

Electronic device circuit breaker - CBMC E4 24DC/1-4A NO - 2906031

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's documentation. Our General Terms of Use for Downloads are valid (<http://phoenixcontact.com/download>)




Multi-channel electronic device circuit breaker for protecting four loads at 24 V DC in the event of overload and short circuit. With electronic locking of the set nominal currents. For installation on DIN rails.

Your advantages

- ✓ Easy device replacement without replanning, thanks to compact design and options for individual adjustments
- ✓ Circuits can be adjusted without any tools by means of one single pushable LED button
- ✓ Optimum protection for cables and sensors as well as NEC Class 2 circuits by means of an additional internal output fuse
- ✓ Reliable protection against unintentional adjustment of current values, thanks to electronic locking
- ✓ Status LEDs in traffic light colors enable instantaneous determination of operating states



Key Commercial Data

Packing unit	1 pc
GTIN	 4 055626 149349
GTIN	4055626149349
Weight per Piece (excluding packing)	119.700 g
Custom tariff number	85363090
Country of origin	Germany

Technical data

Dimensions

Height	90 mm
Width	36 mm
Depth	98 mm (incl. DIN rail 7.5 mm)

Ambient conditions

Ambient temperature (operation)	-25 °C ... 60 °C
Ambient temperature (storage/transport)	-40 °C ... 70 °C
Humidity test	96 h, 95 % RH, 40 °C
Altitude	≤ 3000 m up to 52 °C (amsl (above mean sea level))

Electronic device circuit breaker - CBMC E4 24DC/1-4A NO - 2906031

Technical data

Ambient conditions

	≤ 4000 m up to 46 °C (amsl (above mean sea level))
Shock (operation)	30g (IEC 60068-2-27, Test Ea)
Vibration (operation)	10 Hz ... 57.6 Hz (Amplitude ±0.35 mm; in accordance with IEC 60068-2-6, Test Fc)
	57.6 Hz ... 150 Hz (Acceleration 5g; in accordance with IEC 60068-2-6, Test Fc)
Degree of protection	IP20

General

Flammability rating according to UL 94	V-0
Mounting type	DIN rail: 35 mm
Color	light grey RAL 7035
Number of positions	1
Protection class	III
Degree of pollution	2
Type	DIN rail module, one-piece

Electrical data

Fuse type	electronic
Rated surge voltage	0.5 kV
Operating voltage	18 V DC ... 30 V DC
Rated voltage	24 V DC
Rated current I _N	max. 16 A DC (IN+)
	max. 40 A DC (per terminal position when bridging additional devices via IN+)
	1 / 2 / 3 / 4 A DC (adjustable per output channel)
Measuring tolerance I	± 15 %
Feedback resistance	max. 35 V DC
Fail-safe element	4 A DC (per output channel)
Efficiency	> 99 %
Closed circuit current I ₀	typ. 33 mA
Power dissipation	typ. 0.8 W (No-load operation)
	< 4 W (Nominal operation)
Module initialization time	1.6 s
Waiting time after switch off of a channel	5 s (at overload / short circuit)
Tripping method	E (electronic)
Required backup fuse	not required, integrated failsafe element
Dielectric strength	max. 35 V DC (Load circuit)
MTBF (IEC 61709, SN 29500)	11764705 h (at 25°C with 21% load)
	5319148 h (at 40°C with 34.25% load)
	846023 h (at 60°C with 100% load)
Shutdown time load circuit	≤ 10 ms (for short circuit > 2.0 x I _N)
	1 s (1.2 ... 2.0 x I _N)

Electronic device circuit breaker - CBMC E4 24DC/1-4A NO - 2906031

Technical data

Electrical data

Undervoltage shutdown load circuit	≤ 17.8 V DC (active)
	≥ 18.8 V DC (inactive)
Surge voltage shutdown load circuit	≥ 30.5 V DC (active)
	≤ 29.5 V DC (inactive)
Max. capacitive load load circuit	30000 µF (Depending on the current setting and the short-circuit current available)

Remote indication contact

Connection name	Remote indication circuit
Switching function	N/O contact
Stripping length	10 mm
Conductor cross section solid	0.2 mm ² ... 2.5 mm ²
Conductor cross section AWG	24 ... 12
Conductor cross section, flexible, with ferrule, with plastic sleeve	0.25 mm ² ... 1.5 mm ²
Conductor cross section flexible, with ferrule without plastic sleeve	0.25 mm ² ... 2.5 mm ²
DC operating voltage	0 V DC ... 30 V DC
DC operating current	100 mA DC

Signaling

Channel LED off	off (Channel switched off)
Channel LED green	lit (Channel switched on)
Channel LED yellow	lit (Channel switched on, channel load > 80%)
	flashing (Programming mode active)
Channel LED red	lit (Channel switched off, over- or undervoltage active)
	ON temporarily (Channel switched off, 5 s cool-down phase, overload or short-circuit release)
	flashing (Channel switched off, ready to be switched back on, overload or short-circuit release)
	two flashes (Channel switched off, device total current limit 40 A exceeded)

Connection data

Connection name	Main circuit IN+
Connection method	Push-in connection
Stripping length	15 mm
Conductor cross section solid	0.2 mm ² ... 10 mm ²
Conductor cross section AWG	24 ... 8
Conductor cross section, flexible, with ferrule, with plastic sleeve	0.25 mm ² ... 4 mm ²
Conductor cross section flexible, with ferrule without plastic sleeve	0.25 mm ² ... 6 mm ²
Connection name	Main circuit IN-
Connection method	Push-in connection
Stripping length	10 mm
Conductor cross section solid	0.2 mm ² ... 2.5 mm ²
Conductor cross section AWG	24 ... 12

Electronic device circuit breaker - CBMC E4 24DC/1-4A NO - 2906031

Technical data

Connection data

Conductor cross section, flexible, with ferrule, with plastic sleeve	0.25 mm ² ... 1.5 mm ²
Conductor cross section flexible, with ferrule without plastic sleeve	0.25 mm ² ... 2.5 mm ²
Connection name	Main circuit OUT
Connection method	Push-in connection
Stripping length	10 mm
Conductor cross section solid	0.2 mm ² ... 2.5 mm ²
Conductor cross section AWG	24 ... 12
Conductor cross section, flexible, with ferrule, with plastic sleeve	0.25 mm ² ... 1.5 mm ²
Conductor cross section flexible, with ferrule without plastic sleeve	0.25 mm ² ... 2.5 mm ²

Standards and Regulations

Standards/specifications	EN 61000-6-2 EMC – Immunity for industrial areas
	EN 61000-6-3 EMC – Emission for residential, business and commercial properties and small operations
	EN 60068-2-6 Environmental influences – Vibrations (sinusoidal)
	EN 60068-2-27 Environmental influences – Shocks
	EN 60068-2-78 Environmental influences – Moisture and heat, constant
	EN 50178 Equipping power installations with electronic equipment

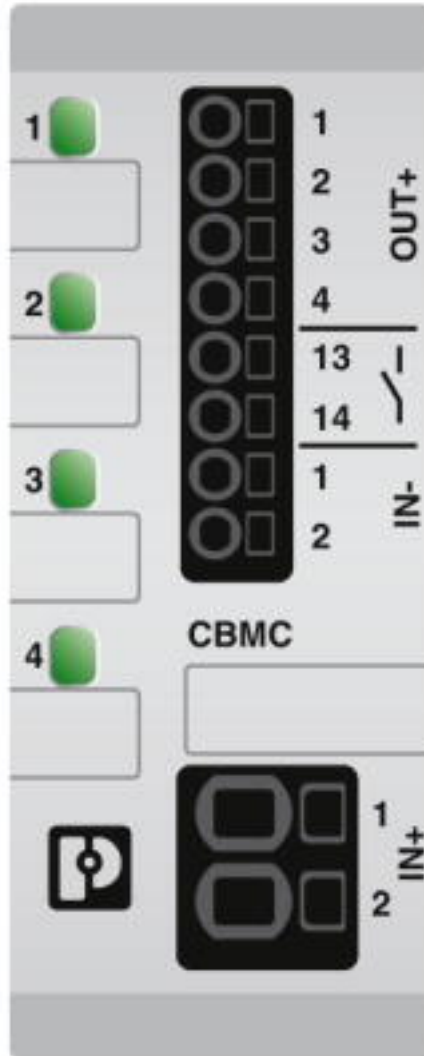
Environmental Product Compliance

REACH SVHC	Lead 7439-92-1
China RoHS	Environmentally Friendly Use Period = 50 years
	For details about hazardous substances go to tab “Downloads”, Category “Manufacturer’s declaration”

Drawings

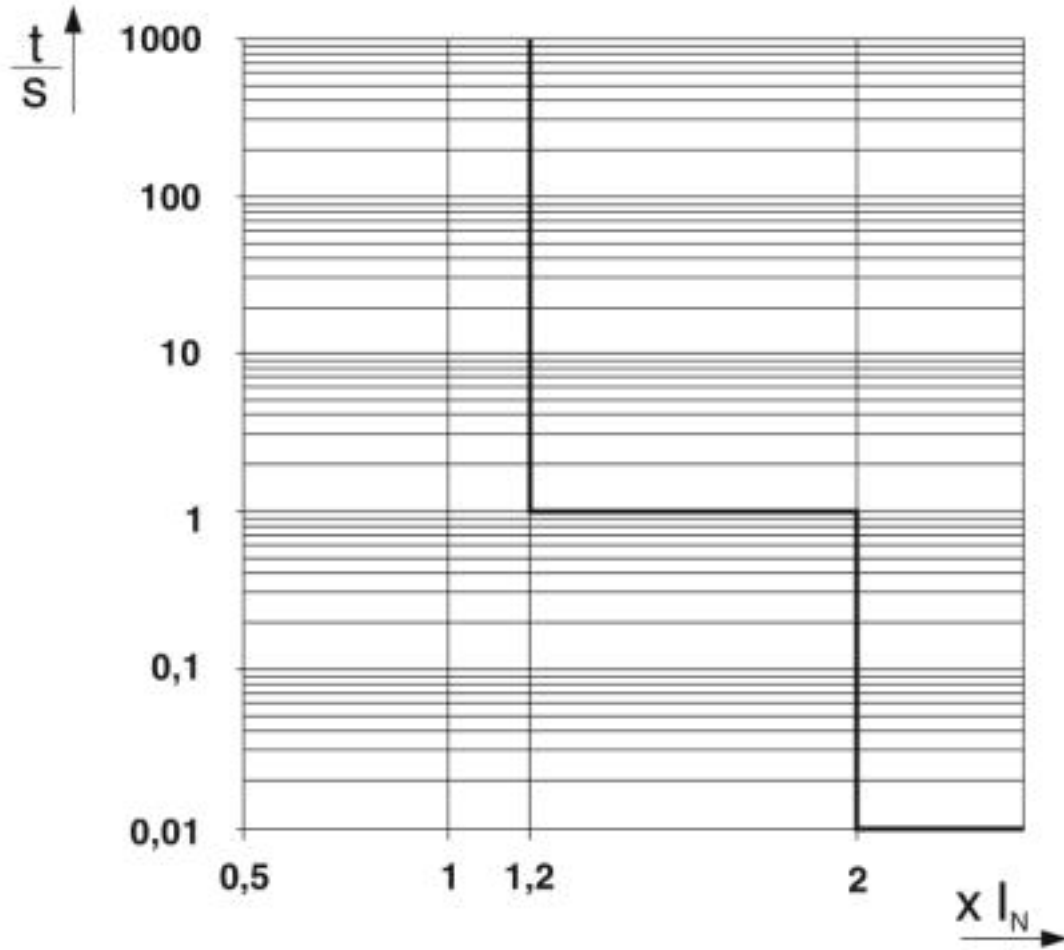
Electronic device circuit breaker - CBMC E4 24DC/1-4A NO - 2906031

Product drawing



Electronic device circuit breaker - CBMC E4 24DC/1-4A NO - 2906031

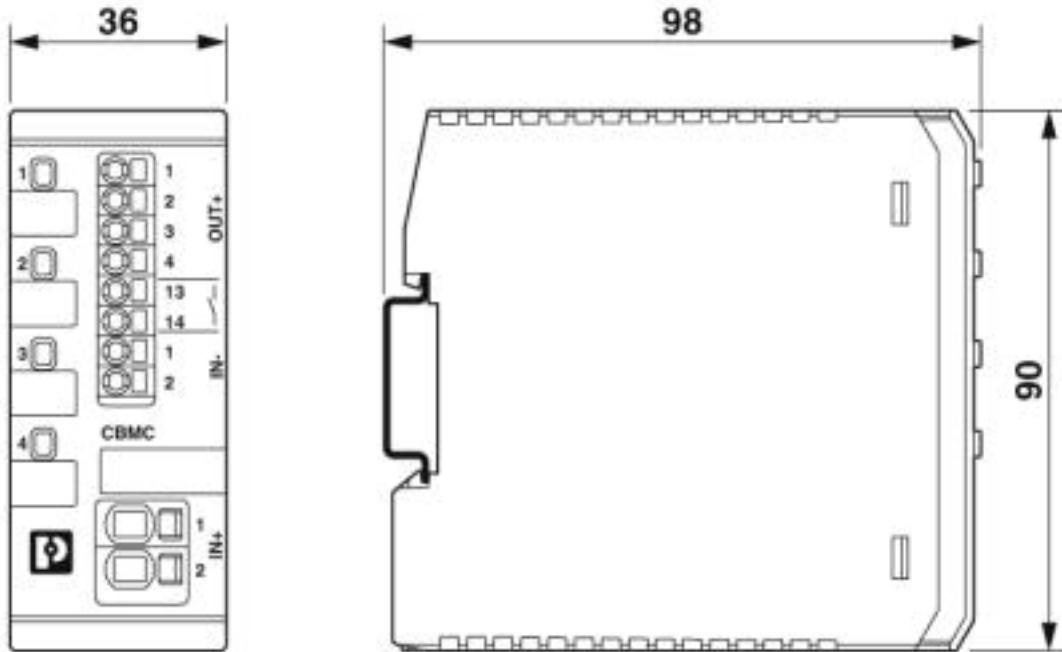
Diagram



Trigger characteristic in the DC range

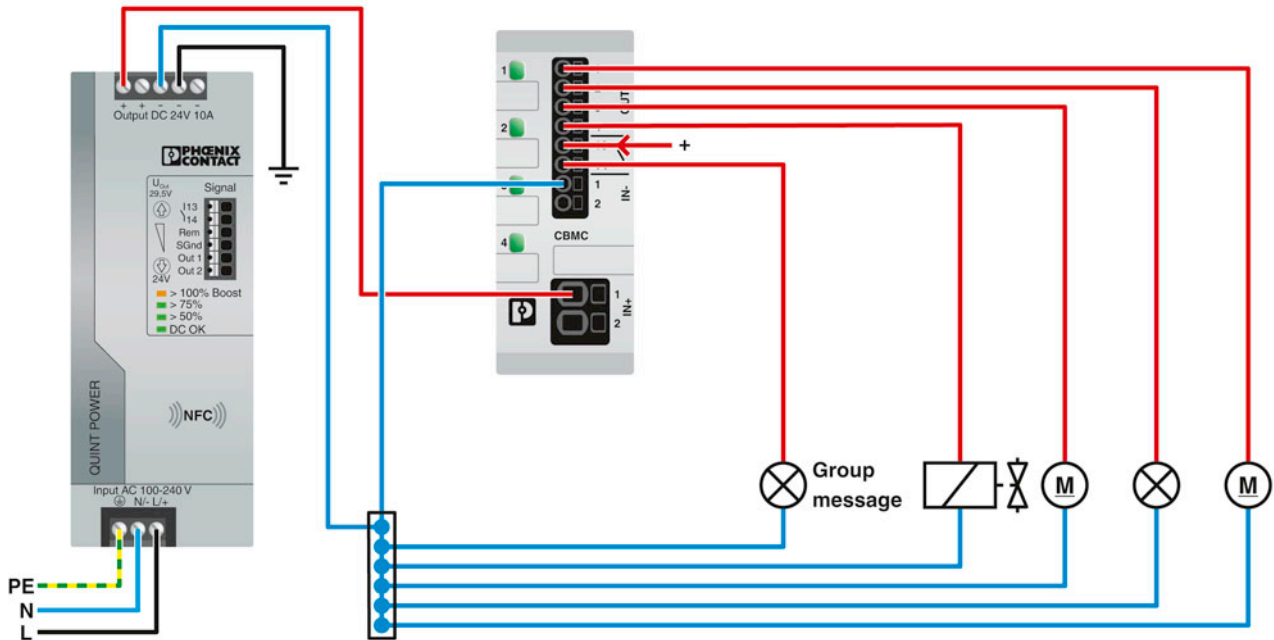
Electronic device circuit breaker - CBMC E4 24DC/1-4A NO - 2906031

Dimensional drawing



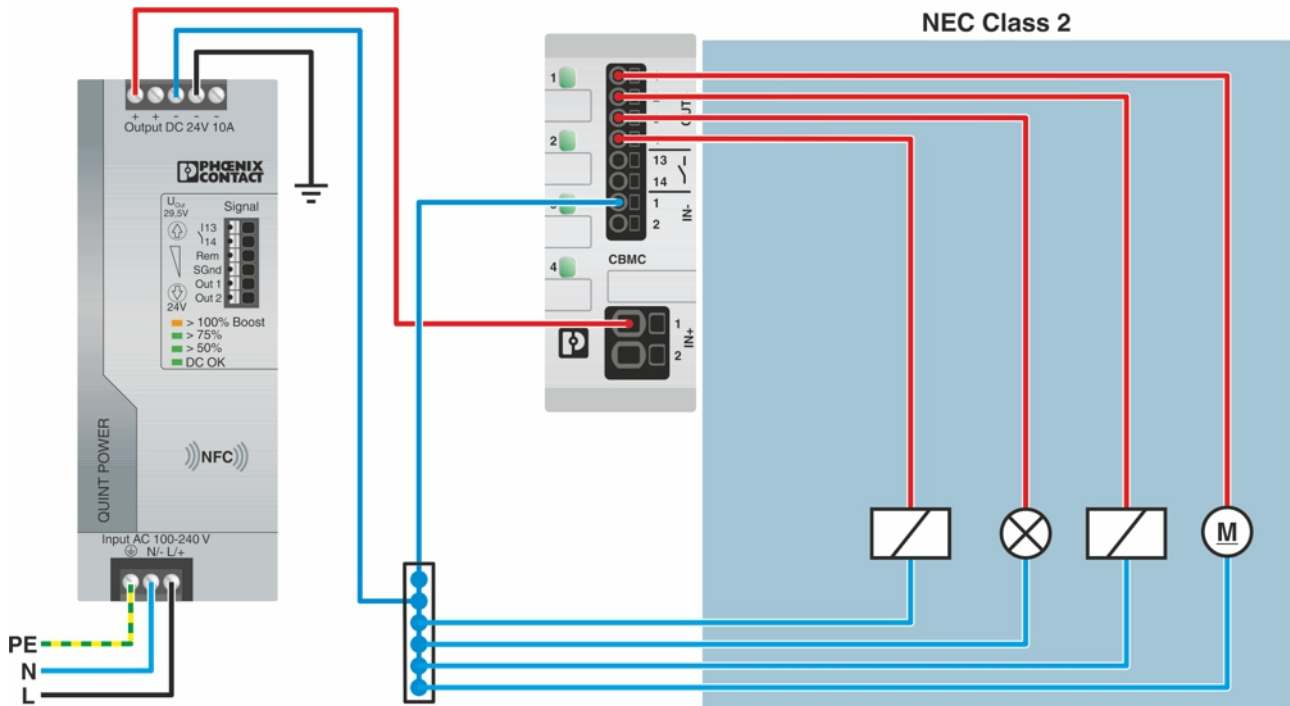
Electronic device circuit breaker - CBMC E4 24DC/1-4A NO - 2906031

Application drawing



Electronic device circuit breaker - CBMC E4 24DC/1-4A NO - 2906031

Application drawing



Classifications

eCl@ss

eCl@ss 10.0.1	27140401
---------------	----------

Electronic device circuit breaker - CBMC E4 24DC/1-4A NO - 2906031

Classifications

eCl@ss

eCl@ss 4.0	27141100
eCl@ss 4.1	27141100
eCl@ss 5.0	27141100
eCl@ss 5.1	27141100
eCl@ss 6.0	27141100
eCl@ss 7.0	27141116
eCl@ss 8.0	27141116
eCl@ss 9.0	27141116

ETIM

ETIM 5.0	EC000899
ETIM 6.0	EC000899
ETIM 7.0	EC000899

UNSPSC

UNSPSC 13.2	39121410
UNSPSC 18.0	39121410
UNSPSC 19.0	39121410
UNSPSC 20.0	39121410
UNSPSC 21.0	39121410

Approvals

Approvals


Approvals

UL Recognized / UL Listed / UL Recognized / cUL Listed / EAC / cULus Listed

Ex Approvals

Approval details

UL Recognized		http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm E317172-20150319
---------------	---	--

UL Listed		http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm FILE E 123528
-----------	---	---

Electronic device circuit breaker - CBMC E4 24DC/1-4A NO - 2906031

Approvals

UL Recognized		http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm	FILE E 317172
---------------	--	---	---------------

cUL Listed		http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm	FILE E 123528
------------	--	---	---------------

EAC			RU C- DE.A*30.B01561
-----	--	--	-------------------------

cULus Listed			
--------------	--	--	--

Accessories

Additional products

Label - EML (10X7)R - 0816663



Label, Roll, white, unlabeled, can be labeled with: THERMOMARK ROLLMASTER 300/600, THERMOMARK X1.2, THERMOMARK ROLL X1, THERMOMARK ROLL 2.0, THERMOMARK ROLL, mounting type: adhesive, lettering field size: 10 x 7 mm, Number of individual labels: 10000

Equipment marking - EML-ESD (20X7)R - 0830567



Equipment marking, Roll, white, unlabeled, can be labeled with: THERMOMARK ROLLMASTER 300/600, THERMOMARK X1.2, THERMOMARK ROLL X1, THERMOMARK ROLL 2.0, THERMOMARK ROLL, mounting type: adhesive, lettering field size: 20 x 7 mm, Number of individual labels: 4000

Power supply unit - QUINT4-PS/1AC/24DC/10 - 2904601



Primary-switched QUINT POWER power supply with free choice of output characteristic curve, SFB (selective fuse breaking) technology, and NFC interface, input: 1-phase, output: 24 V DC/10 A

Electronic device circuit breaker - CBMC E4 24DC/1-4A NO - 2906031

Accessories

Power supply unit - QUINT4-PS/1AC/24DC/20 - 2904602



Primary-switched QUINT POWER power supply with free choice of output characteristic curve, SFB (selective fuse breaking) technology, and NFC interface, input: 1-phase, output: 24 V DC/20 A

Power supply unit - QUINT4-PS/3AC/24DC/10 - 2904621



Primary-switched QUINT POWER power supply with free choice of output characteristic curve, SFB (selective fuse breaking) technology, and NFC interface, input: 3-phase, output: 24 V DC/10 A

Power supply unit - QUINT4-PS/3AC/24DC/20 - 2904622



Primary-switched QUINT POWER power supply with free choice of output characteristic curve, SFB (selective fuse breaking) technology, and NFC interface, input: 3-phase, output: 24 V DC/20 A

Power supply unit - TRIO-PS-2G/1AC/24DC/10 - 2903149



Primary-switched TRIO POWER power supply with push-in connection for DIN rail mounting, input: single phase, output: 24 V DC/10 A

Power supply unit - TRIO-PS-2G/1AC/24DC/20 - 2903151



Primary-switched TRIO POWER power supply with push-in connection for DIN rail mounting, input: single-phase, output: 24 V DC/20 A

Electronic device circuit breaker - CBMC E4 24DC/1-4A NO - 2906031

Accessories

Power supply unit - TRIO-PS-2G/3AC/24DC/5 - 2903153



Primary-switched TRIO POWER power supply with push-in connection for DIN rail mounting, input: 3-phase, output: 24 V DC/5 A

Power supply unit - TRIO-PS-2G/3AC/24DC/10 - 2903154



Primary-switched TRIO POWER power supply with push-in connection for DIN rail mounting, input: 3-phase, output: 24 V DC/10 A

Power supply unit - TRIO-PS-2G/3AC/24DC/20 - 2903155



Primary-switched TRIO POWER power supply with push-in connection for DIN rail mounting, input: 3-phase, output: 24 V DC/20 A

Power supply unit - TRIO-PS-2G/3AC/24DC/40 - 2903156



Primary-switched TRIO power supply for DIN rail mounting, input: 3-phase, output: 24 V DC/40 A, dynamic boost, tool-free fast connection technology for solid and stranded conductors with ferrule
