

QUINT-PS- 24DC/24DC/10 - DC/DC converter



2866378

<https://www.phoenixcontact.com/us/products/2866378>

Please be informed that the data shown in this PDF document is generated from our online catalog. Please find the complete data in the user documentation. Our general terms of use for downloads are valid.

QUINT DC/DC converter, primary-switched, input: 24 V DC, output: 24 V DC/10 A



Product description

The QUINT DC-DC converter 24 V/10 A converts the DC voltage from 18 V ... 32 V to an adjustable, controlled and galvanically separated 24 V output voltage. If no regulated and stable 24 V DC voltage is available to supply a load, DC-DC converters ensure the adjustment of the 24 V load: A non-regulated DC voltage is converted to an adjustable output voltage of 22.5 V ... 28.5 V. Due to electrical isolation, the DC voltage circuits are electrically isolated from each other in a safe way. With a design width of only 80 mm, the housing is extremely slim. The floating DC-OK output and an LED are available for signaling.

Commercial data

Item number	2866378
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	CM05
Product key	CMDQ43
Catalog page	Page 598 (IF-2009)
GTIN	4017918987169
Weight per piece (including packing)	1,357 g
Weight per piece (excluding packing)	1,192 g
Customs tariff number	85044095
Country of origin	CN

QUINT-PS- 24DC/24DC/10 - DC/DC converter



2866378

<https://www.phoenixcontact.com/us/products/2866378>

Technical data

Input data

Input voltage	24 V DC
Nominal input voltage range	24 V DC
Input voltage range	18 V DC ... 32 V DC
Wide-range input	yes
Input voltage range DC	18 V DC ... 32 V DC
Voltage type of supply voltage	DC
Inrush current	< 20 A (typical)
Inrush current integral (I^2t)	0.3 A ² s
Frequency range DC	0 Hz
Mains buffering time	> 3 ms (24 V DC)
Current consumption	typ. 11.4 A (24 V)
Protective circuit	Transient surge protection; Varistor
Typical response time	< 1 s
Input fuse	25 A (slow-blow, internal)

Output data

Efficiency	> 88 %
Nominal output voltage	24 V DC $\pm$ 1 %
Setting range of the output voltage (U_{Set})	22.5 V DC ... 28.5 V DC (> 24 V DC, constant capacity restricted)
Nominal output current (I_N)	10 A (-25 °C ... 60 °C)
Derating	60 °C ... 70 °C (2.5 %/K)
Feedback voltage resistance	35 V DC
Protection against overvoltage at the output (OVP)	< 35 V DC
Max. capacitive load	unlimited
Active current limitation	Approx. 18 A
Control deviation	< 1 % (change in load, static 10 % ... 90 %)
	< 2 % (change in load, dynamic 10 % ... 90 %)
	< 0.1 % (change in input voltage $\pm$ 10 %)
Residual ripple	< 60 mV _{PP}
Output power	240 W
Maximum no-load power dissipation	< 2 W
Power loss nominal load max.	< 28 W
Rise time	< 2 ms (U_{OUT} (10 % ... 90 %))
Connection in parallel	yes, for redundancy and increased capacity
Connection in series	yes

Signal: DC OK active

Output description	$U_{OUT} > 21.5$ V: High signal
Maximum switching voltage	$\leq$ 24 V DC
Output voltage	+ 24 V DC
Continuous load current	$\leq$ 40 mA

QUINT-PS- 24DC/24DC/10 - DC/DC converter



2866378

<https://www.phoenixcontact.com/us/products/2866378>

Signal: DC OK floating

Output description	$U_{OUT} > 21.5 \text{ V}$: Contact closed
Maximum switching voltage	$\leq 30 \text{ V AC/DC}$
Continuous load current	$\leq 1 \text{ A}$

Connection data

Input

Connection method	Pluggable screw connection
Conductor cross section, rigid min.	0.2 mm^2
Conductor cross section, rigid max.	2.5 mm^2
Conductor cross section flexible min.	0.2 mm^2
Conductor cross section flexible max.	2.5 mm^2
Conductor cross section AWG min.	24
Conductor cross section AWG max.	12
Stripping length	7 mm
Screw thread	M3
Tightening torque, min	0.5 Nm
Tightening torque max	0.6 Nm

Output

Connection method	Pluggable screw connection
Conductor cross section, rigid min.	0.2 mm^2
Conductor cross section, rigid max.	2.5 mm^2
Conductor cross section flexible min.	0.2 mm^2
Conductor cross section flexible max.	2.5 mm^2
Conductor cross section AWG min.	24
Conductor cross section AWG max.	12
Stripping length	7 mm
Screw thread	M3
Tightening torque, min	0.5 Nm
Tightening torque max	0.6 Nm

Signal

Conductor cross section, rigid min.	0.2 mm^2
Conductor cross section, rigid max.	2.5 mm^2
Conductor cross section flexible min.	0.2 mm^2
Conductor cross section flexible max.	2.5 mm^2
Conductor cross section AWG min.	24
Conductor cross section AWG max.	12
Screw thread	M3
Tightening torque, min	0.5 Nm
Tightening torque max	0.6 Nm

Signaling

QUINT-PS- 24DC/24DC/10 - DC/DC converter



2866378

<https://www.phoenixcontact.com/us/products/2866378>

Types of signaling	LED
	Active switching output
Operating voltage display	Green LED

Signal output: DC OK active

Status display	"DC OK" LED green
----------------	-------------------

Signal output: DC OK floating

Status display	"DC OK" LED green
----------------	-------------------

Electrical properties

Number of phases	1.00
Insulation voltage input/output	1 kV (routine test)
	1.5 kV (type test)

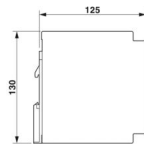
Product properties

Product type	DC/DC converters
MTBF (IEC 61709, SN 29500)	> 500000 h

Insulation characteristics

Protection class	III
Degree of pollution	2

Dimensions

Dimensional drawing	
Width	80 mm
Height	130 mm
Depth	125 mm

Installation dimensions

Installation distance right/left	0 mm / 0 mm ($\leq 70\text{ }^{\circ}\text{C}$)
Installation distance right/left (active)	15 mm / 15 mm ($\leq 70\text{ }^{\circ}\text{C}$)
Installation distance top/bottom	50 mm / 50 mm ($\leq 70\text{ }^{\circ}\text{C}$)
Installation distance top/bottom (active)	50 mm / 50 mm ($\leq 70\text{ }^{\circ}\text{C}$)

Alternative assembly

Width	122 mm
Height	130 mm
Depth	83 mm

Mounting

Assembly note	alignable: horizontally 0 mm, vertically 50 mm
Mounting position	horizontal DIN rail NS 35, EN 60715

QUINT-PS- 24DC/24DC/10 - DC/DC converter



2866378

<https://www.phoenixcontact.com/us/products/2866378>

With protective coating	No
-------------------------	----

Material specifications

Housing material	Metal
Type of housing	AluNox (AlMg1)

Environmental and real-life conditions

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
Climatic class	3K3 (in acc. with EN 60721)
Max. permissible relative humidity (operation)	95 % (at 25 °C, non-condensing)
Shock	18 ms, 30g, in each space direction (according to IEC 60068-2-27)
Vibration (operation)	< 15 Hz, amplitude ± 2.5 mm (according to IEC 60068-2-6) 15 Hz ... 150 Hz, 2.3g, 90 min.

Standards and regulations

Standard – Electronic equipment for use in electrical power installations and their assembly into electrical power installations	EN 50178/VDE 0160 (PELV)
Standard - Electrical safety	EN 60950-1/VDE 0805 (SELV)
Standard – Protection against shock currents, basic requirements for protective separation in electrical equipment	EN 50178
Standard – Safety extra-low voltage	EN 60950-1 (SELV) EN 60204 (PELV)
Standard - Safe isolation	DIN VDE 0100-410
Standard - Safety of transformers	EN 61558-2-17

Approvals

Shipbuilding approval	DNV GL (EMC A), ABS
UL approvals	UL/C-UL listed UL 508 UL/C-UL Recognized UL 60950-1 UL/C-UL Listed UL 1604 Class I, Division 2, Groups A, B, C, D

EMC data

Noise immunity	EN 61000-6-2:2005
Electromagnetic compatibility	Conformance with EMC directive 89/336/EC

Electrostatic discharge

Standards/regulations	EN 61000-4-2
Housing	Level 3

Electrostatic discharge

Contact discharge	8 kV
Discharge in air	8 kV

QUINT-PS- 24DC/24DC/10 - DC/DC converter



2866378

<https://www.phoenixcontact.com/us/products/2866378>

Comments	Criterion B
Electromagnetic HF field	
Standards/regulations	EN 61000-4-3
Electromagnetic HF field	
Frequency range	80 MHz ... 2 GHz
Test field strength	10 V/m
Comments	Criterion A
Fast transients (burst)	
Standards/regulations	EN 61000-4-4
Fast transients (burst)	
Input	2 kV (Level 3 - asymmetrical)
Output	2 kV (Level 3 - asymmetrical)
Signal	1 kV (Level 2 - asymmetrical)
Surge voltage load (surge)	
Standards/regulations	EN 61000-4-5
Surge voltage load (surge)	
Comments	Criterion B
Input/Output	2 kV (Level 3 - asymmetrical)
Input/Output/Signal	1 kV (Level 3 - asymmetrical)
Conducted interference	
Standards/regulations	EN 61000-4-6
Conducted interference	
I/O/S	Level 3 - asymmetrical
Frequency range	0.15 MHz ... 80 MHz
Comments	Criterion A
Voltage	10 V
Voltage dips	
Standards/regulations	EN 61000-4-11
Emitted interference	
Standards/regulations	EN 61000-6-3
Radio interference voltage in acc. with EN 55011	EN 55011 (EN 55022) Class B, area of application: Industry and residential
Emitted radio interference in acc. with EN 55011	EN 55011 (EN 55022) Class B, area of application: Industry and residential

QUINT-PS- 24DC/24DC/10 - DC/DC converter

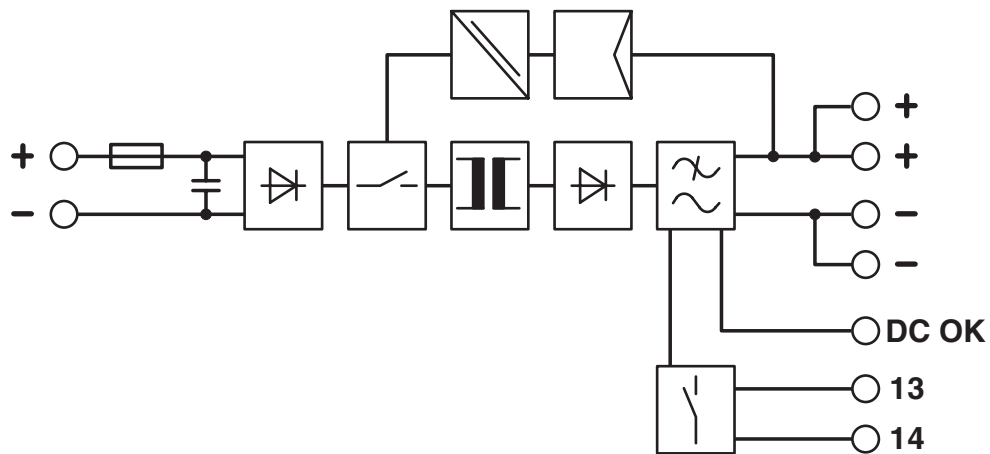


2866378

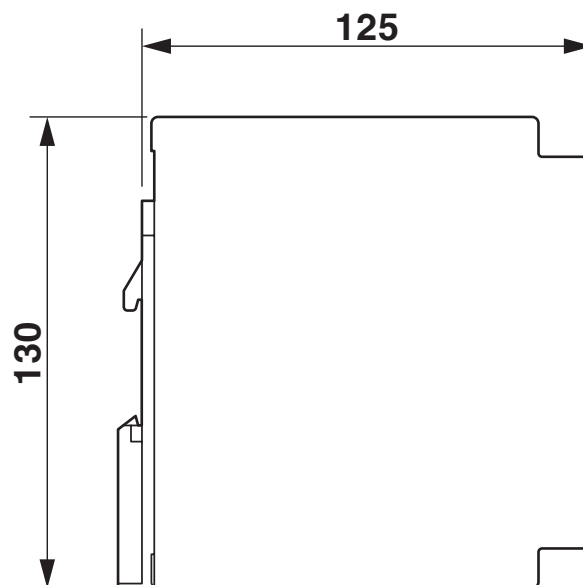
<https://www.phoenixcontact.com/us/products/2866378>

Drawings

Block diagram



Dimensional drawing



QUINT-PS- 24DC/24DC/10 - DC/DC converter



2866378

<https://www.phoenixcontact.com/us/products/2866378>

Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/2866378>



cUL Recognized
Approval ID: FILE E 211944



UL Recognized
Approval ID: FILE E 211944



EAC
Approval ID: EAC-Zulassung



EAC
Approval ID: RU S-DE.BL08.W.00764



UL Listed
Approval ID: FILE E 123528



cUL Listed
Approval ID: FILE E 123528

DNV
Approval ID: TAA0000249



IECEE CB Scheme
Approval ID: DE/PTZ/0071

cULus Recognized

cULus Listed

QUINT-PS- 24DC/24DC/10 - DC/DC converter



2866378

<https://www.phoenixcontact.com/us/products/2866378>

Classifications

ECLASS

ECLASS-11.0	27040701
ECLASS-12.0	27040701
ECLASS-13.0	27040701

ETIM

ETIM 9.0	EC002540
----------	----------

UNSPSC

UNSPSC 21.0	39121000
-------------	----------

QUINT-PS- 24DC/24DC/10 - DC/DC converter



2866378
<https://www.phoenixcontact.com/us/products/2866378>

Environmental product compliance

EU RoHS	
Fulfills EU RoHS substance requirements	Yes
Exemption	6(c), 7(a), 7(c)-I
China RoHS	
Environment friendly use period (EFUP)	EFUP-25
	An article-related China RoHS declaration table can be found in the download area for the respective article under "Manufacturer declaration". For all articles with EFUP-E, no China RoHS declaration table issued and required.
EU REACH SVHC	
REACH candidate substance (CAS No.)	Lead(CAS: 7439-92-1)
SCIP	f8741288-4f90-44a6-b2a3-4828419653e2

Phoenix Contact 2024 © - all rights reserved
<https://www.phoenixcontact.com>

Phoenix Contact USA
586 Fulling Mill Road
Middletown, PA 17057, United States
(+717) 944-1300
info@phoenixcon.com