

# Redundancy module, with protective coating - QUINT4-S-ORING/12-24DC/1X40/+ - 2907753

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Active QUINT single redundancy module for DIN rail mounting, protective coating, input: 12 - 24 V DC, output: 12 - 24 V DC/1 x 40 A, incl. mounted UTA 107/30 universal DIN rail adapter

## Product Description


Active redundancy module for superior system availability and maximum operational reliability. QUINT S-ORING enables the separate structuring of a redundant system. In combination with the new QUINT POWER power supply, the redundant system is monitored continuously.

## Your advantages

- Consistent redundancy up to the load
- Input voltage and decoupling section monitored on a permanent basis
- Save energy by decoupling with MOSFET
- Protection against surge voltages in excess of 30 V DC at the output



## Key Commercial Data

Packing unit	1 pc
GTIN	 4 055626 231914
GTIN	4055626231914

## Technical data

### Dimensions

Width	32 mm
Height	130 mm
Depth	125 mm
Width with alternative assembly	122 mm
Height with alternative assembly	130 mm
Depth with alternative assembly	35 mm
Installation distance right/left	0 mm / 0 mm
Installation distance top/bottom	40 mm / 20 mm

# Redundancy module, with protective coating - QUINT4-S-ORING/12-24DC/1X40/+ - 2907753

## Technical data

### Ambient conditions

Degree of protection	IP20
Inflammability class in acc. with UL 94 (housing / terminal blocks)	V0
Ambient temperature (operation)	-40 °C ... 70 °C (> 60 °C Derating: 2.5 %/K)
Ambient temperature (storage/transport)	-40 °C ... 85 °C
Max. permissible relative humidity (operation)	≤ 100 % (at 25 °C, non-condensing)
Climatic class	3K3 (in acc. with EN 60721)
Degree of pollution	2
Installation height	≤ 5000 m (> 2000 m, observe derating)

### Input data

Nominal input voltage range	12 V DC ... 24 V DC
Input voltage range	8 V DC ... 26 V DC
Current consumption	40 A
Nominal input current	40 A (-40 °C ... 60 °C)

### Output data

Output voltage range	8 V DC ... 26 V DC
Nominal output current (I <sub>N</sub> )	40 A
Static Boost (I <sub>Stat.Boost</sub> )	45 A
Dynamic Boost (I <sub>Dyn.Boost</sub> )	60 A (5 s)
Selective Fuse Breaking (I <sub>SFB</sub> )	215 A (15 ms)
Derating	60 °C ... 70 °C (2.5%/K)
Connection in series	No
Protection against overvoltage at the output (OVP)	≤ 28.8 V DC
Power loss nominal load max.	6.5 W (I <sub>OUT</sub> = 40 A)
	6 W (I <sub>OUT</sub> = 40 A)

### General

Net weight	0.4 kg
Efficiency	typ. 99 % (12 V DC)
	typ. 99.2 % (24 V DC)
MTBF (IEC 61709, SN 29500)	> 13486000 h (25 °C)
	> 7314000 h (40 °C)
	> 3379000 h (60 °C)
Degree of protection	IP20
Protection class	III
Inflammability class in acc. with UL 94 (housing / terminal blocks)	V0
Housing material	Aluminum / stainless steel
Mounting position	horizontal DIN rail NS 35, EN 60715
Assembly instructions	alignable: P <sub>N</sub> ≥ 50%, 5 mm horizontally, 15 mm next to active components, 50 mm vertically

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## Technical data

### General

	alignable: P <sub>N</sub> <50%, 0 mm horizontally, 40 mm vertically top, 20 mm vertically bottom
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### 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.	20
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.	20
Conductor cross section AWG max.	6
Stripping length	10 mm
Screw thread	M4

### Connection data for signaling

Connection method	Push-in connection
Conductor cross section solid min.	0.2 mm <sup>2</sup>
Conductor cross section solid max.	1.5 mm <sup>2</sup>
Conductor cross section flexible min.	0.2 mm <sup>2</sup>
Conductor cross section flexible max.	1.5 mm <sup>2</sup>
Conductor cross section AWG min.	24
Conductor cross section AWG max.	16
Stripping length	8 mm

### 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)

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## Technical data

### Standards

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

### Conformance/approvals

UL approvals	UL/C-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)
Shipbuilding approval	DNV GL

### EMC data

Electromagnetic compatibility	Conformance with EMC Directive 2014/30/EU
Low Voltage Directive	Conformance with Low Voltage Directive 2014/35/EC
Conducted noise emission	EN 55016
	EN 61000-6-3 (Class B)
Noise emission	EN 55016
	EN 61000-6-3 (Class B)
DNV GL conducted interference	Class A
Additional text	Area power distribution
DNV GL noise radiation	Class B
Additional text	Bridge and deck area
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 (Test Level 3)
Frequency range	1 GHz ... 6 GHz
Test field strength	10 V/m (Test Level 3)
Frequency range	1 GHz ... 6 GHz
Test field strength	10 V/m (Test Level 3)
Comments	Criterion A
Fast transients (burst)	EN 61000-4-4
Input	2 kV (Test Level 4 - asymmetrical)
Output	2 kV (Test Level 4 - asymmetrical)
Signal	2 kV (Test Level 4 - asymmetrical)
Comments	Criterion A

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### Technical data

#### EMC data

Surge voltage load (surge)	EN 61000-4-5
Input	1 kV (Test Level 4 - symmetrical)
	2 kV (Test Level 4 - asymmetrical)
Output	1 kV (Test Level 2 - symmetrical)
	2 kV (Test Level 3 - asymmetrical)
Signal	1 kV (Test Level 2 - asymmetrical)
Comments	Criterion A
Conducted interference	EN 61000-4-6
I/O/S	asymmetrical
Frequency range	0.15 MHz ... 80 MHz
Voltage	10 V (Test Level 3)
Comments	Criterion A
Power frequency magnetic field	EN 61000-4-8
Frequency	16.67 Hz
	50 Hz
	60 Hz
Test field strength	30 A/m
Additional text	60 s
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.

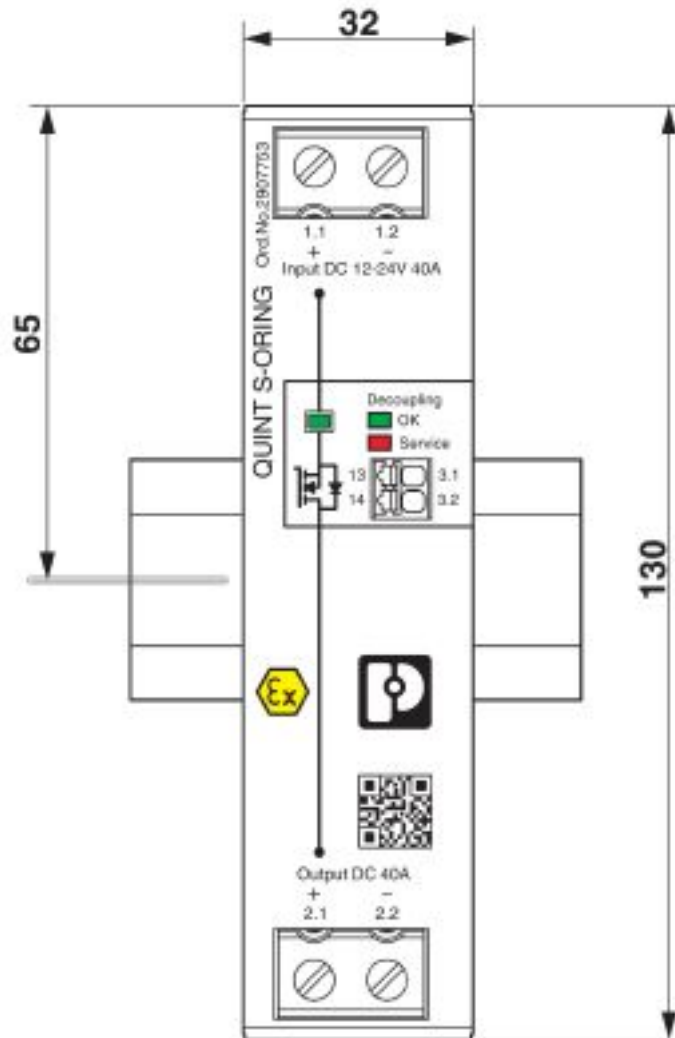
#### Environmental Product Compliance

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

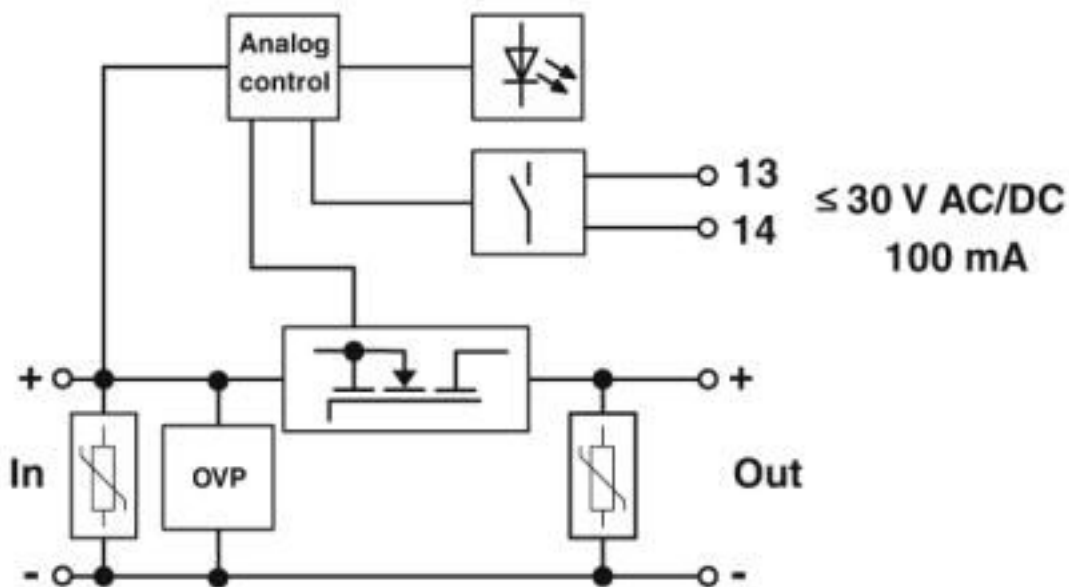
# Redundancy module, with protective coating - QUINT4-S-ORING/12-24DC/1X40/+ - 2907753

Dimensional drawing

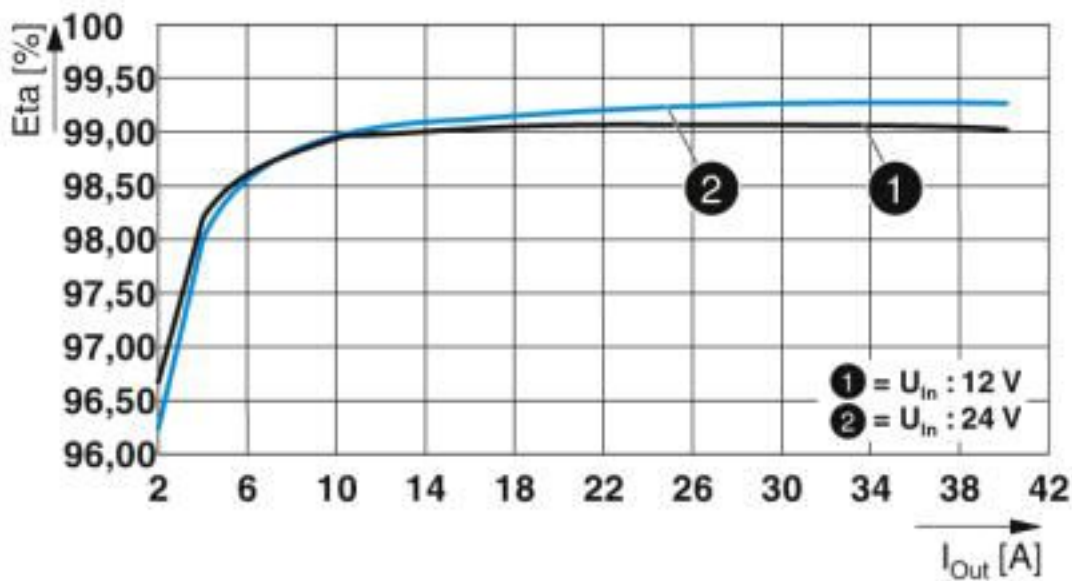


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Block diagram

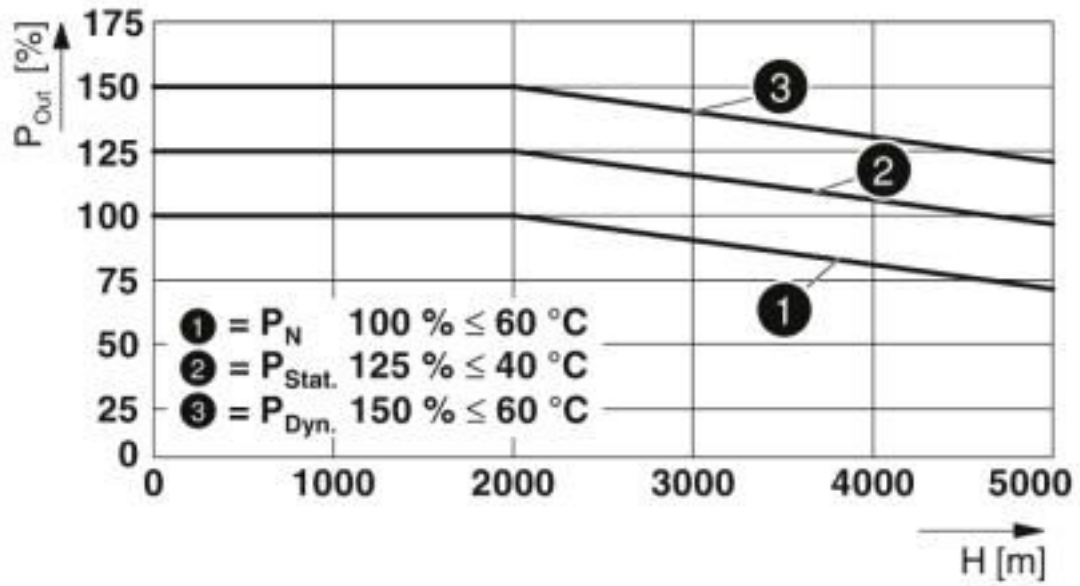


Diagram



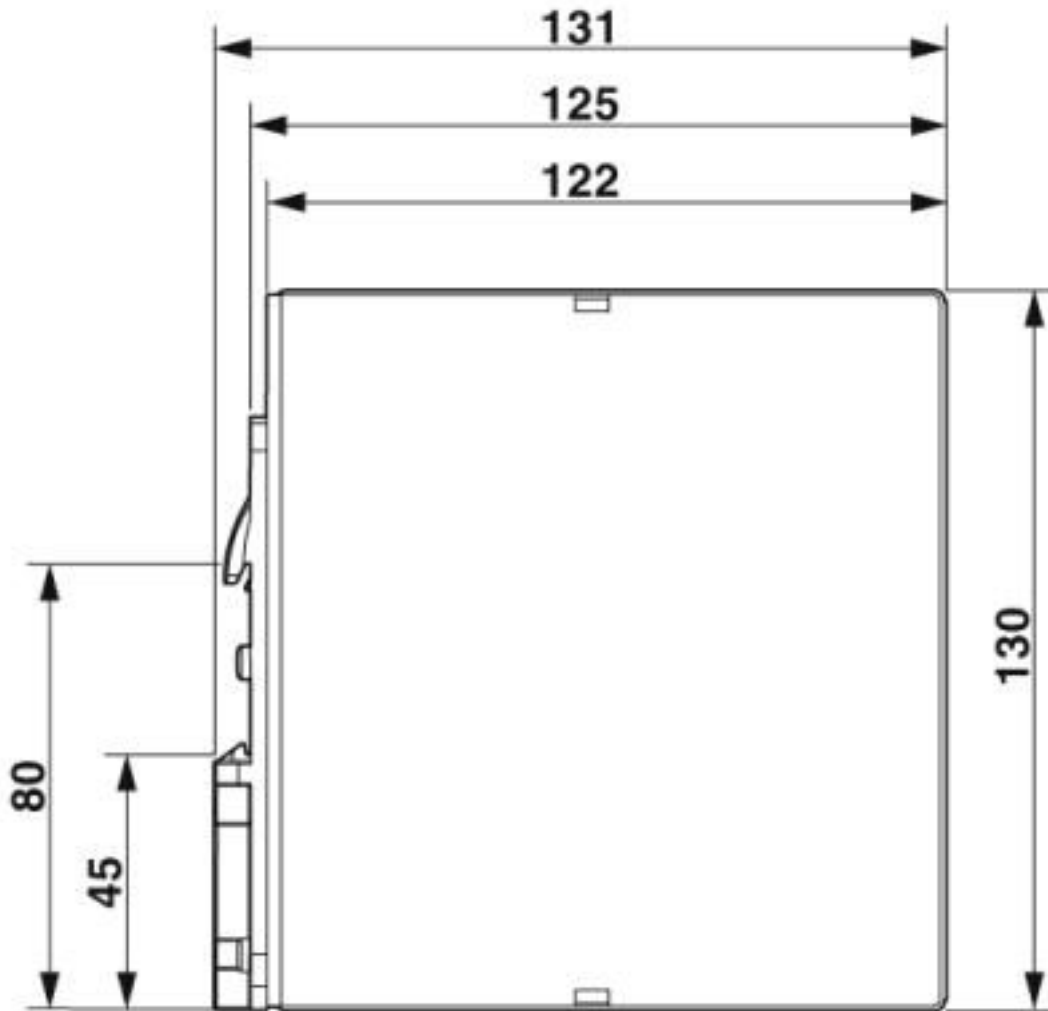
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Diagram



# Redundancy module, with protective coating - QUINT4-S-ORING/12-24DC/1X40/+ - 2907753

Dimensional drawing



## Classifications

eCl@ss

eCl@ss 10.0.1	27371010
eCl@ss 11.0	27371010
eCl@ss 5.0	27371000
eCl@ss 5.1	27371000
eCl@ss 6.0	27371000
eCl@ss 7.0	27371010
eCl@ss 8.0	27371010
eCl@ss 9.0	27371010

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## Classifications

### ETIM

ETIM 5.0	EC000599
ETIM 6.0	EC000599
ETIM 7.0	EC000599

### UNSPSC

UNSPSC 13.2	39121004
UNSPSC 18.0	32151504
UNSPSC 19.0	32151504
UNSPSC 20.0	32151504
UNSPSC 21.0	32151504

## Approvals

### Approvals

#### Approvals

DNV GL / UL Listed / UL Recognized / cUL Recognized / cUL Listed / EAC / UL Recognized / UL Listed / cUL Listed / cUL Recognized / DNV GL / EAC

#### Ex Approvals

IECEX / ATEX / UL Listed / cUL Listed / IECEX / ATEX / UL Listed / cUL Listed / EAC Ex / EAC Ex

### Approval details

DNV GL		<a href="https://approvalfinder.dnvgl.com/">https://approvalfinder.dnvgl.com/</a>	TAA000011F
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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
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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
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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
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## Approvals

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
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EAC			RU*DE*08.B.01873/19
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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
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EAC			RU*DE*08.B.01873/19
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## Accessories

Accessories

Assembly adapter

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### Accessories

#### 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.

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#### Assembly adapters - UTA 107/30 - 2320089



Universal DIN rail adapter

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



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

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