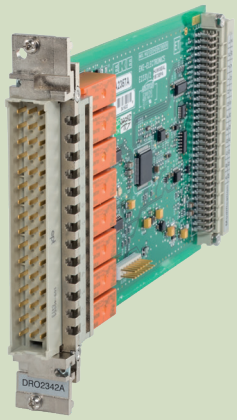

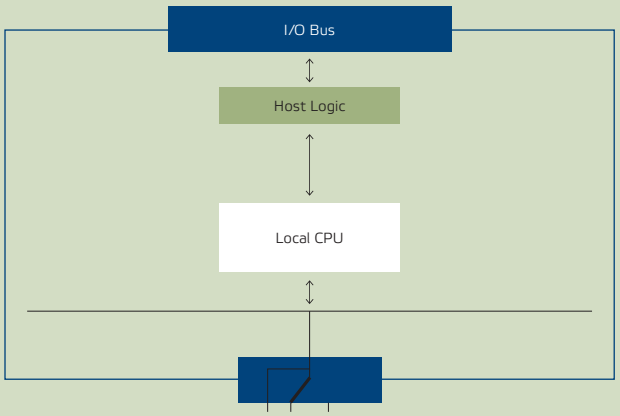

Digital Relay Output Module (DRO)

EN 50126
EN 50128
EN 50129
EN 50155
EN 45545

MODULE FUNCTIONS

The Trainnet® Digital Relay Output Module (DRO) provides standard relay contacts. The Trainnet® DRO receives instructions from the train computer's CPU Module and controls output relays accordingly.

The Trainnet® DRO can be used as a part of a Trainnet® TCMS, VCU or Event Recorder. Alternatively, the Trainnet® DRO can be fitted in the Trainnet® Remote I/O Module (RIOM).

OPTIONS

The Trainnet® DRO2342A has 8 relay output channels located on the module's front side.
The SIL-2 certified DRO5141A version of the module has 4 relay output channels. The relays are of type SPDT (Single Pole Double Throw). The relay contacts are available from the DIN41612F connector at the front of the module.

The DRO modules are able to take up pre-set output states in case of emergency. If the communication between the train computer's CPU module and the DRO fails, the relays go to emergency states that you can define in the application Software. When the Trainnet® DRO is unpowered, all relays are in Normally Closed state. Emergency states should be defined to match the wiring to Normally Open (NO)/ Normally Closed (NC) contacts.

SIL-2 CERTIFIED

The DRO5141A module development is based on the railway standards EN 50126, EN 50128 and EN 50129 that are in accordance with safety integrity level SIL 2. The non-SIL certified version DRO2342A is also available.
For SIL-2, please contact EKE-Sales.

TECHNICAL SPECIFICATIONS

Dimensions (W x H x D)
4 TE x 3 U x 160 mm
Weight
190 g
Input Power
5 V DC ± 5 % (500 mA max., 200 mA typ.)
Temperature Range (operational)
-40 ºC...+70 ºC
MTBF (40 ºC ambient temperature)
1 000 000 h (DRO2342A)
3 250 000 h (DRO5141A)
Relay electrical endurance
500 000 oerations (at 24 V DC 3.0 A resistive load)
I/O Connector
DIN41612-F48 (at front)
Host Interface
RS 485
Number of Channels
8 (DRO2342A)
4 (DRO5141A)
Relay Type
Change over (SPDT) AgNi 0.15 Contacts (DRO2342A)
Change over (SPDT) AgCuNi + Au 0.15 Contacts (DRO5141A)
Maximum Switching Current vs Voltage
24 V DC 3,5 A (DRO2342A)
48 V DC 1,4 A (DRO2342A)
110 V DC 0.5 A (DRO2342A)

24 V DC 3.0 A (DRO5141A)
48 V DC 1.0 A (DRO5141A)
110 V DC 0.3 A (DRO5141A)
Temperature Measurement
Yes, local CPU