Product data sheet

Specifications

universal protection relay, PowerLogic P3U 3CT 1Io 4VT 16DI 8DO 48-230V DI220 RS485

REL52002

Main

Range Of Product	PowerLogic P3
Product Or Component Type	Protection relay
Relay Application	Universal
Product Reference	P3U30-5AAA3BBAA
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 Sensors	0 temperature sensor(s) 0 arc sensor(s)
Number Of Digital Inputs (Di)	16
Number Of Digital Outputs (Do)	1 watchdog 8
Number Of Analogue Inputs	0
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

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

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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	220...230 V AC/DC
Time Synchronisation Protocol	SNTP
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

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
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

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
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
Relative Humidity	0…95 %, without condensation
Maximum Operating Altitude	2000 m
Protective Treatment	Conformal coating

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	3.184 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)

Sustainability

Green Premium^{TM} label is Schneider Electric's commitment to delivering products with best-in-class environmental performance. Green Premium promises compliance with the latest regulations, transparency on environmental impacts, as well as circular and low-CO_2 products.

Guide to assessing product sustainability is a white paper that clarifies global eco-label standards and how to interpret environmental declarations.

Learn more about Green Premium 〉
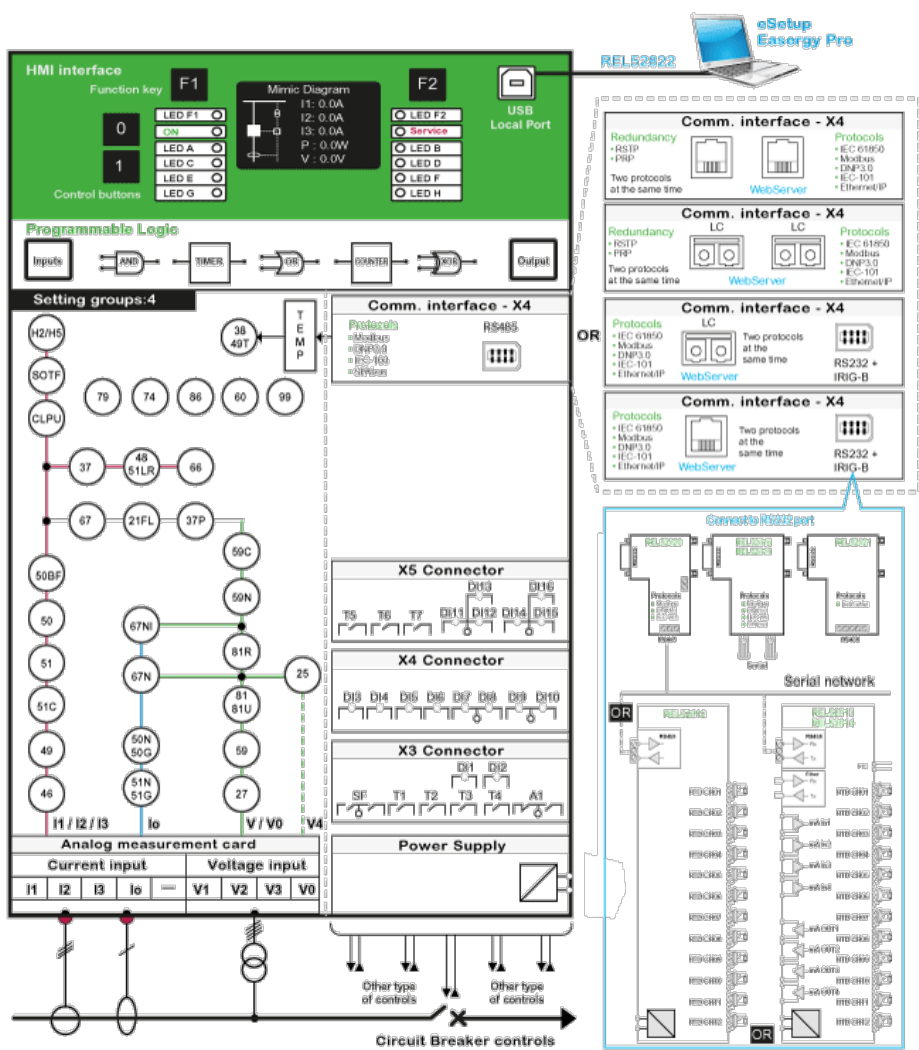
Guide to assess a product's sustainability 〉

Transparency

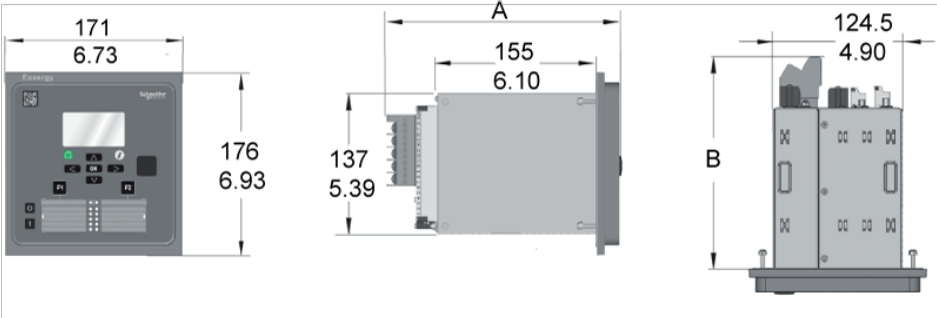|	
Reach Regulation	REACh Declaration
Eu Rohs Directive	Pro-active compliance (Product out of EU RoHS legal scope)
China Rohs Regulation	China RoHS declaration
Environmental Disclosure	Product Environmental Profile
Weee	The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins
Circularity Profile	End of Life Information

Connections and Schema

Functional View

Product data sheet

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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"