Single output up to 300 W
40 - 60Hz / opt. 400Hz

2ph power supply with
active power factor

SYKO®

für Industry / Telecom / System engineering / Railway

- **Use on 115 and/or 230V AC**
- **EN 55022.B / EN61000-4-4/5 S Level 3**
- **Short circuit / no-load / over load protected**
- **6,6/3mm air and creepage distances**
- **Hold-up time > 20ms = f(Ta/ΔC/aging)**
- **Active inrush current limitation**
- **CE - Conformity on request**
- **Power factor correction > 0,98**
- **Use on „fluctuation“ networks**
- **Regulated parallel connection**

Serie PMW03.U

Main points:

Output:

- Accuracy absolute ±1%/50% load
- Option: Uout adjustment (Potentiometer) ±5%
- Regulation factor ±2% f(Ui/Io/Ta)
- Hick-up-Mode at short circuit from <60% Uo
- Ripple ≤ 40mVpp incl. network share
- Spikes <250mVpp (T 1:1 50MHz)
- **PF** Power fail (active low)
- Current sharing (Option) **LSB** regulated parallel connection
- LED green in front panel

Input:

- Input fuse (emergency protection)
- Under voltage switch-off / Hysteresis Restart with Hysteresis
- Active soft start on intermediate capacitors over PTC and actuated phase
- Input capacity: 0,66µF
- Input filter EN55022.B
- Disturbance protection
- EN61000-4-4 (Surge) 1KV/50µs/2Ω EN61000-4-5 (Burst) level 3
- Power factor correction > 0,98
- Hold-up time > 20ms / 230V
- Polarity independent for DC input
- Option: 400Hz or DC-input

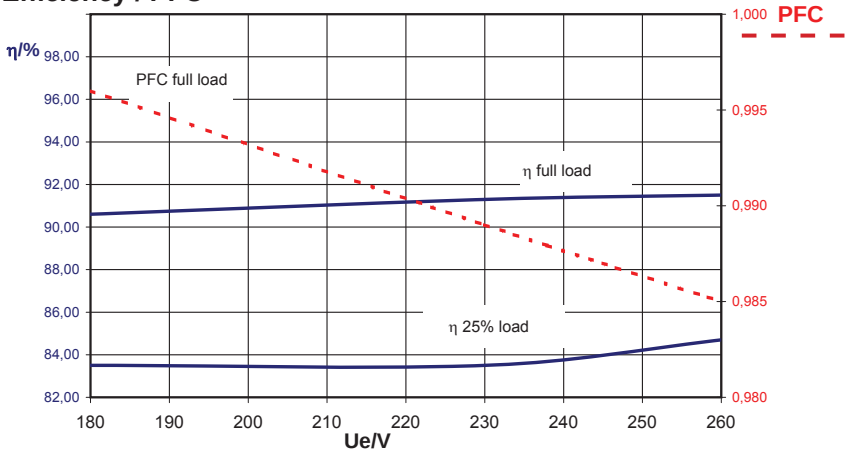
in General:

- -25 to +55°C free air convection
- Option -40 to +70°C (forced air convection)
- Clock frequency approx. 100kHz
- Isolation test voltage:
  Input-Output: 3,75 KV AC (6,6mm)
  Input-Ground: 2,5 KV AC (3mm)
  Output-Ground: 1,0 KV AC (3mm)
- Dimension: 160x100x65 (14TE front panel)
- Option: Front panel (additional charge)
- Option: Chassis mounting
- Connection: H15 connector DIN 41612, 15 pin, style H

Uin range	Uout charging voltage	Io stat./dyn.	Model number
	V	A	
160 - 264 V AC	12	14 / 17	PMW03·U 22·12·170
50/60 Hz	15	12 / 14	PMW03·U 22·15·140
230V AC	24	10 / 12	PMW03·U 22·24·120
	48	5 / 6	PMW03·U 22·48·060
82 - 264 V AC	12	12,5 / 14	PMW03·U 20·12·140
50/60 Hz	15	10 / 11	PMW03·U 20·15·110
115V / 230V AC	24	8 / 9,0	PMW03·U 20·24·090
	48	4 / 4,5	PMW03·U 20·48·045
82 - 150 V AC	12	14 / 17	PMW03·U15.12·170
50/60 Hz	15	12 / 14	PMW03·U15.15.140
optional:	24	10 / 12	PMW03·U15.24.120
115V / 300-500 Hz	48	5 / 6	PMW03·U15.48.060

Modifikation costs for possible changes above parameters: on request
Higher output voltage: on request
Higher output power with forced air convection: on request

Efficiency / PFC PMW03.U20.48.060



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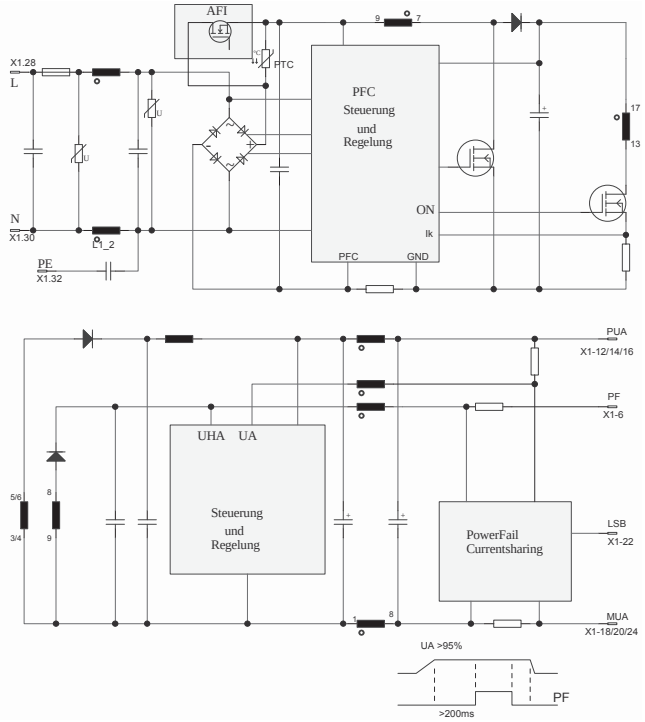
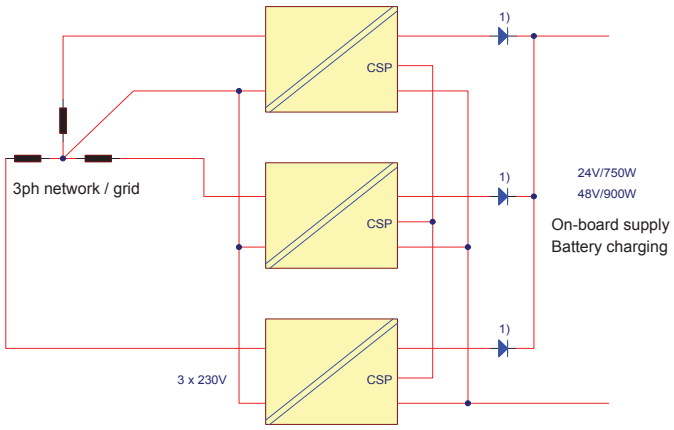
The PMW 03 series is designed for the use on very wide fluctuating AC-networks in mobile applications. The focus was to realise high functionality at the interface points and the double-stage topology's secured operation, which generates very good efficiencies of 90% / 91% (24/48V). The smart mechanical design, use of massive heat sinks for the semiconductor's thermal connection and the use of an overall cover heat sink realises high shock/vibration requirements and ambient temperatures with optimised thermal characteristics. Nominal output voltages 24V (259W) and 48V (300W) for heat sink temperatures at chassis mounting of –25°C to +70°C are available. [Option: Pout +20% for Ta = 50°C]

The functionality allows regulated parallel connection. Three units can work in parallel with primary sided connection to 400V/3Ph-Network in phase to neutral Y-connection. In case of a load step from 0,3 to 30A with three parallel connected units the output's variation is ±2% for <1ms. No-load operation is unproblematic and a 100% load step is allowed. The hold-up time is constant over the ambient temperature range, tolerance of electrolytic capacitors aging, and input voltage at full load. Soft start/pre-charging of the intermediate capacitors is realised with a PTC solution and our active transient protection filter generates constant maximum differential returned inrush currents at jittering turn-on characteristic. PF signals the networks power failure and the Reset signals the decreasing output voltage.

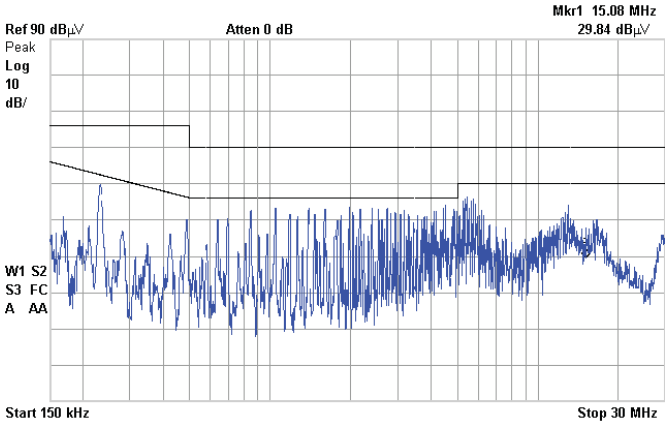


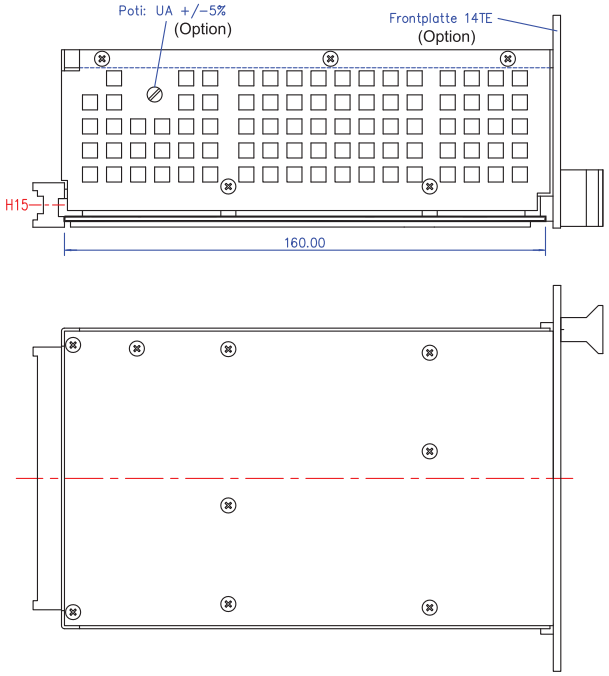
Connection at 3ph grid

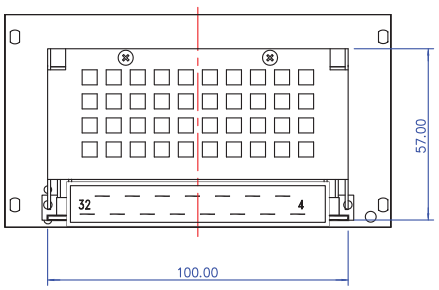


Parallel connection at 3ph/1ph network
1) safety redundant mit de-coupling diode
Power increase without de-coupling diode

Measurement of radio interference







Mechanic
(19“ rack version)

32	30	28	26	24	22	20	18	16	14	12	10	8	6	4
PE	N	L	1)	MUA	LSB	MUA	MUA	PUA	PUA	PUA	NC	NC	PF	NC
⏚														

L / N : L/N Live wire / neutral connector
PE : must be connected to protecting earth!
PUA : +Vout
MUA : -Vout
1) : not applicable (electrical potential close to Vin)
NC : not applicable
LSB : Load share bus (Option)
PF : Power fail
P : Potentiometer (Option)