

# Power supply unit - ASI QUINT 100-240/2.4 EFD - 2736686

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Power supply unit für AS interface, 2.4 A, integrated ground fault detector, IP20 degree of protection

## Product Description

Power supply unit for AS-Interface systems. Special modules 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 QUINT 100-240/2.4 EFD can supply an AS-i system with up to 2.4 A. Safety through automatic ground fault detection: if two ground 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 ASI QUINT has an integrated ground fault detection function. A ground fault is signaled via LED and via an alarm output.

## Your advantages

- Integrated filters ensure that the modulated data flow is not affected
- Integrated ground-fault monitoring signals short circuits on the secondary side
- Wide-range input for operation on all common AC and DC networks



## Key Commercial Data

|                                      |               |
|--------------------------------------|---------------|
| Packing unit                         | 1 pc          |
| GTIN                                 |               |
| GTIN                                 | 4017918959678 |
| Weight per Piece (excluding packing) | 750.000 g     |
| Custom tariff number                 | 85044030      |
| Country of origin                    | Thailand      |

## Technical data

### Dimensions

|                                  |        |
|----------------------------------|--------|
| Width                            | 55 mm  |
| Height                           | 145 mm |
| Depth                            | 125 mm |
| Width with alternative assembly  | 122 mm |
| Height with alternative assembly | 145 mm |

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## Technical data

### Dimensions

|                                 |       |
|---------------------------------|-------|
| Depth with alternative assembly | 58 mm |
|---------------------------------|-------|

### Ambient conditions

|  |  |
|--|--|
| Degree of protection                           | IP20   |
| Ambient temperature (operation)                | -25 °C ... 70 °C (> 60 °C Derating: 2.5 %/K) |
| Ambient temperature (storage/transport)        | -40 °C ... 85 °C                             |
| Max. permissible relative humidity (operation) | 95 % (at 25 °C, non-condensing)              |

### Input data

|                                     |  |
|-------------------------------------|--|
| Nominal input voltage range         | 100 V AC ... 240 V AC                      |
| AC frequency range                  | 45 Hz ... 65 Hz                            |
| Frequency range DC                  | 0 Hz                                       |
| Current consumption                 | approx. 1 A (120 V AC)<br>0.5 A (230 V AC) |
| Nominal power consumption           | 72 W                                       |
| Inrush surge current                | < 15 A (typical)                           |
| Mains buffering                     | > 20 ms (120 V AC)<br>> 80 ms (230 V AC)   |
| Input fuse                          | 5 A (slow-blow, internal)                  |
| Choice of suitable circuit breakers | 6 A ... 16 A (Characteristics B, C, D, K)  |

### Output data

|  |                       |
|--|-----------------------|
| Nominal output voltage                         | 30.1 V DC $\pm$ 1.5 % |
| Output voltage range                           | 28 V DC ... 30 V DC   |
| Nominal output current ( $I_N$ )               | 2.4 A                 |
| Connection in parallel                         | No                    |
| Connection in series                           | yes                   |
| Residual ripple                                | < 30 mV <sub>PP</sub> |
| Output power                                   | 72 W                  |
| Typical response time                          | < 0.5 s               |
| Peak switching voltages nominal load           | < 50 mV <sub>PP</sub> |
| Maximum power dissipation in no-load condition | 3 W                   |
| Power loss nominal load max.                   | 11 W                  |

### General

|                                 |   |
|---------------------------------|---|
| Net weight                      | 0.75 kg                                       |
| Operating voltage display       | LED   |
| Efficiency                      | > 86 % (for 230 V AC and nominal values)      |
| Insulation voltage input/output | 4 kV AC (type test)<br>2 kV AC (routine test) |
| Degree of protection            | IP20  |
| MTBF (IEC 61709, SN 29500)      | > 500000 h                                    |
| Mounting position               | horizontal DIN rail NS 35, EN 60715           |

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## Technical data

### General

|                       |  |
|-----------------------|--|
| Assembly instructions | alignable: horizontally 0 mm, vertically 50 mm |
|-----------------------|--|

### Connection data, input

|                                       |                                  |
|---------------------------------------|----------------------------------|
| Connection method                     | Pluggable spring-cage connection |
| 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 flexible min. | 0.2 mm <sup>2</sup>              |
| Conductor cross section flexible max. | 2.5 mm <sup>2</sup>              |
| Conductor cross section AWG min.      | 24                               |
| Conductor cross section AWG max.      | 14                               |
| Stripping length                      | 9 mm                             |
| Screw thread                          | M3                               |

### Connection data, output

|                                       |                        |
|---------------------------------------|------------------------|
| Connection method                     | Spring-cage connection |
| 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 flexible min. | 0.2 mm <sup>2</sup>    |
| Conductor cross section flexible max. | 2.5 mm <sup>2</sup>    |
| Conductor cross section AWG min.      | 24                     |
| Conductor cross section AWG max.      | 12                     |
| Screw thread                          | M3                     |

### Standards and Regulations

|                                   |  |
|-----------------------------------|--|
| Electromagnetic compatibility     | Conformance with EMC Directive 2004/108/EC |
| Noise immunity                    | EN 61000-6-2:2005                          |
| Connection in acc. with standard  | CUL  |
| Contact discharge                 | 4 kV (Test Level 2)                        |
| Standards/regulations             | EN 61000-4-3                               |
| Frequency range                   | 80 MHz ... 1 GHz                           |
| Test field strength               | 10 V/m                                     |
| Frequency range                   | 1.4 GHz ... 2 GHz                          |
| Test field strength               | 3 V/m                                      |
| Standards/regulations             | EN 61000-4-4                               |
| Comments                          | Criterion B                                |
| Signal                            | 1 kV (Test Level 2 - asymmetrical)         |
| Standards/regulations             | EN 61000-4-6                               |
| Frequency range                   | 0.15 MHz ... 80 MHz                        |
| Voltage                           | 10 V (Test Level 3)                        |
| Low Voltage Directive             | Conformance with LV directive 2006/95/EC   |
| Standard - Safety of transformers | EN 61558-2-17                              |
| Standard - Electrical safety      | EN 60950-1/VDE 0805 (SELV)                 |

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## Technical data

### Standards and Regulations

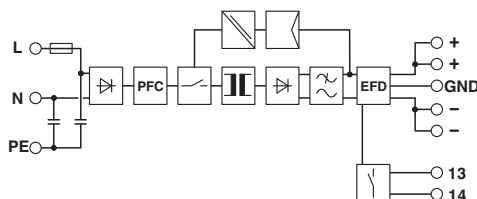
|  |                               |
|--|-------------------------------|
|  | DIN VDE 0100-410              |
| Standard – Electronic equipment for use in electrical power installations and their assembly into electrical power installations | EN 50178/VDE 0160 (PELV)      |
| Standard - Safe isolation  | DIN VDE 0100-410              |
|  | DIN VDE 0106-1010             |
| Standard – Limitation of mains harmonic currents   | EN 61000-3-2                  |
| UL approvals   | UL/C-UL listed UL 508         |
|  | UL/C-UL Recognized UL 60950-1 |

### Environmental Product Compliance

|            |   |
|------------|---|
| REACH SVHC | Lead 7439-92-1  |
| China RoHS | Environmentally Friendly Use Period = 25;   |
|            | For details about hazardous substances go to tab "Downloads", Category "Manufacturer's declaration" |

## Drawings

Block diagram



## Classifications

### eCl@ss

|            |          |
|------------|----------|
| eCl@ss 4.0 | 27250202 |
| eCl@ss 4.1 | 27250202 |
| eCl@ss 5.0 | 27259205 |
| eCl@ss 5.1 | 27242600 |
| eCl@ss 6.0 | 27242600 |
| eCl@ss 7.0 | 27242611 |
| eCl@ss 8.0 | 27242611 |
| eCl@ss 9.0 | 27242611 |

### ETIM

|          |          |
|----------|----------|
| ETIM 2.0 | EC001039 |
| ETIM 3.0 | EC001039 |
| ETIM 4.0 | EC002542 |
| ETIM 5.0 | EC002583 |
| ETIM 6.0 | EC002583 |

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## Classifications

### UNSPSC

|               |          |
|---------------|----------|
| UNSPSC 6.01   | 43172015 |
| UNSPSC 7.0901 | 43201404 |
| UNSPSC 11     | 39121004 |
| UNSPSC 12.01  | 39121004 |
| UNSPSC 13.2   | 39121004 |

## Approvals

### Approvals

#### Approvals

UL Listed / UL Recognized / cUL Recognized / IECEE CB Scheme / cUL Listed / ASI-Interface / EAC / EAC / cULus Recognized / cULus Listed

#### Ex Approvals

### Approval details

|                 |  |   |                 |
|-----------------|--|---|-----------------|
| UL Listed       |  | <a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a> | FILE E 123528   |
| UL Recognized   |  | <a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a> | FILE E 211944   |
| cUL Recognized  |  | <a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a> | FILE E 211944   |
| IECEE CB Scheme |  | <a href="http://www.iecee.org/">http://www.iecee.org/</a>   | SI-1087         |
| cUL Listed      |  | <a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a> | FILE E 123528   |
| ASI-Interface   |  |   | 56301/ 14.06.04 |

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## Approvals

|     |  |               |
|-----|--|---------------|
| EAC |  | EAC-Zulassung |
|-----|--|---------------|

|     |  |                          |
|-----|--|--------------------------|
| EAC |  | RU C-<br>DE.A*30.B.01082 |
|-----|--|--------------------------|

|                  |  |  |
|------------------|--|--|
| cULus Recognized |  |  |
|------------------|--|--|

|              |  |  |
|--------------|--|--|
| cULus Listed |  |  |
|--------------|--|--|

## Accessories

### Accessories

#### Assembly adapter

Assembly adapters - UWA 182/52 - 2938235



Universal wall adapter for securely mounting the power supply in the event of strong vibrations. The power supply is screwed directly onto the mounting surface. The universal wall adapter is attached at the top/bottom.

Assembly adapters - QUINT-PS-ADAPTERS7/1 - 2938196



Assembly adapter for QUINT-PS... power supply on S7-300 rail

Assembly adapters - QUINT-PS-ADAPTERS7/2 - 2938206



Assembly adapter for QUINT POWER 10A on S7-300 rail

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### Accessories

Mounting rail adapter

DIN rail adapter - UTA 107 - 2853983

Universal DIN rail adapter



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