

Product datasheet

Specifications



Easergy P3U 3CT 1Io ringlug 4VT 16DI 8DO 24-48V DI24V RS485

REL52020

Main

Range of product	PowerLogic P3
Product or component type	Protection relay
Relay application	Universal
product reference	P3U30-6ABA1BBAA
Mounting case size	30TE
power supply	24...48 V 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)	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	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 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) Ring lugs 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 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

Ambient air temperature for operation	-40...65 °C
Ambient air temperature for storage	-40...70 °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	24.500 cm
Package 1 Width	26.500 cm
Package 1 Length	31.000 cm
Package 1 Weight	3.265 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	722 kg CO2 eq.
Carbon footprint of the manufacturing phase [A1 to A3]	88 kg CO2 eq.
Carbon footprint of the distribution phase [A4]	4 kg CO2 eq.
Carbon footprint of the installation phase [A5]	0.1 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]	7 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

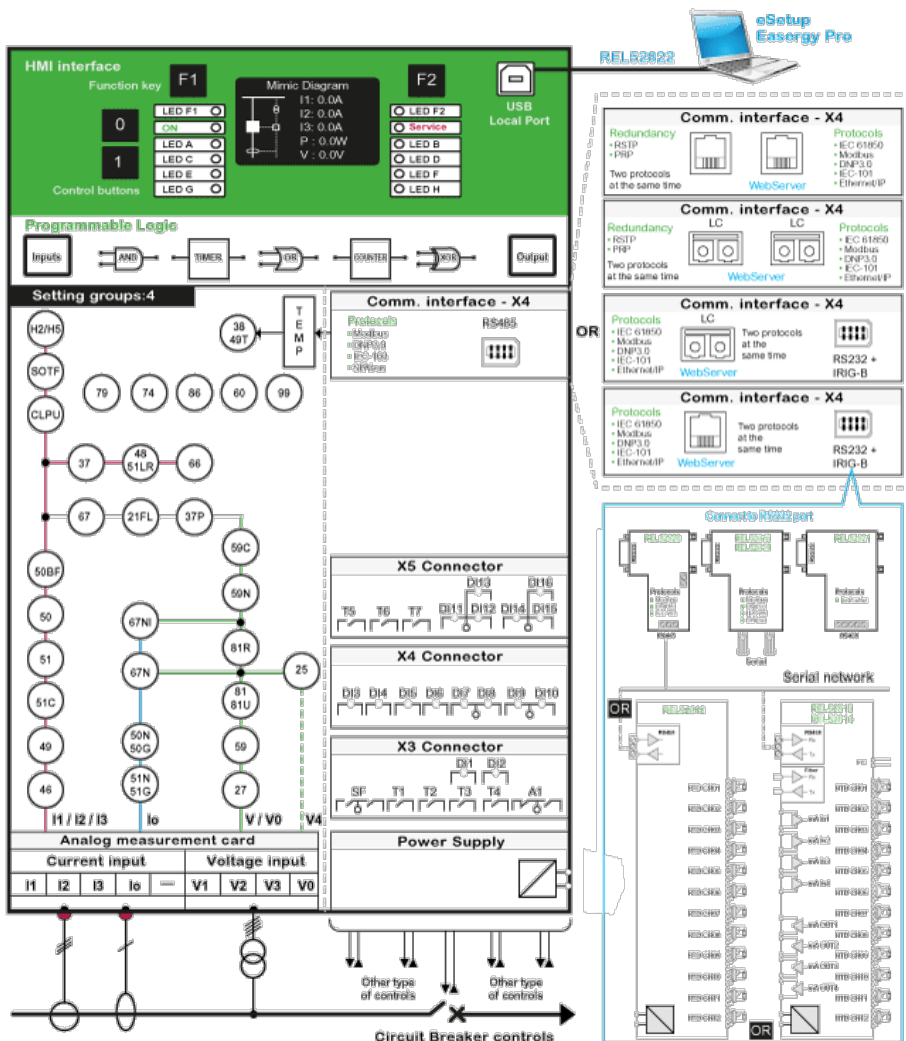


Repack and remanufacture

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

Connections and Schema

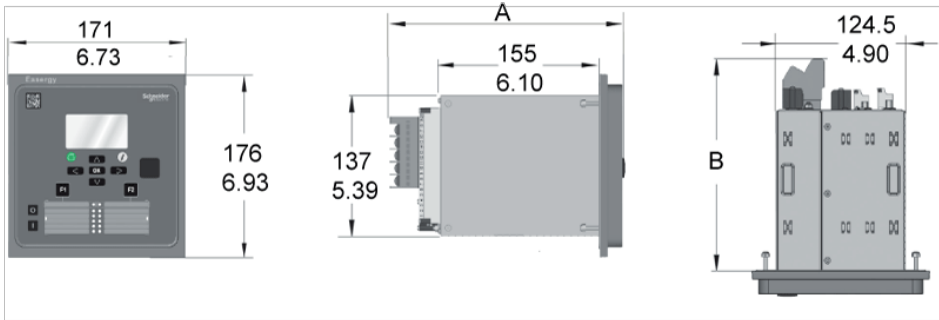
Functional View



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"