

# Product data sheet

Specifications



## Easergy P5F30 48-250V 3LPCT 1CSH 4LPVT 16DI-12DO

REL50406

### Main

<b>Range of product</b>	Easergy P5
<b>Product or component type</b>	Protection relay
<b>Relay application</b>	Feeder - directional over current
<b>Product reference</b>	P5F30-BACB-IAAAA-AAAA
<b>Mounting case size</b>	30TE
<b>Device mounting</b>	Flush
<b>Mounting mode</b>	Withdrawable
<b>Power supply</b>	48...250 V DC 100...230 V AC
<b>Measuring inputs</b>	: LPCT phase current 3 : CSH residual current 1 : LPVT voltage 4
<b>Number of sensors</b>	0 temperature sensor(s) 0 arc sensor(s)
<b>Number of Digital Inputs (DI)</b>	16
<b>Number of Digital Outputs (DO)</b>	11 DO 1 watchdog
<b>Number of analogue inputs</b>	0
<b>Number of analogue outputs</b>	0
<b>Communication ports</b>	USB port 2 front
<b>Communication protocols</b>	-
<b>Cybersecurity</b>	Password protection Port hardening Firmware signature Client IP address filter Secured communication with associated tools
<b>Protection functions</b>	Phase overcurrent 50/51 Directional phase overcurrent 67 Earth fault overcurrent 50N/51N Directional earth fault 67N Transient earth fault 67NI Neutral admittance 21YN Earth fault wattmetric 32N Capacitor bank unbalance 51C Broken conductor 46 I2/I1 Current unbalance 46 I2/I1 Cold load pick-up Switch ON to fault (SOTF) H2 detection H5 detection Breaker failure 50BF Directional active underpower 37P Fault locator 21FL

Recloser 79  
 Negative sequence overcurrent 46  
 Overvoltage 59  
 Undervoltage 27  
 Earth fault overvoltage 59N  
 Underfrequency 81/81N  
 Rate of change of frequency 81R  
 Synchro-check 25  
 Lockout relay 86  
 CT supervision 60  
 VT supervision 60  
 Programmable stages 99  
 Programmable logic  
 Programmable curve

<b>Measurement functions</b>	Current 3-phase Current zero sequence Current positive sequence Current negative sequence Current ratio of negative and positive Phasor diagram of currents or voltages Current 2nd, 15th harmonics with THD Voltage 3-phase Voltage residual Voltage zero sequence Voltage positive sequence Voltage negative sequence Frequency
<b>Control functions</b>	Switchgear control and monitoring Programmable switchgear interlocking Local/remote control
<b>Controllable switchgear devices</b>	6 controlled + 2 monitored objects
<b>Number of setting groups</b>	4
<b>Monitoring functions</b>	Trip circuit supervision 74 Circuit breaker monitoring Relay self-monitoring
<b>Logs and records</b>	Event recording Disturbance recording Tripping context Relay maintenance
<b>Switchgear diagnosis type</b>	CT/VT supervision ANSI code: 60 Trip circuit supervision ANSI code: 74
<b>Connections - terminals</b>	Screw (digital input/output) Ring lugs (analog inputs and outputs)

## Complementary

<b>Software name</b>	ESetup Easergy Pro: virtual simulation test
<b>Display type</b>	and colour LCD 480 x 272 pixels
<b>Number of key</b>	7 customizable
<b>Local signalling</b>	4 x LED 10 x LED tri-colour programmable
<b>Height</b>	176 mm
<b>Width</b>	152 mm
<b>Depth</b>	219 mm
<b>Net weight</b>	3.5 kg

## Environment

<b>Electromagnetic compatibility</b>	Emission tests class A conforming to CISPR 11 Emission tests class A conforming to CISPR 22 Emission tests conforming to IACS E10 EMC immunity class 4 conforming to IEC 61000-4-2 EMC immunity class 4 conforming to ANSI C37.90.3 EMC immunity level 3 conforming to IEC 61000-4-3 EMC immunity conforming to ANSI C37.90.2 EMC immunity conforming to GOST 32137 EMC immunity conforming to GOST 30804.4.3 EMC immunity conforming to IACS E10 EMC immunity level 5 conforming to IEC 61000-4-8 EMC immunity level 5 conforming to IEC 61000-4-9 EMC immunity level 5 conforming to IEC 61000-4-10 EMC immunity level 3 conforming to IEC 61000-4-6 EMC immunity level 3 conforming to IEC 61000-4-18
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EMC immunity conforming to ANSI C37.90.1  
 EMC immunity conforming to IEC 61000-4-12  
 EMC immunity conforming to GOST 30804.4.12  
 EMC immunity level 4 conforming to IEC 61000-4-16  
 EMC immunity level 4 conforming to IEC 61000-4-4  
 EMC immunity level 4 conforming to IEC 61000-4-5

**Mechanical robustness**  
 Vibrations (level: class 2) conforming to IEC 60255-21-1  
 Vibrations conforming to GOST 17516.1  
 Vibrations conforming to IACS E10  
 Shocks (level: class 2) conforming to IEC 60255-21-2  
 Earthquakes (level: class 2) conforming to IEC 60255-21-3

**Climatic withstand**  
 Exposure to cold conforming to IEC 60068-2-1  
 Exposure to dry heat conforming to IEC 60068-2-2  
 Exposure to damp heat in service conforming to IEC 60068-2-78  
 Exposure to damp heat in service conforming to IEC 60068-2-30  
 Temperature variation conforming to IEC 60068-2-14  
 Salt mist conforming to IEC 60068-2-52  
 Influence of corrosion/gas test 2 conforming to IEC 60068-2-60  
 Influence of corrosion/gas test 4 conforming to IEC 60068-2-60  
 Influence of corrosion/gas test 2 conforming to IEC 60721-3-3  
 Influence of corrosion/gas test 4 conforming to IEC 60721-3-3

**Ambient air temperature for operation**  
 -40...85 °C ( 16 h )  
 -40...70 °C ( 96 h )

**Ambient air temperature for storage**  
 -40...85 °C

**IP degree of protection**  
 IP54 conforming to IEC 60529

**Relative humidity**  
 0...93 % at 40 °C, without condensation, 56 days  
 93...95 % at 25...55 °C, 6 cycles, 12 + 12 hours

**Maximum operating altitude**  
 2000 m

**Protective treatment**  
 Conformal coating conforming to IEC 60068-2-52:Kb/1  
 Conformal coating conforming to IEC 60068-2-60:Ke  
 Conformal coating conforming to IEC 60721-3-3:3C2

## Packing Units

**Unit Type of Package 1**  
 PCE

**Number of Units in Package 1**  
 1

**Package 1 Weight**  
 4.5 kg

**Package 1 Height**  
 30.0 cm

**Package 1 width**  
 30.0 cm

**Package 1 Length**  
 35.0 cm

## Offer Sustainability

**Sustainable offer status**  
 Green Premium product

**REACH Regulation**  
[REACH Declaration](#)

**EU RoHS Directive**  
 Pro-active compliance (Product out of EU RoHS legal scope)  
[EU RoHS Declaration](#)

**Mercury free**  
 Yes

**RoHS exemption information**  
[Yes](#)

**China RoHS Regulation**  
[China RoHS declaration](#)

**Environmental Disclosure**  
[Product Environmental Profile](#)

**Circularity Profile**  
[End of Life Information](#)

**WEEE**  
 The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins

## Contractual warranty

**Warranty**  
 Up to 10 years extended warranty (Standard warranty 2 years. Please check with your local SE representative for extended warranty availability and conditions)