



EU-10/10S

CE Approved:
MD, EMC, LVD

Category 3/4, EN 954-1

(Estimated category by 2-channel operation)

- 10 A contact load
- 4 NO safety outputs
- 1 NC signal output
- Multi voltage (EU-10)
- With or without time delay
- Detachable terminals

Function:

Relay used for increasing the number of contacts and for the load of contacts of the existing safety relay.
The extension contact block must be connected to an appropriate safety module.

Technical facilities regarding safety requirements:

- Forced contacts
- Doubling of output contacts
- Monitoring via X1-X2

Approvals, EU-10:



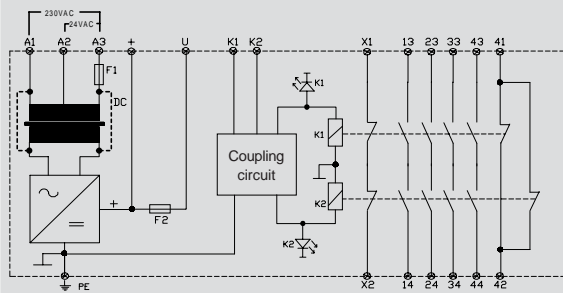
● Approved

User's advantages:

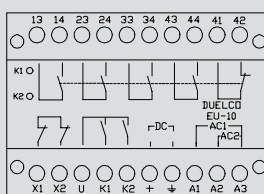
- 4 NO safety outputs with or without delayed release
- 1 NC signal output with or without delayed release
- Contact load: AC 10 A / DC 5 A
- Optional time delay
- Short circuit protected transformer
- Can operate with all NST- and HR-relays
- Detachable terminals
- Multi voltage => reduced stock (only EU-10)
- LED indication of the outputs
- DIN rail mounting
- Design is based on the European Standard, EN 60204-1
- Complies with MD, EMC, LVD (98/37/EC, 92/31/EEC and 73/23/EEC)

➔ **Technical specifications and physical dimensions, see page 44-45**

Block diagram, EU-10:



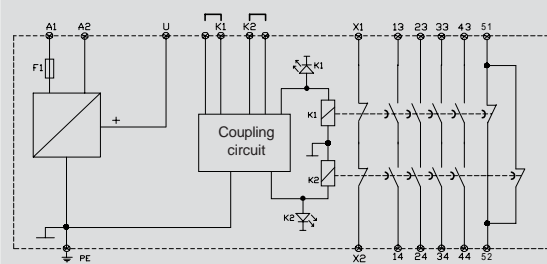
Front layout EU-10:



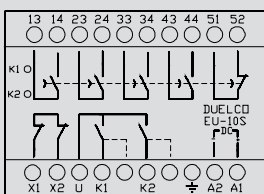
Terminal description:

- A1: 120/230 V AC input
- A2: 48/24 V AC input
- A3: Common AC input
- ⊥: Earth
- + : AC supply: 24 V output;
DC supply: 24 V input
+ 24V output
- U: + 24V output
- K1: + input K1
- K2: + input K2
- X1, X2: Feedback monitoring contact
- 13-14, 23-24, 33-34, 43-44: NO safety output contacts
- 41-42: NC signal contact

Block diagram, EU-10S:



Front layout EU-10S:



Terminal description:

- A1: Power supply (+)
- A2: Power supply (-)
- ⊥: Earth
- U: + 24V output
- K1: + input K1
- K2: + input K2
- X1, X2: Feedback monitoring contact
- 13-14, 23-24, 33-34, 43-44: Delayed NO safety output contacts
- 51-52: Delayed NC signal contact

Order information

Article name	Article no.	Article name	Article no.
EU-10, 24/230 VAC / 24 VDC	42022010	EU-10S 0,5s., 24 VDC	42411240
EU-10, 48/120 VAC / 24 VDC	42012010	EU-10S 1,0s., 24 VDC	42421240
		EU-10S 2,0s., 24 VDC	42431240
		EU-10S 4,0s., 24 VDC	42441240
		EU-10S 8,0s., 24 VDC	42451240
		EU-10S 12,0s., 24 VDC	42461240

Operation description and connection examples

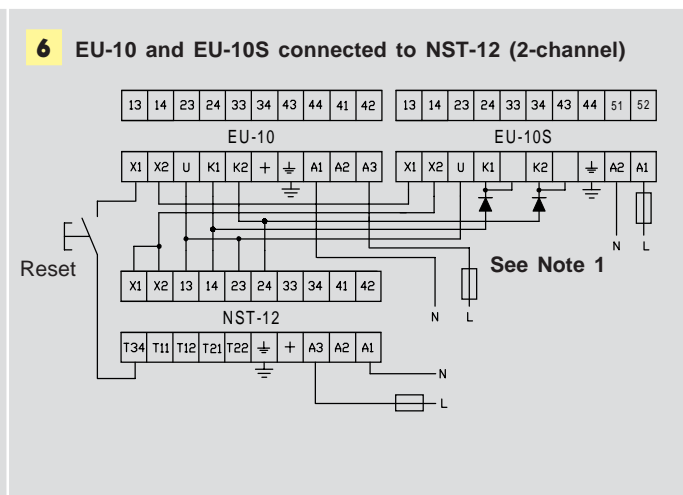
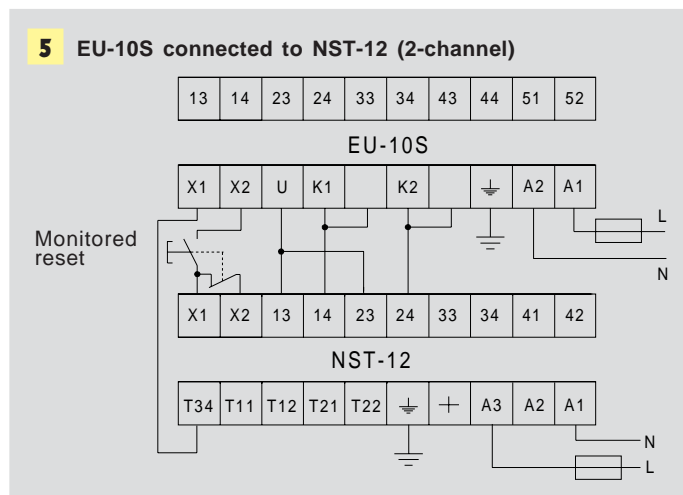
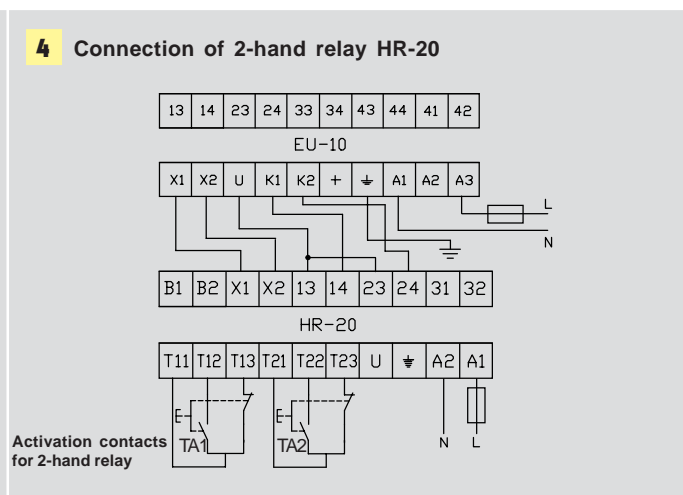
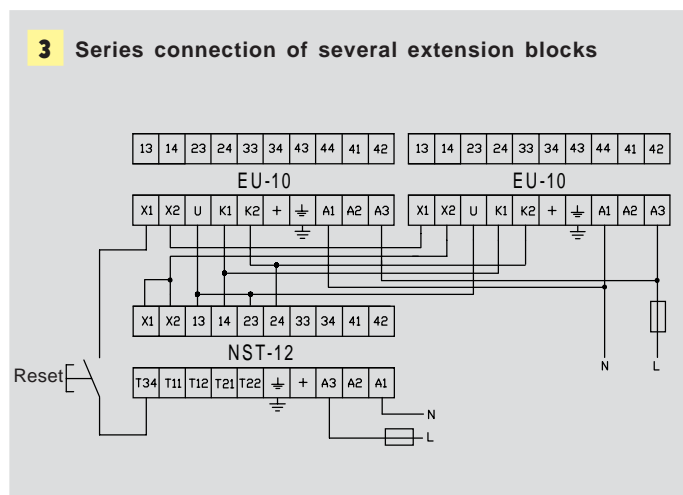
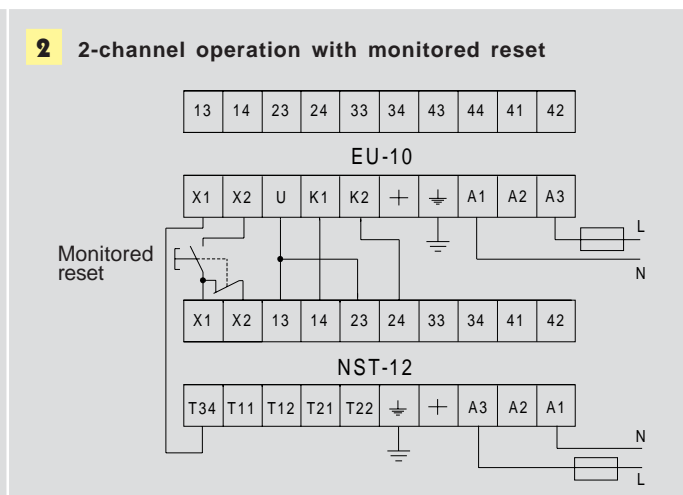
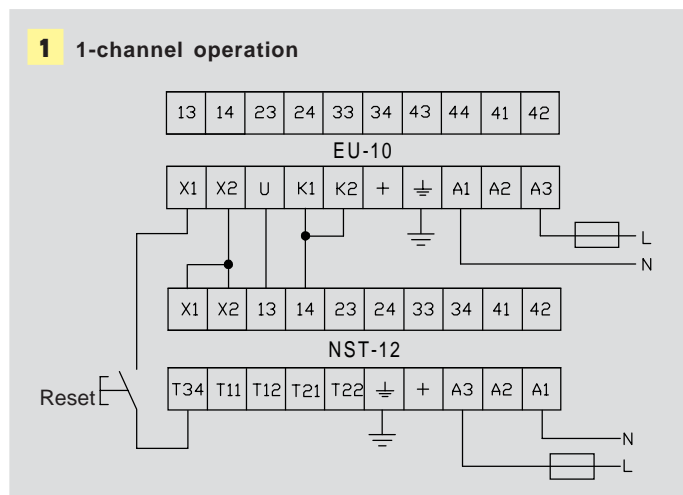
AC supply voltage is connected to terminals A1-A3 or A2-A3 (EU-10S: A1(+)/A2(-) = 24 V DC). If DC supply voltage is used, the connection is to plus (+) and earth (\perp).

In addition, the EU10/10S's feedback coupling X1-X2 is connected to the emergency relay's X1-X2. This connection enables the extension block to become part of the safety circuit. The extension block can be operated as either a 1-channel or as a 2-channel circuit. The NST-3/2003 is, however, limited to 1-channel operation at the input. The EU-10S output contacts are not deactivated until after the specified time period (please see technical data) upon the monitoring safety relay being deactivated/disconnected.

Note: The decision to select 1- or 2-channel operation in connection with the extension block, depends on the level of safety which the system must provide.

Note: The extension block **must** be connected to an emergency relay, as the extension block EU-10/10S does not in itself fulfil any safety requirements!

Note 1: In connection example 6, it is necessary to insert diodes in the current path to K1 and K2. This is necessary, as the delay on the extension module EU-10S will be divided among both EU-10 and EU-10S. Therefore both modules will have a delay on half of the EU-10S module, if the diodes are not mounted!



Note: All examples stated are supplied with 230 VAC and earth. Connection to 24 V AC/DC does **NOT** require earth connection. This applies only for EU-10.