

Product datasheet

Specifications



universal protection relay,
PowerLogic P3U20, 4L, 1U, 10DI/
5DO, Uaux: 48-230V, DI: 24-230V,
RS-485

REL52032

Main

Range of product	PowerLogic P3
Product or component type	Protection relay
Relay application	Universal
product reference	P3U20-5AAA1ABAA
Mounting case size	20TE
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 1
number of Digital Inputs (DI)	10
number of analogue inputs	0
number of Digital Outputs (DO)	1 watchdog 5
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	Port hardening Password protection

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 undercurrent 37
	Negative sequence overcurrent 46
	Broken conductor 46 I2/I1
	Excessive starting time, locked rotor 48/51LR
	Thermal overload protection 49
	Phase overcurrent 50/51
	Earth fault overcurrent 50N/51N
	Breaker failure 50BF
	Switch ON to fault (SOTF)
	Capacitor bank unbalance 51C
	Capacitor overvoltage 59C
	Neutral voltage displacement 59N
	Motor restart inhibition 66
	Directional earth fault 67N
	Transient earth fault 67NI
	CT supervision 60
	VT supervision 60
	H2 detection 68H2
	H5 detection 68H5
	Recloser 79
	Lockout relay 86
	Cold load pick-up
	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	2 controlled + 4 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 Trip circuit supervision ANSI code: TCS
Connections - terminals	Screw removable (digital input/output) Clamp terminal removable (current transformer) Pin removable (voltage transformer)

Complementary

Operating threshold	24...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	16 cm
Package 1 Width	21.5 cm
Package 1 Length	27.5 cm
Package 1 Weight	3.5 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)
----------	--

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

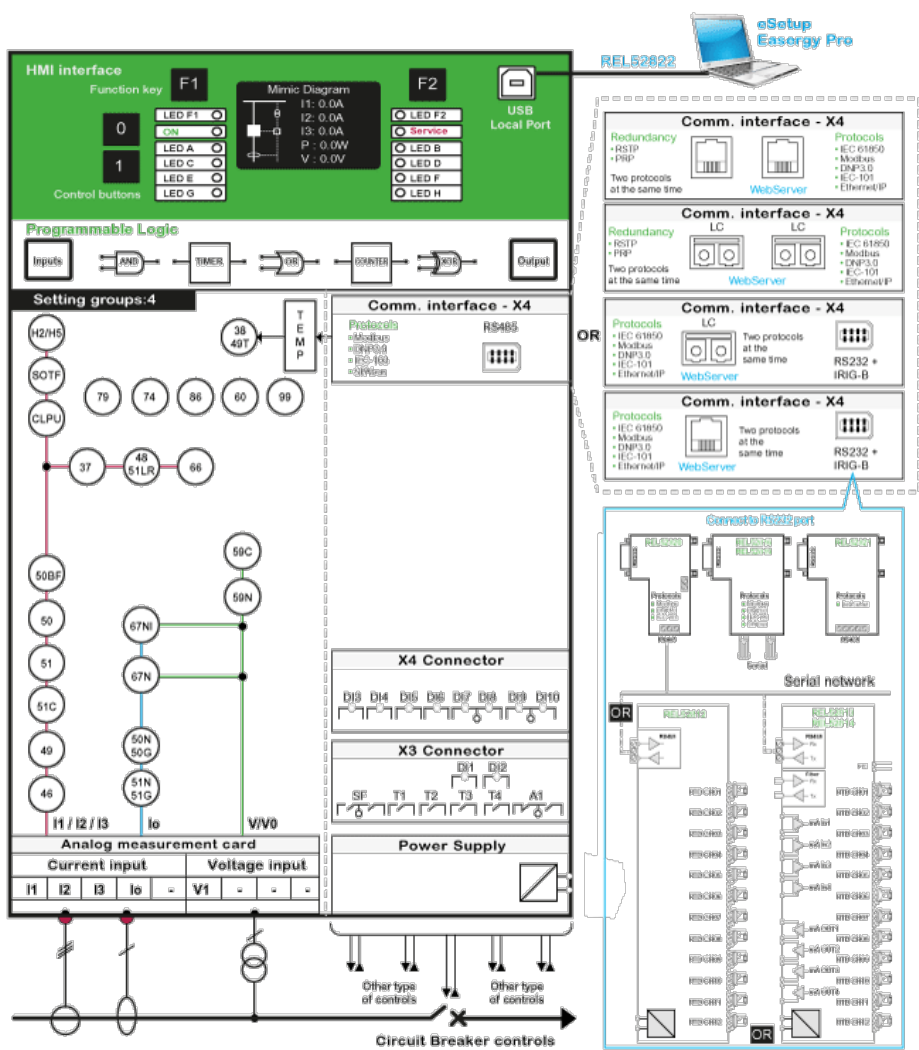
Materials and Packaging	
Packaging made with recycled cardboard	Yes
Packaging without single use plastic	No
China RoHS Regulation	China RoHS declaration

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

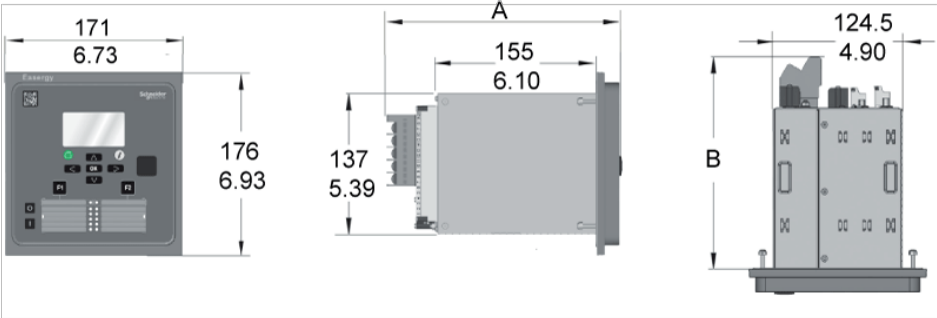
Functional View



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"