

Technical Data

	120W PIC120		240W PIC240		480W PIC480	
AC input	200-240V	global	200-240V	global	200-240V	global
Output						
Output current nominal	5A	5A	10A	10A	20A	20A
Hold-up time typ. at 230V _{ac}	33ms	50ms	33ms	32ms	30ms	>20ms
Input						
AC input voltage nominal	200 – 240V	100 – 120V ¹⁾ 200 – 240V ¹⁾	200 – 240V	100 – 240V	200 – 240V	100 – 240V
AC input voltage range	180 – 264V	90 – 132V ¹⁾ 180 – 264V ¹⁾	180 – 264V	90 – 264V	180 – 264V	90 – 264V
Power factor	0.54	0.54 – 0.64	0.52	0.93 – 0.98	0.99	>0.95
AC inrush current typical cold start	23A	30A	35A	16A	19A	16A
Operating temp. range	-10°C to +70°C	-10°C to +70°C	-10°C to +70°C	-25°C to +70°C	-25°C to +70°C	-25°C to +70°C
Efficiency	90.5%	92.3%	91.4%	95.2%	95.7%	95.0%
MTBF SN 29500, IEC 61709 at 40°C	1720 kh	1379 kh	791 kh	822 kh	482 kh	TBD
Minimum lifetime at +40°C and 100% load	> 47 kh	> 83 kh	> 38 kh	> 74 kh	> 51 kh	> 102 kh
Mechanical data						
Dimensions WxHxD	39x124x124mm	39x124x124mm	49x124x124mm	49x124x124mm	49x124x124mm	59x124x127mm
Weight	350g	370g	550g	540g	620g	810g
Order number	PIC120.241C PIC120.242C²⁾	PIC120.241D	PIC240.241C	PIC240.241D	PIC480.241C	PIC480.241D

General data	
Output voltage nominal	24V
Output voltage range	24 – 28V
Connection type	screw terminals
Output derating	2.5% / K from +55°C (PIC480.241C: 1.7% / K from +55°C)
Humidity	5% to 95% r. h.
Altitude	0 to 6000m (from 2000m with derating)
Shock test	30G 6ms, 20G 11ms according IEC60068-2-27
DC-OK relay contact	integrated (except PIC120.242C)
Conformal coating	on request
Warranty	3 years

60W PIC60	90W PIC90
WxHxD: 36x90x90mm Efficiency: > 92.0% 100–240V wide range available with push-in or screw terminals	
Units available in Q1 / 2018	

Standards and Approvals

1) Automatic selection 2) no DC-OK relay contact 3) PIC120.241C, PIC120.242C, PIC240.241C 4) PIC480.241C / -D in progress 5) not PIC480.241D
 All parameters are specified at nominal values, 230Vac, 50 Hz, +25°C ambient temperature and 5 minutes run-in time unless otherwise noted. Technical data are subject to change without notice.

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Redundancy module



- PIANO PIRD20.241**
- Dual input with separate diodes
 - Two positive poles to reduce risk of bad connections
 - DC 12-28V ±25% wide-range input
 - Full power between -40°C and +55°C
 - Width only 39mm
 - Easy wiring: distribution terminal for negative pole included

Benefit
 Secure your system. The PIRD20.241 is the perfect solution to build cost-effective 1+1 and N+1 redundant systems.

PIANO

PIC Series | 120, 240, 480W | DIN rail power supplies



Simplicity without compromises

The PIANO PIC series is designed for applications requiring reliable DIN rail power supplies, which are focused to deliver the most widely demanded customer functionalities. Our PIC units offer this simplicity without making compromises on PULS' renowned qualities: efficiency, service lifetime, reliability and size.

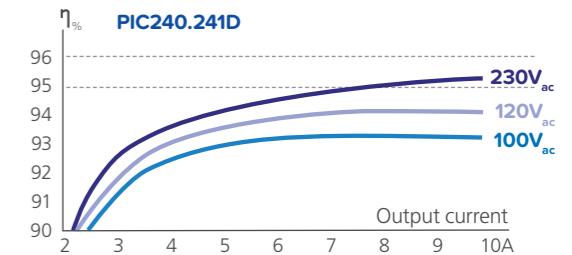
The PIC portfolio is composed of accurately designed and application-oriented 24V power supplies. This specifically developed linecard is unique in the industry 24V class.

The benefit for our customers: They will get exactly what they need for their application – no cost-intensive extra features but still manufactured to the highest quality in these essential functions. The PIC series represents PULS' perfect blend of essential functionality with the highest quality.



Impressive Efficiency

Up to 95.2% (PIC240.241D) premium class efficiency, thanks to an innovative circuit design and high-class semiconductors.

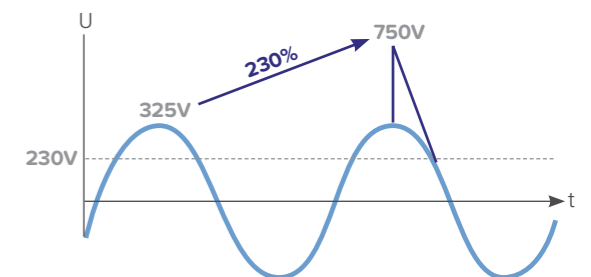


Highest Reliability

The clean board design leads to a reduced number of components which helps to increase reliability (MTBF) to an outstanding level of 1.72 million hours (PIC120.241C).

Electrical Robustness

The PIC series can withstand powerful input transients which are 230% of the nominal input voltage. Robustness is assured over the entire load range.



Benefits at a glance

Reduced system costs

The PIC series is a future-proof and cost-effective investment for your system. The actual acquisition is only the beginning. With the PIC series you will permanently reduce your system costs. The high efficiencies (90.5 to 95.7% at full load) lower the heat losses and reduce your energy costs for the cooling of the system.

Increased process uptime

The high MTBF values (Mean Time Between Failures) of up to 1.72 million hours prove the absolute reliability of the PIC series. The power supplies are equipped with a DC-OK LED and they can also report the DC-OK signal via a floating relay contact (except PIC120.242C).

Flexible choice

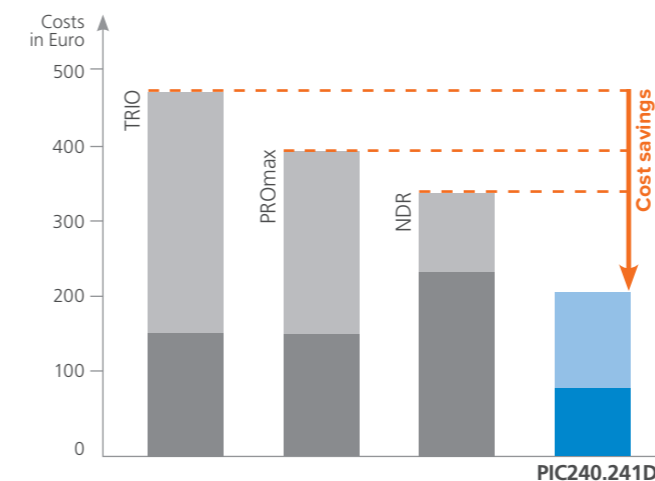
The PIC portfolio allows you a high flexibility. The units differ in very subtle details, which gives you the opportunity to choose only what you really need. For example: If you operate your systems exclusively in Europe, China or India you do not have to pay for a wide range input.

Mechanical robustness

The clean board design and high-grade housing make the PIC series resistant to mechanical shock and vibration. The light-weight design of 350-810g also reduces the static strain on the DIN rail. All units also comply with the V0 class of inflammability.

Potential operating cost savings

The graph shows the operating costs of the PULS PIC240.241D and common 24V-competitor products.



Operating costs over 10 years related to

	Minimum Lifetime	Power Losses
PHOENIX CONTACT TRIO-PS-2G	3.2 years	22.6W
Weidmüller PROmax 240W	4.2 years	21.4W
MEANWELL NDR 240W	4.7 years	29.4W
PIC240.241D	8.5 years	12.1W

The **lifetime costs** are calculated by apportioning the product price over 10 years – including pro rata replacement costs due to expired lifetime. The **costs due to power losses** are based on the assumption of a 230V operation, with an average load of 50%, an active cooling system and electricity costs of 0.08 €/kWh. All data are based on laboratory assessments and the technical measurements were conducted under equal conditions. This approach is inspired by the VDI 2884.