

# REL52131

transformer protection relay, PowerLogic

P3T32 6CT 3Io ringlug 4VT 6DI 10DO

110-230V DI110V 3BIO 6ARC RS485 RJ45

ANSI

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## Main

Range of Product	PowerLogic P3
Product or Component Type	Protection relay
Relay application	Transformer
Product reference	P3T32-CBG1A-DA1FA-BBAAB
Device mounting	Flush
Power supply	48...230 V AC/DC
Measuring inputs	6 1/5 A CT phase current 2 5/1 A CT residual current 1 1/0.2 A CT residual current 4 100 V/110 V VT voltage
Number of sensors	0 temperature sensor(s) 0 arc sensor(s)
Number of Digital Inputs (DI)	6
Number of Digital Outputs (DO)	10 DO 1 watchdog
Number of analogue inputs	0
Number of analogue outputs	0
Communication ports	Front USB port 1 Rear RJ45 1 Rear RS485 1
Communication protocols	IEC 61850 ed. 1 IEC 61850 ed. 2 IEC 60870-5-101 DNP3 TCP Modbus TCP EtherNet/IP IEC 60870-5-103 DNP3 Modbus RTU DeviceNet SPAbus
Cybersecurity	Password protection Port hardening
Protection functions	Overfluxing (V/Hz) 24 Synchro-check 25 Undervoltage 27 Directional active underpower 37P Negative sequence overcurrent 46 Thermal overload protection 49 Earth fault overcurrent 50N/51N Phase overcurrent 50/51 Breaker failure 50BF Switch ON to fault (SOTF) Capacitor bank unbalance 51C Capacitor overvoltage 59C Overvoltage 59 Earth fault overvoltage 59N Restricted earth fault 64REF Directional phase overcurrent 67 Directional earth fault 67N H2 detection 68H2 H5 detection 68H5 Underfrequency 81/81N Rate of change of frequency 81R Lockout relay 86 Two-winding transformer differential 87T Programmable stages 99 Programmable curve Cold load pick-up
Arc flash protection	Yes
Relay Type	Differential current relay

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 $\phi$ Tan $\phi$ Power angle Power factor Voltage phasor diagram view Current phasor diagram view Current 2nd, 15th harmonics with THD Voltage 2nd, 15th harmonics with THD Condition monitoring CB wear Voltage interruption
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
Controllable switchgear devices	3 controlled + 5 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 Trip circuit supervision TCS
Connections - terminals	Screw removable (digital input/output) Ring lugs fixed (current transformer) Pin removable (voltage transformer)

## Complementary

Operating threshold	110 V AC/DC
Time synchronisation protocol	SNTP
Web server	Embedded HTTP server
Display type	LCD 128 x 128 pixels with single line diagram LCD 128 x 128 pixels with ANSI symbols
Number of key	2 customizable
Local signalling	2 LEDs 16 LEDs programmable
Height	6.93 in (176 mm)
Width	10.63 in (270 mm)
Depth	9.06 in (230 mm)
Net weight	9.26 lb(US) (4.2 kg) maximum

## Environment

Electromagnetic compatibility	Emission tests IEC/EN 60255-26 ed. 3 Emission tests class A CISPR 11 Emission tests class A CISPR 22 EMC immunity IEC/EN 60255-26 ed. 3 EMC immunity EN/IEC 61000-4-18 EMC immunity IEC 60255-22-1 EMC immunity level 4 EN/IEC 61000-4-2 EMC immunity IEC 60255-22-2 EMC immunity level 3 EN/IEC 61000-4-3 EMC immunity IEC 60255-22-3 EMC immunity level 4 EN/IEC 61000-4-4 EMC immunity IEC 60255-22-4 EMC immunity level 3 EN/IEC 61000-4-5 EMC immunity IEC 60255-22-5 EMC immunity level 3 EN/IEC 61000-4-6 EMC immunity IEC 60255-22-6 EMC immunity EN/IEC 61000-4-8 EMC immunity level 5 EN/IEC 61000-4-9 EMC immunity EN/IEC 61000-4-29 EMC immunity EN/IEC 61000-4-11 EMC immunity EN/IEC 61000-4-17 EMC immunity IEC 60255-27 EMC immunity class III IEC 60255-5 EMC immunity EN/IEC 60255-1
Mechanical robustness	Vibrations class II) IEC 60255-21-1 VibrationsFc IEC 60068-2-6 Shocks class II) IEC 60255-21-2 ShocksEa IEC 60068-2-27 Seismic tests method A class II) IEC 60255-21-3
Climatic withstand	Exposure to dry heat Bd EN/IEC 60068-2-2 Exposure to cold Ad EN/IEC 60068-2-1 Exposure to damp heat in service Db EN/IEC 60068-2-30 Exposure to damp heat in service Cab EN/IEC 60068-2-78
Ambient air temperature for operation	-40...149 °F (-40...65 °C)
Ambient air temperature for storage	-40...158 °F (-40...70 °C)
IP degree of protection	IP54 IEC 60529
Relative humidity	0...95 %, without condensation
Maximum operating altitude	6561.68 ft (2000 m)
Protective treatment	Conformal coating

## Ordering and shipping details

Category	11405-EASERGY P3 PROTECTIVE RELAYS
Discount Schedule	PL1S
GTIN	3606481465658
Returnability	No
Country of origin	US

## Packing Units

Unit Type of Package 1	PCE
Number of Units in Package 1	1
Package 1 Height	15.75 in (40 cm)
Package 1 Width	11.81 in (30 cm)
Package 1 Length	11.81 in (30 cm)
Package 1 Weight	10.14 lb(US) (4.6 kg)