

# Lembar data produk

Spesifikasi



protection relay Easergy P1F  
90-250V 3CT 1Io: 0.01-2IN 1VT  
8DI-6DO RS485 USB

REL15021

## Main

|                                       |                                                                                                                                                                                                                                                                                                                           |
|---------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Range of product                      | Easergy P1                                                                                                                                                                                                                                                                                                                |
| 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                   | RS485 1 rear<br>USB type mini B 1 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                                                                                                                                                           |
| Control functions                     | Local/remote control                                                                                                                                                                                                                                                                                                      |

|                           |                                                                                                      |
|---------------------------|------------------------------------------------------------------------------------------------------|
|                           | 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                   | and 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                         | 101.5 mm embedded:<br>116.5 mm total:                                                         |
| Width                          | 101.5 mm embedded:<br>116.5 mm total:                                                         |
| Depth                          | 108 mm embedded:<br>119 mm total:                                                             |
| 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             | 19.5 cm  |
| Package 1 Width              | 16.5 cm  |
| Package 1 Length             | 16.5 cm  |
| Package 1 Weight             | 997.0 g  |
| Unit Type of Package 2       | S03      |
| Number of Units in Package 2 | 6        |
| Package 2 Height             | 30.0 cm  |
| Package 2 Width              | 30.0 cm  |
| Package 2 Length             | 40.0 cm  |
| Package 2 Weight             | 6.423 kg |

Offer Sustainability

|                            |                                                  |
|----------------------------|--------------------------------------------------|
| Sustainable offer status   | Green Premium product                            |
| REACH Regulation           | <a href="#">REACH Declaration</a>                |
| EU RoHS Directive          | Compliant<br><a href="#">EU RoHS Declaration</a> |
| Mercury free               | Yes                                              |
| China RoHS Regulation      | <a href="#">China RoHS declaration</a>           |
| RoHS exemption information | <a href="#">Yes</a>                              |
| Environmental Disclosure   | <a href="#">Product Environmental Profile</a>    |
| Circularity Profile        | <a href="#">End of Life Information</a>          |

Penggantian yang disarankan