



# DCN DATASHEET

[dc.systems](https://dc.systems)

Current  DS



by Schneider Electric

# About

The DCN is a DC-DC converter naturally cooled that is used to distribute power to devices working under 700V or 350V while also providing solid state protection.

# Applications

- Component integration

# Features

- Natural Cooling (no fan)
- Output solid-state protection
- Galvanic isolation between DC input & output
- Bipolar or Single +/-350Vdc
- DC TCN Connection
- RCD functionality <0.1sec @1..50mA fault current
- Efficiency > 95%
- Control by Power Line Communication (PLC) protocol
- Usage for Mesh, Star, or point-to-point PLC network topology
- RS485 Modbus or USB-B for user configuration
- Current/OS compatible
- Long lines application up to 3.5km cable length
- 100 % digital based on a DSP

# DCN

## Logistics data

Specification item	Value
Product reference	DCN-350V-1kW-1P-700V-LCR1PLC1R1RCD1

## Electrical input data

Specification item	Value	Unit	Condition
Nominal input voltage	700	V dc	
Max input voltage	760	V dc	Normal working
Min input voltage	600	V dc	Normal working
Max input power	1045	W	@1000W output
Input current	1.5	A dc	@1000W output, 700V input
Efficiency	>96	%	100% output
Standby power	<8	W	Power Line Communication active

## Electrical output data

Specification item	Value	Unit	Condition
Nominal output voltage	350	V dc	Droop not active
Max output current	3	A dc	
Overload current	3.1	A dc	60 sec
	3.3	A dc	15 sec
Short circuit current at the terminals	15	A dc	Excluding pulse system capacitance
Turn off delay short circuit	<1	µs	
Residual current detection RCD	1...50	mA	Configuration 1..100ms

## Physical data

Specification item	Value	Unit	Condition
Height	300	mm	Excluding connectors
Width	75	mm	
Depth	191	mm	
Weight	2275	gr	Excluding connectors
IP rating	IP20		

## Electrical connections

Specification item	Value	Unit	Condition
Incoming cable minimal	0.75	mm <sup>2</sup>	Solid/stranded w. ferrule
Incoming cable maximal	4	mm <sup>2</sup>	Solid/stranded w. ferrule
Luminaire outgoing cable minimal	1	mm <sup>2</sup>	Solid/stranded w. ferrule
Luminaire outgoing cable maximal	4	mm <sup>2</sup>	Solid/stranded w. ferrule
Communication / IO cable minimal	0.25	mm <sup>2</sup>	Stranded w. ferrule
Communication / IO cable maximal	1.5	mm <sup>2</sup>	Stranded w. ferrule

## Surge protection DC input

Specification item	Value	Unit	Condition
Peak Current Rating per 8/20 $\mu$ s	3	kA	25 °C
Clamp voltage	1040	V	@10kA

Note: DC output must be protected externally

## Environmental conditions

Specification item	Value	Unit	Condition
Max ambient temperature	70	°C	Standby
Max ambient temperature 100%	50	°C	Full power w/o derating, depending on position and airflow
Min ambient temperature	-20	°C	Standby
Ambient temperature (T-Life)	40	°C	
Maximal case temperature	70	°C	
Storage temperature	10...30	°C	
Humidity operation	95	%	Non-condensing
Humidity storage	80	%	IEC 60068-2-78
Operating altitude	<2000	m	



by **Schneider** Electric

For more information, visit  
[www.dc.systems/applications/products](http://www.dc.systems/applications/products)

DC Systems  
Oosteinderweg 127C  
1432 AH Aalsmeer

©2022 DC Systems. All Rights Reserved.