

Product data sheet

Specifications



Easergy P5F30 48-250V 3CT 2Io 4VT 16DI-12DO

REL50404

Main

Range of product	Easergy P5
Product or component type	Protection relay
Relay application	Feeder - directional over current
Product reference	P5F30-BACB-GAAAA-AAAA
Mounting case size	30TE
Device mounting	Flush
Mounting mode	Withdrawable
Power supply	48...250 V DC 100...230 V AC
Measuring inputs	: 1/5 A CT phase current 3 : 1/5 A CT residual current 1 : 1 A CT residual current 1 : VT voltage 4
Number of sensors	0 temperature sensor(s) 0 arc sensor(s)
Number of Digital Inputs (DI)	16
Number of Digital Outputs (DO)	11 DO 1 watchdog
Number of analogue inputs	0
Number of analogue outputs	0
Communication ports	USB port 2 front
Communication protocols	-
Cybersecurity	Password protection Port hardening Firmware signature Client IP address filter Secured communication with associated tools
Protection functions	Phase overcurrent 50/51 Directional phase overcurrent 67 Earth fault overcurrent 50N/51N Restricted earth fault 64REF 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

Measurement functions
 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

Control functions
 Switchgear control and monitoring
 Programmable switchgear interlocking
 Local/remote control

Controllable switchgear devices 6 controlled + 2 monitored objects

Number of setting groups 4

Monitoring functions
 Trip circuit supervision 74
 Circuit breaker monitoring
 Relay self-monitoring

Logs and records
 Event recording
 Disturbance recording
 Tripping context
 Relay maintenance

Switchgear diagnosis type
 CT/VT supervision ANSI code: 60
 Trip circuit supervision ANSI code: 74

Connections - terminals
 Screw (digital input/output)
 Ring lugs (analog inputs and outputs)

Complementary

Software name ESetup Easergy Pro: virtual simulation test

Display type and colour LCD 480 x 272 pixels

Number of key 7 customizable

Local signalling
 4 x LED
 10 x LED tri-colour programmable

Height 176 mm

Width 152 mm

Depth 219 mm

Net weight 3.5 kg

Environment

Electromagnetic compatibility
 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
 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)
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