

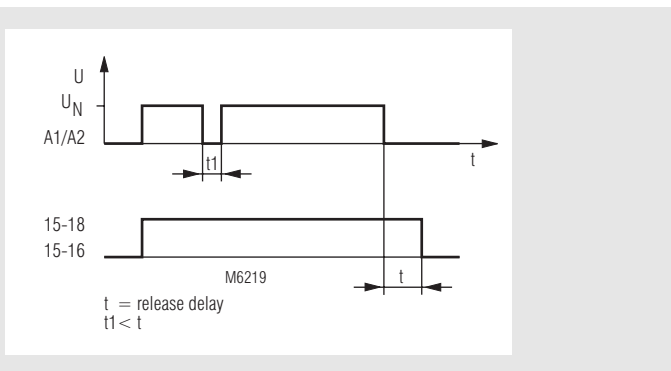
Time-delay relay IK 7819, SK 7819, BC7938N release delay type minitimer

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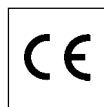


- According to DIN EN 61 812-1
- **Devices available in 3 enclosure versions:**
 - IK 7819:** depth 58 mm, with terminals at the bottom for installation systems and industrial distribution systems according to DIN 43 880
 - SK 7819,**
 - BC7938N:** depth 98 mm, with terminals at the top for cabinets with mounting plate and cable duct
- 1 changeover contact
- Delay of 0,05 ... 300 s
- Wide voltage range
- Repeat accuracy $\leq 1\%$
- Without auxiliary voltage
- LED indicator for operation
- IK/SK 7819: width 17,5 mm
- BC 7938N: width 22,5 mm

Function diagram



Approvals and marking



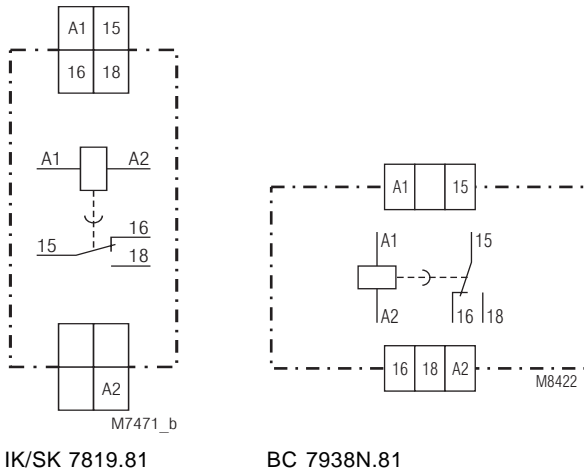
Applications

Time-dependent controllers

Technical data

Time ranges:	0,05 ... 1 s
	0,15 ... 3 s
	0,5 ... 10 s
	1,5 ... 30 s
	5 ... 100 s
	15 ... 300 s
Time setting:	infinite on relative scale
Recovery time:	100 ms
Repeat accuracy:	$\leq 1\%$ of end of scale value
Min. on-time at time range 15 ... 300 s:	AC/DC 24 V- 300 ms
	AC/DC 42 V- 250 ms
	AC/DC 80 V- 200 ms
Temperature influence:	$< 0,1\%$ / K

Circuit diagram



IK/SK 7819.81

BC 7938N.81

Input

Nominal voltage U_N:	AC/DC 24 V
	AC/DC 42 ... 60 V
	AC/DC 110 ... 240 V

Voltage range:

for AC/DC 24 V:	
with 48 % residual ripple	AC / DC 20,5 ... 27 V
with $\leq 10\%$ residual ripple	DC 20,5 ... 30 V
for AC/DC 42 ... 60 V:	
with 48 % residual ripple	AC / DC 30 ... 66 V
with $\leq 10\%$ residual ripple	DC 30 ... 80 V
for AC/DC 110 ... 240 V:	
with 48 % residual ripple	AC / DC 60 ... 264 V
with $\leq 10\%$ residual ripple	DC 60 ... 300 V

Nominal consumption

for AC/DC 24 V:	0,05 VA / W
for AC/DC 60 V:	0,12 VA / W
for AC/DC 240 V:	0,4 VA / W

Nominal frequency:

Switch-on current	
for AC/DC 24 V:	0,6 A
for AC/DC 60 V:	0,7 A
for AC/DC 240 V:	1,1 A

Output

Contacts:	1 changeover contact
Thermal current I_{th}:	5 A

Technical data

Output nominal voltage:	AC 250 V DC see limit curve for arc-free operation
Switching capacity to AC 15	
NO contact:	3 A / AC 230 V EN 60 947-5-1
NC contact:	1 A / AC 230 V EN 60 947-5-1
Electrical life to AC 15 at 1 A, AC 230 V:	≥ 1,5 x 10 ⁵ switching cycles EN 60 947-5-1
Short circuit strength max. fuse rating:	4 A gL EN 60 947-5-1
Mechanical life:	> 10 ⁸ switching cycles

General data

Operating mode:	Continuous operation
Temperature range:	-20 ... +60 °C
Clearance and creepage distances overvoltage category / contamination level:	4 kV / 2 IEC 60 664-1
EMC Electrostatic discharge:	
IK/SK 7819:	6 kV (contact discharge) EN 61000-4-2
BC 7938N:	8 kV (air) EN 61 000-4-2
HF irradiation:	10 V / m EN 61 000-4-3
Fast transients:	4 kV EN 61 000-4-4
Surge voltages between wires for power supply:	2 kV EN 61 000-4-5
between wire and ground:	4 kV EN 61 000-4-5
Interference suppression:	Limit value class B EN 55 011
Degree of protection:	Housing: IP 40 EN 60 529 Terminals: IP 20 EN 60 529
Housing:	Thermoplastic with V0 behaviour according to UL subject 94
Vibration resistance:	Amplitude 0,35 mm frequency 10 ... 55 Hz EN 60 068-2-6
Climate resistance:	20 / 060 / 04 EN 60 068-1
Terminal designation:	EN 50 005
Wire connection: IK/SK 7819:	2 x 2,5 mm ² solid or 2 x 1,5 mm ² stranded ferruled DIN 46 228-1/-2/-3
BC 7938N:	1 x 4 mm ² solid or 2 x 1,5 mm ² stranded ferruled 1 x 2,5 mm ² stranded ferruled (isolated) DIN 46 288-1/-2/-3/-4
Wire fixing: IK/SK 7819:	Flat terminals with self-lifting clamping piece EN 60 999
BC 7938N:	Plus-minus terminal screws M3,5 Box terminal with wire protection
Mounting:	DIN rail EN 50 022
Weight IK 7819:	70 g
SK 7819:	89 g
BC 7938N:	105 g

Dimensions

Width x height x depth

IK 7819:	17,5 x 86 x 58 mm
SK 7819:	17,5 x 86 x 98 mm
BC 7938N:	22,5 x 84 x 98 mm

Standard type

IK 7819.81 AC/DC 110 ... 240 V 0,15 ... 3 s	
Article number:	0044645 stock item
• Output:	1 changeover contact
• Nominal voltage U _N :	AC/DC 110 ... 240 V
• Time range:	0,15 ... 3 s
• Width:	17,5 mm
SK 7819.81 AC/DC 110 ... 240 V 0,15 ... 3 s	
Article number:	0054741
• Output:	1 changeover contact
• Nominal voltage U _N :	AC/DC 110 ... 240 V
• Time range:	0,15 ... 3 s
• Width:	17,5 mm
BC 7938N.81 AC/DC 110 ... 240 V 0,5 ... 10 s	
Article number:	0055774
• Front color grey, with box terminals	
• Output:	1 changeover contact
• Nominal voltage U _N :	AC/DC 110 ... 240 V
• Time range:	0,5 ... 10 s
• Width:	22,5 mm

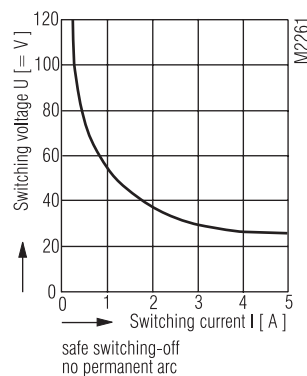
Variant

IK 7819.81/107:	to be used in voltage system changeover control IX 9100 0,5 or 15 sec according to VDE 0107 for medically used rooms. See also project folder P1 "Medically used rooms"
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Ordering example for variant

IK 7819 .81 /107 AC/DC 24 V 0,5 ... 10 s	
	Time range
	Nominal voltage
	Variant, if required
	Contact
	Type

Characteristics



Limit curve for arc-free operation