

NST-4

CE Approved:
MD, EMC, LVD

Category 4, EN 954-1

(Estimated category by 2-channel operation)

- 4 input alternatives
- Status indication with dual colour LEDs
- Automatic, monitored or manual reset
- 22,5 mm slimline relay for safety category 4

Function:

Small and flexible universal emergency stop relay for the highest safety category, with a large number of functions. The relay can operate in 1-channel and 2-channel mode with several options.

Technical facilities regarding safety requirements:

- Forced contacts
- Doubling of output contacts by use of both terminal 13-14 and 23-24
- Internal / external redundancy (for two pole E-stop)
- Monitored reset

User's advantages:

- 2 NO contacts, 250 VAC / 1000 VA
- Contact load: 4 A AC, 3 A DC
- 2-channel operation with/without short circuit protection
- 2-channel operation via a NO and a NC forced push button
- 2-channel door monitoring with 2 sets NO/NC contacts
- 1-channel operation
- Manual / automatic / monitored reset
- Supply voltage 24 VDC, ± 10%
- LED indication of supply + wire-/output status for K1, K2
- 22,5 mm housing for space-saving 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)

Approvals:



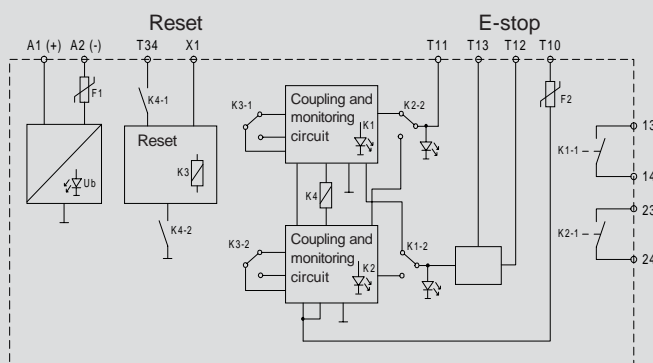
● Approved UL-Rating: Pilot Duty, C300

Status table, LEDs

| LED K1 | LED K2 | Interpretation / Possible fault causes |
|--------|--------|---|
| OFF | OFF | Error at wire or ES-button to T11 & T12 (possibly error at T10). |
| OFF | Yellow | Error at wire or ES-button to T11 (possibly error at T10). ES-button to T12 welded / defect. NB ! Emergency Stop may be activated = no error! |
| Yellow | OFF | Error at wire or ES-button to T12 (possibly error at T10). ES-button to T11 or T13 welded / defect. |
| Yellow | Yellow | Wire, Channel 1 OK; Wire, Channel 2 OK. (If the relay can not be activated = error on wire to T10). |
| Yellow | Green | Error at wire / ES-button to T10 or T12. ES-button to T11 welded / defect. Error at wire / ES-button to T13 and ES-button to T11 or T12 welded / defect. K2 may be welded / defect. |
| Green | Yellow | Error at wire / ES-button to T11. ES-button to T10 or T12 welded / defect. K1 may be welded / defect. |
| Green | Green | Relay outputs activated = Status OK |

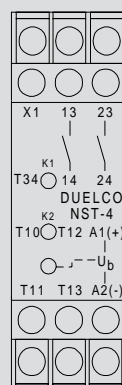
| LED U _b | Interpretation |
|--------------------|-----------------------------------|
| OFF | No power supply or bad connection |
| ON | Power supply OK |

Block diagram:



Note: Both output contacts 13-14 and 23-24 must be used to achieve doubling of the output contacts.

Front layout:



Terminal description:

- A1(+):** Power supply (+)
- A2(-):** Power supply (-)
- X1:** Reset input (control)
- T34:** Reset input (24 VDC)
- T10:** Input terminal (emergency stop)
- T11:** Input terminal (emergency stop)
- T12:** Input terminal (emergency stop)
- T13:** Input terminal (emergency stop)
- 13-14:** NO output contact, K1
- 23-24:** NO output contact, K2

Order information

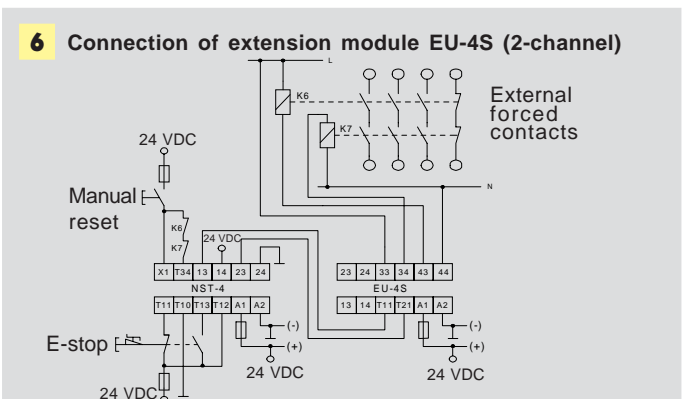
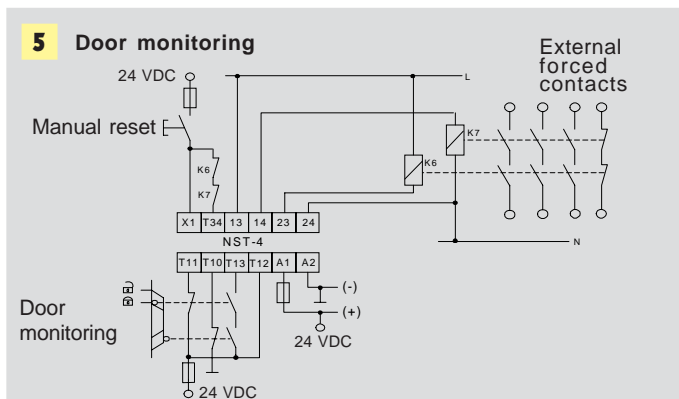
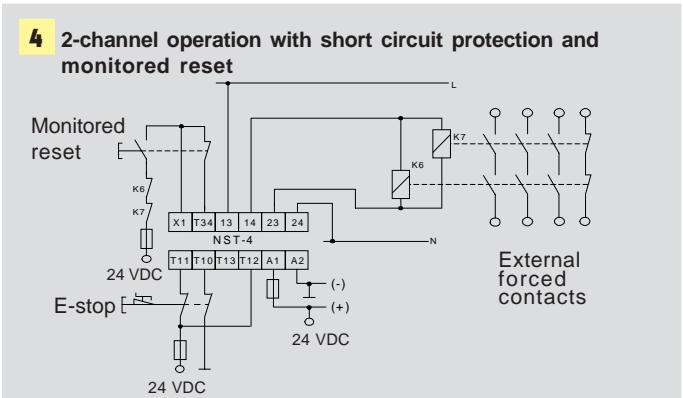
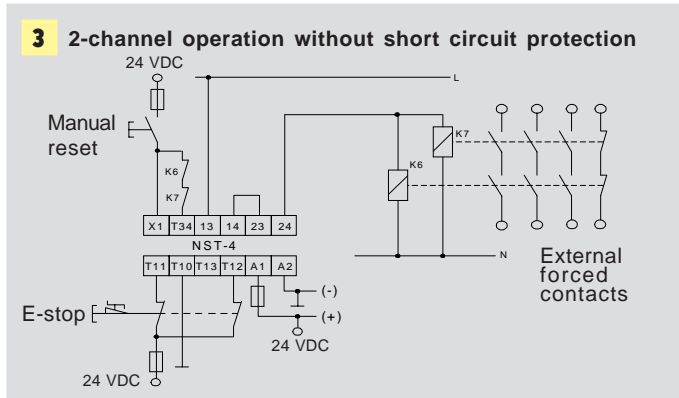
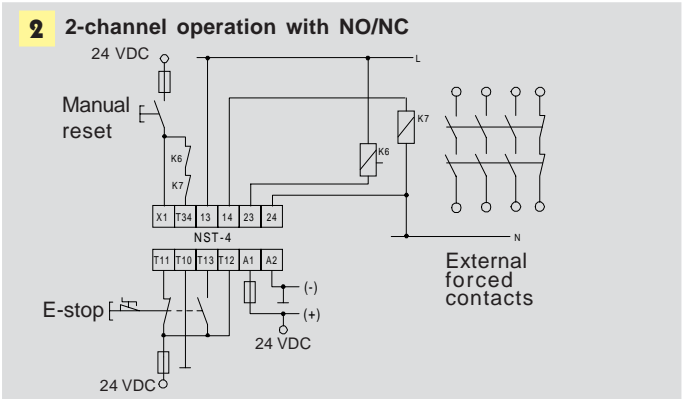
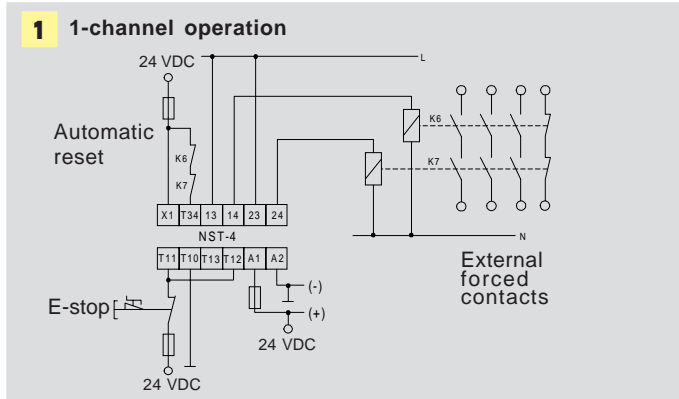
| Article name | Article no. |
|-----------------|-------------|
| NST-4, 24 V DC | 42051244 |
| NST-4T, 24 V DC | 42061244 |

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

Operation description and connection examples

The power supply is applied across terminals A1(+) / A2(-). Provided no internal faults are detected, all wiring is correct and the emergency stop button is deactivated, the power supply LED will illuminate and the LEDs K1/K2 will illuminate yellow (see the LED status table)! The relay is activated by applying a reset signal at terminal X1 and T34. This will activate the relay, the NO safety contacts will close and the LEDs K1/K2 will illuminate green. Activation of the emergency stop button will deactivate the relay, the contacts 13-14, 23-24 will open and LEDs K1/K2 will be extinguished (connection example 4 the LEDs K1/K2 = off / yellow!).

Deactivating the emergency stop button will cause the LEDs K1/K2 to illuminate yellow again, assuming no faults are detected. If at any time LEDs K1/K2 illuminate in a different colour, a fault has been detected. Please refer to the LED status table for full diagnosis. The relay can be reset manually without monitoring, manually with monitoring or automatically.



Note: NST-4 is also available in a version with a transistor output (NST-4T)

