Product data sheet
Characteristics

VPL06N
Power Factor controller - VarPlus Logic - VPL 6

Main

Range	VarPlus
Product name	VarPlus Logic
Device short name	VPL6
Product or component type	Power factor controller

Complementary

Number of step output contacts	6
[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	1 dry contact (switch for cos phi 2.
Colour code	Front : dark grey (RAL 7016)
Display type	Backlit LCD
Display size	56 x 25 mm
Function available	Automatic initialisation Automatic detection Manual programming 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	Ambient temperature inside the cubicle Capacitor current overload Irms/I1 Cos φ

	Operating time Power factor Individual voltage harmonic Tan φ
Information displayed	Individual step size in kVAr Number of switching cycles per step Remaining step capacity in %
Data recording	5 alarms
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 Capacitor current overload (Irms/I1) (> 130 % I1) / Action: message and alarm contact + step switched off 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 Overcompensation / Action: message and alarm contact
Operational Hours alarm	100000 h without maintenance
Operational counter alarm	65000 cycles without maintenance
Input type	Current input CT...X/5 A and X/1 A Insensitive to CT polarity Insensitive to phase rotation polarity Phase to neutral Phase to phase
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
Maximum at the common terminal	10 A
Settings operating mode	Automatic Manual
Type of setting	Choice of stepping programs : linear Step configuration programming : auto Step configuration programming : fixed Target cos phi : dual cos φ Choice of stepping programs : auto Choice of stepping programs : LIFO Delay between 2 successive switch on the same step : 5...1200 s Step configuration programming : off Target cos phi : 0.7 inductive...0.7 capacitive
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 for on reconnection 1...6500 s for on response
Provided equipment	User manual
Mounting mode	Flush-mounted
Mounting support	1...3 mm panel
Mounting location	In cabinet
Cut-out dimensions	138 x 138 mm
Height	144 mm
Width	144 mm
Depth	58 mm

Product weight	0.6 kg

Environment

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