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 terminal 13-14 and 23-24
- Internal redundancy
- 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 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/EEC, 89/336 og 93/68)

Approvals:

C (UL) US
LISTED
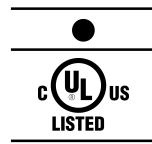
● Approved

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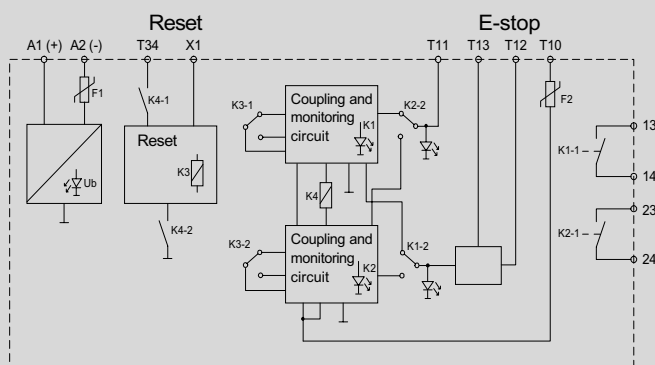
Note: Both output contacts 13-14 and 23-24 must be used to achieve doubling of the stop signal.

Front layout:
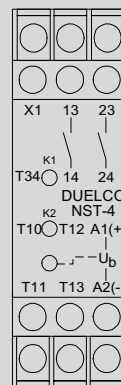
Terminal description:

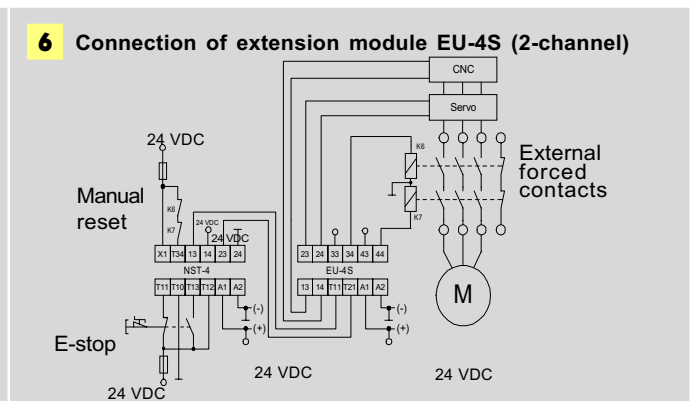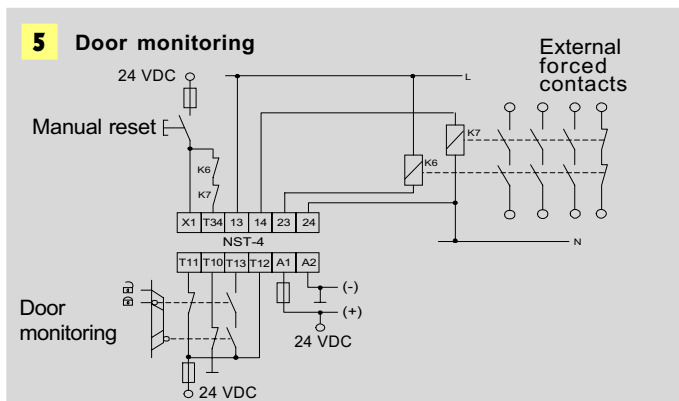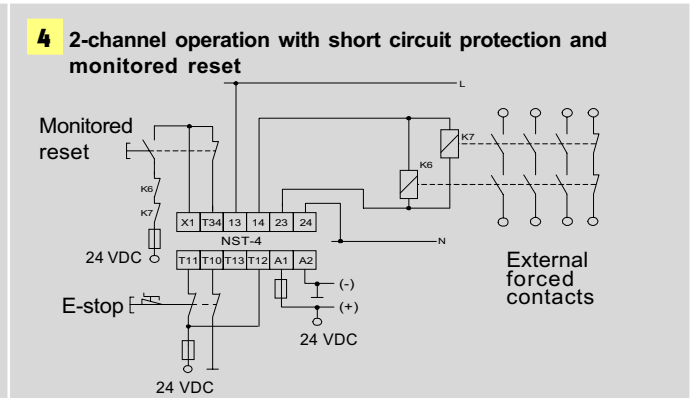|	
A1(+):	Power supply (+)
A2(-):	Power supply (-)
X1:	Reset input (control)
T34:	Reset input (24 VDC)
T10:	Input terminal (emergency stop)
T11:	Input terminal (emergency stop)
T12:	Input terminal (emergency stop)
T13:	Input terminal (emergency stop)
13-14:	NO output contact, K1
23-24:	NO output contact,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

Order information

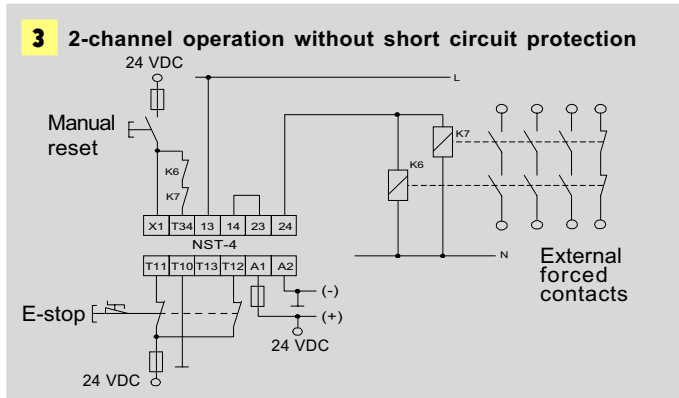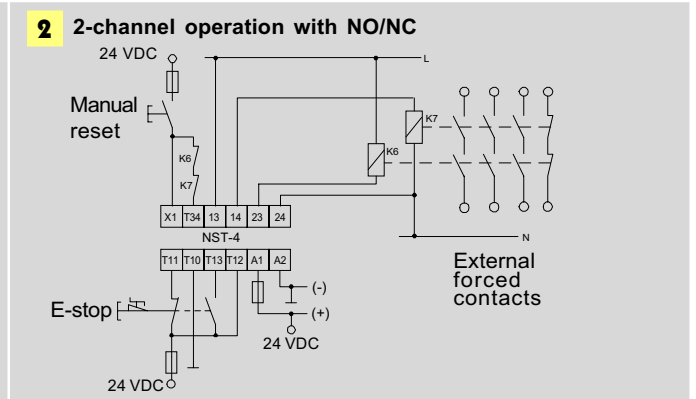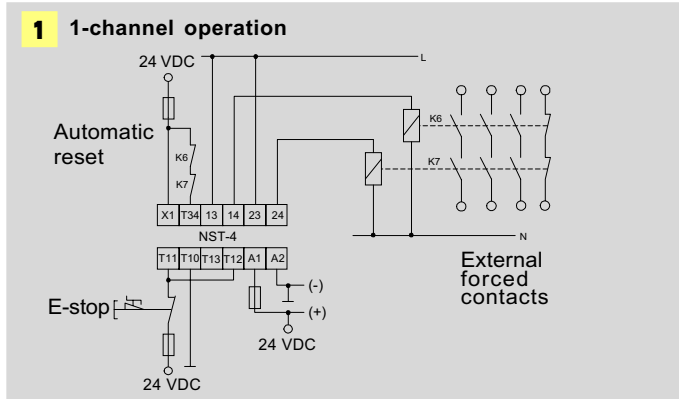| Article name	Article no.
NST-4, 24 V DC	42051244
NST-4T, 24 V DC	42061244

➔ **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 NO safety contacts will open and LEDs K1/K2 will be extinguished (connection examples 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.

1 1-channel operation

2 2-channel operation with NO/NC

3 2-channel operation without short circuit protection

4 2-channel operation with short circuit protection and monitored reset

5 Door monitoring

6 Connection of extension module EU-4S (2-channel)

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

1 Block diagram, NST-4T

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

2 Connection example, NST-4T (2-channel)