

## POWER SUPPLY 1-PHASE, 24V DC LOW POWER PIANO SERIES

PIM90.245

PSU 100-240V ac I/P 24V dc 3.8A 90W O/P Screw

- Output current between 1.5 A to 3.8 A
- Push-in or screw terminals
- Up to 93.8% efficiency
- Low no-load power losses



### PRODUCT DESCRIPTION

The latest and smallest representatives of the PIANO product family are currently the 24V DIN rail power supplies PIM36 (36W), PIM60 (60W) and PIM90 (90W).

Mini power supplies. New space opportunities.

The new PIANO Mini (PIM) power supplies create space in your systems or machines and allow you a more flexible planning. A 90W DIN rail power supply in a 36 x 90 x 91mm (WxHxD) housing is currently unique in the market. The width of the 36W version is only 22.5mm - so literally a thumb's width. This results in completely new space opportunities for you.

Focus on core features.

The most important characteristic of the PIANO devices is their focus on the core features of a power supply: efficiency, lifetime, reliability and size. The very high PULS quality is maintained in each of these features.

An example is the high efficiency of 91.8% (PIM60) and 93.8% (PIM90) at full load and +40°C ambient temperature. This means lower heat losses. It makes the power supplies more durable and reduces your costs for the cooling of your system.

Push-in or screw terminals - you decide.

For the PIM60 and PIM90 you can choose between push-in and screw terminals. The push-in terminals reduce installation time, and are very reliable in environments prone to shock and vibration. In addition, they are ideally suited for robot-assisted wiring processes.

The screw terminals, that accommodate large diameter wires, are still popular in environments with minimal shock and vibration.

Growing power supply family.

With the new PIANO Mini products, PULS now provides a complete, cost-oriented product family in the 36-480W power range.

## TECHNICAL DATA

### INPUT DATA

Input voltage ac	100-240 V
Input voltage ac min	90 V AC
Input voltage ac max	264 V AC
Inrush current at 120 V ac typical	18 A
Inrush current at 230 V ac typical	40 A
Input voltage range	Wide-range

Power factor at 120 V ac, full load. Typical	0.58
Power factor at 230 V ac, full load. Typical	0.45
Number of phases	1

## OUTPUT DATA

Output voltage	24 V DC
Output voltage min	24 V DC
Output voltage max	28 V DC
Output current	3.8 A
Power	90 W

## EFFICIENCY / LIFETIME / MTBF

Efficiency at 120 V ac, full load, typical	92.1 %
Efficiency at 230 V ac, typical	92 %
Efficiency at 230 V ac, full load, typical	93.8 %
Lifetime at 120 V ac, full load and +40 ° C	64000 h
Lifetime at 230 V ac, full load and +40 ° C	102000 h
MTBF (IEC 61709) 230 V ac, max load, 40 ° C	102000 h

## DIMENSIONS

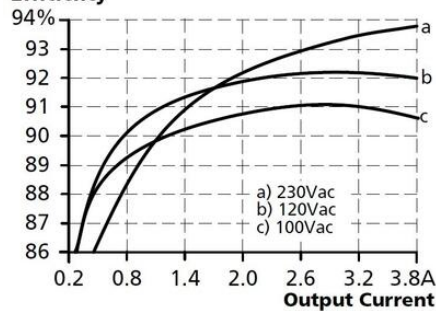
Width	36 mm
Height	90 mm
Depth	91 mm
Weight	0.27 kg

## OTHER

Approvals	CB, CE, cULus
Hold time at 120 V ac, typical full load	25 ms
Hold time at 230 V ac, typical full load	119 ms
IP class	IP20
Clamp type	Screw
Cable connection	Screw max 6 mm <sup>2</sup> solid, 4 mm <sup>2</sup> stranded
Load regulation	<100 mV (0-3,8 A)
Material protection	Polycarbonate
Supply frequency	50-60 ±6 %
Parallel connection for increased current	Not allowed
PFA (EN61000-3-2)	Fulfilled (Class A)

Primary fuse	Min 6A B type or 4A C type
Ripple max	100 mV pp
Series	Piano
Series connection for increased voltage	Yes
Power consumption 120 V ac	1.45 A
Power consumption 230 V ac	0.95 A
Power drop from +60 °C to +70 °C	2.4 W/°C
Temperature min without derating	-10 °C
Temperature max without derating	60 °C
Transient	VDE 0160 (750 V, 1,3 ms)
Type Power Supply	AC-DC

**Efficiency**



**Output Voltage**

