POWER SUPPLY 1-PHASE, 24 V DC PIANO, 10A

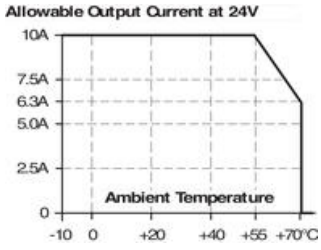
PIC240.241D
PSU 100-240V ac I/P 24V dc 10A 240W O/P

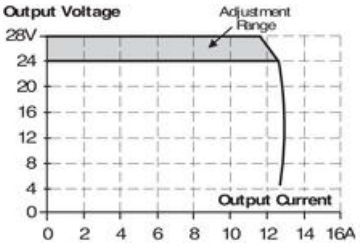
- Output current of 10 A
- Up to 91.4% efficiency
- Only 49 mm wide
- DC-OK relay output

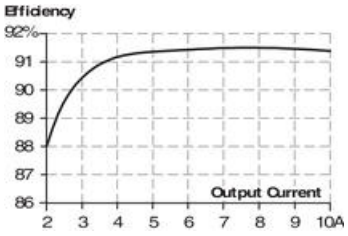
PRODUCT DESCRIPTION

These PIANO series units are extraordinarily compact, industrial grade power supplies that focus on the essential features required in today's industrial applications. The excellent cost/performance ratio presents many new and exciting opportunities without compromising quality or reliability.
The mechanically robust housing is made of a high-grade, reinforced molded material, which permits the units to be used in surrounding temperatures up to +70°C.
Since typical industrial applications do not require multiple mains inputs, the reduction to a regional input voltage range (AC 200 240V) simplifies the circuitry and has significant advantages for reliability, efficiency and cost.
The integrated DC-OK signal makes the unit suitable for many industry applications, such as process, automation and many other critical applications where preventive function monitoring can help to avoid long downtimes.

Output characteristics







Wiring

- A = Primary side, 230 V ac
- B = Secondary side, 24-28 V dc
- C = Potentiometer for voltage output
- D = DC-OK LED
  Lights green when the output voltage is over 18 V dc
- E = DC-OK output relay

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	14 A
Inrush current at 230 V ac typical	26 A
Input voltage range	Wide-range
Power factor at 120 V ac, full load. Typical	0,98
Power factor at 230 V ac, full load. Typical	0,93
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	10 A
Power	240 W

EFFICIENCY / LIFETIME / MTBF

Efficiency at 120 V ac, full load, typical	94 %
Efficiency at 230 V ac, typical	93,9 %
Efficiency at 230 V ac, full load, typical	95,2 %
Lifetime at 120 V ac, full load and +40 ° C	55000 h
Lifetime at 230 V ac, full load and +40 ° C	74000 h
MTBF (IEC 61709) 230 V ac, max load, 40 ° C	822000 h

DIMENSIONS

Width	49 mm
Height	124 mm
Depth	124 mm
Weight	0,54 kg

OTHER

Approvals	CB, CE, cRUus, cULus
Hold time at 120 V ac, typical full load	32 ms
Hold time at 230 V ac, typical full load	32 ms
IP class	IP20
Clamp type	Screw
Cable connection	Screw max 6 mm² solid, 4 mm² stranded
Load regulation	<100 mV (0-10 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 10A B type or 6A C type
Ripple max	100 mV pp
Series	Piano
Series connection for increased voltage	Yes
Power consumption 120 V ac	2,17 A
Power consumption 230 V ac	1,18 A
Power drop from +60 °C to + 70 °C	6 W/°C

Temperature min without derating	-10 °C
Temperature max without derating	55 °C
Transient	VDE 0160 (750 V, 0,3 ms)

Type Power Supply	AC-DC
DC relay output	Yes

Fig. 9-1 Efficiency vs. output current at 24V, typ.

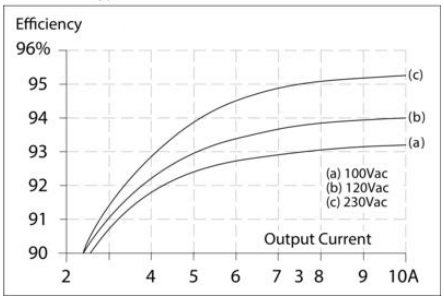


Fig. 6-1 Output voltage vs. output current, typ.

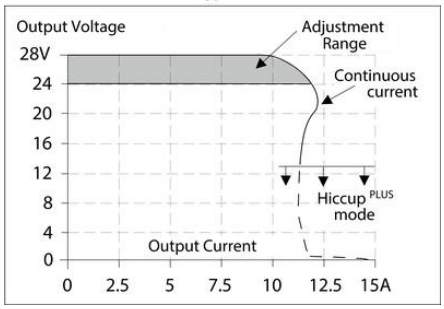


Fig. 6-2
Short-circuit (50mOhm) on output, Hiccup PLUS mode, typ.