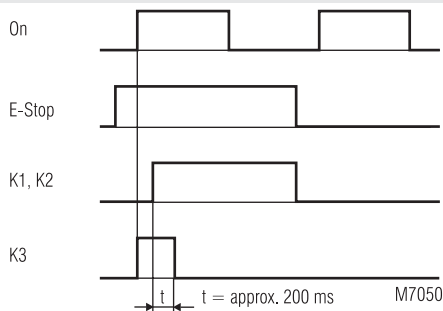




- According to EU directive for machines 98/37/EG
- According to IEC/EN 60204
- Safety category 4 according to EN 954-1
- Output: 4 NO, 1 NC contacts for AC 250 V
- 1- or 2-channel connection
- Automatic restart
- Line fault detection on ON push-button with bridge X2/X3
- Cross fault detection in emergency stop circuit
- Integrated short circuit and overvoltage protection
- Contact goldplated to switch low loads (input of PLC)
- LED indicators for channel 1 and 2
- Feedback circuit to monitor external contactors
- Removable terminal strips
- Wire connection: also 2 x 1,5 mm² stranded ferruled (isolated), DIN 46 228-1/-2/-3/-4 or 2 x 2,5 mm² stranded ferruled DIN 46 228-1/-2/-3
- Width 90 mm

Function diagram



Approvals and marking



Applications

Protection of people and machines

- Emergency stop circuits on machines
- Monitoring of sliding guards

Indication

- | | |
|-------------------------|-----------------------------------|
| green LED S12 / K1: | on when relay K1 energized |
| green LED S22 / K2: | on when relay K2 energized |
| green LED power supply: | on when operating voltage applied |

Notes

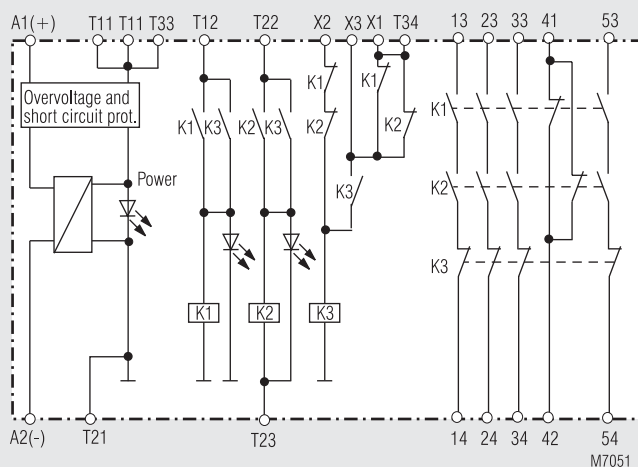
The NO contacts 13/14 ... 53/54 are positively guided safety contacts and are gold plated to switch low loads 1 mVA ... 7 VA and 1 mW ... 7 W in the range of 0,1 ... 60 V (input of PLC) and 1 ... 300 mA.

The device can also be used to switch the max. switching current. However, since the goldplating is burnt off at this current level, the device is no longer suitable for switching small loads after this.

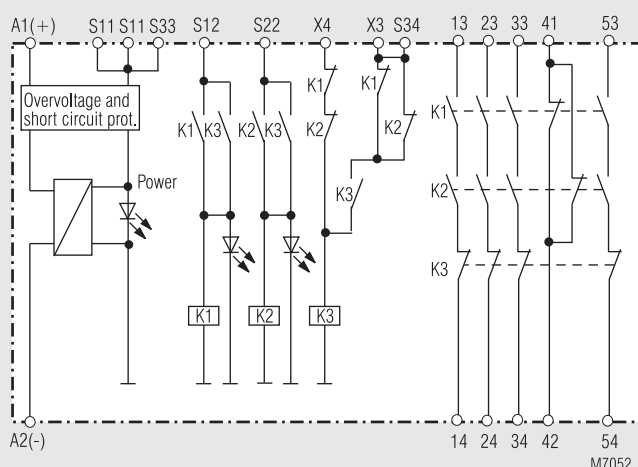
One or more extension modules BN 3081 or external with positively driven contacts may be used to multiply the number of contacts.

The terminal T21 can be used as reference for isolation monitoring and to measure control voltages. Concerning DC-devices the internal short-circuit protection will be bridged in the A2(-)-circuit through connection of the protection-circuit to terminal T21. The short-circuit protection in the A1(+)-circuit remains active.

Block diagrams



BL 5926



BL 5926.51/001

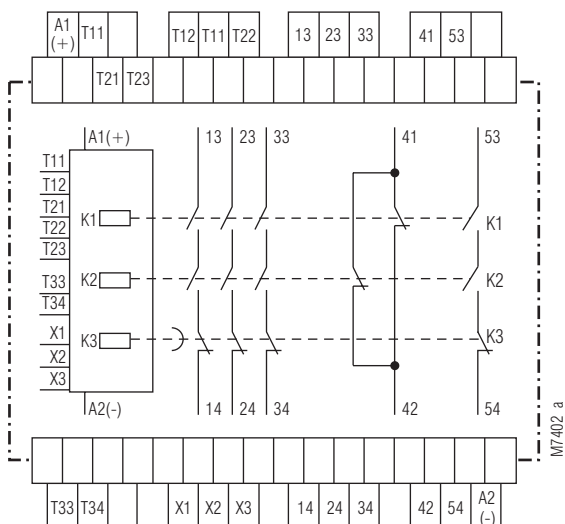
All technical data in this list relate to the state at the moment of edition. We reserve the right for technical improvements and changes at any time.

ATTENTION - AUTOMATIC START!

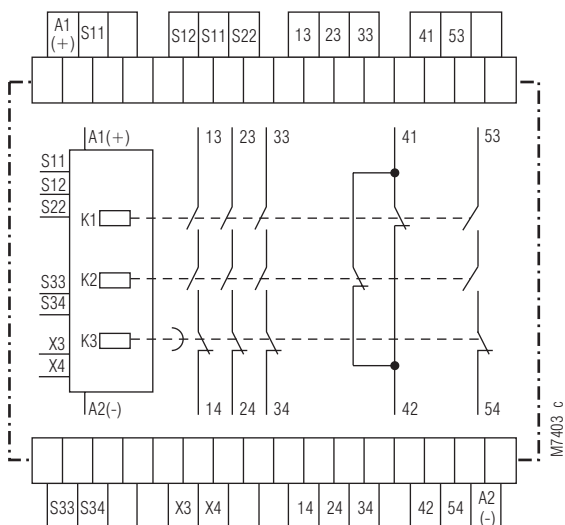


According to IEC/EN 60 204-1 part 9.2.5.4.2 it is not allowed to restart automatically after emergency stop. Therefore the machine control has to disable the automatic start after emergency stop.

Circuit diagrams



BL 5926.51



BL 5926.51/001

Technical data

Input

Nominal voltage U_N:	AC 24, 48, 110, 127, 230, 240 V DC 24 V
Voltage range:	AC 0,85 ... 1,1 U_N DC 0,9 ... 1,2 U_N
at 10% residual ripple:	
at 48% residual ripple:	
Nominal consumption:	DC 0,8 ... 1,1 U_N AC approx. 4,5 VA $\pm$ 30 % DC approx. 2 W
Nominal frequency:	50 / 60 Hz
Control voltage:	DC 23 V at T11 (S11)
Control current U_N:	approx. 35 mA in T12 or T22 (S12, S22)
Minimum voltage U_N:	DC 21 V for active device at terminal T12, T22 (S12, S22)

Output

Contacts

BL 5926.51:	4 NO, 1 NC The NO contacts are safety contacts. ATTENTION! The NC contacts 41-42 can only be used for monitoring.
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Response time:

Release time when interrupting

the secondary (T12-T22):	20 ms
the supply voltage:	70 ms
Release delay of K3:	approx. 150 ms
Contact type:	positive guided
Nominal output voltage:	AC 250 V

Technische Daten

Thermal current I_{th}:	max. 5 A in one contact path
Switching capacity	IEC/EN 60 947-5-1
to AC 15:	13-14, 23-24, 33-34, 41-42, 53-54: 2 A / 230 V
Electrical life:	IEC/EN 60 947-5-1
to AC 15 at 2 A, AC 230 V	10 ⁵ switching cycles
Permissible operating frequency:	6 000 switching cycles / h
Short circuit strength	IEC/EN 60 947-5-1
max. fuse rating:	6 A gL, line circuit breaker C 10 A
Mechanical life:	10 x 10 ⁶ switching cycles

General data

Operating mode:	Continuous operation
Temperature range:	-15 ... +55 °C
Clearance and creepage distances	
overvoltage category / contamination level:	4 kV / 2 IEC 60 664-1
EMC	
Electrostatic discharge	8 kV (air) IEC/EN 61 000-4-2
HF irradiation	10 V / m IEC/EN 61 000-4-3
Fast transients:	2 kV IEC/EN 61 000-4-4
Surge voltages	
between	
wires for power supply:	1 kV IEC/EN 61 000-4-5
between wire and ground:	2 kV IEC/EN 61 000-4-5
HF-wire guided:	10 V IEC/EN 61 000-4-6
Interference suppression:	Limit value class B EN 55011
Degree of protection:	Housing: IP 40 IEC/EN 60 529
	Terminals: IP 20 IEC/EN 60 529
Housing:	Thermoplastic with V0 behaviour according to UL subject 94
Vibration resistance:	Amplitude 0,35 mm IEC/EN 60 068-2-6 frequency 10 ... 55 Hz
Climate resistance:	15 / 055 / 04 IEC/EN 60 068-1
Terminal designation:	EN 50 005
Wire connection:	1 x 4 mm ² solid or 1 x 2,5 mm ² stranded ferruled (isolated) or 2 x 1,5 mm ² stranded ferruled (isolated) DIN 46 228-1/-2/-3/-4 or 2 x 2,5 mm ² stranded ferruled DIN 46 228-1/-2/-3
Wire fixing:	Plus/Minus terminal screws M3,5 Box terminal with wire portection, removable terminal strips
Mounting:	DIN rail IEC/EN 60 715
Weight:	850 g

Dimensions

Width x height x depth:	90 x 86 x 121 mm
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Standard type	
BL 5926.51 DC 24 V	
Article number:	0048557
• Output:	4 NO, 1 NC for AC 250 V
• Nominal voltage U_N :	DC 24 V
• Width:	90 mm

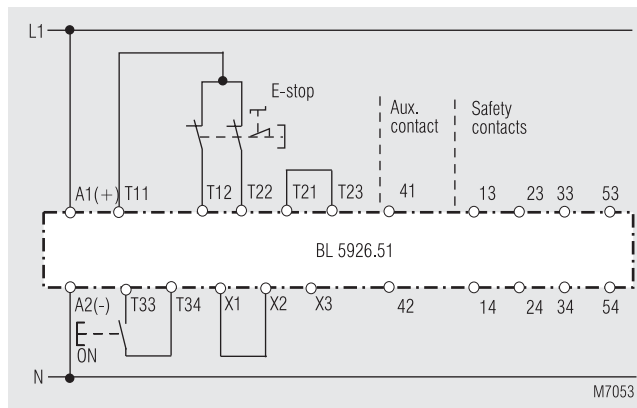
Variant

BL 5926.51 /001	Terminal arrangement corresponding to BN 5983.54 see circuit diagram BL 5926.51/001 No cross fault detection in emergency-stop-circuit
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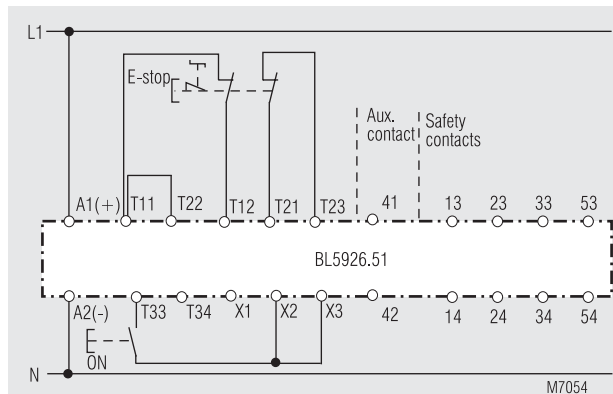
Ordering example for Variant

BL 5926 .51 / _ _ _ AC 230 V 50/60 Hz	
	Nominal frequency
	Nominal voltage
	Variant, if required
	Contact
	Type

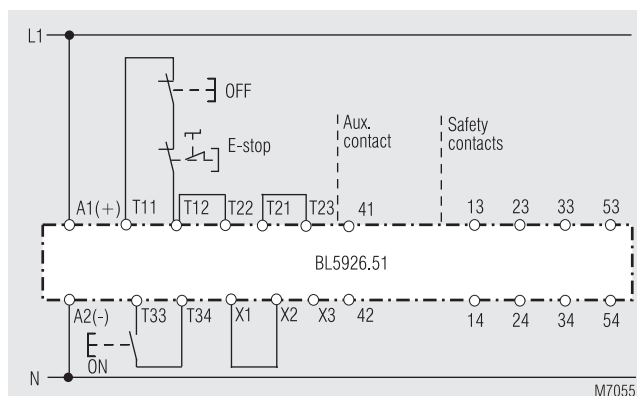
Application examples



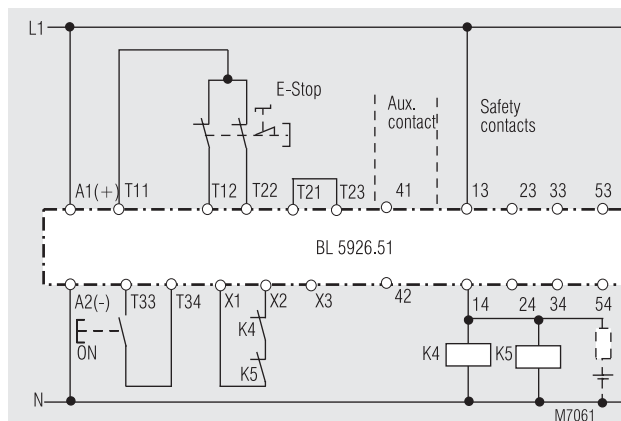
2-channel emergency-stop circuit, without cross fault monitoring



2-channel emergency-stop circuit with cross fault monitoring, and line fault detection on ON-pushbutton.



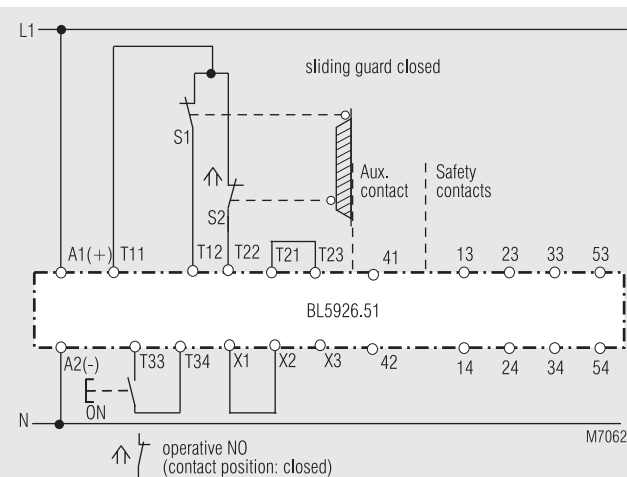
Single channel emergency-stop circuit. This circuit has no redundancy in the emergency-stop loop.



Contact reinforcement by external contactors.

For currents > 5 A the output contacts can be reinforced by external contactors. Functioning of the external contactors is monitored by looping the NC contacts into the start circuit (terminal X2).

Application examples



2-channel monitoring of a sliding guard.

The limit switches S1 and S2 can be operated at different times.

