

Product data sheet

Specifications



PowerLogic P5M30 Motor protection and control relay

P5M30

Main

Range of product	PowerLogic P5
Product or component type	Protection relay
Relay application	Motor
Product reference	P5M30
Mounting case size	30TE
Device mounting	Flush
Mounting support	Rack
Mounting mode	Withdrawable
Power supply	48...250 V DC 100...230 V AC
Measuring inputs	: 1/5 A CT phase current 3 : LPCT phase current 3 : 1/5 A CT residual current 1 : 1 A CT residual current 1 : LPVT voltage 4 : VT voltage 4
Number of sensors	0 16
Number of Digital Inputs (DI)	4 6 8 10 12 16 22
Number of Digital Outputs (DO)	15 DO 1 watchdog
Number of analogue inputs	0
Number of analogue outputs	0
Communication ports	RJ45 2 rear LC 2 rear RS485 1 rear Extension port 1 rear with backup memory Serial link 1 USB port 2 front
Communication protocols	IEC 61850 ed. 1 IEC 61850 ed. 2 IEC 60870-5-101 IEC 60870-5-103 DNP3 over ethernet DNP3 serial and TCP Modbus TCP/IP Modbus serial EtherNet/IP

	HSR option
Redundancy communication port protocol	RSTP PRP
Cybersecurity	Port hardening Password protection Role-based access control Firmware signature
Protection functions	Phase overcurrent 50/51 Directional phase overcurrent 67 Earth fault overcurrent 50N/51N Directional earth fault 67N Transient earth fault 67NI Capacitor bank unbalance 2 Broken conductor 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 VT supervision Programmable stages 99 Programmable curve
Arc flash protection	Option
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	Pin (digital input/output) Ring lugs (current transformer) Ring lugs (voltage transformer)
Complementary	
Operating threshold	220...230 V AC/DC
Time synchronisation protocol	SNTP
Web server	Embedded HTTPS server
Software name	Easergy SmartApp EcoStruxure Power Device ESetup Easergy Pro: virtual simulation test

Display type	and colour LCD 480 x 272 pixels with single line diagram
Number of key	7 customizable
Local signalling	10 x LED tri-colour programmable 4 x LED
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 dry heat conforming to EN/IEC 60068-2-2 Exposure to cold conforming to EN/IEC 60068-2-1 Exposure to damp heat in service conforming to EN/IEC 60068-2-30 Exposure to damp heat in service conforming to EN/IEC 60068-2-78 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
-------------------------------------	---

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
China RoHS Regulation	China RoHS declaration
RoHS exemption information	Yes
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
California proposition 65	WARNING: This product can expose you to chemicals including: Lead and lead compounds, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov

Recommended replacement(s)