasheet

Specifications




## protection relay Easergy P1F 90-250V 3CT 1Io: 0.05-12IN 1VT 8DI-6DO RS485 USB

REL15023

## Main

| | |
|---|---|
| **Range of product** | PowerLogic |
| **Product or component type** | Protection relay |
| **Relay application** | Feeder |
| **product reference** | P1 |
| **Device mounting** | Flush |
| **Mounting support** | Fixing kit |
| **Mounting mode** | Flush-mounted |
| **power supply** | 90...240 V AC<br>90...250 V DC |
| **measuring inputs** | : 1/5 A CT phase current 8 |
| **number of Digital Inputs (DI)** | 8 |
| **number of Digital Outputs (DO)** | 6 DO<br>1 watchdog |
| **type of temperature module connection** | 1 twisted shielded pair |
| **communication ports** | 1 RS485 on rear<br>1 USB type mini B on front |
| **communication protocols** | CEI 60870-5-103<br>Modbus RTU |
| **Cybersecurity** | Password protection |
| **protection functions** | Breaker failure 50BF<br>Phase overcurrent 50/51<br>Earth fault overcurrent 50N/51N<br>Lockout relay 86<br>Thermal overload protection 49<br>Cold load pick-up<br>Switch ON to fault (SOTF)<br>Inrush detection<br>Negative sequence overcurrent 46<br>Broken conductor 46BC<br>Recloser 79<br>Directional earth fault 67N |
| **Arc flash protection** | No |
| **measurement functions** | Current 3-phase<br>Current RMS<br>Current peak<br>Current inrush<br>Current positive sequence<br>Current negative sequence<br>Frequency<br>Temperature overload |

Disclaimer: This documentation is not intended as a substitute for and is not to be used for determining suitability or reliability of these products for specific user applications

| | |
|---|---|
| **control functions** | Local/remote control<br>I/O push-button<br>Digital<br>Using serial port |
| **monitoring functions** | Circuit breaker monitoring<br>Trip circuit supervision 74<br>Event counters<br>Relay self-monitoring |
| **logs and records** | Event recording<br>Disturbance recording<br>Trip context information |
| **Switchgear diagnosis type** | Trip circuit supervision ANSI code: TCS |
| **Connections - terminals** | Snap-on fixed<br>Screw clamp terminals fixed |

## Complementary

| | |
|---|---|
| **Maximum power consumption in W** | 13.5 W AC<br>4 W DC |
| **Software name** | ESetup Easergy Pro: device setup |
| **Display type** | Graphic display terminal |
| **Number of key** | 9 |
| **Local signalling** | 6 x LED red/orange programmable<br>1 x LED red relay trip indicator<br>1 x LED green watchdog |
| **Device connection** | Serial port 1 shielded twisted pair |
| **Communication compatibility** | IEC 60870-5-103<br>Modbus RTU |
| **Standards** | EN 60255-26:2009<br>EN 60255-1:2010<br>EN 60255-27:2005 |
| **Product certifications** | CE |
| **Height** | Embedded: 101.5 mm<br>Total: 116.5 mm |
| **Width** | Embedded: 101.5 mm<br>Total: 116.5 mm |
| **Depth** | Embedded : 108 mm<br>Total : 119 mm |
| **Net weight** | 0.8 kg maximum |

## Environment

| | |
|---|---|
| **Directives** | 2006/95/EC - low voltage directive<br>2004/108/EC - electromagnetic compatibility |
| **Electromagnetic compatibility** | Electromagnetic immunity level 3 conforming to EN 61000-4-2/3/4/5/6/8 |
| **Mechanical robustness** | Seismic tests: 2 Gn horizontal, 1 Gn vertical conforming to EN 60255-21-3<br>Shocks (level: class 1) : 5 Gn for 11 ms conforming to EN 60255-21-2<br>Shocks withstand (level: class 1) : 10 Gn for 16 ms conforming to EN 60255-21-2<br>Bumps (level: class 1) : 15 Gn for 11 ms conforming to EN 60255-21-2<br>Vibrations (level: class 1) : 1 Gn, 10...150 Hz, 1 cycle conforming to EN 60255-21-1 |
| **Ambient air temperature for operation** | -25…60 °C<br>-30…70 °C ( 16 h ) |
| **Ambient air temperature for storage** | -30…70 °C |
| **IP degree of protection** | IP54 conforming to IEC 60529 |

| | |
|---|---|
| **Relative humidity** | 0…93 % at 40 °C, 21 days<br>0…93 % at 60 °C, 10 days<br>93 % at 25…55 °C, 6 cycles, 12 + 12 hours |

## Packing Units

| | |
|---|---|
| **Unit Type of Package 1** | PCE |
| **Number of Units in Package 1** | 1 |
| **Package 1 Height** | 18.500 cm |
| **Package 1 Width** | 16.300 cm |
| **Package 1 Length** | 16.300 cm |
| **Package 1 Weight** | 1.111 kg |
| **Unit Type of Package 2** | S04 |
| **Number of Units in Package 2** | 6 |
| **Package 2 Height** | 30.000 cm |
| **Package 2 Width** | 40.000 cm |
| **Package 2 Length** | 60.000 cm |
| **Package 2 Weight** | 7.500 kg |

## Contractual warranty

| | |
|---|---|
| **Warranty (in months)** | 18 |

## Environmental Data

Schneider Electric aims to achieve Net Zero status by 2050 through supply chain partnerships, lower impact materials, and circularity via our ongoing “Use Better, Use Longer, Use Again” campaign to extend product lifetimes and recyclability.

Environmental Data explained >

How we assess product sustainability >

### Environmental footprint

| | |
|---|---|
| Total lifecycle Carbon footprint | **244 kg CO2 eq.** |
| Carbon footprint of the manufacturing phase [A1 to A3] | **85 kg CO2 eq.** |
| Carbon footprint of the distribution phase [A4] | **0.3 kg CO2 eq.** |
| Carbon footprint of the installation phase [A5] | **0.6 kg CO2 eq.** |
| Carbon footprint of the use phase [B2, B3, B4, B6] | **157 kg CO2 eq.** |
| Carbon footprint of the end-of-life phase [C1 to C4] | **1 kg CO2 eq.** |
| Environmental Disclosure | Product Environmental Profile |

## Use Better

### Materials and Packaging

| | |
|---|---|
| Packaging made with recycled cardboard | **No** |
| Packaging without single use plastic | **No** |
| SCIP Number | **2140e85d-91da-4f06-9dcd-b67f68a55691** |
| EU RoHS Directive | Compliant By Exemption |
| REACh Regulation | Reference contains Substances of Very High Concern above the threshold |

## Use Again

### Repack and remanufacture

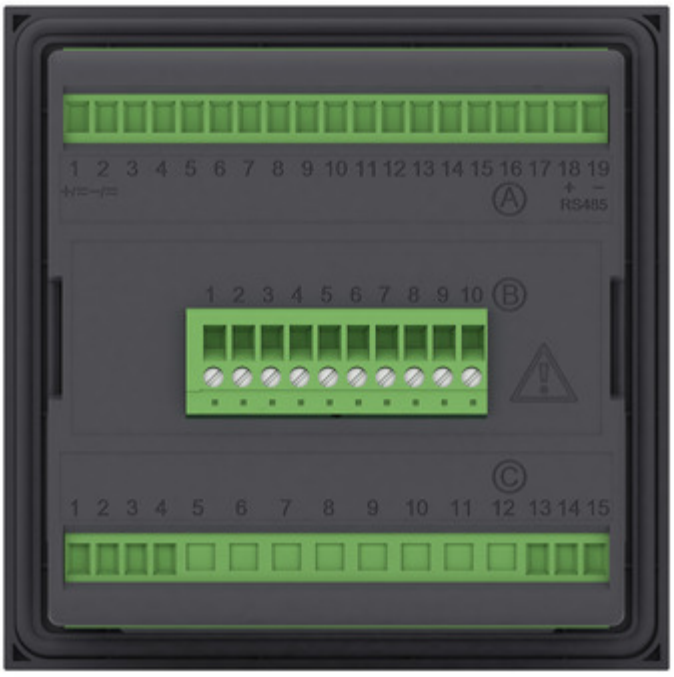
| | |
|---|---|
| Recyclability potential, in % | **5** |
| End of life manual availability | End of Life Information |
| Take-back | **No** |
| WEEE Label | **The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins** |

Image of product / Alternate images

**Alternative**






1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19
A
RS485
1 2 3 4 5 6 7 8 9 10
B
C
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15