

BED3P

240 / 480 Watt

- 3 Phase DIN Rail PSUs for industrial applications
- Universal power input: 3x 320...600 VAC (3 Phase) or 2x 360...600 VAC (2 Phase)
- Adjustable output voltage 24...28 V_{DC}
- Protective coating according to ATEX and HazLoc
- PowerBoost with 150% power for 5 seconds
- Very robust and corrosion-resistant aluminum housing (IP20 compliant)
- Extended temperature range -25...+75 °C
- High efficiency up to 92%
- Certified according to international safety standards EN/UL 60950-1 and UL 508
- No derating for the entire input voltage range



DIN Rail PSU

DIN Rail Power Supply Series BED3P

The **IP20-compliant switching power supplies** of the BED3P series are designed for **industrial applications** in the control, process and automation technology, as well as for applications in energy and environmental technology. The compact DIN Rail power supplies features a **PowerBoost** which provides a **power output of 150 %** for 5 seconds. This function safely handles

high starting currents and peak loads. Due to the **high efficiency** of up to 92%, the heat build-up is reduced to a minimum. This will extend the **lifetime** of the power supply units and all other components in the cabinet. High-quality electronic components, a very **robust and corrosion-resistant aluminum housing** and the rugged design round off the profile of the **shock and**

vibration tested BED3P power supply series. The **100% burn-in tested** devices start from -40°C and fulfill the standard **SEMI F47** (Immunity to voltage dips). Due to the conformal **protective coating**, the power supplies are also suitable for use in potentially explosive areas **according to ATEX (EU) and HazLoc (US, Canada)**.



BED3P-24024
240 Watt



BED3P-48024
480 Watt

Article No.	Output Power	Output voltage Nominal	Output voltage Adjustment range	Output current (max)	Ripple & Noise (typ)	Efficiency (typ)
BED3P-24024	240 W	24 V _{DC}	24...28 V _{DC}	10 A	<150 mV _{SS}	92 %
BED3P-48024	480 W	24 V _{DC}	24...28 V _{DC}	20 A	<150 mV _{SS}	91 %

Technical data									
Input voltage	Nominal: 3x 400...500 VAC / 500 VDC Range: 3x 320...600 VAC (3 Phase), 2x 360...600 VAC (2 Phase) / 450...800 VDC								
Power factor correction (PFC)	240 W: Passive PFC, 480 W: Active PFC								
Input frequency	50...60 Hz								
Input current									
	<table border="1"> <thead> <tr> <th></th> <th>3x 400 VAC</th> <th>3x 500 VAC</th> </tr> </thead> <tbody> <tr> <td>240 Watt</td> <td><0,75 A</td> <td><0,65 A</td> </tr> <tr> <td>480 Watt</td> <td><1 A</td> <td><0,75 A</td> </tr> </tbody> </table>		3x 400 VAC	3x 500 VAC	240 Watt	<0,75 A	<0,65 A	480 Watt	<1 A
	3x 400 VAC	3x 500 VAC							
240 Watt	<0,75 A	<0,65 A							
480 Watt	<1 A	<0,75 A							
Inrush current	240 W: <40 A, 480 W: <50 A (at 3x 400 VAC or 3x 500 VAC)								
Nominal output voltage	24 VDC								
Output voltage adjustment range	24...28 VDC								
Line regulation	<0,5 % typ.								
Load regulation	<1 % typ.								
Hold up time	>20 ms (at 3x 400 VAC or 3x 500 VAC / 100 % load)								
Rise time	<100 ms at nominal voltage (100 % load)								
Start-up time	<1000 ms at nominal voltage (100 % load)								
Protection	Short circuit protection: Hicc-up-Mode (with auto recovery after error correction) Overload/-current protection: >150 % of rated current, Hicc-up-Mode (with auto recovery) Overtemperature protection: +80 °C (depending on load and while operating in the derating range, the over-temperature protection can trigger already below +80 °C), Hicc-up-Mode (with auto recovery) Overvoltage protection: >28.8 V, SELV-Output, Hicc-up-Mode (with auto recovery)								
Insulation voltage	Input/Output	4000 VAC							
	Input/FG	2000 VAC							
	Output/FG	1500 VAC							
Safety	EN60950-1, UL60950-1, UL 508, CE Designed according to CSA C22.2 No. 60950-1 and CSA C22.2 No. 107.1-01								
EMC	CISPR22, EN55022, EN55011, FCC: Class B IEC 61204-3 (Low-voltage power supply devices, DC output) Designed according to SEMI F47								
Explosion protection ATEX	Designed according to EN60079-0, EN60079-15 (II 3G Ex nA IIc T4 Gc)								
Explosion protection HazLoc	Designed according to CSA C22.2 No.231-M1987 Designed according to ANSI/ISA 12.12.01:2007 (Class I, Division 2, Group A, B, C, D, T4)								
Earth leakage current	<3,5 mA (typ)								
Temperature	Operating: -25 °C...+75 °C (Cold start from -40 °C) / Storage: -40 °C...+85 °C								
Derating	>50 °C: 2.5 % / °C, >70 °C: 5 % / °C								
MTBF	>500000 h according to Telcordia SR-332 at 25 °C								
Max. operating altitude	2000 m (UL508), 2500 m (UL/EN60950-1)								
Humidity	Operating: 10...90% RH, non-condensing / Storage: 10...90% RH, non-condensing								
Vibration test (non-operating)	Designed according to IEC60068-2-6, 10...500 Hz at 30 m/s ² (max. 3G); 60 min per axis (X, Y, Z)								
Shock test (non-operating)	Designed according to IEC60068-2-27, 30G (300m/S ²) for 18 ms								
Protection class	IP20								
Dimensions (WxDxH)	See drawing								
Weight (net)	240 W: 0.89 kg, 480 W: 1.35 kg								

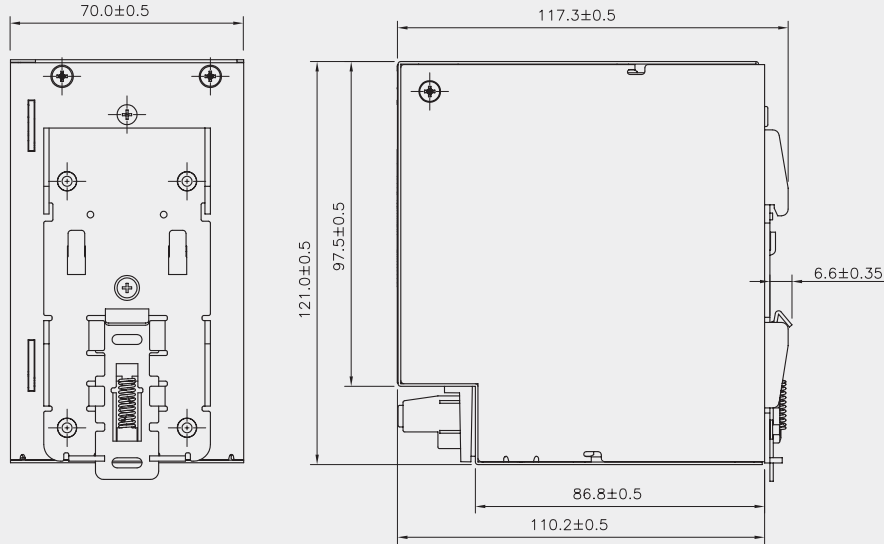
More performance classes and ATEX certified PSUs are available on request.

Ripple and Noise was measured with parallel cables. All data was measured at +25 °C, operating humidity <75 %, nominal input voltage. After the PowerBoost, the device must not be operated over the max. output power for at least 60 seconds. The final assembly has to comply with the valid EMC and safety standards. As a power component this PSU is for assembly purposes only and must not be operated in unassembled condition. The case in which the BED3P is installed must be at least IP54 compliant.

Explosion hazardous voltages are currently present for up to 5 minutes after switching off the BED3P. The device must not be touched during this time period. Remove device only when it is de-energized and not in a hazardous area. Risk of explosion!

Drawing

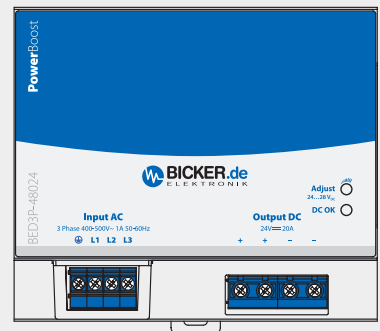
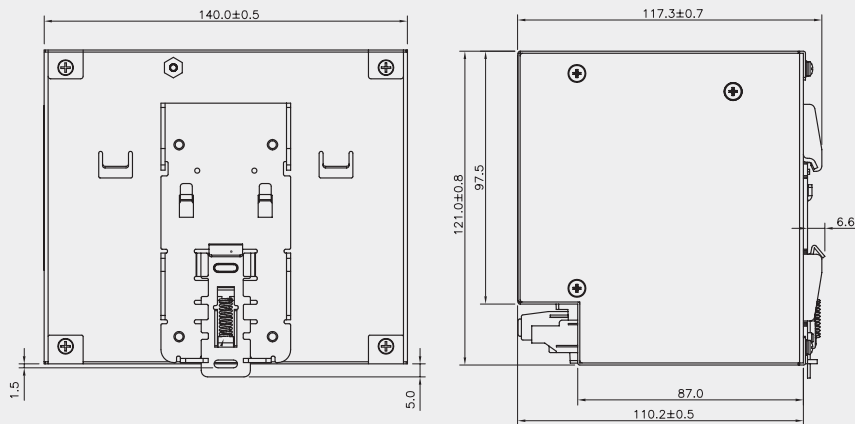
BED3P-24024



Tolerance ± 0.5 mm

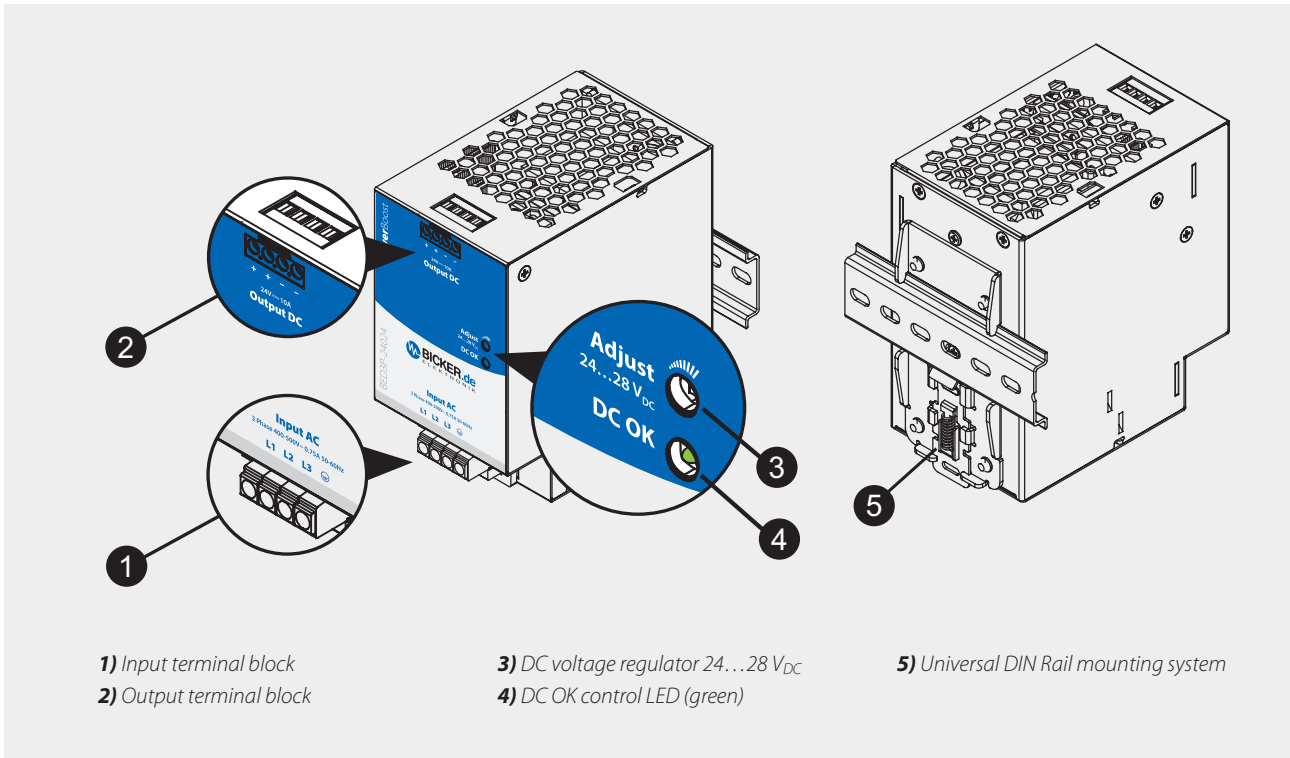
DIN Rail PSU

BED3P-48024



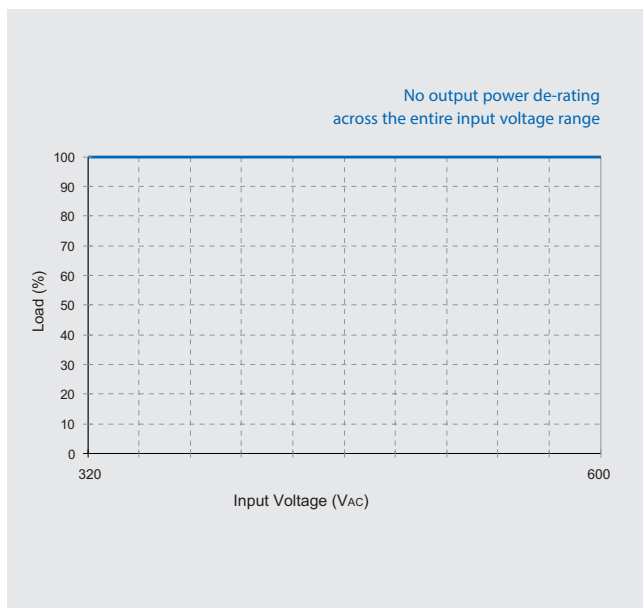
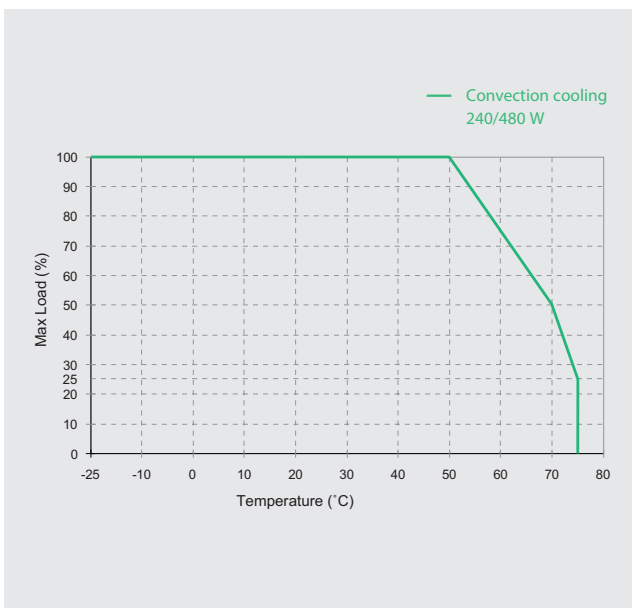
Tolerance ± 0.5 mm

Device description on the example of BED3P-24024



Article No.	Output Power	Input Connector	Output Connector	Input cable	Output cable
BED3P-24024	240 W	4-pin terminal block (600 V/35 A)	4-pin terminal block (300 V/28 A)	0.82 - 3.31 mm ² AWG 18-12 Torque 4.5 Kgf/cm / 3.96 lb/in	1.31 - 3.31 mm ² AWG 16-12 Torque 4.1 Kgf/cm / 3.6 lb/in
BED3P-48024	480 W	4-pin terminal block (600 V/35 A)	4-pin terminal block (300 V/30 A)	0.82 - 8.35 mm ² AWG 18-8 Torque 4.6 Kgf/cm / 4.0 lb/in	3.31 - 5.27 mm ² AWG 12-10 Torque 4.6 Kgf/cm / 4.0 lb/in

Derating



Specification is subject to change without notice. Errors excepted. Status as at: 26.08.2016