# Product datasheet

Specifications



## Power Factor controller, PowerLogic PFC Controller, VPL 12

VPL12N

**EAN Code: 3606480800115**

**Price: 356,90 EUR**

## 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<br><= 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<br>Automatic initialisation<br>Automatic detection<br>Advanced programming (expert)<br>Any step sequence |
| **Metering type** | Power factor and displacement PF (signed, four quadrant)<br>Total current harmonic distortion THD (I)<br>Power factor average over lifetime<br>Temperature maximum<br>Phase current I1, I2, I3 RMS on load<br>Active power P, P1, P2, P3 on load<br>Reactive power Q, Q1, Q2, Q3 on load<br>Apparent power S, S1, S2, S3 on load<br>Voltage U21, U32, U13, V1, V2, V3 on load |
| **Type of measurement** | Capacitor current overload Irms/I1<br>Individual voltage harmonic<br>Power factor<br>Operating time<br>Cos φ<br>Ambient temperature inside the cubicle<br>Tan φ |
| **Information displayed** | Number of switching cycles per step<br>Individual step size in kVAr<br>Remaining step capacity in % |

Rates duty January 2016

Disclaimer: This documentation is not intended as a substitute for and is not to be used for determining suitability or reliability of these products for specific user applications

| | |
|---|---|
| **Type of alarms** | Step power loss (< 75 %) / Action: message and alarm contact + step blocked<br>Step faulty / Action: message and alarm contact + step blocked<br>High current (> 6 A CT) / Action: message and alarm contact<br>Hunting (unstable regulation) / Action: message and alarm contact + step blocked<br>Low current (< 15 mA CT) / Action: message and alarm contact<br>Overcompensation / Action: message and alarm contact<br>Capacitor current overload (Irms/I1) (> 130 % I1) / Action: message and alarm contact + step switched off<br>Overtemperature (50 °C) / Action: message and alarm contact + step switched off<br>Overtemperature (30 °C) / Action: fan switch<br>Overvoltage (+/- 10 %) / Action: message and alarm contact + control stopped<br>Total harmonic distortion (> 7 %) / Action: message and alarm contact + step switched off |
| **Data recording** | 5 alarms |
| **Operational Hours alarm** | 100000 h without maintenance |
| **Operational counter alarm** | 65000 cycles without maintenance |
| **Input type** | Phase to phase<br>Phase to neutral<br>Insensitive to CT polarity<br>Insensitive to phase rotation polarity<br>Current input CT...X/5 A and X/1 A |
| **Output type** | Control relay: 0.2 A 110 V DC<br>Control relay: 1 A 48 V DC<br>Control relay: 2 A 400 V AC 50/60 Hz<br>Control relay: 1 A 24 V DC<br>Control relay: 5 A 250 V AC 50/60 Hz<br>Control relay: 5 A 120 V AC 50/60 Hz<br>Fan: 5 A 250 V AC 50/60 Hz<br>Fan: 1 A 48 V DC<br>Alarm relay: 5 A 250 V AC 50/60 Hz<br>Alarm relay: 1 A 48 V DC |
| **Maximum at the common terminal** | 10 A |
| **Settings operating mode** | Automatic<br>Manual |
| **Type of setting** | Choice of stepping programs: auto<br>Choice of stepping programs: LIFO<br>Choice of stepping programs: linear<br>Delay between 2 successive switch on the same step: 5...1200 s<br>Step configuration programming: auto<br>Step configuration programming: off<br>Step configuration programming: fixed<br>Target cos phi: 0.7 inductive...0.7 capacitive<br>Target cos phi: dual cos φ |
| **Measurement accuracy** | Voltage +/- 1 %<br>Current +/- 1 %<br>Frequency +/- 1 %<br>Energy (P,Q,S) +/- 2 %<br>Cos φ +/- 2 %<br>Total voltage harmonic distortion THD (U) +/- 2 %<br>Individual voltage harmonic +/- 3 %<br>Temperature +/- 3 °C |
| **Time delay range** | 1...6500 s (on reconnection)<br>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 |

| | |
|---|---|
| **Product weight** | 0.6 kg |
| **Compatibility code** | VPL 12 |

## Environment

| | |
|---|---|
| **Standards** | IEC 61000-6-4<br>UL 61010-1<br>EN 61010-1<br>IEC 61000-6-2<br>IEC 61326-1 |
| **Product certifications** | EAC<br>NRTL<br>cNRTL<br>CE |
| **IP degree of protection** | Front face: IP41<br>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 |

## Contractual warranty

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|---|---|
| **Warranty (in months)** | 18 |

## 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

| | |
|---|---|
| Total lifecycle Carbon footprint | **238 kg CO2 eq.** |
| Carbon footprint of the manufacturing phase [A1 to A3] | **82 kg CO2 eq.** |
| Carbon footprint of the distribution phase [A4] | **0.2 kg CO2 eq.** |
| Carbon footprint of the installation phase [A5] | **0.3 kg CO2 eq.** |
| Carbon footprint of the use phase [B2, B3, B4, B6] | **155 kg CO2 eq.** |
| Carbon footprint of the end-of-life phase [C1 to C4] | **1 kg CO2 eq.** |
| Environmental Disclosure | **Product Environmental Profile** |

## Use Better

### Materials and Substances

| | |
|---|---|
| Packaging made with recycled cardboard | **Yes** |
| Packaging without single use plastic | **Yes** |
| SCIP Number | **Fb1ad43d-1a69-4fc3-8936-92a443d1d0b3** |
| EU RoHS Directive | **Compliant By Exemption** |
| REACh Regulation | **Reference contains Substances of Very High Concern above the threshold** |

## Use Longer

### Lifetime extension

| | |
|---|---|
| Repair | **No** |

## Use Again

### Repack and remanufacture

| | |
|---|---|
| Recyclability potential, in % | **20** |
| End of life manual availability | **End of Life Information** |
| Take-back | **Yes** |
| WEEE Label | **The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins** |