



PHI-CON

# 35 W AC-DC Power-Supply PACC35A-Series

- Metal case
- 85 ... 264 V<sub>AC</sub> / 120...373 V<sub>DC</sub> universal input range
- Continuously short circuit protected
- Input - Output isolation voltage 3 kV<sub>AC</sub>
- Isolation Class I
- EN-, IEC-, UL 62368-1
- EN 55032 Class B
- EN 60335-1



## Model guide

Type	Output 1		Output 2		Output power [W] max.	Efficiency @ full load, Vin 230V <sub>AC</sub> [%] typ.	Capacitive load	
	voltage [V <sub>DC</sub> ]	Current range [A]	voltage [V <sub>DC</sub> ]	current [A] max.			Output 1 [μF] max.	Output 2 [μF] max.
PACC35A05401210	5.0	0.4...4	12	0.1...1	32	81	4000	1000
PACC35A05222410	5.0	0.22...2.2	24	0.1...1	35	83	2200	1000

## Specifications

Input	
Voltage range	85...264 V <sub>AC</sub> or 120...373 V <sub>DC</sub> Power derating see diagram
Line frequency range	47...63 Hz
Full load input current	0.75 A @ 115 V <sub>AC</sub> , 0.5 A @ 230 V <sub>AC</sub>
Inrush current	30 A, typ. @ 115 V <sub>AC</sub> 50 A, typ. @ 230 V <sub>AC</sub>
Stand by power consumption	0.3 W typ.
Recommended fuse	1 A, time delayed type
Isolation voltage	
Input to output	≥ 3 kV <sub>AC</sub> , for 1 minute, <10 mA
Input to protection GND	≥ 2 kV <sub>AC</sub> , for 1 minute, <10 mA
Output to protection GND	≥ 500 V <sub>AC</sub> , for 1 minute, <10 mA
Output to Output	≥ 500 V <sub>DC</sub> , for 1 minute
Isolation resistance	
Input to output	10 <sup>8</sup> Ω at 500 V <sub>DC</sub>
Input to protection GND	10 <sup>8</sup> Ω at 500 V <sub>DC</sub>
Output to protection GND	10 <sup>8</sup> Ω at 500 V <sub>DC</sub>
Leakage current	≤ 2 mA <sub>rms</sub> , typ. @ 240 V
Output	
Voltage tolerance at full load PACC35A05401201 PACC35A05221201	Vout 1: ± 2 %, max. Vout 2: ± 8 %, max. Vout 2: -4/+8 %, max.
Line regulation	Vout 1: ± 0.5 %, typ. Vout 2: ± 1.5 %, typ.
Load regulation at 0 to 100 % load change	Vout 1: ± 0.5 %, typ. Vout 2: ± 5 %, typ.
Trim range	Vout 1: 4.75...5.5 V
Start up delay time	2 s, max.
Output voltage rise time	Vout 1, Vout 2: 30 ms, max.
Temperature coefficient	± 0.03 % / °C, typ.
Ripple & noise (BW 20 MHz)	Vout 1: 80 mV, typ. Vout 2: 150 mV, typ.
Short circuit protection	Continuous, Hiccup, automatic restart after delay time < 5 s
Over current protection	≥ 110 ...220 % of rated current
Over voltage protection	Vout 1: 5.75 ...6.75 V
Minimum load	See model guide

General	
Power off hold up time	Vin: 115 V <sub>AC</sub> : 5 ms, typ. Vin: 230 V <sub>AC</sub> : 30 ms, typ.
Switching frequency	100 kHz, typ.
Reliability MTBF (MIL-HDBK-217F @25 °C)	>300 000 h
EMI conducted emission	EN 55032 (CISPR32), class B
EMI radiated emission	EN 55032 (CISPR32), class B
EMC compliance	
ESD IEC-, EN 61000-4-2	Contact ± 6 kV, perf. crit. A Air ± 8 kV, perf. crit. A
RS IEC-, EN 61000-4-3	10 V/m perf. crit. A
EFT IEC, EN 61000-4-4	± 2 kV perf. crit. A
Surge IEC, EN 61000-4-5	± 2 kV line to line perf. crit. A ± 4 kV line to GND perf. crit. A
CS IEC, EN 61000-4-6	10 Vrms perf. crit. A
Voltage dips, short interruptions and voltage variations immunity IEC, EN 61000-4-11	0...70 % perf. crit. B
Safety Standard	EN 62368-1, IEC 62368-1, UL 62368-1, EN 60335-1
Safety Class	Class I
Environmental	
Operating ambient temperature	-30...70 °C (see derating diagram)
Storage temperature	-40 ... 85 °C
Case temperature	95 °C, max.
Power derating 55...70 °C	2 % per °C, See diagram
Storage humidity	10...95 %, non condensing
Cooling	Free air convection, >35 LFM
Operating altitude	≤ 5000 m
Vibration	≤ 5 g
Physical	
Dimensions	99 x 97 x 30 mm
Weight	210 g
Case material	Aluminium
Wave soldering temperature	≤ 265 °C, ≤ 10 s, ≥ 1.5 mm distance from case
Manual soldering temperature	≤ 370 °C, ≤ 5 s, ≤ 1.5 mm distance from case

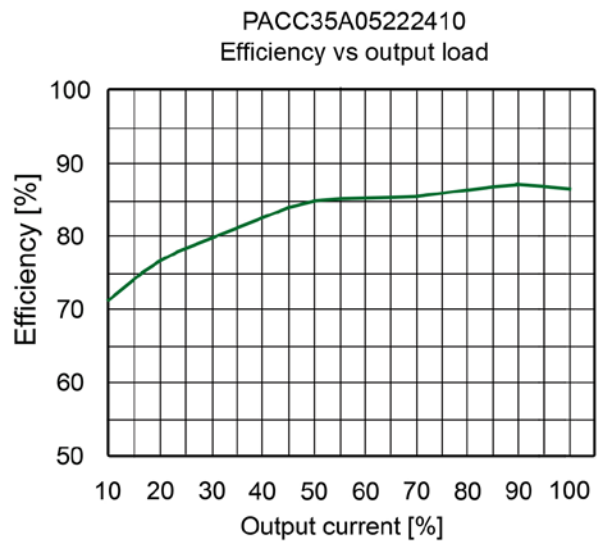
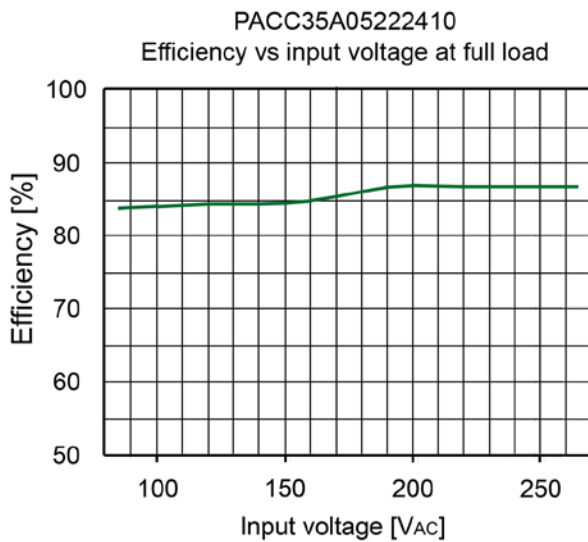
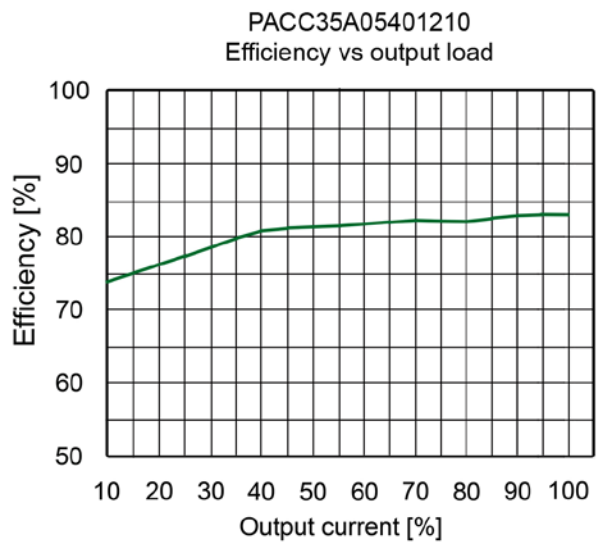
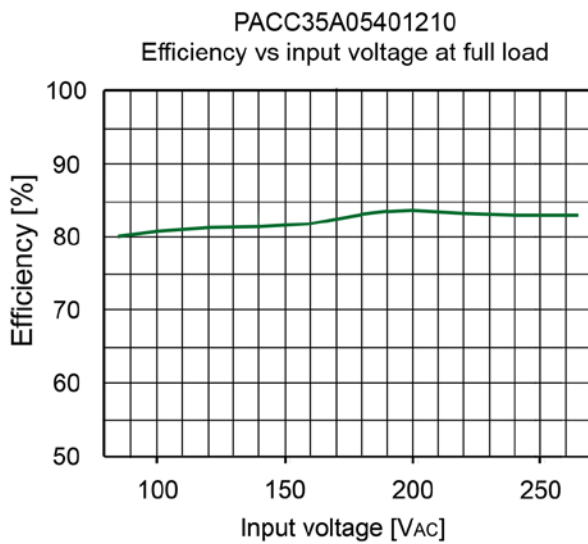
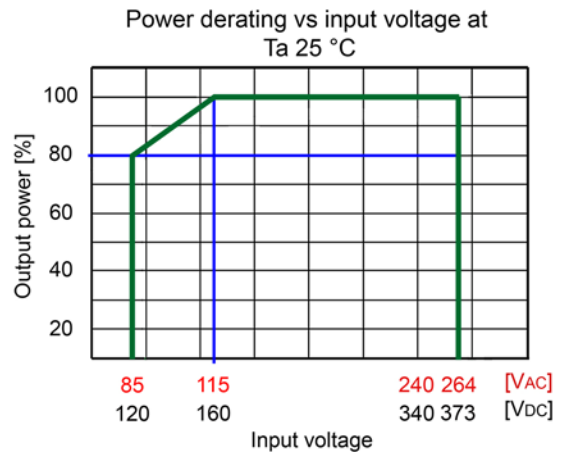
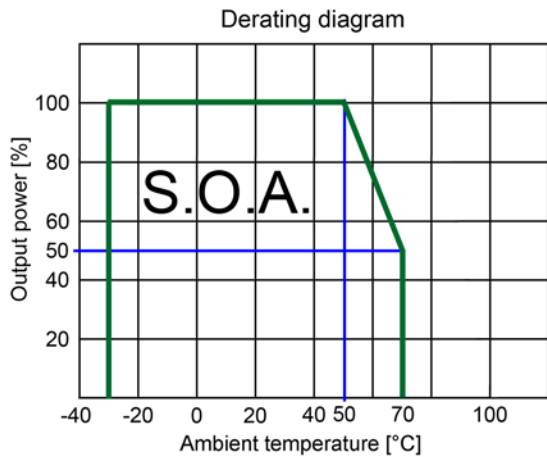
### Note:

1. Ripple and noise were measured by the method of near measure (The details see noise measure method).
2. All specifications measured at Ta 25 °C, humidity <75 %, 230 V<sub>AC</sub> input voltage and rated output load unless otherwise specified.
3. The ambient temperature derating of 5 °C/1000 m is needed for operating altitude greater than 2000 m.
4. The case needs to be extra connected to PE of system when the terminal equipment in operating.



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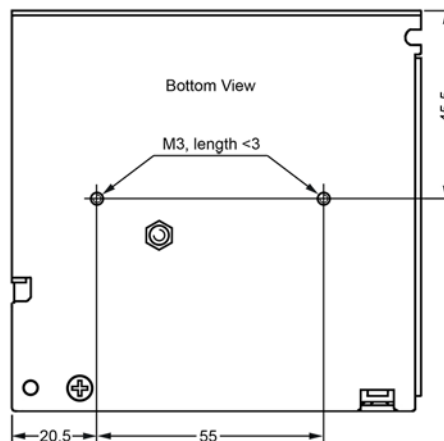
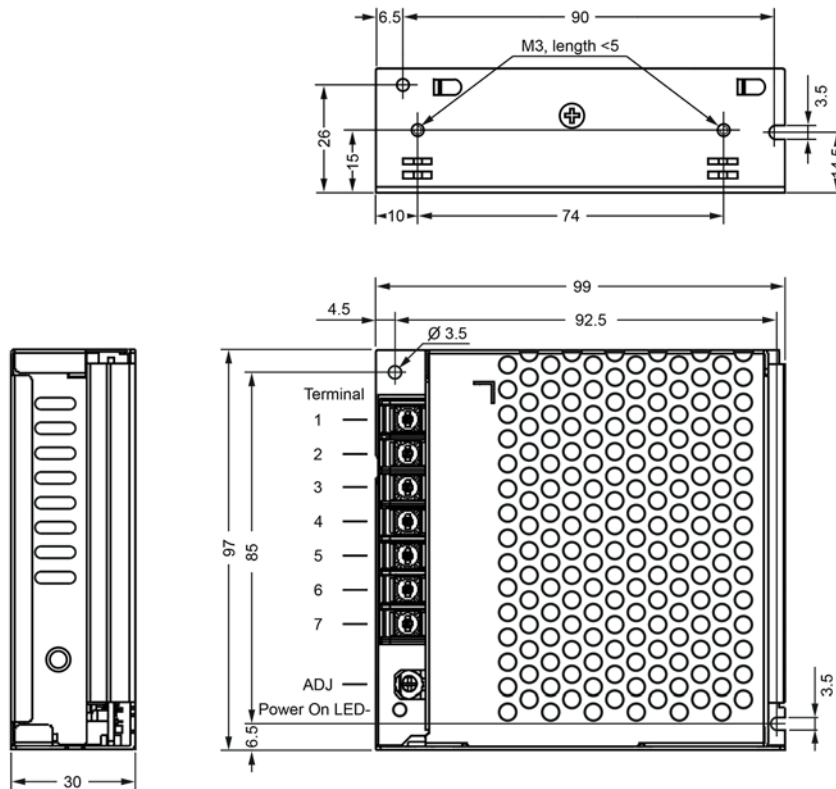




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## Mechanical dimensions



Pin assignment	
1	AC In (L)
2	AC In (N)
3	Protective earth
4	- DC Out 2
5	+ DC Out 2
6	- DC Out 1
7	+ DC Out 1

Note:  
 Unit: mm  
 General tolerances:  $\pm 1$  mm  
 Screwing torque M3 thread:  $< 0.5$  Nm  
 Terminal wire range: 22..14 AWG

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Rev: 20190718 f