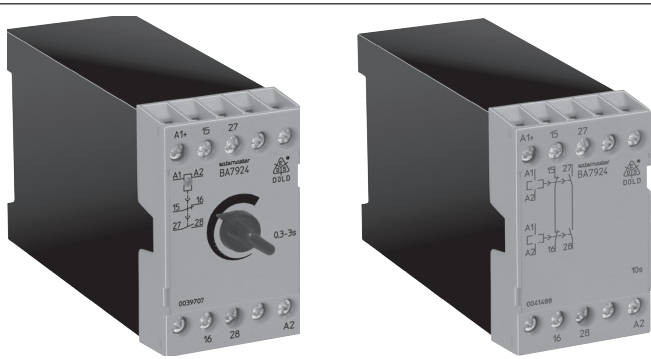


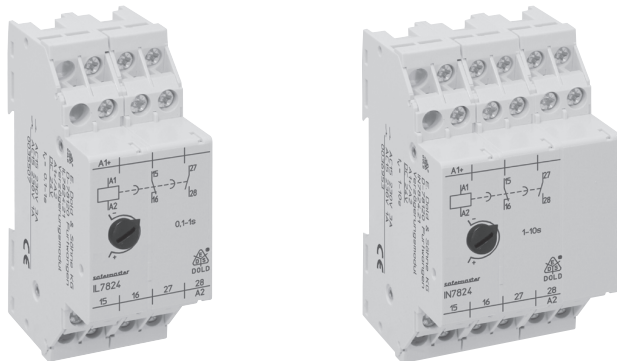
Delay module BA 7924, IL 7824, IN 7824, release delay safemaster

B/C 0221537



BA 7924.21

BA 7924.21/002



IL 7824.21

IN 7824.21

- According to EC Directive for machines 98/37/EG
- According to IEC/EN 61 812-1, IEC/EN 60 204-1
- Release delay
- Optionally with redundant timing circuit
- Without auxiliary voltage
- Output: 1 NC, 1 NO contacts, positively-driven
- Optionally with adjustable or fixed time delay up to 30 s
- Optionally with 1 or 2 separate timing circuits
- Optionally also in housing for distribution board
- Operating state display
- Width 45 mm, 35 mm or 52,5 mm

Approvals and marking



* see variants

Application

Delayed switch-off in safety-oriented controls

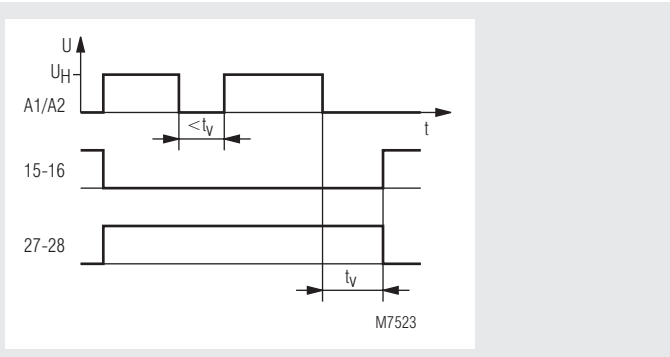
Indication

LED's comes on when A1 / A2 connected to supply

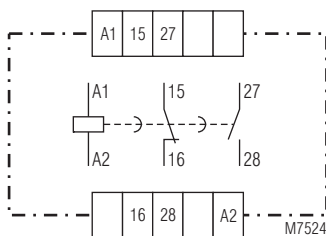
Notes

The output contacts of the two timing circuits are connected in series in the BA 7924.21/002 and /003 modules. This results in so-called switch-off redundancy, i.e. the contact path 27-28 is opened reliably after expiry of the predefined delay time, even if a contact in this path is welded.

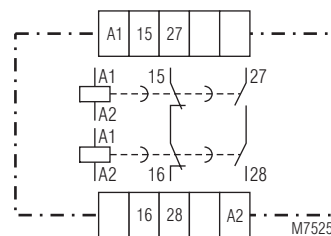
Function diagram



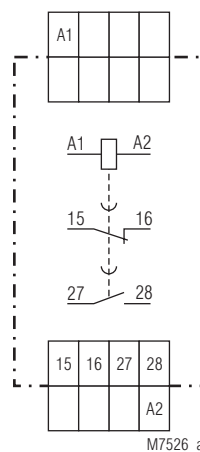
Circuit diagrams



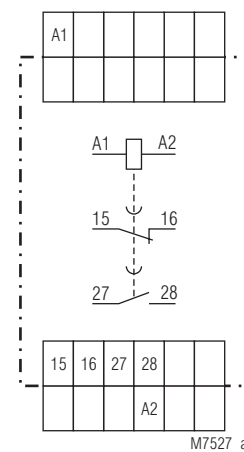
BA 7924.21
BA 7924.21/100



BA 7924.21/002
BA 7924.21/003



IL 7824.21



IN 7824.21

Technical data

Time ranges

BA 7924.21: 0,1 ... 1 s; 0,3 ... 3 s; 0,5 ... 5 s;
1 ... 10 s; 3 ... 30 s

BA 7924.21/001: 1 s; 3 s; 5 s; 10 s; 30 s fixed

BA 7924.21/002: 5 s; 10 s fixed

BA 7924.21/003: 0,5 ... 5 s; 1 ... 10 s

IL 7824.21: 0,1 ... 1 s; 0,3 ... 3 s

IL 7824.21/100: 0,5 s; 1 s; 3 s fixed

IN 7824.21: 0,5 ... 5 s; 1 ... 10 s

IN 7824.21/100: 5 s; 10 s fixed

Repeat accuracy: ±15 % of set value

Minimum closing time: 50 % of full scale value

Setting accuracy

upper half of setting scale: ± 25 % of full scale value

lower half of setting scale: ± 100 % of full scale value

Input

Nominal voltage U_N : DC 24 V
AC 230 V (only BA 7924.21 and
BA 7924.21/001)

Voltage range: AC 0,8 ... 1,1 U_N

at 10 % residual ripple: DC 0,9 ... 1,2 U_N

at 48 % residual ripple: DC 0,8 ... 1,1 U_N

Nominal consumption: 0,85 W / 4,5 VA

at BA 7924.21/002 and

BA 7924.21/003: 1,7 W

Nominal frequency: 50 / 60 Hz

Output

Contacts

BA 7924.21: 1 NC, 1 NO contacts

IL/IN 7824.21: 1 NC, 1 NO contacts

Contact type: Relay, positively-driven

Nominal output voltage: AC 10 ... 250 V, DC 10 ... 110 V

Thermal current I_m : max. 8 A

Switching capacity

to AC 15: 3 A / AC 230 V IEC/EN 60 947-5-1

for NO contact

1 A / AC 230 V IEC/EN 60 947-5-1

for NC contact

IEC/EN 60 947-5-1

Electrical life

to AC 15 at 1 A, AC 230 V: ≥ 2,5 x 10⁵ switching cycles

Permissible operating frequency:

max. 2000 switching cycles / h
but please note minimum closing time

Short circuit strength

max. fuse rating: 6 A gL IEC/EN 60 947-5-1

Mechanical life:

10 x 10⁶ switching cycles

General data

Operating mode: Continuous operation

Temperature range: - 20 ... + 60 °C

Clearance and creepage distances

rated impuls voltage /
pollution degree: 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: 4 kV IEC/EN 61 000-4-4

Interference suppression: Limit value class B EN 55011

Degree of protection Housing: IP 40 IEC/EN 60 529

Terminal plate: 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: 20 / 060 / 04 IEC/EN 60 068-1

Terminal arrangement

at BA 7924: DIN 46199-5

Terminal designation: EN 50 005

Technical data

Wire connection: max. 2 x 2,5 mm² solid or
max. 2 x 1,5 mm² stranded ferruled
DIN 46 228-1/-2/-3/-4

Wire fixing: Flat terminals with self-lifting
clamping piece IEC/EN 60 999-1
DIN rail IEC/EN 60 715

Mounting:

Weight:

BA 7924 DC / AC: 200 g / 350 g

IL 7824 / IN 7824: 120 g / 150 g

Dimensions

Width x height x depth

BA 7924: 45 x 74 x 133 mm

IL 7824: 35 x 89 x 58 mm

IN 7824: 52,5 x 89 x 58 mm

Standard type

BA 7924.21 DC 24 V 0,3 ... 3 s

Article number: 0039707 stock item

• Output: 1 NO contact

1 NC contact

• Nominal voltage U_N : DC 24 V

• Time range: 0,3 ... 3 s

• Width: 45 mm

Variants

BA 7924.21/61: with UL approval (Canada/USA)

BA 7924.21: 1 timing circuit, adjustable time

BA 7924.21/001: 1 timing circuit, fixed time

BA 7924.21/002: 2 timing circuit, fixed time

BA 7924.21/003: 2 timing circuit, adjustable time

Delay modules in housing for distribution board:

IL 7824.21: 1 timing circuit, adjustable time delay, 35 mm wide

IN 7824.21: 1 timing circuit, adjustable time delay, 55 mm wide

IL 7824.21/100: 1 timing circuit, fixed time delay, 35 mm wide

IN 7824.21/100: 1 timing circuit, fixed time delay, 55 mm wide

Ordering example for variants

BA 7924 .21 / - - - DC 24 V 0.5 ... 5 s

