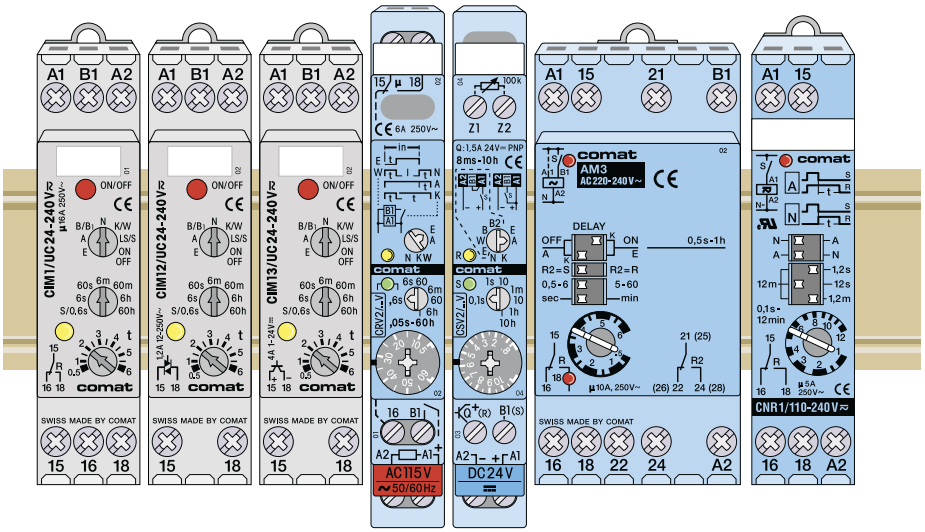
DIN Time Relays



Application	Types	Functions	Min. time	Max. time	Contact rating	Design
Universal time relay, 8 time functions & stepping function, ON/OFF switch, service function	CIM1	E, B, W, A, K, N, B1, S, LS	50 ms	60 h	16 A / 250 V	17.5 mm
Universal time relay, 8 time functions & stepping function, ON/OFF switch, AC solid state output	CIM12	E, B, W, A, K, N, B1, S, LS	50 ms	60 h	2 A / 250 V	17.5 mm
Universal time relay, 8 time functions & stepping function, ON/OFF switch, DC solid state output	CIM13	E, B, W, A, K, N, B1, S, LS	50 ms	60 h	5 A / 24 V DC	17.5 mm
Universal time relay, 7 time functions, ON/OFF switch, service function	CIM2	E, A, L, M, G, B2, H	50 ms	60 h	16 A / 250 V	17.5 mm
Universal time relay, 7 time functions, ON/OFF switch, service function, AC solid state output	CIM22	E, A, L, M, G, B2, H	50 ms	60 h	2 A / 250 V	17.5 mm
Universal time relay, 7 time functions, ON/OFF switch, service function, DC solid state output	CIM23	E, A, L, M, G, B2, H	50 ms	60 h	5 A / 24 V DC	17.5 mm
Universal time relay, 6 time functions, ON/OFF switch, service function	CIM3	F, Q, G, H, I, P	50 ms	60 h	16 A / 250 V	17.5 mm
Universal time relay, 6 time functions, ON/OFF switch, service function, AC solid state output	CIM32	F, Q, G, H, I, P	50 ms	60 h	2 A / 250 V	17.5 mm
Universal time relay, 6 time functions, ON/OFF switch, service function, DC solid state output	CIM33	F, Q, G, H, I, P	50 ms	60 h	5 A / 24 V DC	17.5 mm
Universal timer, ON-OFF switch, 2 CO contacts	CM3	E, A, K, N, B1, B, W	50 ms	60 h	5 A / 250 V	17.5 mm
Multi function	CRV2	E, W, A, K, N	0.05 s	60 h	6 A / 250 V	13 mm
Double time relay	CRV3	F, Q	2x 50 ms	2x 60 h	6 A / 250 V	13 mm
Multi function, external potentiometer, solid state output	CSV2	E, W, B, B2, E, A, K, N	8 ms	10 h	1.5 A / 30 V	13 mm
Multifunction time relay	AM2	E, A, K, W	0.5 s	60 min	10 A / 250 V	17.5 mm
Universal timer with instantaneous contact	AM3	E, A, K, W	0.5 s	60 min	10 A / 250 V	35 mm
Time run without auxiliary voltage	CNR1	A, N	0.1 s	12 min	5 A / 250 V	17.5 mm
Pulse shaper	CPF11	K, L, A	5 ms	600 ms	0.8 A / 24 V	17.5 mm
Star-Delta time relay	CY1	Y	0.5 s	60 s	6 A / 250 V	17.5 mm

(Function diagrams: refer to page 130)

CIM1, CIM1R (Railway)

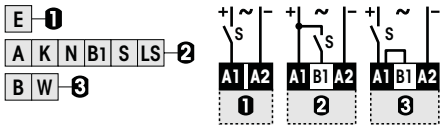
Time relay with mechanical changeover output contact 8 time functions + stepping function, ON-OFF switch, 50 ms ... 60 h, DIN Rail mounting according to DIN 43 880

Type: CIM1/UC24-240V

Sophisticated multifunction time relay, 1 changeover power contact with zero crossing switching (50/60 Hz), 8 time functions, stepping function and service function ON/OFF, time ranges: 50 ms … 60 h, multifunction LED state indicator, suitable for any time-control application and also staircase lighting, Light-switch neon lamp current absorption on input B1, Manual switching function for maintenance, emergency, etc., 16.6 Hz power supply applications. Railway version available.

Maximum contact load	**16 A / 250 V AC-1 384 W DC-1**
Recommended minimum contact load	**10 mA / 10 V**

Time functions and related connection diagrams (Function diagrams: refer to page 130)
The functions are selectable by rotary switch



LED function table:

LED	Relay	Time run
OFF	OFF	NO
Continuous ON	ON	NO
Short blinking	OFF	YES
Long blinking	ON	YES

Time data

7 partial time ranges, t_{max} (rotary switch)	0.6, 6, 60 s / 6, 60 min / 6, 60 h
Fine adjustment range (rotary knob)	t_{min} … t_{max}, 0.5 … 6
Time range tolerance	t_{min}: -5 % … +0 % / t_{max}: -0 % … +5 %
Repetition accuracy	± 0.1 % or DC: 2 ms / AC: 10 ms
Response time, power on, on A1	≤ 45 ms
Min. trigger pulse on B1	20 ms (AC / DC)
Reset time B1 (AC/DC)	≤ 30 ms
Voltage failure buffering (50 / 60 Hz)	≥ 20 ms

Contacts

Material CIM1 / CIM1R / Type	AgNi / 1 CO, micro disconnection
Rated operational current at 40 °C / 60 °C	16 A / 13 A
Max. inrush current	30 A
Max. switching voltage AC-1	250 V
Max. AC load AC-1 (Fig.1)	4 kVA
Max. DC load DC-1 30 V / 250 V (Fig.2)	240 W / 85 W

Power supply- and control input

Nominal voltage (A1, B1)	**UC 24-240 V (UC = AC / DC)**
Operating voltage range	UC 19 … 250 V
Power consumption	approx. 1 W
Frequency range	15 … 60 Hz
Allowed DC residual current into B1	≤ 0.5 mA
AC Neon lamp residual current into B1	≤ 10 mA
Trigger threshold voltage on B1, AC / DC	15 / 17 V

Insulation

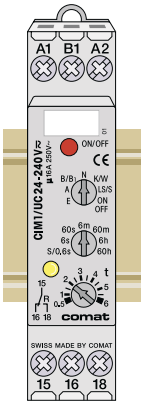
Test voltage open contact	1 kVrms 1 minute
Test voltage between contacts and control input	2.5 kVrms 1 minute

General Specifications

Ambient temperature storage /operation	-40 … 85 °C / -40 …60 °C (Railway: -46 °C)
Mechanical life of contact	30 x 10^6 operations
Conductor cross section	Stranded wire 2.5 mm^2, 2 x 1.5 mm^2
Ingress protection degree	IP 20
Max. Screw torque	0.4 Nm
Housing material / weight	Lexan / 70 g

Standard types

UC (AC/DC) 15...60 Hz	**CIM1/UC24-240V**
Railway	**CIM1R/UC24-240V**



Connection diagram

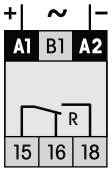


Fig.1 AC voltage endurance

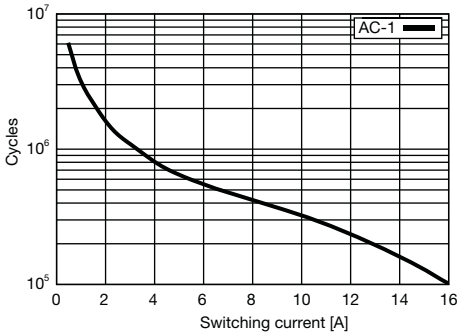
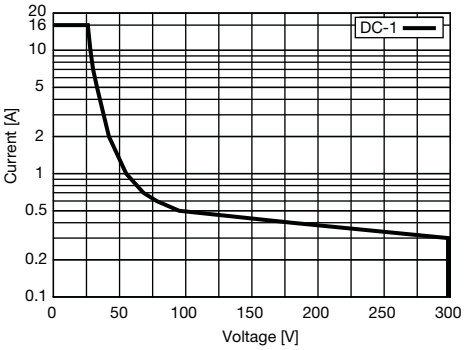
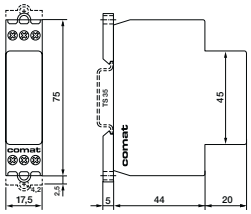


Fig. 2 DC load limit curve



Dimensions [mm]



Technical approvals, conformities

EN 50155, EN 60730

CIM12, CIM12R (Railway)

Time relay with AC solid-state output
8 time functions and stepping function, ON-OFF switch, 50 ms … 60 h, DIN Rail mounting according to DIN 43 880

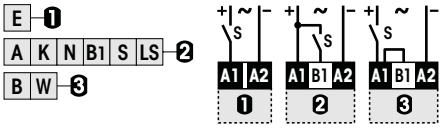
Type: CIM12/UC24-240V

Sophisticated multifunction time relay, 1 triac output, suitable for high frequency of operations and inductive loads, 8 time functions, stepping function and service function ON/OFF, time ranges: 50 ms … 60 h, multifunction LED state indicator, suitable for any time-control application and also staircase lighting, Light-switch neon lamp current absorption on input B1, manual switching function for maintenance, emergency, etc., 16.6 Hz applications. Railway version available.

Maximum contact load	**2 A / 250 V**
Minimum contact load	**50 mA**

Time functions and related connection diagrams (Function diagrams: refer to page 130)

The functions are selectable by rotary switch



LED function table:

LED	Relay	Time run
OFF	OFF	NO
Continuous ON	ON	NO
Short blinking	OFF	YES
Long blinking	ON	YES

Time data

7 partial time ranges, t_{max} (rotary switch)	0.6, 6, 60 s / 6, 60 min / 6, 60 h
Fine adjustment range (rotary knob)	t_{min} … t_{max}, 0.5 … 6
Time range tolerance	t_{min}: -5 % … +0 % / t_{max}: -0 % … +5 %
Repetition accuracy	± 0.1 % or DC: 2 ms / AC: 10 ms
Response time, power on, on A1	≤ 45 ms
Min. trigger pulse on B1	20 ms (AC / DC)
Reset time B1 (AC/DC)	≤ 30 ms
Voltage failure buffering (50 / 60 Hz)	≥ 20 ms

Output

Type	Triac, zero crossing
Rated operational current at 40 °C (Fig.1)	2 A
Max. inrush current (10 ms)	100 A
Max. switching voltage	250 V
Max. AC load AC-1	300 VA
I^2t value	78 A^2s
Leakage current	< 1 mA

Power supply- and control input

Nominal voltage	**UC 24-240 V (UC = AC / DC)**
Operating voltage range	UC 19 … 250 V
Power consumption	approx. 1 W
Frequency range	15 … 60 Hz
Allowed DC residual current into B1	≤ 0.5 mA
AC Neon lamp residual current into B1	≤ 10 mA
Trigger threshold voltage on B1, AC / DC	15 / 17 V

Insulation

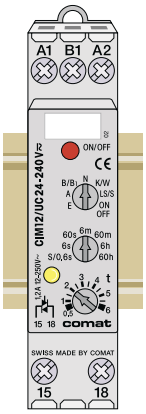
Test voltage between output and control input	2.5 kVrms 1 minute

General Specifications

Ambient temperature storage /operation	-40 … 85 °C / -40 …60 °C (Railway: -70 °C)
Conductor cross section	Stranded wire 2.5 mm^2, 2 x 1.5 mm^2
Ingress protection degree	IP 20
Max. Screw torque	0.4 Nm
Housing material / weight	Lexan / 70 g

Standard types

UC (AC/DC), 15…60 Hz	**CIM12/UC24-240V**
Railway	**CIM12R/UC24-240V**



Connection diagram

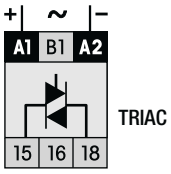
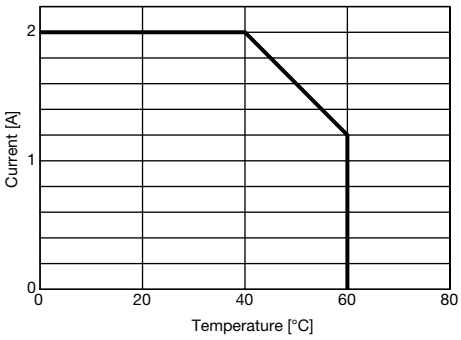
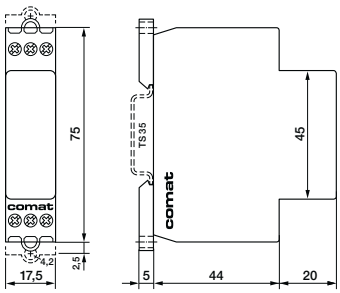


Fig. 1 Output derating curve



Dimensions [mm]



Technical approvals, conformities

EN 50155, EN 60730

CIM13, CIM13R (Railway)

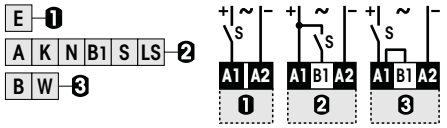
Time relay with DC solid-state output
8 time functions and stepping function, ON-OFF switch, 50 ms ... 60 h
DIN Rail mounting according to DIN 43 880

Type: CIM13/UC24-240V

Sophisticated multifunction time relay, 1 transistor output, 8 time functions, stepping function and service function ON/OFF, time ranges from 50 ms … 60 h, multifunction LED state indicator, suitable for any time-control application and also staircase-light control, light-switch neon lamp current absorption on input B1, manual switching function for maintenance, emergency, etc., 16.6 Hz applications. Railway version available.

Maximum contact load	**4 A / 30 V**
Recommended minimum contact load	**1 mA**

Time functions and related connection diagrams (Function diagrams: refer to page 130)
The functions are selectable by rotary switch



LED function table:

LED	Relay	Time run
OFF	OFF	NO
Continuous ON	ON	NO
Short blinking	OFF	YES
Long blinking	ON	YES

Time data

7 partial time ranges, t_{max} (rotary switch)	0.6, 6, 60 s / 6, 60 min / 6, 60 h
Fine adjustment range (rotary knob)	t_{min} … t_{max}, 0.5 … 6
Time range tolerance	t_{min}: -5 % … +0 % / t_{max}: -0 % … +5 %
Repetition accuracy	± 0.1 % or DC: 2 ms / AC: 10 ms
Response time, power on, on A1	≤ 45 ms
Min. trigger pulse on B1	20 ms (AC / DC)
Reset time B1 (AC/DC)	≤ 30 ms
Voltage failure buffering (50 / 60 Hz)	≥ 20 ms

Output

Type	MOS FET
Rated operational current (Fig. 1)	4 A
Max. inrush current (10 µs)	40 A
Max. switching voltage	30 V
Leakage current	< 10 µA

Power supply- and control input

Nominal voltage (UC = AC / DC)	**UC 24-240 V (UC = AC / DC)**
Operating voltage range	UC 19 … 250 V
Power consumption	approx. 1 W
Frequency range	15 … 60 Hz
Allowed DC residual current into B1	≤ 0.5 mA
AC Neon lamp residual current into B1	≤ 10 mA
Trigger threshold voltage on B1, AC / DC	15 / 17 V

Insulation

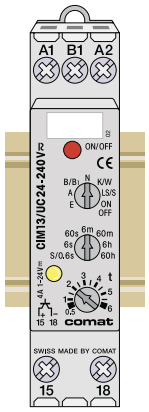
Test voltage between output and control input	2.5 kVrms 1 minute

General Specifications

Ambient temperature storage /operation	-40 … 85 °C / -40 …60 °C (Railway: -70 °C)
Conductor cross section	Stranded wire 2.5 mm², 2 x 1.5 mm²
Ingress protection degree	IP 20
Max. Screw torque	0.4 Nm
Housing material / Weight	Lexan / 70 g

Standard types

UC (AC/DC), 15…60 Hz	**CIM13/UC24-240V**
Railway	**CIM13R/UC24-240V**



Connection diagram

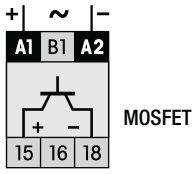
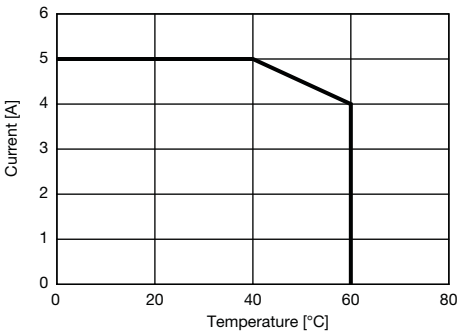
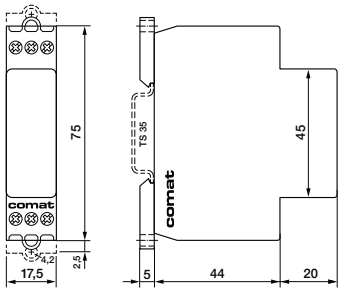


Fig. 1 Output derating curve



Dimensions [mm]



Technical approvals, conformities

EN 50155; EN 60730

CIM2, CIM2R (Railway)

Time relay with mechanical changeover output contact 7 time functions and 7 time ranges from 50 ms ... 60 h, DIN Rail mounting according to DIN 43 880

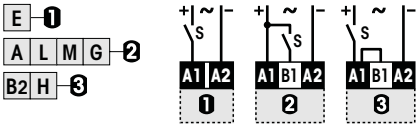
Type: CIM2/UC24-240V

Sophisticated multifunction time relay, 1 changeover power contact switching in zero crossing (50/60 Hz), 7 time functions and service function ON/OFF, 7 time ranges from 50 ms to 60 h, multifunction LED state indicator, suitable for any time-control application, light-switch neon lamp current absorption on input B1, manual switching function for maintenance, emergency, etc., 16.6 Hz power supply applications. Railway version available.

Maximum contact load	**16 A / 250 V AC-1 384 W DC-1**
Recommended minimum contact load	**10 mA / 10 V**

Time functions and related connection diagrams (Function diagrams: refer to page 130)

The functions are selectable by rotary switch



LED function table:

LED	Relay	Time run
OFF	OFF	NO
Continuous ON	ON	NO
Short blinking	OFF	YES
Long blinking	ON	YES

Time data

7 partial time ranges, t_{max} (rotary switch)	0.6, 6, 60 s / 6, 60 min / 6, 60 h
Fine adjustment range (rotary knob)	t_{min} ... t_{max}, 0.5 ... 6
Time range tolerance	t_{min}: -5 % ... +0 % / t_{max}: -0 % ... +5 %
Repetition accuracy	± 0.1 % or DC: 2 ms / AC: 10 ms
Response time, power on, on A1	≤ 45 ms
Min. trigger pulse on B1	20 ms (AC / DC)
Reset time B1 (AC/DC)	≤ 30 ms
Voltage failure buffering (50 / 60 Hz)	≥ 20 ms

Contacts

Material CIM2 / CIM2R / Type	AgNi / 1 CO, micro disconnection
Rated operational current at 40 °C / 60 °C	16 A / 13 A
Max. inrush current	30 A
Max. switching voltage AC-1	250 V
Max. AC load AC-1 (Fig.1)	4 kVA
Max. DC load DC-1 30 V / 250 V (Fig.2)	240 W / 85 W

Power supply- and control input

Nominal voltage (A1, B1)	**UC 24-240 V (UC = AC / DC)**
Operating voltage range	UC 19 ... 250 V
Power consumption	approx. 1 W
Frequency range	15 ... 60 Hz
Allowed DC residual current into B1	≤ 0.5 mA
AC Neon lamp residual current into B1	≤ 10 mA
Trigger threshold voltage on B1, AC / DC	15 / 17 V

Insulation

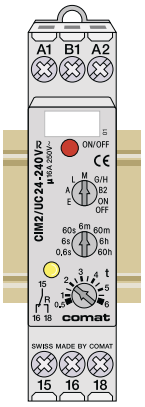
Test voltage open contact	1 kVrms 1 minute
Test voltage between contacts and control input	2.5 kVrms 1 minute

General Specifications

Ambient temperature storage /operation	-40 ... 85 °C / -40 ...60 °C (Railway: -46 °C)
Mechanical life of contact	30 x 10^6 operations
Conductor cross section	Stranded wire 2.5 mm², 2 x 1.5 mm²
Ingress protection degree	IP 20
Max. Screw torque	0.4 Nm
Housing material / weight	Lexan / 70 g

Standard types

UC (AC/DC) 15...60 Hz	**CIM2/UC24-240V**
Railway	**CIM2R/UC24-240V**



Connection diagram

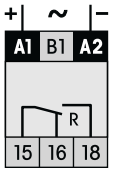


Fig.1 AC voltage endurance

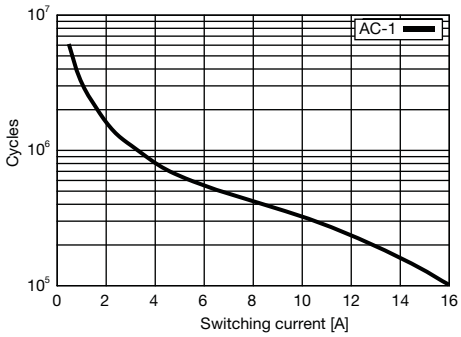
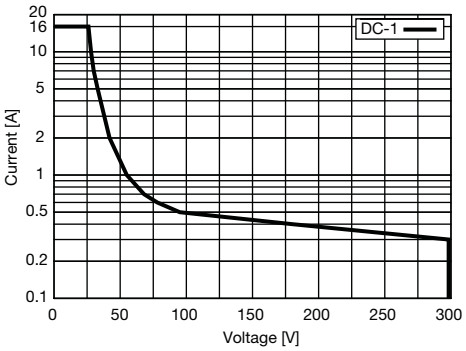
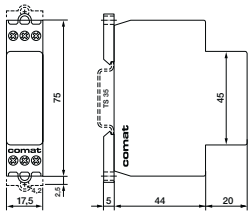


Fig. 2 DC load limit curve



Dimensions [mm]



Technical approvals, conformities

EN 50155, EN 60730

CIM22, CIM22R (Railway)

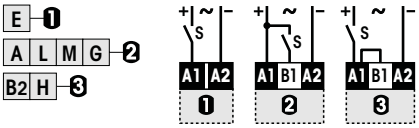
Time relay with AC solid-state output
7 time functions and 7 time ranges 50 ms … 60 h, DIN Rail mounting according to DIN 43 880

Type: CIM22/UC24-240V

Sophisticated multifunction time relay, 1 triac output, suitable for high frequency of operations and inductive loads, 7 time functions and service function ON/OFF, 7 time ranges from 50 ms … 60 h, multifunction LED state indicator, suitable for any time-control application light-switch neon lamp current absorption on input B1, manual switching function for maintenance, emergency, etc., 16.6 Hz applications. Railway version available.

Maximum contact load	**2 A / 250 V**
Minimum contact load	**50 mA**

Time functions and related connection diagrams (Function diagrams: refer to page 130)
The functions are selectable by rotary switch



LED function table:

LED	Relay	Time run
OFF	OFF	NO
Continuous ON	ON	NO
Short blinking	OFF	YES
Long blinking	ON	YES

Time data

7 partial time ranges, t_{max} (rotary switch)	0.6, 6, 60 s / 6, 60 min / 6, 60 h
Fine adjustment range (rotary knob)	t_{min} … t_{max}, 0.5 … 6
Time range tolerance	t_{min}: -5 % … +0 % / t_{max}: -0 % … +5 %
Repetition accuracy	± 0.1 % or DC: 2 ms / AC: 10 ms
Response time, power on, on A1	≤ 45 ms
Min. trigger pulse on B1	20 ms (AC / DC)
Reset time B1 (AC/DC)	≤ 30 ms
Voltage failure buffering (50 / 60 Hz)	≥ 20 ms

Output

Type	Triac, zero crossing
Rated operational current at 40 °C (Fig.1)	2 A
Max. inrush current (10 ms)	100 A
Max. switching voltage	250 V
Max. AC load AC-1	300 VA
I^2t value	78 A^2s
Leakage current	< 1 mA

Power supply- and control input

Nominal voltage	**UC 24-240 V (UC = AC / DC)**
Operating voltage range	UC 19 … 250 V
Power consumption	approx. 1 W
Frequency range	15 … 60 Hz
Allowed DC residual current into B1	≤ 0.5 mA
AC Neon lamp residual current into B1	≤ 10 mA
Trigger threshold voltage on B1, AC / DC	15 / 17 V

Insulation

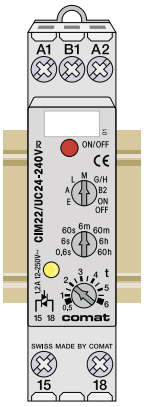
Test voltage between output and control input	2.5 kVrms 1 minute

General Specifications

Ambient temperature storage /operation	-40 … 85 °C / -40 …60 °C (Railway: -70 °C)
Conductor cross section	Stranded wire 2.5 mm^2, 2 x 1.5 mm^2
Ingress protection degree	IP 20
Max. Screw torque	0.4 Nm
Housing material / weight	Lexan / 70 g

Standard types

UC (AC/DC), 15…60 Hz	**CIM22/UC24-240V**
Railway	**CIM22R/UC24-240V**



Connection diagram

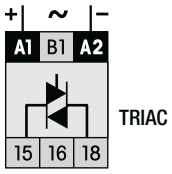
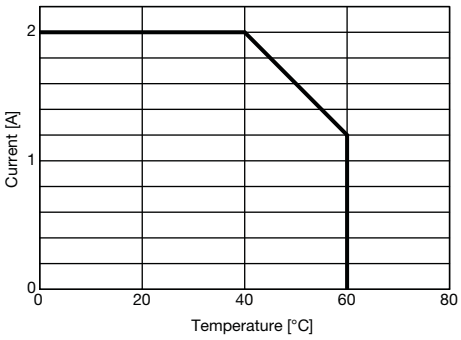
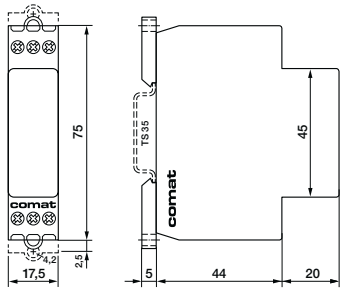


Fig. 1 Output derating curve



Dimensions [mm]



Technical approvals, conformities

EN 50155, EN 60730

CIM23, CIM23R (Railway)

Time relay with DC solid-state output
7 time functions and 7 time ranges from 50 ms ... 60 h
DIN Rail mounting according to DIN 43 880

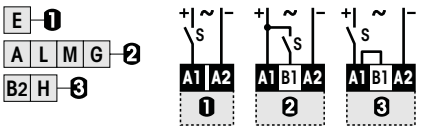
Type: CIM23/UC24-240V

Sophisticated multifunction time relay, 1 transistor output, 7 time functions and service function ON/OFF, 7 time ranges from 50 ms … 60 h, multifunction LED state indicator suitable for any time-control application, light-switch neon lamp current absorption on input B1, manual switching function for maintenance, emergency, etc., 16.6 Hz applications. Railway version available.

Maximum contact load	**4 A / 30 V**
Recommended minimum contact load	**1 mA**

Time functions and related connection diagrams (Function diagrams: refer to page 130)

The functions are selectable by rotary switch



LED function table:

LED	Relay	Time run
OFF	OFF	NO
Continuous ON	ON	NO
Short blinking	OFF	YES
Long blinking	ON	YES

Time data

7 partial time ranges, t_{max} (rotary switch)	0.6, 6, 60 s / 6, 60 min / 6, 60 h
Fine adjustment range (rotary knob)	t_{min} … t_{max}, 0.5 … 6
Time range tolerance	t_{min}: -5 % … +0 % / t_{max}: -0 % … +5 %
Repetition accuracy	± 0.1 % or DC: 2 ms / AC: 10 ms
Response time, power on, on A1	≤ 45 ms
Min. trigger pulse on B1	20 ms (AC / DC)
Reset time B1 (AC/DC)	≤ 30 ms
Voltage failure buffering (50 / 60 Hz)	≥ 20 ms

Output

Type	MOS FET
Rated operational current (Fig. 1)	4 A
Max. inrush current (10 µs)	40 A
Max. switching voltage	30 V
Leakage current	< 10 µA

Power supply- and control input

Nominal voltage (UC = AC / DC)	**UC 24-240 V (UC = AC / DC)**
Operating voltage range	UC 19 … 250 V
Power consumption	approx. 1 W
Frequency range	15 … 60 Hz
Allowed DC residual current into B1	≤ 0.5 mA
AC Neon lamp residual current into B1	≤ 10 mA
Trigger threshold voltage on B1, AC / DC	15 / 17 V

Insulation

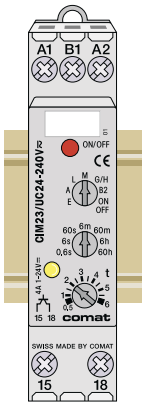
Test voltage between output and control input	2.5 kVrms 1 minute

General Specifications

Ambient temperature storage /operation	-40 … 85 °C / -40 …60 °C (Railway: -70 °C)
Conductor cross section	Stranded wire 2.5 mm², 2 x 1.5 mm²
Ingress protection degree	IP 20
Max. Screw torque	0.4 Nm
Housing material / Weight	Lexan / 70 g

Standard types

UC (AC/DC), 15...60 Hz	**CIM23/UC24-240V**
Railway	**CIM23R/UC24-240V**



Connection diagram

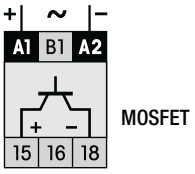
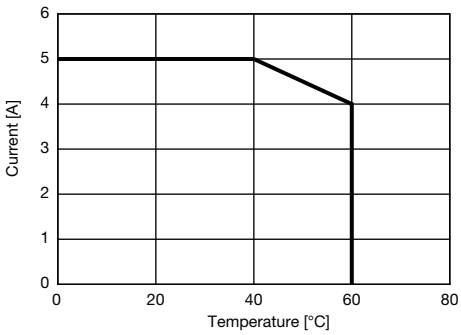
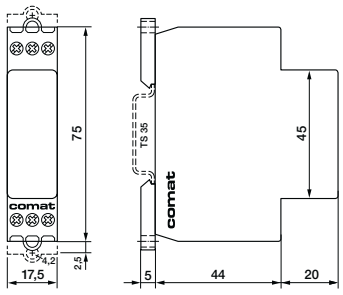


Fig. 1 Output derating curve



Dimensions [mm]



Technical approvals, conformities

EN 50155; EN 60730

CIM3, CIM3R (Railway)

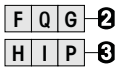
Time relay with mechanical changeover output contact
6 time functions and service function, 7 time ranges from 50 ms...60 h, DIN Rail mounting according to DIN 43 880

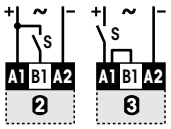
Type: CIM3/UC24-240V

Sophisticated multifunction time relay, 1 changeover power contact switching in zero crossing (50/60 Hz), 6 time functions and service function ON/OFF, 7 time ranges from 50 ms to 60 h, multifunction LED state indicator, suitable for any time-control application, light-switch neon lamp current absorption on input B1, manual switching function for maintenance, emergency, etc., 16.6 Hz power supply applications. Railway version available.

Maximum contact load	**16 A / 250 V AC-1 384 W DC-1**
Recommended minimum contact load	**10 mA / 10 V**

Time functions and related connection diagrams (Function diagrams: refer to page 130)
The functions are selectable by rotary switch





LED function table:

LED	Relay	Time run
OFF	OFF	NO
Continuous ON	ON	NO
Short blinking	OFF	YES
Long blinking	ON	YES

Time data

7 partial time ranges, t_{max} (rotary switch)	0.6, 6, 60 s / 6, 60 min / 6, 60 h
Fine adjustment range (rotary knob)	t_{min} ... t_{max}, 0.5 ... 6
Time range tolerance	t_{min}: -5 % ... +0 % / t_{max}: -0 % ... +5 %
Repetition accuracy	± 0.1 % or DC: 2 ms / AC: 10 ms
Response time, power on, on A1	≤ 45 ms
Min. trigger pulse on B1	20 ms (AC / DC)
Reset time B1 (AC/DC)	≤ 30 ms
Voltage failure buffering (50 / 60 Hz)	≥ 20 ms

Contacts

Material CIM3 / CIM3R / Type	AgNi / 1 CO, micro disconnection
Rated operational current at 40 °C / 60 °C	16 A / 13 A
Max. inrush current	30 A
Max. switching voltage AC-1	250 V
Max. AC load AC-1 (Fig.1)	4 kVA
Max. DC load DC-1 30 V / 250 V (Fig.2)	240 W / 85 W

Power supply- and control input

Nominal voltage (A1, B1)	**UC 24-240 V (UC = AC / DC)**
Operating voltage range	UC 19 ... 250 V
Power consumption	approx. 1 W
Frequency range	15 ... 60 Hz
Allowed DC residual current into B1	≤ 0.5 mA
AC Neon lamp residual current into B1	≤ 10 mA
Trigger threshold voltage on B1, AC / DC	15 / 17 V

Insulation

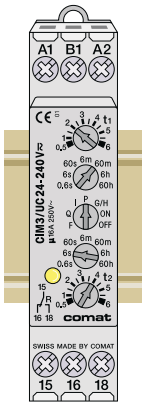
Test voltage open contact	1 kVrms 1 minute
Test voltage between contacts and control input	2.5 kVrms 1 minute

General Specifications

Ambient temperature storage /operation	-40 ... 85 °C / -40 ...60 °C (Railway: -46 °C)
Mechanical life of contact	30 x 10^6 operations
Conductor cross section	Stranded wire 2.5 mm², 2 x 1.5 mm²
Ingress protection degree	IP 20
Max. Screw torque	0.4 Nm
Housing material / weight	Lexan / 70 g

Standard types

UC (AC/DC) 15...60 Hz	**CIM3/UC24-240V**
Railway	**CIM3R/UC24-240V**



Connection diagram

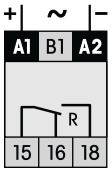


Fig.1 AC voltage endurance

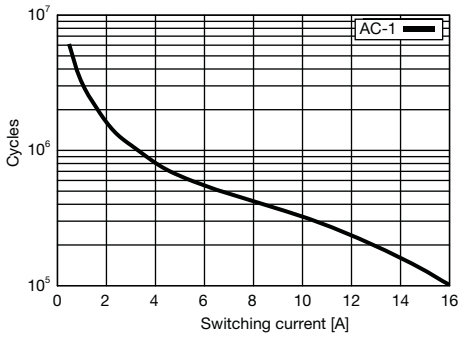
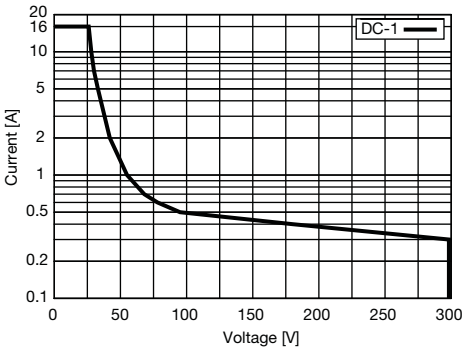
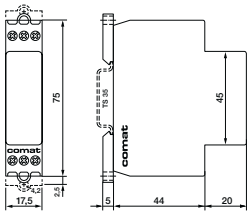


Fig. 2 DC load limit curve



Dimensions [mm]



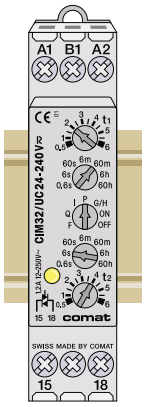
Technical approvals, conformities

EN 50155, EN 60730

CIM32, CIM32R (Railway)

Time relay with AC solid-state output

6 time functions and service function, 7 time ranges from 50 ms...60 h, DIN Rail mounting according to DIN 43 880



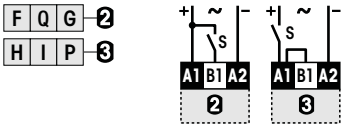
Type: CIM32/UC24-240V

Sophisticated multifunction time relay, 1 triac output, suitable for high frequency of operations and inductive loads, 6 time functions and service function ON/OFF, 7 time ranges from 50 ms … 60 h, multifunction LED state indicator, suitable for any time-control application light-switch neon lamp current absorption on input B1, manual switching function for maintenance, emergency, etc., 16.6 Hz applications. Railway version available.

Maximum contact load	**2 A / 250 V**
Minimum contact load	**50 mA**

Time functions and related connection diagrams (Function diagrams: refer to page 130)

The functions are selectable by rotary switch



LED function table:

LED	Relay	Time run
OFF	OFF	NO
Continuous ON	ON	NO
Short blinking	OFF	YES
Long blinking	ON	YES

Time data

7 partial time ranges, t_{max} (rotary switch)	0.6, 6, 60 s / 6, 60 min / 6, 60 h
Fine adjustment range (rotary knob)	t_{min} … t_{max}, 0.5 … 6
Time range tolerance	t_{min}: -5 % … +0 % / t_{max}: -0 % … +5 %
Repetition accuracy	± 0.1 % or DC: 2 ms / AC: 10 ms
Response time, power on, on A1	≤ 45 ms
Min. trigger pulse on B1	20 ms (AC / DC)
Reset time B1 (AC/DC)	≤ 30 ms
Voltage failure buffering (50 / 60 Hz)	≥ 20 ms

Output

Type	Triac, zero crossing
Rated operational current at 40 °C (Fig.1)	2 A
Max. inrush current (10 ms)	100 A
Max. switching voltage	250 V
Max. AC load AC-1	300 VA
I^2t value	78 A^2s
Leakage current	< 1 mA

Power supply- and control input

Nominal voltage	**UC 24-240 V (UC = AC / DC)**
Operating voltage range	UC 19 … 250 V
Power consumption	approx. 1 W
Frequency range	15 … 60 Hz
Allowed DC residual current into B1	≤ 0.5 mA
AC Neon lamp residual current into B1	≤ 10 mA
Trigger threshold voltage on B1, AC / DC	15 / 17 V

Insulation

Test voltage between output and control input	2.5 kVrms 1 minute

General Specifications

Ambient temperature storage /operation	-40 … 85 °C / -40 …60 °C (Railway: -70 °C)
Conductor cross section	Stranded wire 2.5 mm^2, 2 x 1.5 mm^2
Ingress protection degree	IP 20
Max. Screw torque	0.4 Nm
Housing material / weight	Lexan / 70 g

Standard types

UC (AC/DC), 15...60 Hz	**CIM32/UC24-240V**
Railway	**CIM32R/UC24-240V**

Connection diagram

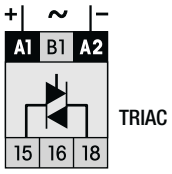
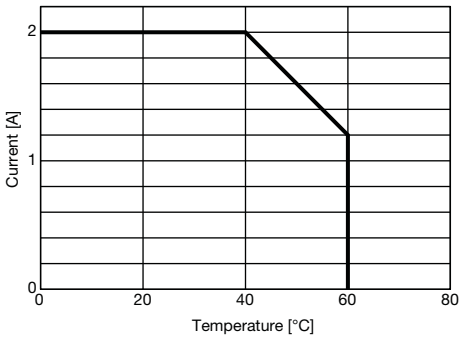
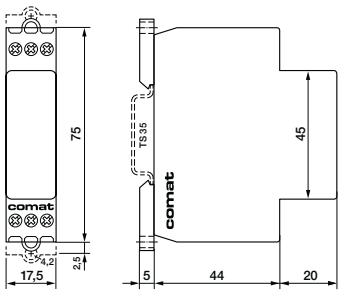


Fig. 1 Output derating curve



Dimensions [mm]



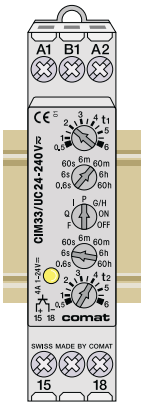
Technical approvals, conformities

EN 50155, EN 60730

CIM33, CIM33R (Railway)

Time relay with DC solid-state output

6 time functions and service function, 7 time ranges from 50 ms...60 h, DIN Rail mounting according to DIN 43 880

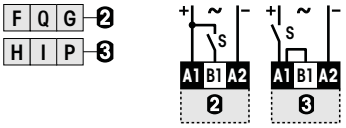


Type: CIM33/UC24-240V

Sophisticated multifunction time relay, 1 transistor output, 6 time functions and service function ON/OFF, 7 time ranges from 50 ms … 60 h, Multifunction LED state indicator, suitable for any time-control application, light-switch neon lamp current absorption on input B1, manual switching function for maintenance emergency, etc., 16.6 Hz applications. Railway version available.

Maximum contact load	**4 A / 30 V**
Recommended minimum contact load	**1 mA**

Time functions and related connection diagrams (Function diagrams: refer to page 130)
The functions are selectable by rotary switch



LED function table:

LED	Relay	Time run
OFF	OFF	NO
Continuous ON	ON	NO
Short blinking	OFF	YES
Long blinking	ON	YES

Time data

7 partial time ranges, t_{max} (rotary switch)	0.6, 6, 60 s / 6, 60 min / 6, 60 h
Fine adjustment range (rotary knob)	t_{min} … t_{max}, 0.5 … 6
Time range tolerance	t_{min}: -5 % … +0 % / t_{max}: -0 % … +5 %
Repetition accuracy	± 0.1 % or DC: 2 ms / AC: 10 ms
Response time, power on, on A1	≤ 45 ms
Min. trigger pulse on B1	20 ms (AC / DC)
Reset time B1 (AC/DC)	≤ 30 ms
Voltage failure buffering (50 / 60 Hz)	≥ 20 ms

Output

Type	MOS FET
Rated operational current (Fig. 1)	4 A
Max. inrush current (10 µs)	40 A
Max. switching voltage	30 V
Leakage current	< 10 µA

Power supply- and control input

Nominal voltage (UC = AC / DC)	**UC 24-240 V (UC = AC / DC)**
Operating voltage range	UC 19 … 250 V
Power consumption	approx. 1 W
Frequency range	15 … 60 Hz
Allowed DC residual current into B1	≤ 0.5 mA
AC Neon lamp residual current into B1	≤ 10 mA
Trigger threshold voltage on B1, AC / DC	15 / 17 V

Insulation

Test voltage between output and control input	2.5 kVrms 1 minute

General Specifications

Ambient temperature storage / operation	-40 … 85 °C / -40 …60 °C (Railway: -70 °C)
Conductor cross section	Stranded wire 2.5 mm², 2 x 1.5 mm²
Ingress protection degree	IP 20
Max. Screw torque	0.4 Nm
Housing material / Weight	Lexan / 70 g

Standard types

UC (AC/DC), 15...60 Hz	**CIM33/UC24-240V**
Railway	**CIM33R/UC24-240V**

Connection diagram

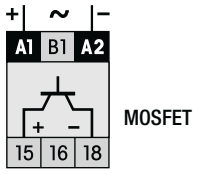
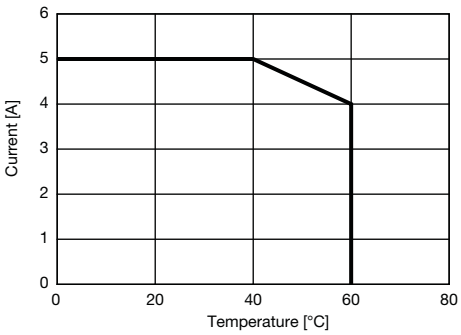
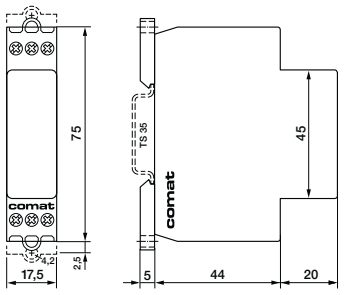


Fig. 1 Output derating curve



Dimensions [mm]



Technical approvals, conformities

EN 50155; EN 60730