

2.1 Monofunction Time Relays



Application	Types	Functions*	Min. time	Max. time	contact rating	Socket
Monofunction Time Relay	CMD	A, E	50 ms	60 min	10 A / 250 V	DIN

*(Function diagrams: refer to page 152)

CMD11-A/UC12V, CMD11-E/UC12V

Mono Function Timing Relay

2 time functions, 0.5 s ... 60 minutes

DIN Rail mounting according to DIN 43 880

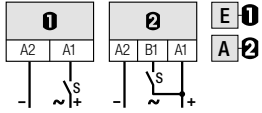


Type: CMD11-.../UC12V

The CMD is a cost-efficient timing relay supporting timing functions such as on-delay or off-delay and five time ranges from 50 ms to 60 minutes. It comes with an 8 A change-over contact and with four separate supplies (UC12V, UC24V, AC115V und AC230V). The output state is displayed by LED. The relay may be manually operated and blocked by ON/OFF switch.

Maximum contact load	10 A 250 V AC-1	6 A 25 V DC-1
Recommended minimum contact load	100 mA / 12 V	

Time functions and related connection diagrams (Function diagrams: refer to page 152)



Time data

5 partial time ranges, t_{max} (DIP switch)	0,6 s / 6 s / 60 s / 6 min / 60 min
Fine adjustment range (rotary knob)	$t_{min} \dots t_{max}$, 0.5 ... 6
Time range tolerance	t_{min} : -30 % ... +0 % / t_{max} : -0 % ... +30 %
Repetition accuracy	± 0.2 % or 20 ms
Response time, power on, on A1	≤ 50 ms
Min. trigger pulse width on input B1	100 ms (AC / DC)
Reset time B1 (AC/DC)	≤ 90 ms
Voltage failure buffering	≥ 5 ms

Contacts

Type	Single contact, CO
Material	AgNi
Rated operational current	10 A
Max. inrush current (10ms)	15 A
Max. switching voltage AC-1	250 V
Max. AC load AC-1 (Fig. 1)	2500 VA AC-1
Max. DC load DC-1 24 V / 220 V (Fig. 2)	150 W / 70 W

Power supply- and control input

CMD11-.../UC12V	
Nominal voltage (UC = AC / DC)	12 V AC/DC
Operating voltage range	9.6 ... 14.4 V AC/DC
Power consumption DC typ.	32 mA
Power consumption AC typ.	50 mA
Frequency range	48 ... 62 Hz
Input current into B1 typ. AC/DC	2.7/4.3 mA
Trigger threshold voltage on B1 typ AC / DC	5.2 / 8.8 V

Insulation

Test voltage open contact	1 kVrms 1 minute
Test voltage between contacts and control input	2 kVrms 1 minute

General Specifications

Ambient temperature storage /operation	-40 ... 85 °C / -40 ...60 °C
Life time of contacts 8 A, 250 V AC-1	75 x 10 ³
Conductor cross section	Stranded wire 2.5 mm ² , 2 x 1.5 mm ²
Ingress protection degree	IP 20
Max. Screw torque	0.5 Nm
Housing material / Weight	Polyamide PA-66 (UL94-V0) / 48 g

Standard types

UC (AC/DC) 40...60 Hz

CMD11-A/UC12V
CMD11-E/UC12V



Connection diagram

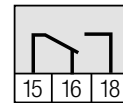


Fig.1 AC voltage endurance

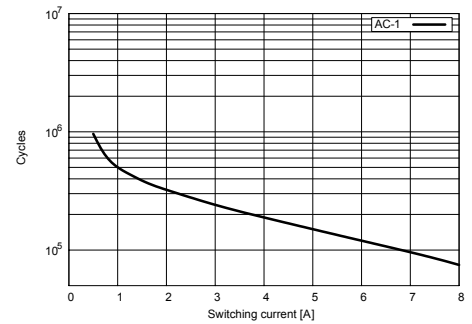
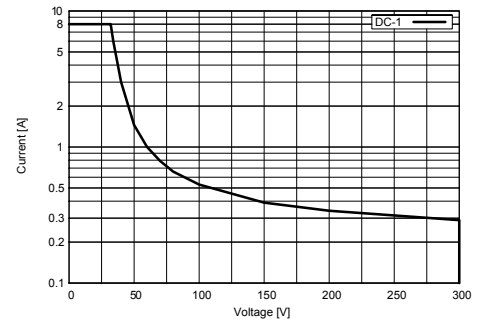
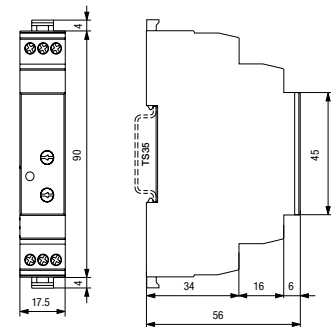


Fig. 2 DC load limit curve



Dimensions [mm]



Technical approvals, conformities



EN 60947

CMD11-A/UC24V, CMD11-E/UC24V

Mono Function Timing Relay

2 time functions, 0.5 s ... 60 minutes

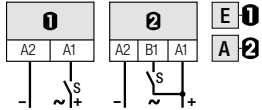
DIN Rail mounting according to DIN 43 880

Type: CMD11-.../UC12V

The CMD is a cost-efficient timing relay supporting timing functions such as on-delay or off-delay and five time ranges from 50 ms to 60 minutes. It comes with an 8 A change-over contact and with four separate supplies (UC12V, UC24V, AC115V und AC230V). The output state is displayed by LED. The relay may be manually operated and blocked by ON/OFF switch.

Maximum contact load	10 A 250 V AC-1	6 A 25 V DC-1
Recommended minimum contact load	100 mA / 12 V	

Time functions and related connection diagrams (Function diagrams: refer to page 152)



Time data

5 partial time ranges, t_{max} (DIP switch)	0,6 s / 6 s / 60 s / 6 min / 60 min
Fine adjustment range (rotary knob)	$t_{min} \dots t_{max}$, 0.5 ... 6
Time range tolerance	t_{min} : -30 % ... +0 % / t_{max} : -0 % ... +30 %
Repetition accuracy	± 0.2 % or 20 ms
Response time, power on, on A1	≤ 50 ms
Min. trigger pulse width on input B1	100 ms (AC / DC)
Reset time B1 (AC/DC)	≤ 90 ms
Voltage failure buffering	≥ 5 ms

Contacts

Type	Single contact, CO
Material	AgNi
Rated operational current	10 A
Max. inrush current (10ms)	15 A
Max. switching voltage AC-1	250 V
Max. AC load AC-1 (Fig. 1)	2500 VA AC-1
Max. DC load DC-1 24 V / 220 V (Fig. 2)	150 W / 70 W

Power supply- and control input

CMD11-.../UC24V	
Nominal voltage (UC = AC / DC)	24 V AC/DC
Operating voltage range	19.2 ... 28.8 V AC/DC
Power consumption DC typ.	12 mA
Power consumption AC typ.	21 mA
Frequency range	48 ... 62 Hz
Input current into B1 typ. AC/DC	11.6. /9.5 mA
Trigger threshold voltage on B1 typ AC / DC	9.5 / 14 V

Insulation

Test voltage open contact	1 kVrms 1 minute
Test voltage between contacts and control input	2 kVrms 1 minute

General Specifications

Ambient temperature storage /operation	-40 ... 85 °C / -40 ... 60 °C
Life time of contacts 8 A, 250 V AC-1	75 x 10 ³
Conductor cross section	Stranded wire 2.5 mm ² , 2 x 1.5 mm ²
Ingress protection degree	IP 20
Max. Screw torque	0.5 Nm
Housing material / Weight	Polyamide PA-66 (UL94-V0) / 48 g

Standard types

UC (AC/DC) 40...60 Hz

CMD11-A/UC24V
CMD11-E/UC24V



Connection diagram

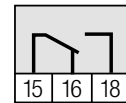


Fig.1 AC voltage endurance

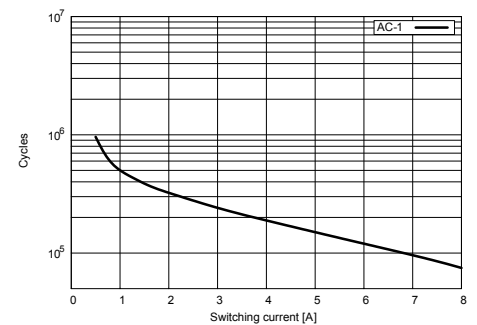
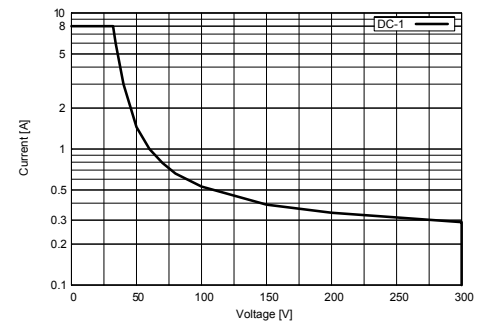
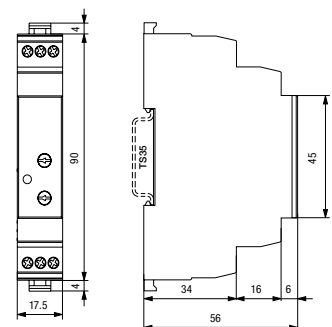


Fig. 2 DC load limit curve



Dimensions [mm]



Technical approvals, conformities



CMD11-A/AC115V, CMD11-E/AC115V

Mono Function Timing Relay

2 time functions, 0.5 s ... 60 minutes

DIN Rail mounting according to DIN 43 880

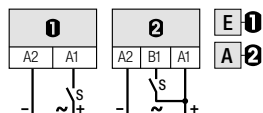


Type: CMD11-.../UC12V

The CMD is a cost-efficient timing relay supporting timing functions such as on-delay or off-delay and five time ranges from 50 ms to 60 minutes. It comes with an 8 A change-over contact and with four separate supplies (UC12V, UC24V, AC115V und AC230V). The output state is displayed by LED. The relay may be manually operated and blocked by ON/OFF switch.

Maximum contact load	10 A 250 V AC-1	6 A 25 V DC-1
Recommended minimum contact load	100 mA / 12 V	

Time functions and related connection diagrams (Function diagrams: refer to page 152)



Time data

5 partial time ranges, t_{max} (DIP switch)	0,6 s / 6 s / 60 s / 6 min / 60 min
Fine adjustment range (rotary knob)	$t_{min} \dots t_{max}$, 0.5 ... 6
Time range tolerance	t_{min} : -30 % ... +0 % / t_{max} : -0 % ... +30 %
Repetition accuracy	± 0.2 % or 20 ms
Response time, power on, on A1	≤ 50 ms
Min. trigger pulse width on input B1	100 ms (AC / DC)
Reset time B1 (AC/DC)	≤ 90 ms
Voltage failure buffering	≥ 5 ms

Contacts

Type	Single contact, CO
Material	AgNi
Rated operational current	10 A
Max. inrush current (10ms)	15 A
Max. switching voltage AC-1	250 V
Max. AC load AC-1 (Fig. 1)	2500 VA AC-1
Max. DC load DC-1 24 V / 220 V (Fig. 2)	150 W / 70 W

Power supply- and control input

Nominal voltage	CMD11-.../AC115V 115 V AC
Operating voltage range	92 ... 138 V AC
Power consumption AC typ.	47 mA
Frequency range	48 ... 62 Hz
Input current into B1 typ. AC	1.7 mA
Trigger threshold voltage on B1 typ AC	42 V

Insulation

Test voltage open contact	1 kVrms 1 minute
Test voltage between contacts and control input	2 kVrms 1 minute

General Specifications

Ambient temperature storage /operation	-40 ... 85 °C / -40 ... 60 °C
Life time of contacts 8 A, 250 V AC-1	75×10^3
Conductor cross section	Stranded wire 2.5 mm ² , 2 x 1.5 mm ²
Ingress protection degree	IP 20
Max. Screw torque	0.5 Nm
Housing material / Weight	Polyamide PA-66 (UL94-V0) / 48 g

Standard types

UC (AC/DC) 40...60 Hz	CMD11-A/AC115V CMD11-E/AC115V
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Connection diagram

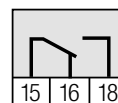


Fig.1 AC voltage endurance

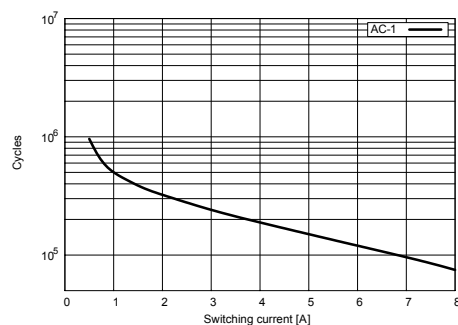
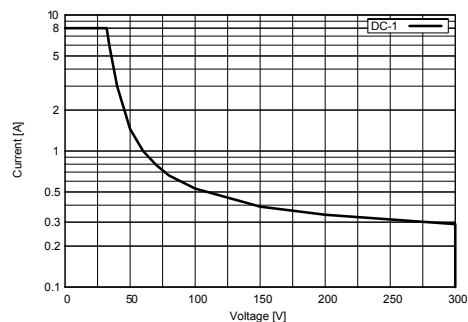
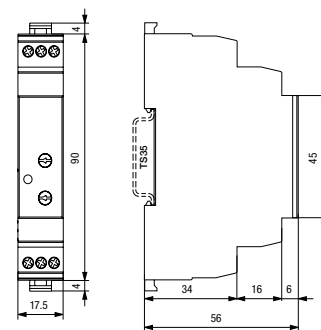


Fig. 2 DC load limit curve



Dimensions [mm]



Technical approvals, conformities



EN 60947

CMD11-A/AC230V, CMD11-E/AC230V

Mono Function Timing Relay

2 time functions, 0.5 s ... 60 minutes

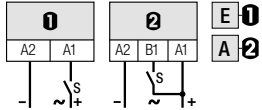
DIN Rail mounting according to DIN 43 880

Type: CMD11-.../AC230V

The CMD is a cost-efficient timing relay supporting timing functions such as on-delay or off-delay and five time ranges from 50 ms to 60 minutes. It comes with an 8 A change-over contact and with four separate supplies (UC12V, UC24V, AC115V und AC230V). The output state is displayed by LED. The relay may be manually operated and blocked by ON/OFF switch.

Maximum contact load	10 A 250 V AC-1	6 A 25 V DC-1
Recommended minimum contact load	100 mA / 12 V	

Time functions and related connection diagrams (Function diagrams: refer to page 152)



Time data

5 partial time ranges, t_{max} (DIP switch)	0,6 s / 6 s / 60 s / 6 min / 60 min
Fine adjustment range (rotary knob)	$t_{min} \dots t_{max}$, 0.5 ... 6
Time range tolerance	t_{min} : -30 % ... +0 % / t_{max} : -0 % ... +30 %
Repetition accuracy	± 0.2 % or 20 ms
Response time, power on, on A1	≤ 50 ms
Min. trigger pulse width on input B1	100 ms (AC / DC)
Reset time B1 (AC/DC)	≤ 90 ms
Voltage failure buffering	≥ 5 ms

Contacts

Type	Single contact, CO
Material	AgNi
Rated operational current	10 A
Max. inrush current (10ms)	15 A
Max. switching voltage AC-1	250 V
Max. AC load AC-1 (Fig. 1)	2500 VA AC-1
Max. DC load DC-1 24 V / 220 V (Fig. 2)	150 W / 70 W

Power supply- and control input

Nominal voltage	CMD11-.../AC230V 230 V AC
Operating voltage range	184 ... 255 V AC
Power consumption AC typ.	60 mA
Frequency range	48 ... 62 Hz
Input current into B1 typ. AC	1.9 mA
Trigger threshold voltage on B1 typ AC	80 V

Insulation

Test voltage open contact	1 kVrms 1 minute
Test voltage between contacts and control input	2 kVrms 1 minute

General Specifications

Ambient temperature storage /operation	-40 ... 85 °C / -40 ... 60 °C
Life time of contacts 8 A, 250 V AC-1	75×10^3
Conductor cross section	Stranded wire 2.5 mm ² , 2 x 1.5 mm ²
Ingress protection degree	IP 20
Max. Screw torque	0.5 Nm
Housing material / Weight	Polyamide PA-66 (UL94-V0) / 48 g

Standard types

UC (AC/DC) 40...60 Hz

CMD11-A/AC230V
CMD11-E/AC230V



Connection diagram

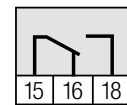


Fig.1 AC voltage endurance

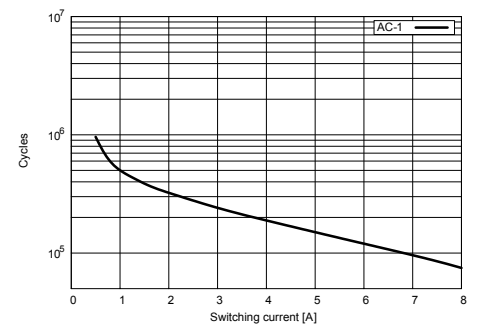
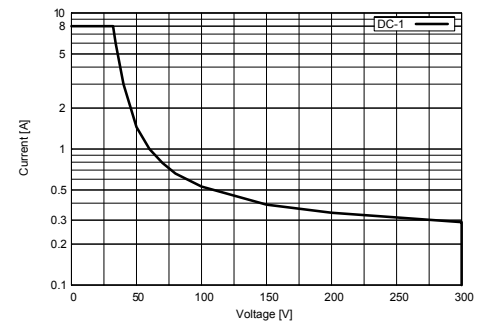
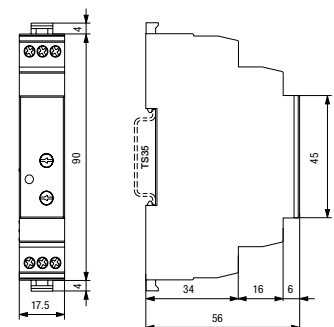


Fig. 2 DC load limit curve



Dimensions [mm]



Technical approvals, conformities



