

# Power Supply HARTING pCon 2060-24



## Industrial Power Supply HARTING pCon 2060

### Advantages

- Compact design and high power density
- Easy installation and tool-less connection
- Wide input range for world-wide use
- Wide operating temperature range (up to 70 °C without derating)
- Can be used directly in industrial environments
- Protection class II (no earth connection necessary)
- Proof against sustained short-circuits, overloads and no-load operation
- Proof against dynamic overload (150 % rated current for up to 2.5 seconds)
- International approvals

### General

The power supplies of the HARTING pCon 2000 product family are designed as power supply solutions for control units, Ethernet and other automation components.

With their wide range of input voltage, the units are suitable for world-wide use.

The quick connection technology and the 2 terminals per connection point guarantees easy and quick installation.

### Identification

### Part number

### Drawing

### Dimensions in mm

HARTING pCon 2060-24  
Industrial Power Supply

20 80 000 3121



All data given are in line with the actual state of art and therefore not binding.  
HARTING reserves the right to modify designs without giving the relevant reasons.

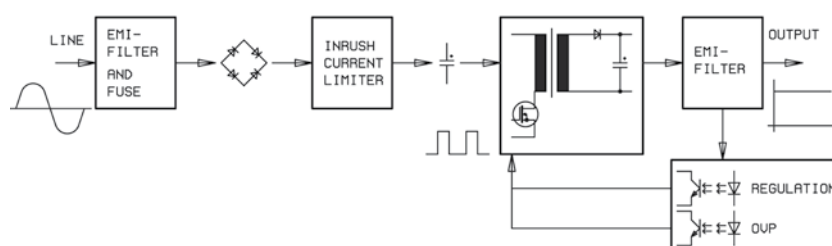
Identification	Part number	Drawing	Dimensions in mm
<b>HARTING pCon 2060-24</b>  Industrial Power Supply For mounting onto top-hat mounting rail according to DIN EN 60 715	20 80 000 3121		

## Technical characteristics

### Input

Nominal input voltage	100 V AC / 230 V AC (wide range input)
Input voltage tolerances	according to IEC 61 131-2 and DIN 19 240
Input voltage range	85 to 264 V AC (100 to 375 V DC)
Input frequency	47 ... 63 Hz
Input Current $I_{in}$	< 0.7 A at 230 V AC and < 1.3 A at 100 V AC
Inrush current	< 40 A (active limitation)
Leakage current	< 0.25 mA (at 47 ... 63 Hz mains frequency and max. input voltage)
Internal fuse	T 4 AL / 250 V
Recommended back-up fuse	6 A, 10 A or 16 A characteristic B (EN 60 898)
Transient surge protection	according to VDE 0160 (varistor)
Power Factor Correction	active PFC

### Block Diagram:

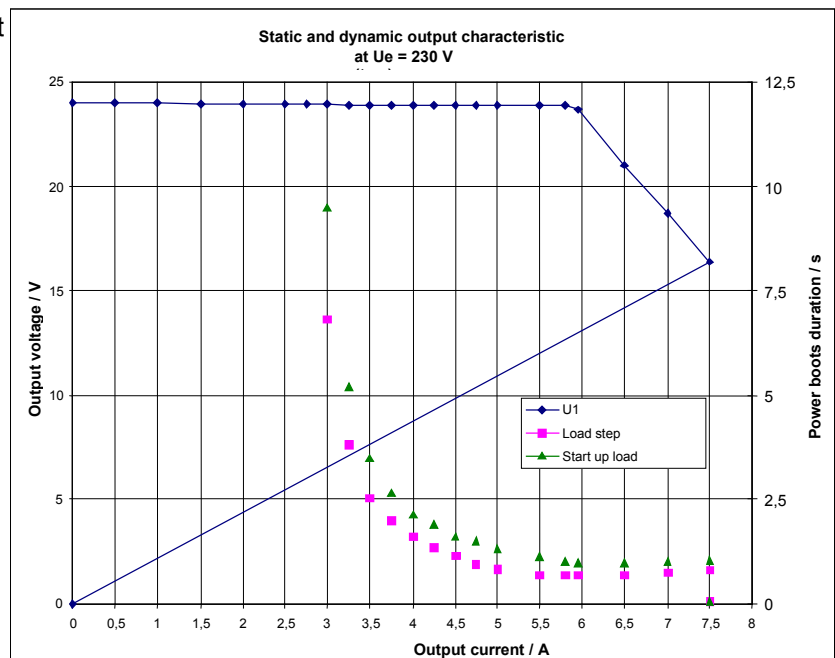


## Technical characteristics

### Output

Output voltage	24 V DC (setting range 23 ... 29 V)
Accuracy	$\pm 1\%$ over the total load and input voltage range
Output current	2.5 A static 3.15 A (25 % over nominal load) dynamic for max. 7 seconds 3.75 A (50 % over nominal load) dynamic for max. 2,5 seconds
Max. output power	60 W
Ripple/Noise	$< 40\text{ mVss}$ (at $U_{in} = 264\text{ V}$ )
Steady-state control accuracy	$< 2\%$
Overload behavior	current limitation $> 2,7\text{ A}$ static; $> 5,0\text{ A}$ dynamic

The device is electronically protected against short-circuit and no load operation. In the event of a malfunction, the output voltage is limited to 35 V DC.  
During overload the output voltage is reduced to approx. 17 V, a low-resistance connections induces hiccup mode to protect against the danger of fire.



Mains buffering at nominal load (typical)	$\geq 100\text{ ms}$ at 230 V AC; $\geq 15\text{ ms}$ at 115 V AC
Start-up of capacitive loads	$< 8\text{ mF}$ and nominal load
Efficiency (typical at nominal load)	$U_{in} = 230\text{ V}$ : 91.5 % / power dissipation (typ.) 5.6 W $U_{in} = 115\text{ V}$ : 90 % / power dissipation (typ.) 6.7 W $U_{in} = 100\text{ V}$ : 88 % / power dissipation (typ.) 8.2 W
Output voltage indication	LED green
Turn-on time	$\leq 400\text{ ms}$ after applying the mains voltage
Resistance to reverse feed	35 V

## Technical characteristics

### General Data

MTBF	> 250.000 hours (according to IEC 1709, SN 29 500)
Insulation co-ordination	Type-/ routine test 3 kV AC
Isolation voltage Input / Output	
Connectable in parallel	yes, with redundancy module (decoupling diodes)

### Connection

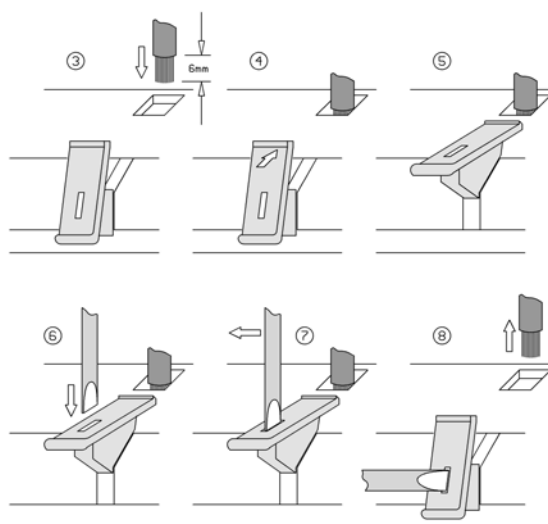
Primary: 2 x L1 / 2 x N (below)  
Secondary: 2 x U1 / 2 x GND (above)

### Conductor cross-sections

Stranded conductor: 0,3 ... 2,5 mm<sup>2</sup> (AWG 28 ... 12)  
Solid conductor: 0,3...4 mm<sup>2</sup> (AWG 28 ... 12)

The connection can be made with or without screw driver (3 mm width), as shown in the following pictures

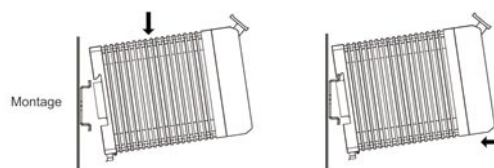
- ③ - ⑤ : make contacts  
⑥ - ⑧ : break contacts



### Installation / Removal

The power supply can be snapped onto a 35 mm mounting rail acc. to EN 60 715.

The unit should be mounted at a slight angle from above onto the rail. Push down until the slide at the back of the unit snaps in (see diagram).



The device must be mounted in such a way that the ventilation slots are not covered and air convection is unimpeded.

Leave a space of at least 3 cm above and below the unit.

The air temperature at the bottom of the unit must be not higher than the max. operating temperature ( $T_u = 70\text{ }^{\circ}\text{C}$ )!

Disconnect all cables before starting removal.

To remove, first unlock the slide with a screwdriver and then take the unit away from the rail.



## Technical characteristics

### Design features

Housing	plastic enclosure anthracite-grey RAL 7016
Dimensions (W x H x D)	45 x 75 x 105 mm
Mounting	35 mm DIN rail according to DIN EN 60 715
Weight	approx. 250 g
Degree of protection acc. to DIN 60 529	IP 20
Class of protection	II (no earth connection necessary)

### Environmental conditions

Operating temperature	-25° C to 70°C (without forced ventilation)
Storage temperature	-30 °C to +85 °C
Relative humidity	30 % to 95 % (non-condensing)

### Mechanical stability

Shock	IEC 60 068-2-27
Vibration	IEC 60 068-2-6

### Product standards

- EN 50 178 (VDE 0160)
- EN 60 950 (SELV)
- EN 60 204 (PELV)

### EMC standards

Interference immunity ESD	IEC 61 000-4-2
Interference immunity HF, radiated	IEC 61 000-4-3
Interference immunity Burst	IEC 61 000-4-4
Interference immunity Surge	IEC 61 000-4-5
Interference immunity	IEC 61 000-4-6
Emitted radiation	EN 55 011, (EN 55 022) Class B
System perturbation	IEC 61 000-3-3
Rail standard	EN 50 121-3-2

### Approvals

	Conforms to EMC guideline 89/336/EEC and low voltage directive 2006/95/EG
Electrical safety of information technology equipment	IEC/EN 60 950, UL 60 950, CSA 22.2-60 950 CCSA-NRTL/C

