PHŒNIX CONTACT

Redundancy module - FL RED 2003E PRP - 2701863

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)

Ethernet redundancy module for redundant networks with the redundancy protocol PRP and three RJ45 connections.

Product Description

The compact redundancy modules (RED) enable flexible and economical design of high-availability Ethernet networks in the field of energy and automation. With robustness according to IEC 61850-3 and IEEE 1613, their wide temperature range from -40°C to +70°C, and extensive power supply range from 18 to 58 V DC, they cover all the requirements of industrial and energy technology applications. Parallel redundancy according to IEC 62439 enables high availability networks without switch-over time to be established.

Product Features

- Meets the requirements of IEC 61850-3 and IEEE 1613
- Standardized PRP redundancy function according to IEC 62439-3
- Easy startup without configuration
- Parallel redundancy without switch-over times for maximum availability
- No loss of packets in the event of network failure
- Low power consumption during operation
- -40°C ... +70°C ambient temperature
- Alarm contact

Ethernet IEC 61850-3

Key Commercial Data

Packing unit	1 pc
Weight per Piece (excluding packing)	600.0 g
Custom tariff number	85176200
Country of origin	Germany

Technical data

Note

Utilization restriction	EMC: class A product, see manufacturer's declaration in the download area

Redundancy module - FL RED 2003E PRP - 2701863

Technical data

Dimensions

Width	40 mm
Height	100 mm
Depth	109 mm

Ambient conditions

Degree of protection	IP20
Ambient temperature (operation)	-40 °C ... 70 °C
Ambient temperature (storage/transport)	-45 °C ... 85 °C
Permissible humidity (operation)	10 % ... 95 % (non-condensing)
Permissible humidity (storage/transport)	10 % ... 95 % (non-condensing)
Air pressure (operation)	70 kPa ... 106 kPa (3000 m above sea level)
Air pressure (storage/transport)	70 kPa ... 106 kPa (3000 m above sea level)

Interfaces

Interface 1	Ethernet (RJ45)
No. of ports	3 (RJ45 ports)
Connection method	RJ45
Note on connection method	Auto negotiation and autocrossing
Transmission physics	Copper
Transmission speed	10/100 MBit/s
Transmission length	100 m (per segment)
Data flow control/protocols	IEC 61850-3, IEEE 1613

Function

Basic functions	Ethernet redundancy module for the Parallel Redundancy Protocol
Status and diagnostic indicators	LEDs: U_{S1}, U_{S2} (redundant voltage supply), link and activity per port

Network expansion parameters

Maximum conductor length (twisted pair)	100 m

Supply voltage

Supply voltage	24 V DC (redundant)
	48 V DC (redundant)
Residual ripple	3.6 V_{PP} (within the permitted voltage range)
Supply voltage range	18 V DC ... 58 V DC
Typical current consumption	250 mA (at U_S = 24 V DC)

General

Mounting type	DIN rail
Type AX	Block design

Redundancy module - FL RED 2003E PRP - 2701863

Technical data

General

Net weight	417 g

Connection data

Conductor cross section solid min.	0.2 mm²
Conductor cross section solid max.	1.5 mm²
Conductor cross section flexible min.	0.2 mm²
Conductor cross section flexible max.	1.5 mm²
Conductor cross section AWG min.	24
Conductor cross section AWG max.	16

Standards and Regulations

Developed in acc. with standard	IEC 61000-6.2
Test standard	IEC 61000-4-2 (ESD)
Test result	Criterion A
Test standard	IEC 61000-4-3 (immunity to radiated interference)
Test result	Criterion A
Test standard	IEC 61000-4-4 (burst)
Test result	Criterion A
Test standard	IEC 61000-4-5 (surge)
Test result	Criterion A
Test standard	IEC 61000-4-6 (immunity to conducted interference)
Test result	Criterion A
Test standard	IEC 61000-4-8 (immunity to magnetic fields)
Test result	Criterion A
Test standard	EN 55022 (emitted interference)
Test result	Criterion B
Noise emission	EN 61000-6-4
Noise immunity	IEC 61850-3, IEEE 1613, EN 61000-6-2: 2005

Classifications

eCl@ss

eCl@ss 4.0	24010504
eCl@ss 4.1	24010504
eCl@ss 5.0	19030101
eCl@ss 5.1	19030101
eCl@ss 6.0	19170103
eCl@ss 7.0	19170190

Redundancy module - FL RED 2003E PRP - 2701863

Classifications

eCl@ss

eCl@ss 8.0	27069204

ETIM

ETIM 4.0	EC001478
ETIM 5.0	EC000515

UNSPSC

UNSPSC 6.01	20142601
UNSPSC 7.0901	20142601
UNSPSC 11	20142601
UNSPSC 12.01	20142601
UNSPSC 13.2	20142601

Approvals

Approvals

Approvals

UL Listed / cUL Listed / cULus Listed

Ex Approvals

Approvals submitted

Approval details

UL Listed

cUL Listed

Redundancy module - FL RED 2003E PRP - 2701863

Approvals

cULus Listed