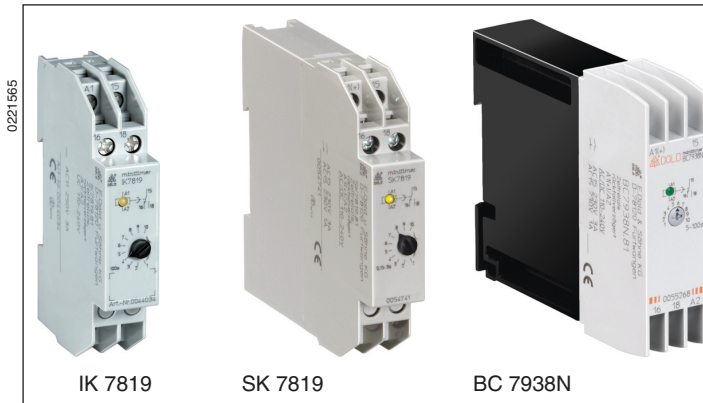


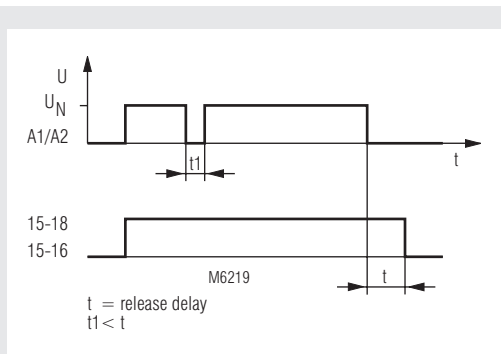
MINITIMER

Time Delay Relay, Release Delay Type
IK 7819, SK 7819, BC 7938N

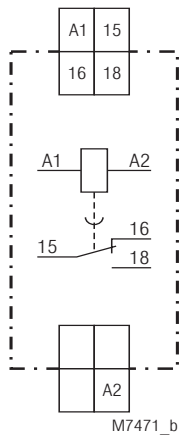


- According to IEC/EN 61 812-1
- 1 changeover contact
- Delay of 0.05 ... 300 s
- Wide voltage range
- Repeat accuracy $\leq 1\%$
- Without auxiliary voltage
- LED indicator for operation
- **Devices available in 3 enclosure versions:**
 - IK 7819:** depth 58 mm, with terminals at the bottom for installation systems and industrial distribution systems according to DIN 43 880
 - SK 7819,**
 - BC 7938N:** depth 98 mm, with terminals at the top for cabinets with mounting plate and cable duct
- IK/SK 7819: width 17.5 mm
- BC 7938N: width 22.5 mm

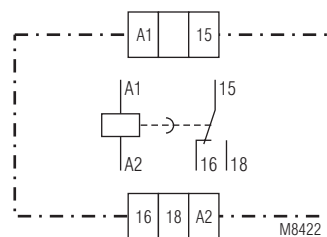
Function Diagram



Circuit Diagram



IK/SK 7819.81



BC 7938N.81

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:	$< 0.1\% / K$

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:	AC / DC 20.5 ... 27 V
with 48 % residual ripple	DC 20.5 ... 30 V
with $\leq 10\%$ residual ripple	
for AC/DC 42 ... 60 V:	AC / DC 30 ... 66 V
with 48 % residual ripple	DC 30 ... 80 V
with $\leq 10\%$ residual ripple	
with AC/DC 110 ... 240 V:	AC / DC 60 ... 264 V
with 48 % residual ripple	DC 60 ... 300 V
with $\leq 10\%$ residual ripple	

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:

50/60 Hz

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

Technical Data

Output

Contacts:	1 changeover contact
Thermal current I_{th}:	5 A
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	IEC/EN 60 947-5-1
NC contact:	1 A / AC 230 V	IEC/EN 60 947-5-1
Electrical life		IEC/EN 60 947-5-1
to AC 15 at 1 A, AC 230 V:	≥ 1.5 x 10 ⁵ switching cycles	

Short circuit strength

max. fuse rating:	4 A gL	IEC/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

rated impuls voltage / pollution degree:	4 kV / 2	IEC 60 664-1
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EMC

Electrostatic discharge:		
IK/SK 7819:	6 kV (contact)	IEC/EN 61 000-4-2
BC 7938N:	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

Surge voltages between

wires for power supply:	2 kV	IEC/EN 61 000-4-5
between wire and ground:	4 kV	IEC/EN 61 000-4-5
Interference suppression:	Limit value class B	EN 55 011

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
frequency 10 ... 55 Hz IEC/EN 60 068-2-6
20 / 060 / 04 IEC/EN 60 068-1
EN 50 005

Climate resistance:

Terminal designation:

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/-4
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 46 228-1/-2/-3/-4

Wire fixing:

IK/SK 7819:	Flat terminals with self-lifting clamping piece IEC/EN 60 999-1
BC 7938N:	Plus-minus terminal screws M3.5 Box terminal with wire protection

Mounting:

DIN rail IEC/EN 60 715

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
• Output:	1 changeover contact
• Nominal voltage U_N :	AC/DC 110 ... 240 V
• Time range:	0.15 ... 3 s
• Width:	17.5 mm

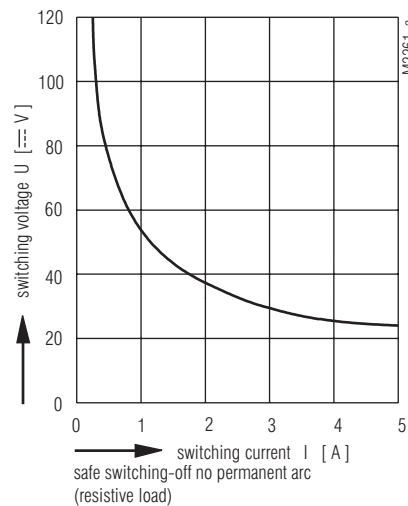
SK 7819.81 AC/DC 110 ... 240 V	0.15 ... 3 s
Article number:	0054741
• Output:	1 changeover contact
• Nominal voltage U_N :	AC/DC 110 ... 240 V
• Time range:	0.15 ... 3 s
• Width:	17.5 mm

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

Ordering Example

IK 7819	.81	AC/DC 24 V	0.5 ... 10 s	
				Time range
				Nominal voltage
				Contact
				Type

Characteristics



Limit curve for arc-free operation