Product data sheet
Characteristics

REL52032
universal protection relay, PowerLogic P3U20, 4L, 1U, 10DI/5DO, Uaux: 48-230V, DI: 24-230V, RS-485



Main

Range of product	PowerLogic P3
Product or component type	Protection relay
Relay application	Universal
Device short name	P3U20-5AAA1ABAA
Mounting case size	20TE
[Us] rated supply voltage	48...230 V AC/DC
Input type	: 1/5 A CT phase current 3 : 1/5 A CT residual current 1 : 100 V/110 V VT voltage 1
Number of sensors	0 temperature sensor(s) 0 arc sensor(s)
Digital input number	10
Analogue input number	0
Number of outputs	1 watchdog 5
Analogue output number	0
Transmission support medium	Copper cable external module Fiber optic cable external module
Integrated connection type	USB port 1 front RS485 1 rear
Communication port protocol	IEC 60870-5-101 IEC 60870-5-103 DNP3 Modbus RTU DeviceNet SPAbus
Cybersecurity	Port hardening Password protection
Protection type	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

Type of measurement	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 type	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
Single line diagram	2 controlled + 4 displayed
Setting	4
Monitoring function	Trip circuit supervision 74 Circuit breaker monitoring Relay self-monitoring
Network and machine diagnosis type	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

Environmental characteristic	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
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	16.000 Cm
Package 1 Width	21.500 Cm
Package 1 Length	27.500 Cm
Package 1 Weight	3.500 Kg

Offer Sustainability

Recyclability potential, in %	32
Total lifecycle Carbon footprint	722 kg CO2 eq.
Carbon footprint of the manufacturing phase [A1 to A3]	87.56038865141248
Carbon footprint of the manufacturing phase [A1 to A3]	88 kg CO2 eq.
Carbon footprint of the distribution phase [A4]	3.5983846120311327
Carbon footprint of the distribution phase [A4]	4 kg CO2 eq.
Carbon footprint of the installation phase [A5]	0.1391354164353736
Carbon footprint of the installation phase [A5]	0.1 kg CO2 eq.
Carbon footprint of the use phase [B2, B3, B4, B6]	623.8010019422173
Carbon footprint of the use phase [B2, B3, B4, B6]	624 kg CO2 eq.
Sustainable packaging	No
Carbon footprint of the end-of-life phase [C1 to C4]	7.222786989773109
Carbon footprint of the end-of-life phase [C1 to C4]	7 kg CO2 eq.
Environmental Disclosure	Product Environmental Profile
Total lifecycle Carbon footprint	722
Packaging made with recycled cardboard	Yes
Packaging without single use plastic	No
SCIP Number	7fd15df9-a702-4a28-ad01-afb36a7b785f

REACh Regulation	Reference contains Substances of Very High Concern above the threshold
EU RoHS Directive	Compliant By Exemption
California proposition 65	WARNING: This product can expose you to chemicals including: Lead and lead compounds, w
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 a

Contractual warranty

Warranty (in months)	24

Product Life Status : Commercialised