

Product datasheet

Specifications



universal protection relay,
PowerLogic P3U 3CT 1Io RINGLUG
4VT 8DI 16DO 48-230V DI24V
2RJ45 ANSI

REL53000

Main

Range of product	PowerLogic P3
Product or component type	Protection relay
Relay application	Universal
product reference	P3U30-6AAA1BCAB
Mounting case size	30TE
Device mounting	Flush
Mounting mode	Flush mounting
power supply	48...230 V AC/DC
measuring inputs	: 1/5 A CT phase current 3 : 1/5 A CT residual current 1 : 100 V/110 V VT voltage 4
Number of sensors	0 temperature sensor(s) 0 arc sensor(s)
number of Digital Inputs (DI)	16
number of analogue inputs	0
number of Digital Outputs (DO)	8 DO 1 watchdog
number of analogue outputs	0
communication ports	USB port 1 front RJ45 2 rear
communication protocols	IEC 61850 ed. 1 IEC 61850 ed. 2 IEC 60870-5-101 DNP3 TCP Modbus TCP EtherNet/IP
Redundancy communication port protocol	RSTP PRP
Cybersecurity	Password protection Port hardening

Disclaimer: This documentation is not intended as a substitute for and is not to be used for determining suitability or reliability of these products for specific user applications

protection functions	Phase overcurrent 50/51
	Directional phase overcurrent 67
	Earth fault overcurrent 50N/51N
	Directional earth fault 67N 8
	Transient earth fault 67NI
	Capacitor bank unbalance 51C
	Broken conductor 46 I2/I1
	Cold load pick-up 50N/51N
	H2 detection 68H2
	H5 detection 68H5
	Breaker failure 50BF
	Cold load pick-up 37P
	Switch ON to fault (SOTF) 37P
	Directional active underpower 37P
	Fault locator 21FL
	Recloser 79
	Phase undercurrent 37
	Excessive starting time, locked rotor 48/51LR
	Switch ON to fault (SOTF) 50BF
	Motor restart inhibition 66
	Capacitor overvoltage 59C
	Negative sequence overcurrent 46
	Overvoltage 59
	Undervoltage 27
	Positive sequence undervoltage 27P
	Earth fault overvoltage 59N
	Underfrequency 81/81N
	Rate of change of frequency 81R
	Synchro-check 25
	Lockout relay 86
	CT supervision 60 8
	VT supervision 60
	Programmable stages 99 8
	Programmable curve 68H2
	Programmable curve 99 8
Arc flash protection	No

measurement functions	Current 3-phase Current zero sequence Current positive sequence Current negative sequence Current ratio of negative and positive Voltage phase to earth Voltage phase to phase Voltage zero sequence Voltage positive sequence Voltage negative sequence Voltage ratio of negative and positive Short circuit fault reactance 2nd, 15th harmonics with THD Fault location current zero sequence Earth fault reactance ratio of negative and positive Frequency phase to earth Short circuit fault reactance ratio of negative and positive Active power zero sequence RMS active power positive sequence Reactive power negative sequence Fault location current negative sequence RMS reactive power Apparent power RMS apparent power Active energy Frequency phasor diagram view Reactive energy Cos φ Tan φ Power angle Power factor Voltage phasor diagram view Current phasor diagram view Current 2nd, 15th harmonics with THD RMS active power zero sequence Voltage 2nd, 15th harmonics with THD Condition monitoring CB wear 2nd, 15th harmonics with THD Voltage interruption Reactive power positive sequence RMS reactive power zero sequence Apparent power positive sequence RMS apparent power ratio of negative and positive Voltage interruption 2nd, 15th harmonics with THD
control functions	Switchgear control and monitoring Programmable switchgear interlocking Local control on single-line diagram Local control with I/O keys Local/remote control 2 function keys Mobile application with Easergy SmartApp Web-server Programmable logic
controllable switchgear devices	4 controlled + 8 displayed
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
Switchgear diagnosis type	CT supervision ANSI code: TCS Trip circuit supervision ANSI code: TCS
Connections - terminals	Screw removable (digital input/output) Pin removable (voltage transformer) Ring lugs removable (current transformer)

Complementary

Operating threshold	24 V AC/DC
Time synchronisation protocol	SNTP

Software name	ESetup Easergy Pro: virtual simulation test Easergy SmartApp
Web server	Embedded HTTP server
Display type	LCD 128 x 64 pixels with single line diagram
Number of key	2 customizable
Local signalling	4 LEDs 8 LEDs programmable
Height	169.5 mm
Width	170 mm
Depth	205 mm
Net weight	2.5 kg maximum

Environment

climatic withstand	Exposure to dry heat Bb tests conforming to EN/IEC 60068-2-2 Exposure to cold Ad tests conforming to EN/IEC 60068-2-1 Exposure to damp heat in service Db tests conforming to EN/IEC 60068-2-30 Exposure to damp heat in service Cab tests conforming to EN/IEC 60068-2-78
Mechanical robustness	Vibrations (level: class II) conforming to IEC 60255-21-1 Vibrations: Fc conforming to IEC 60068-2-6 Shocks (level: class II) conforming to IEC 60255-21-2 Shocks: Ea conforming to IEC 60068-2-27 Seismic tests method A (level: class II) conforming to IEC 60255-21-3
Electromagnetic compatibility	Emission tests conforming to IEC/EN 60255-26 ed. 3 Emission tests conforming to CISPR 11 Emission tests conforming to CISPR 22 EMC immunity conforming to IEC/EN 60255-26 ed. 3 EMC immunity conforming to EN/IEC 61000-4-18 EMC immunity level 4 conforming to EN/IEC 61000-4-2 EMC immunity level 3 conforming to EN/IEC 61000-4-3 EMC immunity level 4 conforming to EN/IEC 61000-4-4 EMC immunity level 3 conforming to EN/IEC 61000-4-5 EMC immunity level 3 conforming to EN/IEC 61000-4-6 EMC immunity conforming to EN/IEC 61000-4-8 EMC immunity level 5 conforming to EN/IEC 61000-4-9 EMC immunity conforming to EN/IEC 61000-4-29 EMC immunity conforming to EN/IEC 61000-4-11 EMC immunity conforming to EN/IEC 61000-4-17 EMC immunity conforming to IEC 60255-22-1 EMC immunity conforming to IEC 60255-22-2 EMC immunity conforming to IEC 60255-22-3 EMC immunity conforming to IEC 60255-22-4 EMC immunity conforming to IEC 60255-22-5 EMC immunity conforming to IEC 60255-22-6 EMC immunity conforming to IEC 60255-27 EMC immunity class III conforming to IEC 60255-5 EMC immunity conforming to EN/IEC 60255-1
Ambient air temperature for operation	-40...65 °C
Ambient air temperature for storage	-40...70 °C
IP degree of protection	IP54 front conforming to IEC 60529
maximum operating altitude	2000 m
Protective treatment	Conformal coating
Relative humidity	0...95 %, without condensation

Packing Units

Unit Type of Package 1	PCE
Number of Units in Package 1	1
Package 1 Height	29.972 cm

Package 1 Width	29.718 cm
Package 1 Length	39.116 cm
Package 1 Weight	3.806 kg

Contractual warranty

Warranty (in months)	24
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Environmental Data

Schneider Electric aims to achieve Net Zero status by 2050 through supply chain partnerships, lower impact materials, and circularity via our ongoing “Use Better, Use Longer, Use Again” campaign to extend product lifetimes and recyclability.

[Environmental Data explained >](#)

[How we assess product sustainability >](#)



Environmental footprint

Total lifecycle Carbon footprint	731 kg CO2 eq.
Carbon footprint of the manufacturing phase [A1 to A3]	95 kg CO2 eq.
Carbon footprint of the distribution phase [A4]	4 kg CO2 eq.
Carbon footprint of the installation phase [A5]	0.2 kg CO2 eq.
Carbon footprint of the use phase [B2, B3, B4, B6]	624 kg CO2 eq.
Carbon footprint of the end-of-life phase [C1 to C4]	8 kg CO2 eq.
Environmental Disclosure	Product Environmental Profile

Use Better



Materials and Substances

Packaging made with recycled cardboard	Yes
Packaging without single use plastic	No
SCIP Number	7fd15df9-a702-4a28-ad01-afb36a7b785f
EU RoHS Directive	Compliant By Exemption
REACH Regulation	Reference contains Substances of Very High Concern above the threshold

Use Longer



Lifetime extension

Repair	No
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Use Again



Repack and remanufacture

Recyclability potential, in %	32
End of life manual availability	End of Life Information
Take-back	No
WEEE Label	 The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins