

Product datasheet

Specifications



universal protection relay,
PowerLogic P3U 3CT 1Io 4VT 16DI
8DO 48-230V DI110V RS485

REL52012

Main

Range of product	PowerLogic P3
Product or component type	Protection relay
Relay application	Universal
product reference	P3U30-5AAA2BBAA
Mounting case size	30TE
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 Digital Inputs (DI)	16
number of analogue inputs	0
number of Digital Outputs (DO)	1 watchdog 8
number of analogue outputs	0
type of temperature module connection	Copper cable external module Fiber optic cable external module
communication ports	USB port 1 front RS485 1 rear
communication protocols	IEC 60870-5-101 IEC 60870-5-103 DNP3 Modbus RTU DeviceNet SPABus
Cybersecurity	Password protection Port hardening

Price is "List Price" and may be subject to a trade discount – check with your local distributor or retailer for actual price.

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 51C
Broken conductor 46 I2/I1
Cold load pick-up
Switch ON to fault (SOTF)
Breaker failure 50BF
Directional active underpower 37P
Fault locator 21FL
Recloser 79
Phase undercurrent 37
Excessive starting time, locked rotor 48/51LR
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
VT supervision 60
H2 detection 68H2
H5 detection 68H5
Programmable stages 99
Programmable curve

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
Fault location current
Earth fault reactance
Frequency
Active power
RMS active power
Reactive power
RMS reactive power
Apparent power
RMS apparent power
Active energy
Reactive energy
Cos ϕ
Tan ϕ
Power angle
Power factor
Voltage phasor diagram view
Current phasor diagram view
Current 2nd, 15th harmonics with THD
Voltage 2nd, 15th harmonics with THD
Voltage interruption
Condition monitoring CB wear

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/VT supervision ANSI code: 60 CT supervision Trip circuit supervision ANSI code: TCS
Connections - terminals	Screw removable (digital input/output) Pin removable (current transformer) Pin removable (voltage transformer)

Complementary

Operating threshold	110...230 V AC/DC
Software name	EcoStruxure Power Device ESetup Easergy Pro
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
Standards	IEC
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 Bumps (level: class II) conforming to IEC 60255-21-2 Bumps: Ea conforming to IEC 60068-2-27
Electromagnetic compatibility	Emission tests conforming to IEC/EN 60255-26 ed. 3 Emission tests class A conforming to CISPR 11 Emission tests class A 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

Ambient air temperature for operation	-40...65 °C
IP degree of protection	IP54 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	26 cm
Package 1 Width	21.5 cm
Package 1 Length	31.5 cm
Package 1 Weight	1.204 kg

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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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

[Environmental Disclosure](#)

[Product Environmental Profile](#)

Use Better

Materials and Substances

Packaging made with recycled cardboard **Yes**

Packaging without single use plastic **No**

EU RoHS Directive **Pro-active compliance (Product out of EU RoHS legal scope)**

REACH Regulation [REACH Declaration](#)

China RoHS Regulation [China RoHS declaration](#)

Use Again

Repack and remanufacture

[Circularity Profile](#)

[End of Life Information](#)

WEEE



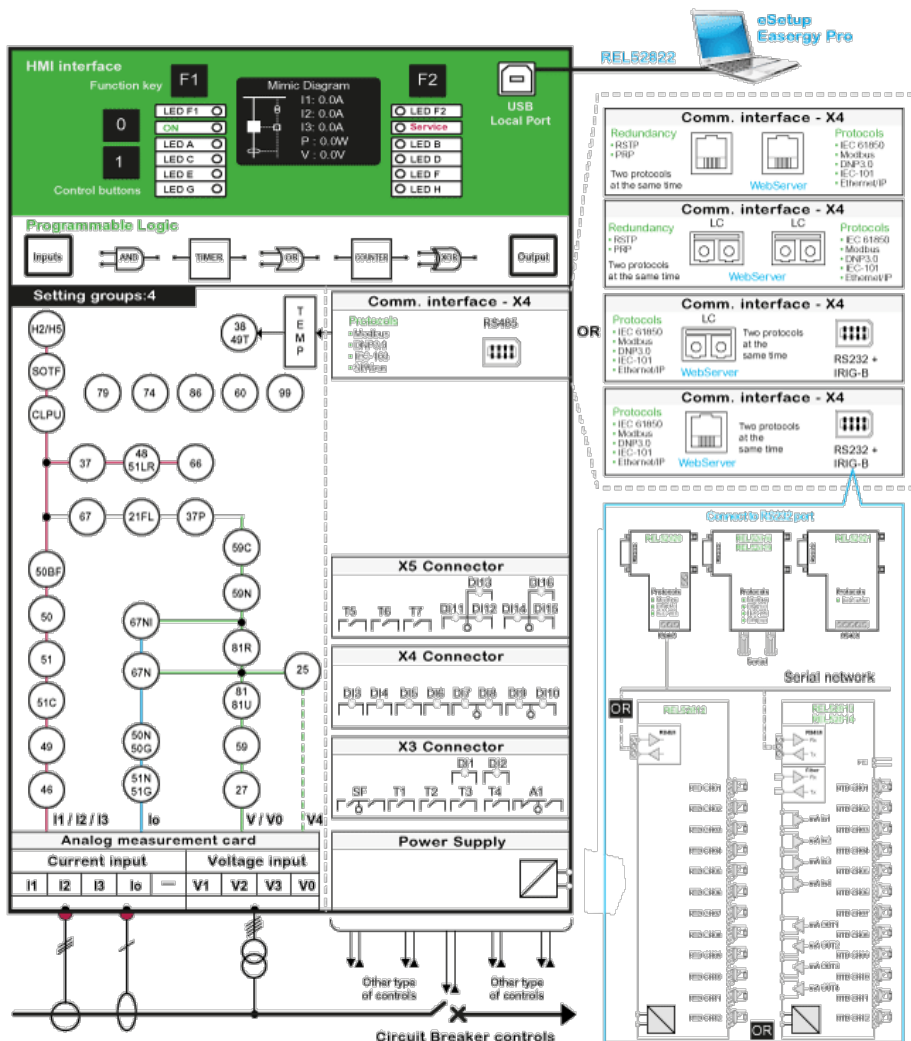
The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins

Take-back

No

Connections and Schema

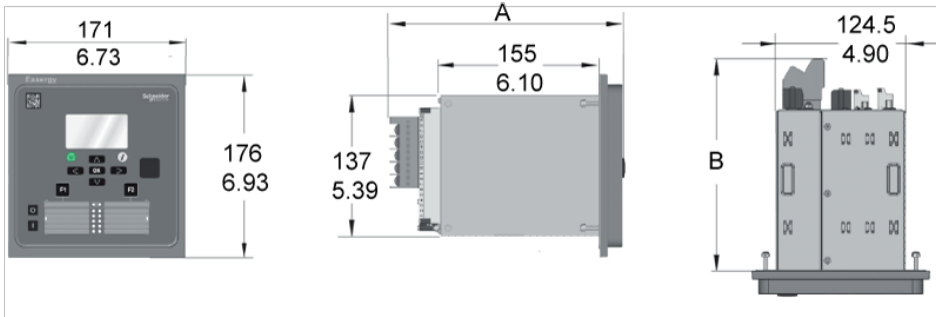
Functional View



Dimensions Drawings

Base Unit Dimensions

mm
in.



	A	B
With screw connector	214 mm/8.43"	192 mm/7.6"
With ring-lug connector	226 mm/8.90"	204 mm/8.0"