Product data sheet

Specifications

Easergy P5M30 48-250V 3CT 2Io 4VT 10DI-8DO

REL50407

Main

Range of product	Easergy P5
Product or component type	Protection relay
Relay application	Motor
Product reference	P5M30-AACB-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)	10
Number of Digital Outputs (DO)	7 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 assciated 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 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

Phase undercurrent 37
Excessive starting time, locked rotor 48/51LR
Motor restart inhibition 66
Negative sequence overcurrent 46
Overvoltage 59
Undervoltage 27
Positive sequence undervoltage 27P
Earth fault overvoltage 59N
Underfrequency 81/81N
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

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	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)