

UNO-PS/350-900DC/24DC/60W - DC/DC converter



2906300

<https://www.phoenixcontact.com/us/products/2906300>

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.



Primary-switched UNO DC/DC converter with wide range input, for DIN rail mounting, input: 350 ... 900 V DC, output: 24 V DC/60 W

Product description

UNO DC/DC converters with basic functionality
With the DC/DC converters from the UNO POWER range, the control cabinet is supplied directly from the photovoltaic system. This saves installation costs and increases the efficiency of the system.

Your advantages

- Wide input voltage range
- Direct field installation
- Minimal space required in the control box
- Simplified startup
- UL 1741-certified DC/DC converter

Commercial data

Item number	2906300
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	CM06
Product key	CMDU43
GTIN	4055626062648
Weight per piece (including packing)	317 g
Weight per piece (excluding packing)	317 g
Customs tariff number	85044095
Country of origin	DE

Technical data

Input data

DC operation

Nominal input voltage range	350 V DC ... 900 V DC
Input voltage range	300 V DC ... 1000 V DC
Wide-range input	yes
Electric strength, max.	≤ 1050 V DC
Voltage type of supply voltage	DC
Inrush current	< 1 A (typical)
Inrush current integral (I^2t)	< 0.38 A ² s
Current consumption	0.19 A (350 V DC)
	0.07 A (1000 V DC)
Typical response time	< 1 s
Recommended breaker for input protection	1 A (Characteristic gPV or comparable)
Recommended fuse for input protection	1000 V DC

Output data

Efficiency	> 90 %
Output characteristic	U/I
Nominal output voltage	24 V DC
Nominal output current (I_N)	2.5 A (-25 °C ... 55 °C)
Derating	55 °C ... 70 °C (2.5 %/K)
Feedback voltage resistance	< 35 V DC
Protection against overvoltage at the output (OVP)	< 35 V DC
Control deviation	< 1 % (change in load, static 10 % ... 90 %)
	< 3 % (Dynamic load change 10 % ... 90 %, 10 Hz)
	< 0.1 % (change in input voltage ±10 %)
Residual ripple	< 20 mV _{PP} (with nominal values)
Output power	60 W
Maximum no-load power dissipation	< 0.5 W
Power loss nominal load max.	< 6.5 W
Rise time	< 1 s (U_{OUT} (10 % ... 90 %))
Response time	< 2 ms
Connection in parallel	yes, for redundancy and increased capacity
Connection in series	no

Signal: DC OK active

Output description	$U_{OUT} > 0.9 \times U_N$: High signal
--------------------	--

Connection data

Input

Connection method	Screw connection
-------------------	------------------

UNO-PS/350-900DC/24DC/60W - DC/DC converter



2906300

<https://www.phoenixcontact.com/us/products/2906300>

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.	14
Stripping length	8 mm
Screw thread	M3
Tightening torque, min	0.5 Nm
Tightening torque max	0.6 Nm

Output

Connection method	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.	14
Stripping length	8 mm
Screw thread	M3
Tightening torque, min	0.5 Nm
Tightening torque max	0.6 Nm

Signaling

Types of signaling	LED
--------------------	-----

Signal output: DC OK active

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

Electrical properties

Number of phases	1
Insulation voltage input/output	8 kV DC (type test)
	3 kV DC (routine test)
	8 kV

Product properties

Product type	DC/DC converters
Product family	UNO POWER
MTBF (IEC 61709, SN 29500)	> 1160000 h (40 °C)

Insulation characteristics

Protection class	II
Degree of pollution	2

Dimensions

UNO-PS/350-900DC/24DC/60W - DC/DC converter



2906300

<https://www.phoenixcontact.com/us/products/2906300>

Width	55 mm
Height	90 mm
Depth	84 mm

Installation dimensions

Installation distance right/left	0 mm / 0 mm ($\leq 70\text{ °C}$)
Installation distance top/bottom	30 mm / 30 mm ($\leq 70\text{ °C}$)

Mounting

Mounting type	DIN rail mounting
Assembly note	alignable: 0 mm horizontally, 30 mm vertically
Mounting position	horizontal DIN rail NS 35, EN 60715
With protective coating	no

Material specifications

Flammability rating according to UL 94 (housing / terminal blocks)	V0
Housing material	Plastic
Housing material	PC
Foot latch material	POM (Polyoxymethylene)

Environmental and real-life conditions

Ambient conditions

Degree of protection	IP20
Ambient temperature (operation)	-25 °C ... 70 °C (> 55° C derating : 2.5%/K)
Ambient temperature (storage/transport)	-40 °C ... 85 °C
Ambient temperature (start-up type tested)	-40 °C
Climatic class	3K3 (in acc. with EN 60721)
Max. permissible relative humidity (operation)	$\leq 95\%$ (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 – Limitation of mains harmonic currents	EN 61000-3-2
Standard - Electrical safety	IEC 62109-1
Standard – Safety extra-low voltage	IEC 60950-1 (SELV) and EN 60204-1 (PELV)
Standard - Safe isolation	DIN VDE 0100-410
Standard - Safety of power converters for use in photovoltaic power systems	IEC 62109-1
Approval - requirement of the semiconductor industry with regard to mains voltage dips	EN 61000-4-11

Overvoltage category

IEC 62109-1	II
-------------	----

UNO-PS/350-900DC/24DC/60W - DC/DC converter



2906300

<https://www.phoenixcontact.com/us/products/2906300>

Approvals

UL approvals	UL 1741
Conformity/Approvals	
SIL in accordance with IEC 61508	0

EMC data

Electromagnetic compatibility	Conformance with EMC Directive 2014/30/EU
Low Voltage Directive	Conformance with Low Voltage Directive 2014/35/EC
EMC requirements for noise emission	EN 61000-6-3
	EN 61000-6-4
EMC requirements for noise immunity	EN 61000-6-1
	EN 61000-6-2

Electrostatic discharge

Standards/regulations	EN 61000-4-2
-----------------------	--------------

Electrostatic discharge

Contact discharge	6 kV (Test Level 3)
Discharge in air	8 kV (Test Level 3)
Comments	Criterion B

Electromagnetic HF field

Standards/regulations	EN 61000-4-3
-----------------------	--------------

Electromagnetic HF field

Frequency range	80 MHz ... 1 GHz
Test field strength	10 V/m
Frequency range	1 GHz ... 2 GHz
Test field strength	10 V/m
Frequency range	2 GHz ... 3 GHz
Test field strength	10 V/m
Comments	Criterion A

Fast transients (burst)

Standards/regulations	EN 61000-4-4
-----------------------	--------------

Fast transients (burst)

Input	4 kV (Test Level 4 - asymmetrical)
Output	2 kV (Test Level 3 - asymmetrical)
Comments	Criterion B

Surge voltage load (surge)

Standards/regulations	EN 61000-4-5
-----------------------	--------------

Surge voltage load (surge)

Input	2 kV (Test Level 3 - symmetrical)
-------	-----------------------------------

UNO-PS/350-900DC/24DC/60W - DC/DC converter



2906300

<https://www.phoenixcontact.com/us/products/2906300>

Output	4 kV (Test Level 4 - asymmetrical)
	1 kV (Test Level 2 - symmetrical)
	2 kV (Test Level 3 - asymmetrical)
Comments	Criterion B

Conducted interference

Standards/regulations	EN 61000-4-6
-----------------------	--------------

Conducted interference

Frequency range	10 kHz ... 80 MHz
Comments	Criterion A
Voltage	10 V (Test Level 3)

Voltage dips

Standards/regulations	EN 61000-4-11
-----------------------	---------------

Emitted interference

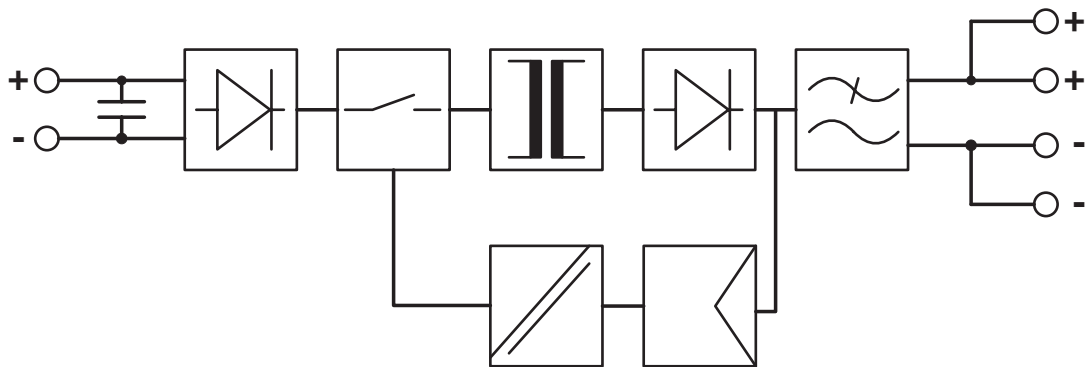
Standards/regulations	EN 61000-6-3
Radio interference voltage in acc. with EN 55011	EN 55011 (EN 55022) Class B, area of application: Industry and residential
Emitted radio interference in acc. with EN 55011	EN 55011 (EN 55022) Class B, area of application: Industry and residential

Criteria

Criterion A	Normal operating behavior within the specified limits.
Criterion B	Temporary impairment to operational behavior that is corrected by the device itself.

Drawings

Block diagram



UNO-PS/350-900DC/24DC/60W - DC/DC converter



2906300

<https://www.phoenixcontact.com/us/products/2906300>

Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/2906300>



cUL Recognized

Approval ID: FILE E 476951



UL Recognized

Approval ID: FILE E 476951



IECEE CB Scheme

Approval ID: US-27376-M1-UL



EAC

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



EAC

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

UNO-PS/350-900DC/24DC/60W - DC/DC converter



2906300

<https://www.phoenixcontact.com/us/products/2906300>

Classifications

ECLASS

ECLASS-13.0	27040701
ECLASS-15.0	27040701

ETIM

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

UNSPSC

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

Environmental product compliance

EU RoHS

Fulfills EU RoHS substance requirements	Yes
Exemption	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	21ec55f9-c700-47d5-9399-546a8bea5814

EF3.0 Climate Change

CO2e kg	10.717 kg CO2e
---------	----------------