

NST-12

CE Approved:
MD, EMC, LVD

Category 4, EN 954-1

(Estimated category by 2-channel operation)

- 10 A contact load
- 1 or 2 channel operation
- Multi voltage
- 3 NO safety outputs
- 1 NC signal contact
- PTC-fuse against short circuit of wires
- Detachable terminals

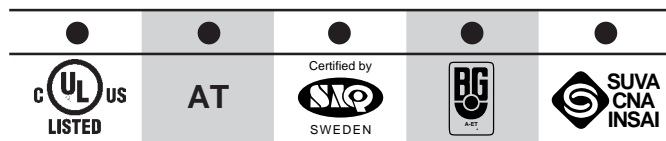
Function:

The big brother of NST-8 is especially suitable for very dangerous machines and where a high contact load is necessary. NST-12 has multi voltage which results in high flexibility.

Technical facilities regarding safety requirements:

- Forced contacts
- Doubling of output contacts
- Internal / external redundancy (for two pole E-stop)
- Monitored reset
- Short circuit monitored

Approvals:



● Approved

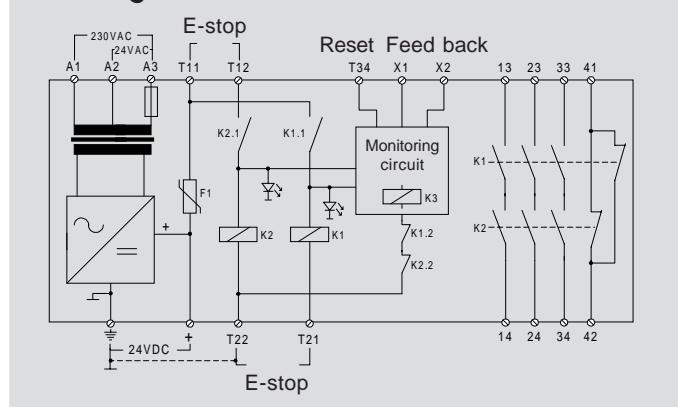
UL-Rating: Pilot Duty, B300

User's advantages:

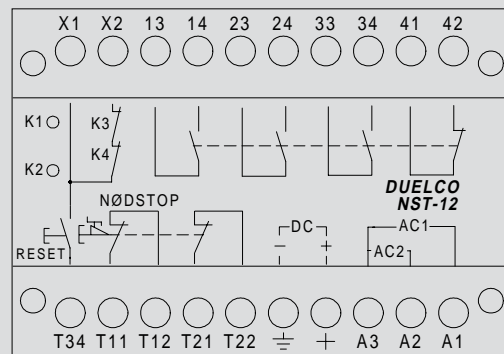
- 3 NO safety outputs
- 1 NC signal output
- Contact load: AC 10 A / DC 5 A
- 1- and 2 channel operation with / without short circuit protection
- Manual / automatic / monitored reset
- Short circuit proof transformer
- Protection against short circuit of cables via PTC-fuse
- Multi voltage => reduced stock
- Detachable terminals
- LED indication
- 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:



Frontlayout:



Status table, LEDs

LED K1	LED K2	Interpretation
ON	ON	K1 and K2 activated / E-stop OK
OFF	OFF	Relay K1 and K2 are deactivated
ON	OFF	K1 activated and K2 deactivated; error on E-stop by T21, T22 *
OFF	ON	K1 deactivated and K2 activated; error on E-stop by T11, T12 *

* Fault indication from activated state

Order information

Article name	Article no.
NST-12, 24/230 V AC / 24 V DC	42022012
NST-12, 48/120 V AC / 24 V DC	42012012

Terminal description:

- A3:** Common power supply (AC)
- A2/A1:** 24/48 VAC input / 230/120 VAC input
- +**: AC supply: 24 V output; DC supply: 24 V input
- ⊥:** Earth
- T11:** + out (E-stop)
- T12:** Maintenance voltage
- T21:** Earth K1
- T22:** Earth (E-stop)
- T34:** + voltage input for reset
- X1/X2:** Monitored reset / Reset input
- 13-14,** NO safety output contact
- 23-24,** NO safety output contact
- 33-34:** NO safety output contact
- 41-42:** NC signal output contact

Operation description and connection examples

Power supply (AC-voltage) is connected to terminals A1-A3 or A2-A3. If a DC voltage wants to be used, the power supply is connected to positive (+) and earth (\perp) (see figure 7).

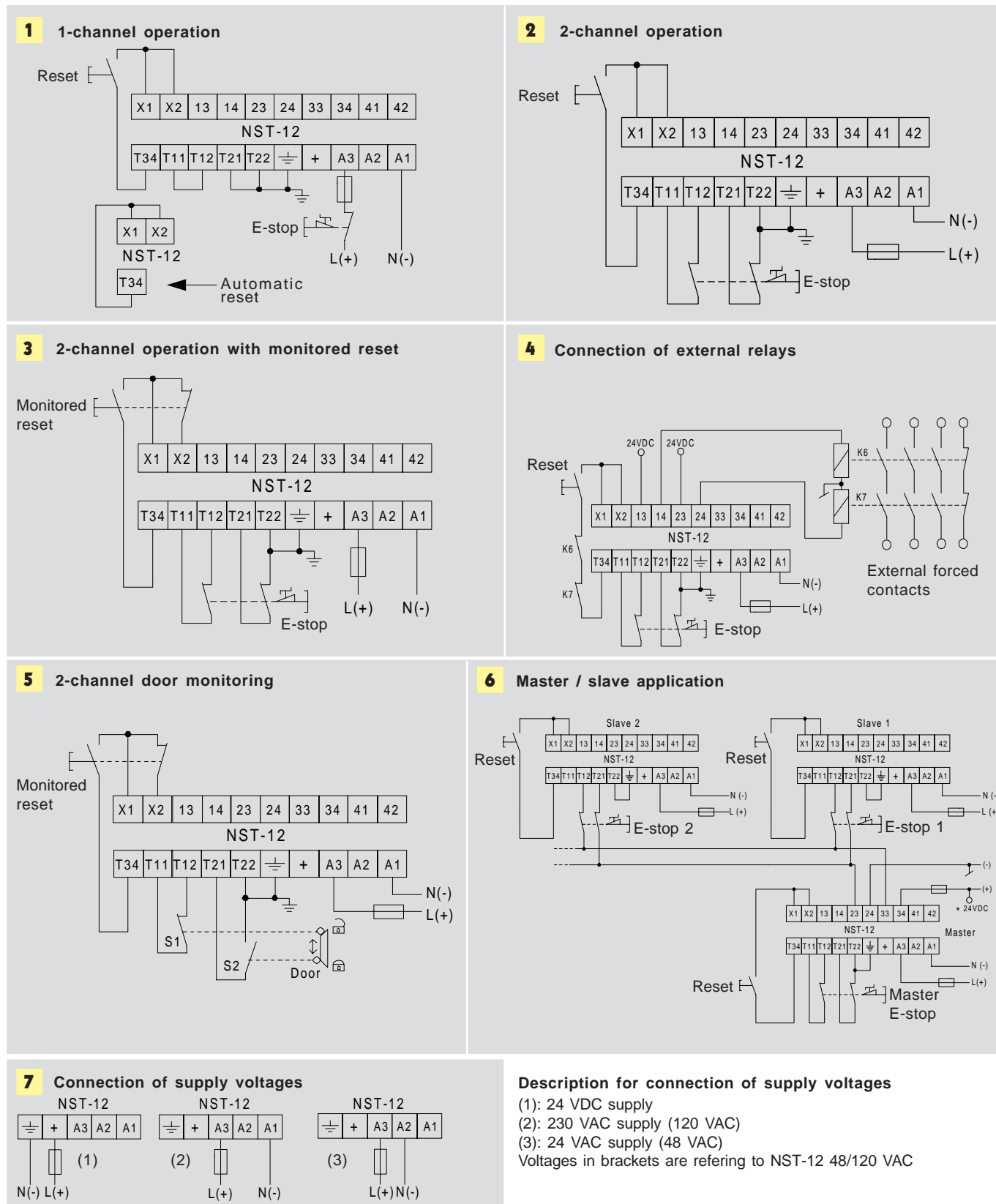
Assuming the emergency stop is deactivated and no internal faults are detected, the relay is ready to be activated. X1 and X2 must be connected. The relay activates by pushing the reset button, which is connected to terminal X1 and T34. This switches on the contacts 13-14, 23-24, 33-34 and switches off the contact 41-42. Furthermore the LEDs K1 and K2 illuminates.

If the emergency stop is now activated, relays K1 and K2 will open. The contacts 13-14, 23-24 and 33-34 will open, while contact 41-42 will close.

If X1-X2 and X1-T34 are permanently connected (automatic reset), contacts 13-14, 23-24 and 33-34 will close and contact 41-42 will open when the emergency stop is deactivated.

To achieve a monitoring of the reset button, a forced NO contact must be placed between X1-X2, which is forced with the NC contact between T34 and X1.

(Note: The NO reset button and the NC contact must be forced).



Note: All examples stated are supplied with 230 VAC and earth. Connection to 24 V AC/DC does NOT require earth connection.

Description for connection of supply voltages

- (1): 24 VDC supply
 - (2): 230 VAC supply (120 VAC)
 - (3): 24 VAC supply (48 VAC)
- Voltages in brackets are referring to NST-12 48/120 VAC