Product datasheet

Specifications

Protection and control relay, PowerLogic P7, transformer standard, 6CT, 3VT, 24BI, 20BO, 110-250V, ethernet RJ45

REL76502

EAN Code: 3606486926765

Main

Range of product	PowerLogic P7
Product or component type	Protection and control relay
Relay application	Transformer application and bay control
product reference	P7
Mounting case size	40TE
Device mounting	Flush
Mounting support	19" rack
Mounting mode	Flush mounting Rack-mounted
power supply	110...250 V DC 110...250 V AC 50/60 Hz
measuring inputs	6 CT 1/5 A 3 VT
number of Digital Inputs (DI)	24
number of analogue inputs	8 RTD optional
number of Digital Outputs (DO)	20 1 watchdog
type of temperature module connection	2 twisted, type A, shielded wires (RS485)
communication ports	1 CAN port 1 Ethernet TCP/IP 2 SFP ports 1 USB port 1 COM serial link
communication protocols	Modbus serial and TCP DNP3 serial and TCP IEC 61850 Ed 2.1 IEC 61869-9 IEC 61850-9-2 LE
Redundancy communication port protocol	HSR PRP RSTP Failover

Cybersecurity	IEC 62443 SL2 LDAP RADIUS based user authentication Port hardening Role-based access control Secure boot Security log Syslog protocol support Firmware signature Client IP address filter Pre-login banner Security policy management
protection functions	Phase overcurrent 50/51 Ground fault protection 50N/51N Sensitive earth fault overcurrent 50G/51G Negative sequence overcurrent 46 Inrush detection 68 Voltage-dependent overcurrent 51V Undervoltage 27 Overvoltage 59 Underfrequency 81U Directional phase overcurrent 67 Directional earth fault 67N Overfrequency 81O Temperature monitoring (8 RTDs) 38/49T Positive sequence undervoltage 47 Neutral voltage displacement 59N Directional reactive overpower 32Q Earth fault wattmetric 32N Earth fault admittance 21N Directional active overpower 32P Directional active underpower 37P Rate of change of frequency 81R Thermal overload for transformer 49T CT supervision 60 VT supervision 60FL Breaker failure 50 BF Overfluxing (V/Hz) 24 Transformer differential 87T Underimpedance 21 Synchro-check 25 High impedance differential 64REF Programmable logic
measurement functions	Current 3-phase RMS current 3-phase Current sequence Current 1-phase RMS current 1-phase Voltage 3-phase RMS voltage 3-phase Voltage sequence Active power fundamental frequency Apparent power fundamental frequency Reactive power fundamental frequency RMS active power minimum RMS reactive power minimum RMS apparent power maximum Active power demand maximum Active power demand minimum Reactive power demand maximum Reactive power demand minimum Apparent power demand maximum Apparent power demand minimum RMS phase current demand maximum RMS phase current demand minimum Power maximum Power factor maximum Harmonic distorsion (I THD & U THD) minimum Voltage sags and swells Earth fault current external measurement
control functions	Switchgear control and monitoring Programmable switchgear interlocking Local/remote control Programmable logic Remote control Function keys

controllable switchgear devices	12 controlled objects including 3 CBs
number of setting groups	8
monitoring functions	Circuit breaker monitoring Switch monitoring Relay self-monitoring Trip circuit supervision 74 Event counters Watchdog
logs and records	Disturbance recording Event recording Fault recording Operation log
Switchgear diagnosis type	CT/VT supervision ANSI code: 60 Auxiliary power supply monitoring Cumulative breaking current Number of operations DC battery voltage monitoring
Connections - terminals	Screw type terminals (digital input/output) Ring terminal (analogue input)

Complementary

Input power interruption	100 ms 200 ms
Maximum power consumption in W	24 W typical
Operating threshold	110 V DC 220 V DC
Time synchronisation protocol	IRIG-B SNTP IEEE 1588
Software name	PowerLogic Engineering Suite
Display type	Colour touchscreen 800 x 640 pixels
Display size	7 inch
Information displayed	Single line diagram Menu-driven user interface
Control button type	1 home physical key 1 reset physical key 12 customizable virtual function keys
Local signalling	4 LEDs red/orange device status 24 LEDs tri-colour programmable
Communication compatibility	DNP3 Modbus IEC 61850 Ed 2.1
Device connection	Connection to a PC USB Extension port extension cable Ethernet port RJ45 Serial port RS485 cable SFP redundant Ethernet port fibre optic/RJ45 multi/single mode optional
Product certifications	cUL listed UKCA KETOP CE DNV
Height	178 mm
Width	205.2 mm
Depth	282 mm
Net weight	8.8 kg maximum

Environment

climatic withstand	Exposure to cold Ae conforming to IEC 60068-2-1 Exposure to dry heat Be conforming to IEC 60068-2-2 Exposure to damp heat in service Cab conforming to IEC 60068-2-78 Temperature variation Nb conforming to IEC 60068-2-14 Exposure to damp heat not in service Cab conforming to IEC 60068-2-30 Salt mist Kb/1 conforming to IEC 60068-2-52 Influence of corrosion/gas test 2 Ke conforming to IEC 60068-2-60 Influence of corrosion/gas test 4 Ke conforming to IEC 60068-2-60
Mechanical robustness	Vibrations (level: class 2) conforming to IEC 60255-21-1 Shocks (level: class 2) conforming to IEC 60255-21-2 Shocks (level: class 1) conforming to IEC 60255-21-2 Bumps (level: class 1) conforming to IEC 60255-21-2 Seismic tests (level: class 2) conforming to IEC 60255-21-3
Electromagnetic compatibility	Electromagnetic immunity class A conforming to CISPR 11 Electromagnetic immunity class A conforming to CISPR 22 Electromagnetic immunity level 3 conforming to IEC 6100-4-3 Radiated radio-frequency electromagnetic field immunity test level 4 conforming to ANSI C37.90.2 Electrostatic discharge level 4 conforming to IEC 6100-4-2 Electrostatic discharge level 5 conforming to ANSI C37.90.3 Immunity to magnetic fields level 4 conforming to IEC 61000-4-8 Immunity to magnetic fields level 5 conforming to IEC 61000-4-9 Immunity to magnetic fields level 5 conforming to IEC 61000-4-10 Conducted RF disturbances level 3 conforming to IEC 61000-4-6 Fast transient bursts level 4 conforming to IEC 61000-4-4 Damped oscillatory wave level 3 conforming to IEC 61000-4-18 Damped oscillatory wave conforming to ANSI C37.90.1 Damped oscillatory wave level 3 conforming to IEC 61000-4-12 Conducted disturbance emission A conforming to IEC 61000-4-16 Surges level 4 conforming to IEC 61000-4-5
Ambient air temperature for operation	-40…70 °C (96 h)
IP degree of protection	IP54 front conforming to IEC 60529 IP30 case conforming to IEC 60529 IP20 rear conforming to IEC 60529
IK degree of protection	IK07 conforming to IEC 62262
maximum operating altitude	2000 m
Protective treatment	Conformal coating conforming to IEC 60068-2-52:Kb/1 Conformal coating conforming to IEC 60068-2-60:Ke
Relative humidity	0…93 % at 40 °C, without condensation, 56 days

Packing Units

Unit Type of Package 1	PCE
Number of Units in Package 1	1
Package 1 Height	30 cm
Package 1 Width	30 cm
Package 1 Length	40 cm
Package 1 Weight	8.217 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)

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

Carbon footprint (kg.eq.CO2 per CR, Total Life cycle)	**1709**
Environmental Disclosure	**Product Environmental Profile**

Use Better

Materials and Substances

Packaging made with recycled cardboard	**Yes**
Packaging without single use plastic	**No**
EU RoHS Directive	**Compliant with Exemptions**
SCIP Number	**7185a990-e1e7-4906-8102-573086cf8d7d**
REACh Regulation	**REACh Declaration**
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**

Technical Illustration

Assembly's dimensions