Product data sheet
Characteristics

VPL12N
Power Factor controller, PowerLogic PFC Controller, VPL 12



Main

Range	PowerLogic
Product name	PowerLogic PFC Controller
Product or component type	Power factor controller
Device short name	VPL12

Complementary

Number of step output contacts	12
[Us] rated supply voltage	90...550 V AC <= 999 kV AC with external VT
Measurement current	0…5 A
Measurement voltage	90…550 V AC 50/60 Hz
Operating mode	Manual or automatic
Number of quadrant operation for generator application	4
Device connection	Communication protocol: Modbus interface: RS485
Input function	Switch: 1 x dry contact
Colour code	Front: dark grey RAL 7016
Display type	Backlit LCD
Display size	56 x 25 mm
Function available	Manual programming Automatic initialisation Automatic detection Advanced programming (expert) Any step sequence
Metering type	Power factor and displacement PF (signed, four quadrant) Total current harmonic distortion THD (I) Power factor average over lifetime Temperature maximum Phase current I1, I2, I3 RMS on load Active power P, P1, P2, P3 on load Reactive power Q, Q1, Q2, Q3 on load Apparent power S, S1, S2, S3 on load Voltage U21, U32, U13, V1, V2, V3 on load
Type of measurement	Capacitor current overload Irms/I1 Individual voltage harmonic Power factor Operating time Cos φ Ambient temperature inside the cubicle Tan φ
Information displayed	Number of switching cycles per step Individual step size in kVAr Remaining step capacity in %

Type of alarms	Step power loss (< 75 %) / Action: message and alarm contact + step blocked Step faulty / Action: message and alarm contact + step blocked High current (> 6 A CT) / Action: message and alarm contact Hunting (unstable regulation) / Action: message and alarm contact + step blocked Low current (< 15 mA CT) / Action: message and alarm contact Overcompensation / Action: message and alarm contact Capacitor current overload (Irms/I1) (> 130 % I1) / Action: message and alarm contact + step swit Overtemperature (50 °C) / Action: message and alarm contact + step switched off Overtemperature (30 °C) / Action: fan switch Overvoltage (+/- 10 %) / Action: message and alarm contact + control stopped Total harmonic distortion (> 7 %) / Action: message and alarm contact + step switched off
Data recording	5 alarms
Service life in hours	100000 H without maintenance
Mechanical durability	65000 Cycles without maintenance
Input type	Phase to phase Phase to neutral Insensitive to CT polarity Insensitive to phase rotation polarity Current input CT...X/5 A and X/1 A
Output type	Control relay: 0.2 A 110 V DC Control relay: 1 A 48 V DC Control relay: 2 A 400 V AC 50/60 Hz Control relay: 1 A 24 V DC Control relay: 5 A 250 V AC 50/60 Hz Control relay: 5 A 120 V AC 50/60 Hz Fan: 5 A 250 V AC 50/60 Hz Fan: 1 A 48 V DC Alarm relay: 5 A 250 V AC 50/60 Hz Alarm relay: 1 A 48 V DC
Current of common	10 A
Settings operating mode	Automatic Manual
Type of setting	Choice of stepping programs: auto Choice of stepping programs: LIFO Choice of stepping programs: linear Delay between 2 successive switch on the same step: 5...1200 s Step configuration programming: auto Step configuration programming: off Step configuration programming: fixed Target cos phi: 0.7 inductive...0.7 capacitive Target cos phi: dual cos φ
Measurement accuracy	Voltage +/- 1 % Current +/- 1 % Frequency +/- 1 % Energy (P,Q,S) +/- 2 % Cos φ +/- 2 % Total voltage harmonic distortion THD (U) +/- 2 % Individual voltage harmonic +/- 3 % Temperature +/- 3 °C
Time delay range	1...6500 s (on reconnection) 1...6500 s (on response)
Provided equipment	User manual
Mounting mode	Flush-mounted
Mounting support	Panel - thickness: 1…3 mm
Mounting location	In cabinet
Cut-out dimensions	138 x 138 mm
Height	144 Mm
Width	144 Mm
Depth	58 Mm
Net weight	0.6 Kg
Compatibility code	VPL 12

Environment

Standards	IEC 61000-6-4 UL 61010-1 EN 61010-1 IEC 61000-6-2 IEC 61326-1
Product certifications	EAC[RETURN]NRTL[RETURN]cNRTL[RETURN]CE
IP degree of protection	Front face: IP41 Rear face: IP20
Operating altitude	<= 2000 m
Ambient air temperature for operation	-20…60 °C
Ambient air temperature for storage	-40…85 °C

Packing Units

Unit Type of Package 1	PCE
Number of Units in Package 1	1
Package 1 Height	9.200 Cm
Package 1 Width	17.700 Cm
Package 1 Length	18.400 Cm
Package 1 Weight	727.000 G
Unit Type of Package 2	S03
Number of Units in Package 2	8
Package 2 Height	30.000 Cm
Package 2 Width	30.000 Cm
Package 2 Length	40.000 Cm
Package 2 Weight	6.155 Kg
Unit Type of Package 3	P06
Number of Units in Package 3	64
Package 3 Height	75.000 Cm
Package 3 Width	60.000 Cm
Package 3 Length	80.000 Cm
Package 3 Weight	58.408 Kg

Offer Sustainability

Recyclability potential, in %	20
Total lifecycle Carbon footprint	238 kg CO2 eq.
Carbon footprint of the manufacturing phase [A1 to A3]	81.613
Carbon footprint of the manufacturing phase [A1 to A3]	82 kg CO2 eq.
Carbon footprint of the distribution phase [A4]	0.23061
Carbon footprint of the distribution phase [A4]	0.2 kg CO2 eq.
Carbon footprint of the installation phase [A5]	0.34502
Carbon footprint of the installation phase [A5]	0.3 kg CO2 eq.
Carbon footprint of the use phase [B2, B3, B4, B6]	154.82
Carbon footprint of the use phase [B2, B3, B4, B6]	155 kg CO2 eq.
Mercury free	Yes
Sustainable packaging	Yes
Carbon footprint of the end-of-life phase [C1 to C4]	1.01
Carbon footprint of the end-of-life phase [C1 to C4]	1 kg CO2 eq.
Environmental Disclosure	Product Environmental Profile
Total lifecycle Carbon footprint	238
Packaging made with recycled cardboard	Yes
Packaging without single use plastic	Yes
SCIP Number	Fb1ad43d-1a69-4fc3-8936-92a443d1d0b3
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, which
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

Contractual warranty

Warranty (in months)	18

Product Life Status : Commercialised