

0221537



BA 7924.21



BA 7924.21/002



IL 7824.21



IN 7824.21

- Release delay
- Without auxiliary voltage
- Output: 1 NC, 1 NO contacts, forcibly guided
- Operating state display
- Optionally with adjustable or fixed time delay up to 30 s
- Optionally with redundant timing circuit
- Optionally with 1 or 2 separate timing circuits
- Optionally also in housing for distribution board
- Width 45 mm, 35 mm or 52.5 mm

Approvals and marking



Application

Delayed switch-off in safety-oriented controls.

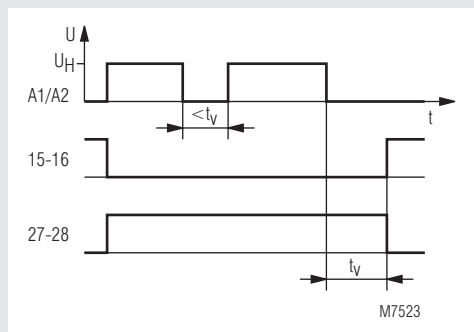
Indication

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

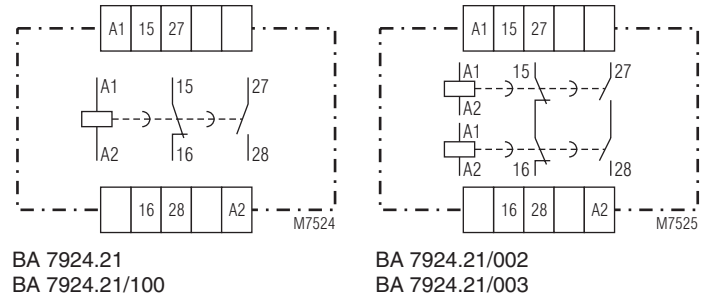
Notes

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.

Function diagram

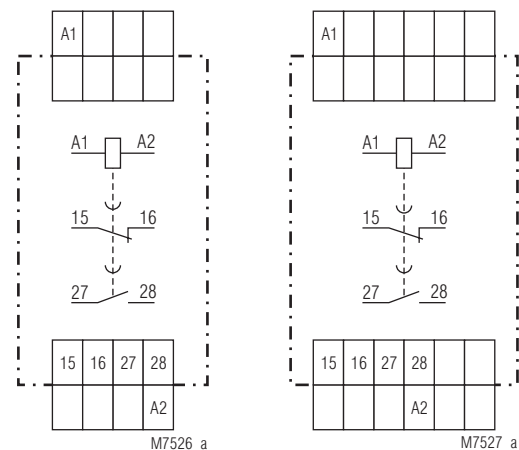


Circuit diagrams



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
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, forcibly guided
Nominal output voltage:	AC 10 ... 250 V, DC 10 ... 110 V
Thermal current I_{th}:	max. 8 A
Switching capacity	
to AC 15	
for NO contact:	3 A / AC 230 V IEC/EN 60 947-5-1
for NC contact	1 A / AC 230 V IEC/EN 60 947-5-1
to DC 13	
for NO contact:	2 A / DC 24 V IEC/EN 60 947-5-1
for NC contact	2 A / DC 24 V IEC/EN 60 947-5-1
Electrical life	IEC/EN 60 947-5-1
to AC 15 at 1 A, AC 230 V:	≥ 2.5 x 10 ⁵ 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 10 ⁶ 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
Wire connection:	max. 2 x 2.5 mm ² solid or max. 2 x 1.5 mm ² stranded ferruled DIN 46 228-1/-2/-3/-4
Wire fixing:	Flat terminals with self-lifting clamping piece IEC/EN 60 999-1

Technical Data		
Mounting:	DIN rail	IEC/EN 60 715
Weight:		
BA 7924 DC / AC:	200 g / 350 g	
IL 7824 / IN 7824:	120 g / 150 g	
Dimensions		
Width x heigth 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	
Statistic related data BA 7924.21		
λ _{total}	618	FIT
MTTF	184.7	a
d _{op}	365	days/a
h _{op}	24	h/day
t _{Zyklus}	3600	s/Zyklus
n _{op}	8760	Zyklen/a
B ₁₀	161838	Zyklen
Statistic related data BA 7924.21/002		
λ _{total}	1148	FIT
MTTF	99.4	a
d _{op}	365	days/a
h _{op}	24	h/day
t _{Zyklus}	3600	s/Zyklus
n _{op}	8760	Zyklen/a
B ₁₀	87100	Zyklen
Statistic related data BA 7924.21/003		
λ _{total}	1233	FIT
MTTF	92.6	a
d _{op}	365	days/a
h _{op}	24	h/day
t _{Zyklus}	3600	s/Zyklus
n _{op}	8760	Zyklen/a
B ₁₀	81110	Zyklen

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

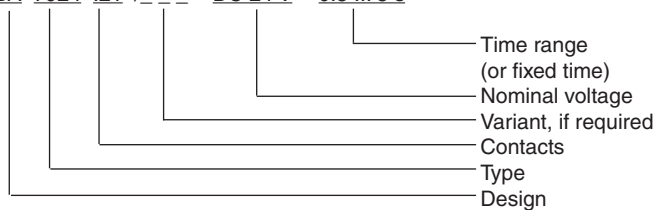
IN 7824.21: 1 timing circuit, adjustable time delay, 55 mm wide

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

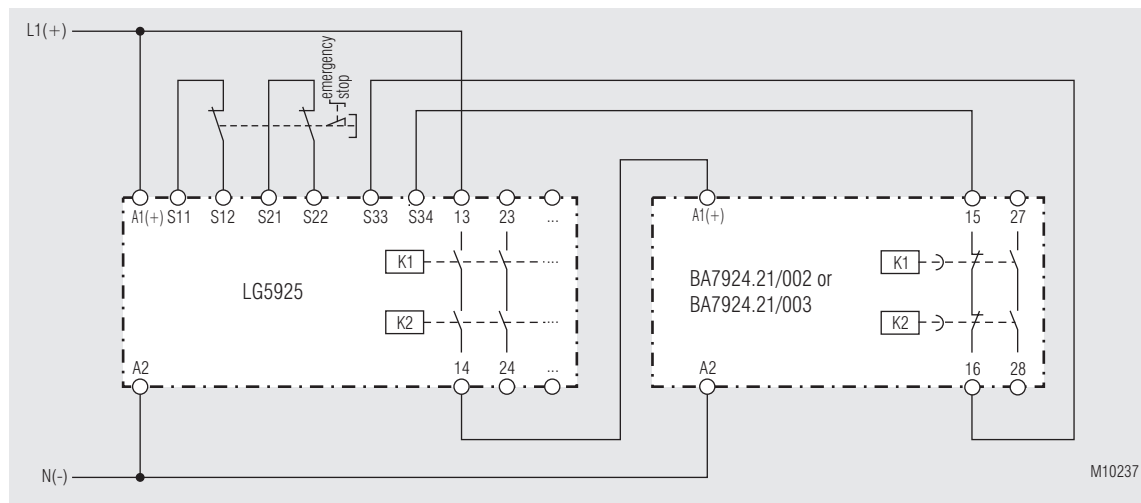
IN 7824.21/100: 1 timing circuit, fixed time delay, 55 mm wide

Ordering example for variants

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



Application example



LG 5925 with BA 7924.21/002 e.g. BA 7924.21/003, suitable up to SIL 3, Performance Level e

