

## ASI PS 100-240 AC/4.8 EFD

This product has been replaced by a newer version.

Order No.: 2741260



<http://catalog.phoenixcontact.net/phoenix/treeViewClick.do?UID=2741260>

AS-i primary switched-mode power supply, input voltage 100 - 240 V AC or 130 - 370 V DC, nominal output voltage 30 V DC 3%, nominal output current 4.8 A with integrated harmonic filter and automatic earth fault detection



### Commercial data

|                          |                                                                                                        |
|--------------------------|--------------------------------------------------------------------------------------------------------|
| EAN                      | <br>4 017918 190408 |
| Note                     | Made-to-order                                                                                          |
| Pack                     | 1 Pcs.                                                                                                 |
| Customs tariff           | 85044082                                                                                               |
| Product key              | CNI6N1                                                                                                 |
| Catalog page information | Page 208 (AX-2004)                                                                                     |

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### Product description

Power supply unit for AS-Interface systems

Special power supply units with an output voltage range of 29.5 V - 31.6 V DC are used to supply the AS-Interface systems. The AS-i system also requires a data decoupling network in the power supply unit in order to be able to transmit communication signals along the power line. The ASI PS 100-240 AC/4.8 EFD power supply unit can supply an AS-i system with up to 4.8 A.

Safety through automatic earth fault detection

If two earth faults occur in an AS-i system, this can cause the machines to inadvertently start up or not to be able to stop operation. The power supply unit has an integrated earth fault detection function. An earth fault is signaled via LED and a signal output.

#### Worldwide use

The wide-range input of the power supply unit can be operated with all conventional AC and DC networks without having to make any settings. The devices can thus be used worldwide.

#### Harmonic current wave filter integrated

The EN 61000-3-2 came into force on 1.1.2001. All primary switched power supplies that are directly connected to the public low-voltage network must be accordingly equipped with a harmonic current wave filter.

For this purpose, the power supply unit has a PFC filter (Power Factor Correction). As well as the filter function, this circuit guarantees mains buffering of over 40 ms.

#### Varnished PCB

The power supply unit can also be used in a damp environment. The varnished PCB means that the power supply is insensitive to high humidity and condensation in the inside of the device.

### Technical data

#### Input data

|                              |                                                                                        |
|------------------------------|----------------------------------------------------------------------------------------|
| Nominal input voltage        | 100 V AC ... 240 V AC                                                                  |
| AC input voltage range       | 85 V AC ... 264 V AC                                                                   |
| DC input voltage range       | 90 V DC ... 350 V DC                                                                   |
| AC frequency range           | 47 Hz ... 63 Hz                                                                        |
| DC frequency range           | 0 Hz                                                                                   |
| Current consumption          | Approx. 1.8 A (at 120 V AC (nominal load))<br>Approx. 1 A (at 230 V AC (nominal load)) |
| Inrush surge current         | < 15 A (typical)                                                                       |
| Power failure bypass         | > 20 ms (for 120 V AC)<br>> 80 ms (for 230 V AC)                                       |
| Input fuse                   | 5 A (slow-blow, internal)                                                              |
| Power factor (cos phi)       | Approx. 0.95                                                                           |
| Type of protection           | Surge protection                                                                       |
| Protective circuit/component | Varistor                                                                               |

#### Output data

|                        |                                                                 |
|------------------------|-----------------------------------------------------------------|
| Nominal output voltage | 30 V $\pm$ 1,5 %                                                |
| Output current         | 4.8 A (up to 60°C)<br>6 A (with POWER BOOST)                    |
| Connection in parallel | Yes, for assembling redundant systems and increasing efficiency |

|                                      |                                            |
|--------------------------------------|--------------------------------------------|
| Residual ripple                      | < 100 mV <sub>pp</sub> (0 kHz ... 10 kHz)  |
|                                      | < 50 mV <sub>pp</sub> (10 kHz ... 500 kHz) |
| Peak switching voltages idling       | < 100 mV <sub>pp</sub> (0 kHz ... 10 kHz)  |
| Peak switching voltages nominal load | < 50 mV <sub>pp</sub> (10 kHz ... 500 kHz) |
| Maximum power dissipation idling     | < 4 W                                      |
| Power loss nominal load max.         | < 16 W                                     |
| Type of protection                   | Protection against internal surge voltages |

#### General data

|                                                |                                                    |
|------------------------------------------------|----------------------------------------------------|
| Width                                          | 70 mm                                              |
| Height                                         | 130 mm                                             |
| Depth                                          | 125 mm                                             |
| Net weight                                     | 1 kg                                               |
| Operating voltage display                      | Green LED                                          |
| Efficiency                                     | Approx. 88 %                                       |
| Insulation voltage input/output                | 2 kV (routine test)                                |
|                                                | 4 kV (type test)                                   |
| Degree of protection                           | IP20                                               |
| Protection class                               | I, IEC 61140, EN 61140, VDE 0140-1                 |
| MTBF (IEC 61709, SN 29500)                     | > 500000 h                                         |
| Ambient temperature (operation)                | -25 °C ... 60 °C (> 60 °C derating)                |
| Ambient temperature (storage/transport)        | -40 °C ... 85 °C                                   |
| Max. permissible relative humidity (operation) | 95 % (at 25 °C, no condensation)                   |
| Mounting position                              | On horizontal DIN rail NS 35 in acc. with EN 60715 |
| Assembly instructions                          | Can be aligned: vertical with spacing = 5 cm       |
| Electromagnetic compatibility                  | Conformance with EMC directive 89/336/EC           |
| Noise emission                                 | EN 50081-2                                         |
| Noise immunity                                 | EN 61000-6-2:2005                                  |
| Standard - Electrical safety                   | EN 60950/VDE 0805                                  |
|                                                | DIN EN 50178/VDE 0160:1998-04                      |
|                                                | UL 508C                                            |
|                                                | CSA C22.2-14                                       |
|                                                | UL 1950                                            |
|                                                | CSA C22.2-950                                      |
| Standard - Safe isolation                      | DIN VDE 0100-410                                   |
|                                                | DIN VDE 0106-101                                   |

#### Connection data, input

|                                        |                     |
|----------------------------------------|---------------------|
| Connection method                      | Spring-cage conn.   |
| Conductor cross section solid min.     | 0.2 mm <sup>2</sup> |
| Conductor cross section solid max.     | 2.5 mm <sup>2</sup> |
| Conductor cross section stranded min.  | 0.2 mm <sup>2</sup> |
| Conductor cross section stranded max.  | 2.5 mm <sup>2</sup> |
| Conductor cross section AWG/kcmil min. | 24                  |
| Conductor cross section AWG/kcmil max  | 12                  |
| Stripping length                       | 9 mm                |

#### Connection data, output

|                                        |                     |
|----------------------------------------|---------------------|
| Connection method                      | Spring-cage conn.   |
| Conductor cross section solid min.     | 0.2 mm <sup>2</sup> |
| Conductor cross section solid max.     | 2.5 mm <sup>2</sup> |
| Conductor cross section stranded min.  | 0.2 mm <sup>2</sup> |
| Conductor cross section stranded max.  | 2.5 mm <sup>2</sup> |
| Conductor cross section AWG/kcmil min. | 24                  |
| Conductor cross section AWG/kcmil max  | 12                  |
| Stripping length                       | 9 mm                |

#### Certificates / Approvals



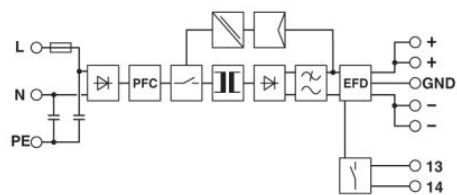
#### Accessories

| Item           | Designation        | Description                                                                                                                                                                           |
|----------------|--------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>General</b> |                    |                                                                                                                                                                                       |
| 1873061        | FKC 2,5/ 3-ST-5,08 | Plug component, Nominal current: 12 A, Rated voltage (III/2): 320 V, Number of positions: 3, Pitch: 5.08 mm, Connection method: Spring-cage conn., Color: green, Contact surface: Tin |
| 1873087        | FKC 2,5/ 5-ST-5,08 | Plug component, Nominal current: 12 A, Rated voltage (III/2): 320 V, Number of positions: 5, Pitch: 5.08 mm, Connection method: Spring-cage conn., Color: green, Contact surface: Tin |

|         |                       |                                                                                                                                                                                                                                                              |
|---------|-----------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1853023 | TMSTBP 2,5/ 3-ST-5,08 | Plug component, Nominal current: 12 A, Rated voltage (III/2): 320 V, Number of positions: 3, Pitch: 5.08 mm, Connection method: Screw connection, Color: green, Contact surface: Tin, The plug allows conductors to be looped through from module to module. |
| 1853049 | TMSTBP 2,5/ 5-ST-5,08 | Plug component, Nominal current: 12 A, Rated voltage (III/2): 320 V, Number of positions: 5, Pitch: 5.08 mm, Connection method: Screw connection, Color: green, Contact surface: Tin, The plug allows conductors to be looped through from module to module. |

Drawings

Block diagram



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