

# Uninterruptible power supply - QUINT-UPS/ 24DC/ 24DC/40 - 2320241

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Uninterruptible power supply with IQ technology for DIN rail mounting, input: 24 V DC, output: 24 V DC/40 A, including mounted universal DIN rail adapter UTA 107/30

## Product Description

The UPS module for 24 V DC with output currents ranging from 5 to 40 A allows you to create a custom solution combining a power supply, UPS module, and energy storage.

## Your advantages

- ✓ Easy handling thanks to automatic battery detection, tool-free battery replacement during operation, and communication via the IFS interface
- ✓ Optimum use of the buffer time and preventive monitoring of the energy storage
- ✓ Rapid battery charging
- ✓ Comprehensive signaling and parameterization
- ✓ Fast tripping of standard circuit breakers with SFB (selective fuse breaking) technology
- ✓ Reliable starting of difficult loads with the static POWER BOOST power reserve with up to 1.5 times the nominal current permanently



## Key Commercial Data

|                                      |                                                                                                         |
|--------------------------------------|---------------------------------------------------------------------------------------------------------|
| Packing unit                         | 1 pc                                                                                                    |
| GTIN                                 | <br>4 046356 554121 |
| GTIN                                 | 4046356554121                                                                                           |
| Weight per Piece (excluding packing) | 880.000 g                                                                                               |
| Custom tariff number                 | 85371091                                                                                                |
| Country of origin                    | China                                                                                                   |

## Technical data

### Dimensions

|       |       |
|-------|-------|
| Width | 47 mm |
|-------|-------|

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## Technical data

### Dimensions

|                                  |        |
|----------------------------------|--------|
| Height                           | 130 mm |
| Depth                            | 125 mm |
| Width with alternative assembly  | 123 mm |
| Height with alternative assembly | 130 mm |
| Depth with alternative assembly  | 51 mm  |

### Ambient conditions

|                                                |                                |
|------------------------------------------------|--------------------------------|
| Degree of protection                           | IP20                           |
| Ambient temperature (operation)                | -25 °C ... 70 °C               |
| Ambient temperature (storage/transport)        | -40 °C ... 85 °C               |
| Max. permissible relative humidity (operation) | ≤ 95 % (25 °C, non-condensing) |
| Climatic class                                 | 3K3 (in acc. with EN 60721)    |

### Input data

|                                        |                                   |
|----------------------------------------|-----------------------------------|
| Input voltage                          | 24 V DC                           |
| Nominal input voltage                  | 24 V DC                           |
| Input voltage range                    | 18 V DC ... 30 V DC               |
| Current consumption (maximum)          | 51.9 A (maximum, mains operation) |
| Current consumption (charging process) | 6.9 A (Charging, mains operation) |
| Fixed backup threshold                 | ≤ 22 V DC                         |
| Variable connect threshold             | 1 V/0.1 s                         |

### Output data (24 V DC mains operation)

|                                                     |                          |
|-----------------------------------------------------|--------------------------|
| Nominal output voltage                              | 24 V DC                  |
| Output voltage range (depends on the input voltage) | 18 V DC ... 30 V DC      |
| Nominal output current ( $I_N$ )                    | 40 A (-25 °C ... 50 °C)  |
| POWER BOOST ( $I_{Boost}$ )                         | 45 A (-25 °C ... 40 °C)  |
| Selective Fuse Breaking ( $I_{SFB}$ )               | 215 A (-25 °C ... 60 °C) |

### Output data (24 V DC battery operation)

|                                                     |                                                                    |
|-----------------------------------------------------|--------------------------------------------------------------------|
| Nominal output voltage                              | 24 V DC                                                            |
| Output voltage range (depends on the input voltage) | 19.2 V DC ... 27.6 V DC ( $U_{OUT} = U_{BAT} - 0.5 \text{ V DC}$ ) |
| Nominal output current ( $I_N$ )                    | 40 A (-25 °C ... 60 °C)                                            |
| POWER BOOST ( $I_{Boost}$ )                         | 45 A (-25 °C ... 40 °C)                                            |
| Selective Fuse Breaking ( $I_{SFB}$ )               | 215 A (-25 °C ... 60 °C)                                           |

### General output data

|            |                                                       |
|------------|-------------------------------------------------------|
| Efficiency | > 99 % (Mains operation, with charged energy storage) |
|------------|-------------------------------------------------------|

### General

# Uninterruptible power supply - QUINT-UPS/ 24DC/ 24DC/40 - 2320241

## Technical data

### General

|                            |                                            |
|----------------------------|--------------------------------------------|
| IQ technology              | Yes                                        |
| Net weight                 | 0.7 kg                                     |
| Protection class           | III                                        |
| MTBF (IEC 61709, SN 29500) | > 500000 h (40 °C)                         |
| Mounting position          | horizontal DIN rail NS 35, EN 60715        |
| Assembly instructions      | alignable: horizontal 5 mm, vertical 50 mm |

### Connection data, input

|                                       |                     |
|---------------------------------------|---------------------|
| Connection method                     | Screw connection    |
| Conductor cross section solid min.    | 0.5 mm <sup>2</sup> |
| Conductor cross section solid max.    | 16 mm <sup>2</sup>  |
| Conductor cross section flexible min. | 0.5 mm <sup>2</sup> |
| Conductor cross section flexible max. | 16 mm <sup>2</sup>  |
| Conductor cross section AWG min.      | 8                   |
| Conductor cross section AWG max.      | 6                   |
| Stripping length                      | 10 mm               |
| Screw thread                          | M4                  |

### Connection data, output

|                                       |                     |
|---------------------------------------|---------------------|
| Connection method                     | Screw connection    |
| Conductor cross section solid min.    | 0.5 mm <sup>2</sup> |
| Conductor cross section solid max.    | 16 mm <sup>2</sup>  |
| Conductor cross section flexible min. | 0.5 mm <sup>2</sup> |
| Conductor cross section flexible max. | 16 mm <sup>2</sup>  |
| Conductor cross section AWG min.      | 8                   |
| Conductor cross section AWG max.      | 6                   |
| Stripping length                      | 10 mm               |
| Screw thread                          | M4                  |

### Connection data for signaling

|                                       |                     |
|---------------------------------------|---------------------|
| Conductor cross section solid min.    | 0.2 mm <sup>2</sup> |
| Conductor cross section solid max.    | 4 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                          | M4                  |

## Standards

# Uninterruptible power supply - QUINT-UPS/ 24DC/ 24DC/40 - 2320241

## Technical data

### Standards

|                                                                                                                                  |                            |
|----------------------------------------------------------------------------------------------------------------------------------|----------------------------|
| EMC requirements for noise immunity                                                                                              | EN 61000-6-1               |
|                                                                                                                                  | EN 61000-6-2               |
| EMC requirements for noise emission                                                                                              | EN 61000-6-3               |
|                                                                                                                                  | EN 61000-6-4               |
| Standard - Electrical safety                                                                                                     | EN 60950-1/VDE 0805 (SELV) |
| Standard – Electronic equipment for use in electrical power installations and their assembly into electrical power installations | EN 50178/VDE 0160 (PELV)   |
| Rail applications                                                                                                                | EN 50121-4                 |

### Conformance/approvals

|              |                                                                                  |
|--------------|----------------------------------------------------------------------------------|
| UL approvals | UL Listed UL 508                                                                 |
|              | UL/C-UL Recognized UL 60950-1                                                    |
|              | UL ANSI/ISA-12.12.01 Class I, Division 2, Groups A, B, C, D (Hazardous Location) |

### EMC data

|                               |                                           |
|-------------------------------|-------------------------------------------|
| Electromagnetic compatibility | Conformance with EMC Directive 2014/30/EU |
| Low Voltage Directive         | Conformance with LV directive 2006/95/EC  |
| Electrostatic discharge       | EN 61000-4-2                              |
| Contact discharge             | 8 kV (Test Level 4)                       |
| Discharge in air              | 15 kV (Test Level 4)                      |
| Electromagnetic HF field      | EN 61000-4-3                              |
| Frequency range               | 80 MHz ... 1 GHz                          |
| Test field strength           | 20 V/m                                    |
| Frequency range               | 1 GHz ... 3 GHz                           |
| Test field strength           | 10 V/m                                    |
| Frequency range               | 2 GHz ... 3 GHz                           |
| Test field strength           | 3 V/m                                     |
| Comments                      | Criterion A                               |
| Fast transients (burst)       | EN 61000-4-4                              |
| Input                         | 2 kV (Test Level 3 - asymmetrical)        |
| Output                        | 2 kV (Test Level 3 - asymmetrical)        |
| Signal                        | 2 kV (Test Level 4 - asymmetrical)        |
| Comments                      | Criterion A                               |
| Surge voltage load (surge)    | EN 61000-4-5                              |
| Input                         | 1 kV (Test Level 2 - symmetrical)         |
|                               | 2 kV (Test Level 3 - asymmetrical)        |
| Output                        | 1 kV (Test Level 2 - symmetrical)         |
|                               | 2 kV (Test Level 3 - asymmetrical)        |

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Technical data

EMC data

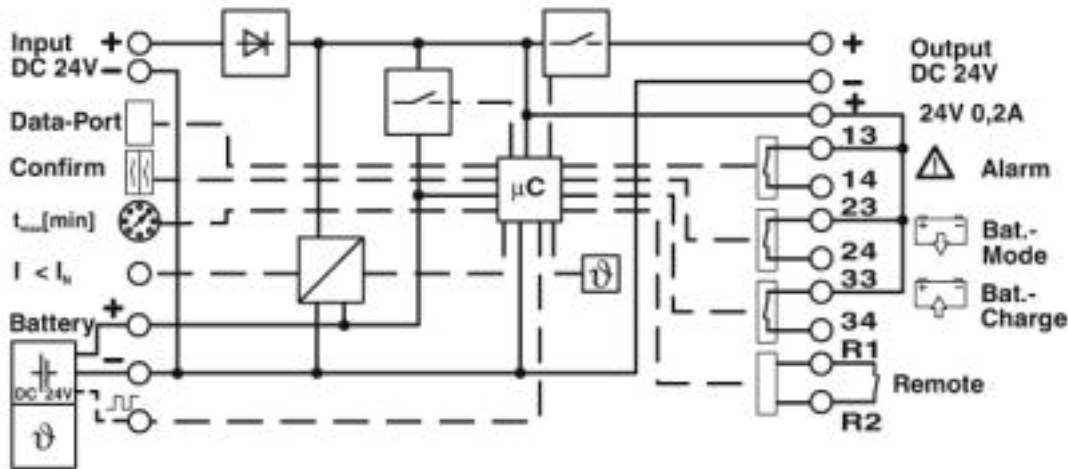
|                 |                                                                                      |
|-----------------|--------------------------------------------------------------------------------------|
| Signal          | 1 kV (Test Level 2 - asymmetrical)                                                   |
| Comments        | Criterion A                                                                          |
| I/O/S           | asymmetrical                                                                         |
| Frequency range | 0.15 MHz ... 80 MHz                                                                  |
| Voltage         | 10 V (Test Level 3)                                                                  |
| Comments        | Criterion A                                                                          |
| Criterion A     | Normal operating behavior within the specified limits.                               |
| Criterion B     | Temporary impairment to operational behavior that is corrected by the device itself. |

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 | 27040600 |
| eCl@ss 4.1 | 27040600 |
| eCl@ss 5.0 | 27040600 |

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### Classifications

#### eCl@ss

|            |          |
|------------|----------|
| eCl@ss 5.1 | 27040600 |
| eCl@ss 6.0 | 27040600 |
| eCl@ss 7.0 | 27040603 |
| eCl@ss 8.0 | 27040603 |
| eCl@ss 9.0 | 27040705 |

#### ETIM

|          |          |
|----------|----------|
| ETIM 3.0 | EC001039 |
| ETIM 4.0 | EC000382 |
| ETIM 5.0 | EC000382 |
| ETIM 6.0 | EC000382 |
| ETIM 7.0 | EC000382 |

#### UNSPSC

|               |          |
|---------------|----------|
| UNSPSC 6.01   | 30211510 |
| UNSPSC 7.0901 | 39121011 |
| UNSPSC 11     | 39121011 |
| UNSPSC 12.01  | 39121011 |
| UNSPSC 13.2   | 39121011 |
| UNSPSC 18.0   | 39121011 |
| UNSPSC 19.0   | 39121011 |
| UNSPSC 20.0   | 39121011 |
| UNSPSC 21.0   | 39121011 |

### Approvals

#### Approvals

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#### Approvals

DNV GL / PRS / BV / LR / ABS / UL Listed / UL Recognized / cUL Recognized / cUL Listed / EAC / EAC / cULus Recognized / cULus Listed

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#### Ex Approvals

UL Listed / cUL Listed / cULus Listed

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#### Approval details

# Uninterruptible power supply - QUINT-UPS/ 24DC/ 24DC/40 - 2320241

## Approvals

|                    |                                                                                     |                                                                                                                                                                                                                                    |                   |
|--------------------|-------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|
| DNV GL             |    | <a href="https://approvalfinder.dnvgl.com/">https://approvalfinder.dnvgl.com/</a>                                                                                                                                                  | TAA0000265        |
| Nominal voltage UN |                                                                                     | 500 V                                                                                                                                                                                                                              |                   |
| Nominal current IN |                                                                                     | 41 A                                                                                                                                                                                                                               |                   |
| mm²/AWG/kcmil      |                                                                                     | 6                                                                                                                                                                                                                                  |                   |
| PRS                |    | <a href="http://www.prs.pl/">http://www.prs.pl/</a>                                                                                                                                                                                | TE/2103/880590/16 |
| BV                 |    | <a href="http://www.veristar.com/portal/veristarinfo/generalinfo/approved/approvedProducts/equipmentAndMaterials">http://www.veristar.com/portal/veristarinfo/generalinfo/<br/>approved/approvedProducts/equipmentAndMaterials</a> | 41516/A0 BV       |
| LR                 |  | <a href="http://www.lr.org/en">http://www.lr.org/en</a>                                                                                                                                                                            | 17/20032          |
| ABS                |                                                                                     | <a href="http://www.eagle.org/eagleExternalPortalWEB/">http://www.eagle.org/eagleExternalPortalWEB/</a>                                                                                                                            | 15-GD1438179-PDA  |
| 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     |
| 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     |

# Uninterruptible power supply - QUINT-UPS/ 24DC/ 24DC/40 - 2320241

## Approvals

EAC



EAC-Zulassung

EAC



RU C-  
DE.A\*30.B.01082

cULus Recognized



cULus Listed



## Accessories

### Accessories

#### Assembly adapter

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



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

#### Assembly adapters - UWA 182/52 - 2938235



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



# Uninterruptible power supply - QUINT-UPS/ 24DC/ 24DC/40 - 2320241

## Accessories

Assembly adapters - UTA 107/30 - 2320089



Universal DIN rail adapter

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## Battery unit

Energy storage - UPS-BAT/VRLA/24DC/7.2AH - 2320319



Energy storage device, lead AGM, VRLA technology, 24 V DC, 7.2 Ah, tool-free battery replacement, automatic detection, and communication with QUINT UPS-IQ

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Energy storage - UPS-BAT/VRLA/24DC/12AH - 2320322



Energy storage device, lead AGM, VRLA technology, 24 V DC, 12 Ah, tool-free battery replacement, automatic detection, and communication with QUINT UPS-IQ

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Energy storage - UPS-BAT/VRLA/24DC/38AH - 2320335



Energy storage device, lead AGM, VRLA technology, 24 V DC, 38 Ah, automatic detection, and communication with QUINT UPS-IQ

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Energy storage - UPS-BAT/VRLA-WTR/24DC/13AH - 2320416



Energy storage device, lead AGM, VRLA technology, 24 V DC, 13 Ah, tool-free battery replacement, automatic detection, and communication with QUINT UPS-IQ

## Uninterruptible power supply - QUINT-UPS/ 24DC/ 24DC/40 - 2320241

### Accessories

#### Energy storage - UPS-BAT/VRLA-WTR/24DC/26AH - 2320429



Energy storage device, lead AGM, VRLA technology, 24 V DC, 26 Ah, tool-free battery replacement, automatic detection, and communication with QUINT UPS-IQ

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#### Energy storage - UPS-BAT/LI-ION/24DC/120WH - 2320351



Energy storage device, LI-ION technology, 24 V DC, 120 Wh, for ambient temperatures of -20°C ... 60°C, automatic detection and communication with QUINT UPS-IQ

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#### Energy storage - UPS-CAP/24DC/10A/10KJ - 2320377



Maintenance-free energy storage based on double-layer capacitor, 24 V DC, 10 kJ, automatic detection and communication with QUINT UPS-IQ

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#### Energy storage - UPS-CAP/24DC/20A/20KJ - 2320380



Maintenance-free energy storage based on double-layer capacitor, 24 V DC, 20 kJ, automatic detection and communication with QUINT UPS-IQ

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### Data cable preassembled

#### Data cable - IFS-RS232-DATACABLE - 2320490



Data cable for communication between devices with a D-SUB 9 RS-232 connection and Phoenix Contact devices with the 12-pos. IFS data port such as QUINT UPS-IQ or TRIO UPS.

## Uninterruptible power supply - QUINT-UPS/ 24DC/ 24DC/40 - 2320241

### Accessories

Data cable - IFS-USB-DATACABLE - 2320500



Used for communicating between industrial PCs and Phoenix Contact devices with the 12-pos. IFS data port, such as QUINT UPS or TRIO UPS.

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### Memory block

Memory block - IFS-CONFSTICK - 2986122



Multi-functional memory block for the INTERFACE systemf for easy storage and backup of the configuration.

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Memory block - IFS-CONFSTICK-L - 2901103



Multi-functional memory block with handle for the INTERFACE system; for easy storage and back up of the configuration.