

Terminal relays

Manual switch VDI 3814

with enhanced features

MIRO 6.2

Output relay
1 C/O contact



MIRO 6.2

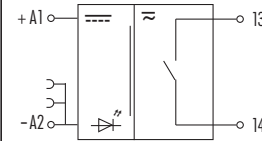
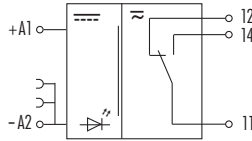
Output relay
1 N/O contact



Circuit diagram

Common connection up to max. 50 V AC/DC

At connection voltages of 110 and 230 V, A2 does not feature potential sockets



Ordering data

Input voltage	spring clamp/screw terminals	Art.-No.	Art.-No.
12 V DC	cUL	6652050	
24 V DC	UL + CSA	6652000	6652002
24 V AC/DC	UL + CSA	6652001	6652015
48 V DC	UL + CSA	6652020	
110 V AC/DC	UL + CSA	6652030	
230 V AC/DC	UL + CSA	6652040	

Input

Input voltage/-current	12 V DC	24 V DC	24 V AC/DC	48 V DC	110 V AC/DC	230 V AC/DC
	10 ... 15 V DC / approx. 20 mA	19.2 ... 30 V DC / approx. 14 mA	19.2 ... 30 V AC/DC / approx. 17 mA	40 ... 53 V DC / approx. 12 mA	95 ... 121 V AC/DC / approx. 4 mA	195 ... 253 V AC/DC / approx. 3 mA

Status indicator

green LED

Output

Max. switched voltage	250 V AC/DC
Max. switched current	6 A (see table, switching capabilities to EN 60947-5-1)
Min. load current	10 mA/12 V DC
Max. power rating (voltage dependent)	1500 VA/120 W
Contact material	Ag Sn O ₂
Energize/release/contact bounce time	10/15/1.5 ms

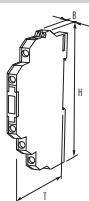
General data

Mech./elect. life	2 x 10 ⁷ / load dependent (for inductive loads we recommend interference suppression components connected parallel to the coil)
Max. switching frequency	10 Hz
Test isolation voltage	4 kV/AC; safe separation to EN 60947-1
Air and creepage distance	6/8 mm
Temperature range	-20...+55 °C
Mounting method	DIN-rail mounting to EN 60715 (TH35)
Dimension H x B x T	90 x 6.2 x 65 mm

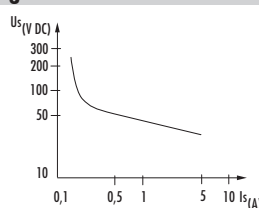
Accessories

Accessories	Art.-No.
Bridging link max. 2 A	90961
Bridging comb 10-pole, red	90976
End caps, 1 pair, red	90982
Bridging comb 10-pole, blue	90975
End caps, 1 pair, blue	90980
Wire chain 16-pole	90977
Label plate	90901

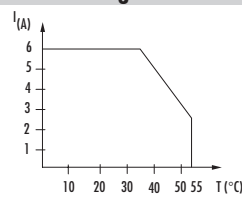
Dimension drawing



Load limit curve



De-rating curve



Switching capabilities to EN 60947

	AC 1	AC 15	DC 13
24 V	6 A	3 A	1 A
110 V	6 A	3 A	0.2 A
230 V	6 A	3 A	0.1 A

Notes

For screw-type terminal connection, the item number changes from 6652... to 52... (i.e. the prefix 66 is dropped).

1) When the listed values are exceeded the gold plating is destroyed. The relay will then take on the properties of an output type.

Terminal relays

Input relays

with enhanced features

MIRO 6.2

Input relays
1 C/O contact



MIRO 6.2

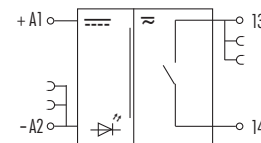
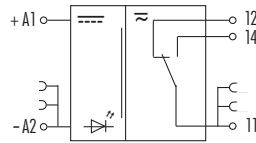
Input relays
1 N/O contact



Circuit diagram

Common connection up to max. 50 V AC/DC

At connection voltages of 110 and 230 V, A2 does not feature potential sockets



Ordering data

Input voltage	spring clamp/screw terminals	Art.-No.	spring clamp/screw terminals	Art.-No.
12 V DC				
24 V DC	UL + CSA	6652005	UL + CSA	6652004
24 V AC/DC	UL + CSA	6652003		
48 V DC	UL + CSA	6652021		
110 V AC/DC	UL + CSA	6652031		
230 V AC/DC	UL + CSA	6652041		

Input

Input voltage/-current	12 V DC	10 ... 15 V DC / approx. 20 mA
	24 V DC	19.2 ... 30 V DC / approx. 14 mA
	24 V AC/DC	19.2 ... 30 V AC/DC / approx. 17 mA
	48 V DC	40 ... 53 V DC / approx. 12 mA
	110 V AC/DC	95 ... 121 V AC/DC / approx. 4 mA
	230 V AC/DC	195 ... 253 V AC/DC / approx. 3 mA

Status indicator

yellow LED

Output

Max. switched voltage	30 V AC/36 V DC ¹⁾
Max. switched current	50 mA ¹⁾
Min. load current	1 mA/12 V DC
Max. power rating (voltage dependent)	1500 VA/120 W
Contact material	Ag Sn O ₂ gold plated
Energize/release/contact bounce time	10/15/1.5 ms

General data

Mech./elect. life	2 x 10 ⁷ /load dependent (for inductive loads we recommend interference suppression components connected parallel to the coil)
Max. switching frequency	10 Hz
Test isolation voltage	4 kV/AC; safe separation to EN 60947-1
Air and creepage distance	6/8 mm
Temperature range	-20 ... +55 °C
Mounting method	DIN-rail mounting to EN 60715 (TH35)

Dimension H x B x T

90 x 6.2 x 65 mm

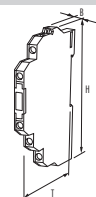
78 x 6.2 x 65 mm

Accessories

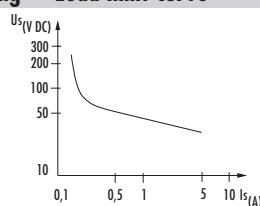
Art.-No.

Bridging link max. 2 A	90961
Bridging comb 10-pole, red	90976
End caps, 1 pair, red	90982
Bridging comb 10-pole, blue	90975
End caps, 1 pair, blue	90980
Wire chain 16-pole	90977
Label plate	90901

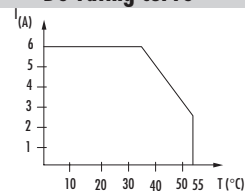
Dimension drawing



Load limit curve



De-rating curve



Switching capabilities to EN 60947

	AC 1	AC 15	DC 13
24 V	6 A	3 A	1 A
110 V	6 A	3 A	0.2 A
230 V	6 A	3 A	0.1 A

Notes

For screw-type terminal connection, the item number changes from 6652... to 52... (i.e. the prefix 66 is dropped).

¹⁾ When the listed values are exceeded the gold plating is destroyed. The relay will then take on the properties of an output type

Terminal relays with enhanced features

MIRO 6.2

Output relay
1 N/O contact
with protected H-O-A switch



MIRO 6.2

Output relay
1 C/O contact
with isolation function

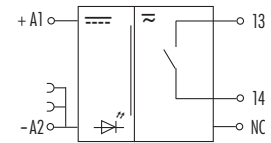
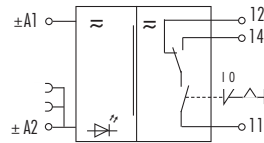
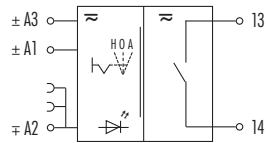
MIRO 6.2

Output relay
1 N/O contact
with soldering terminal

Circuit diagram

Common connection up to
max. 50 V AC/DC

At connection voltages of 110 and 230 V,
A2 does not feature potential sockets



common return for NC

Ordering data

Input voltage	spring clamp/screw terminals	Art.-No.	spring clamp/screw terminals	Art.-No.	spring clamp/screw terminals	Art.-No.
24 V DC					UL + CSA	6652006
24 V AC/DC	UL + CSA	6652007	UL + CSA	6652010		
48 V DC						
110 V AC/DC						
230 V AC/DC						

Input

Input voltage/-current	24 V DC	19.2 ... 30 V DC	/ approx. 14 mA
	24 V AC/DC	19.2 ... 30 V AC/DC	/ approx. 17 mA
	48 V DC		
	110 V AC/DC		
	230 V AC/DC		

Status indicator green LED

Output

Max. switched voltage	250 V AC/DC
Max. switched current	6 A (see table)
Min. load current	10 mA/12 V DC
Max. power rating (voltage dependent)	1500 VA/120 W
Contact material	Ag Sn O ₂
Energize/release/contact bounce time	10/15/1.5 ms

General data

Mech./elect. life	2 x 10 ⁷ /load dependent (for inductive loads we recommend interference suppression components connected parallel to the coil)
Max. switching frequency	10 Hz
Test isolation voltage	4 kV/AC; safe separation to EN 60947-1
Air and creepage distance	6/8 mm
Temperature range	-20...+55 °C
Mounting method	DIN-rail mounting to EN 60715 (TH35)
Dimension H x B x T	90 x 12.4 x 65 mm

Accessories

Art.-No.	Dimension drawing	Load limit curve	De-rating curve	Switching capabilities to EN 60947																
90961				<table border="1"> <thead> <tr> <th></th> <th>AC 1</th> <th>AC 15</th> <th>DC 13</th> </tr> </thead> <tbody> <tr> <td>24 V</td> <td>6 A</td> <td>3 A</td> <td>1 A</td> </tr> <tr> <td>110 V</td> <td>6 A</td> <td>3 A</td> <td>0.2 A</td> </tr> <tr> <td>230 V</td> <td>6 A</td> <td>3 A</td> <td>0.1 A</td> </tr> </tbody> </table>		AC 1	AC 15	DC 13	24 V	6 A	3 A	1 A	110 V	6 A	3 A	0.2 A	230 V	6 A	3 A	0.1 A
					AC 1	AC 15	DC 13													
24 V					6 A	3 A	1 A													
110 V					6 A	3 A	0.2 A													
230 V					6 A	3 A	0.1 A													
90976																				
90982																				
90975																				
90980																				
90977																				
90901																				

Notes

For screw-type terminal connection, the item number changes from 6652... to 52... (i.e. the prefix 66 is dropped).

1) When the listed values are exceeded the gold plating is destroyed. The relay will then take on the properties of an output type

Terminal relays with enhanced features

MIRO 6.2

Output relay
1 N/O contact
with H-O-A switch



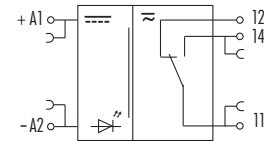
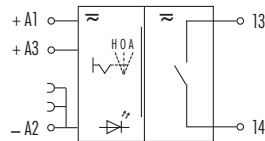
MIRO 6.2 pluggable

Output relay
1 C/O contact



Circuit diagram

Common connection up to
max. 50 V AC/DC

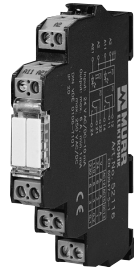


Ordering data		Art.-No.	Art.-No.
Input voltage	screw terminals		spring clamp terminals
24 V DC			UL + CSA
24 V AC/DC	UL + CSA	526010	¹⁾ 3000-16013-2100010
48 V DC			UL + CSA
110 V AC/DC			
230 V AC/DC			UL + CSA
			²⁾ 3000-16013-3100030
Input			
Input voltage/-current	24 V DC		19.2 ... 26.8 V AC/DC/approx. 10 mA
	24 V AC/DC	19.2 ... 28 V AC/DC /approx. 7 mA	19.2 ... 28.8 V AC/DC/approx. 12 mA
	48 V DC		
	110 V AC/DC		
	230 V AC/DC		184 ... 264 V AC/DC/approx. 4 mA
Status indicator	green LED for relay activation red LED for manual made		green LED
Output			
Max. switched voltage	250 V AC/DC		
Max. switched current	6 A (see table)		
Min. load current	10 mA/12 V DC		
Max. power rating (voltage dependent)	1500 VA/120 W		
Contact material	Ag Sn O ₂		
Energize/release/contact bounce time	8/20/2 ms		
General data			
Mech./elect. life	2 x 10 ⁷ /load dependent (for inductive loads we recommend interference suppression components connected parallel to the coil)		
Max. switching frequency	10 Hz		
Test isolation voltage	4 kV/AC; safe separation to EN 60947-1		
Air and creepage distance	6/8 mm		
Temperature range	-20 ... +55 °C		
Mounting method	DIN-rail mounting to EN 60715 (TH35)		
Dimension H x B x T	90 x 6.2 x 65 mm		93 x 6.2 x 75.6 mm
Accessories		Art.-No.	Art.-No.
	Bridging link max. 2 A	90961	Bridging link, blue 3000-90000-0300010
	Bridging comb 10-pole, red	90976	Bridging link, black 3000-90000-0300020
	End caps, 1 pair, red	90982	Removable relay ¹⁾ 3000-16023-2100010
	Bridging comb 10-pole, blue	90975	²⁾ 3000-16023-2100020
	End caps, 1 pair, blue	90980	Isolation plate 3000-90000-0300030
	Wire chain 6-pole	90977	
	Label plate	90901	
Notes		For screw-type terminal connection, the item number changes from 6652... to 52... (i.e. the prefix 66 is dropped). Load limit curve, de-rating curve and switching capabilities see page 3.3.6	

Terminal relays

MIRO 12.4

Output relay
2 C/O contact
with enhanced features



MIRO 12.4

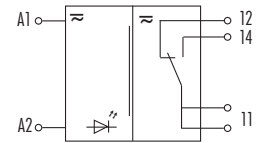
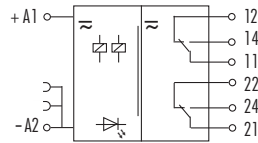
Input relays
2 C/O contact
with enhanced features

MIRO 12.4

Input relays
1 C/O contact
Multi-voltage input

Circuit diagram

At connection voltages of 110 and 230 V, A2 does not feature potential sockets



Ordering data	Art.-No.	Art.-No.	Art.-No.
Input voltage	spring clamp/screw terminals	spring clamp/screw terminals	screw terminals
24 V DC	cUL 6652102	cUL 6652110	52160
24 V AC/DC	cUL 6652103	cUL 6652111	52160
48 V DC	cUL 6652120	cUL 6652126	52160
110 V AC/DC	cUL 6652130	cUL 6652136	52160
230 V AC/DC	cUL 6652140	cUL 6652146	52160

Input	Input voltage/-current	Input voltage/-current	Input voltage/-current
Status indicator	24 V DC	19.2 ... 30 V DC / approx. 18 mA	
	24 V AC/DC	19.2 ... 30 V AC/DC / approx. 20 mA	min. 21.6 V AC/DC/appr. 6 mA max. 12 mA for 1 s)
	48 V DC	40 ... 53 V DC / approx. 14 mA	approx. 27 mA (max. 60 mA for 180 s)
	110 V AC/DC	95 ... 121 V AC/DC / approx. 7 mA	approx. 10 mA (max. 300 mA for 60 s)
	230 V AC/DC	195 ... 253 V AC/DC / approx. 5 mA	max. 253 V AC/DC/appr. 6 mA (max. 900 mA for 15 ms)

Output	Output	Output
Max. switched voltage	250 V AC/DC	30 V AC/36 V DC ¹⁾
Max. switched current	6 A (see table)	50 mA ¹⁾
Min. load current	10 mA/12 V DC	1 mA/12 V DC
Max. power rating (voltage dependent)	1500 VA/120 W	
Contact material	Ag Sn O ₂	Ag Sn O ₂ gold plated
Energize/release/contact bounce time	10/15/1.5 ms	

General data	General data
Mech./elect. life	2 x 10 ⁷ /load dependent (for inductive loads we recommend interference suppression components connected parallel to the coil)
Max. switching frequency	10 Hz
Test isolation voltage	4 kV/AC; safe separation to EN 60947-1
Air and creepage distance	6/8 mm
Temperature range	-20...+55 °C
Mounting method	DIN-rail mounting to EN 60715 (TH35)
Dimension H x B x T	90 x 12.4 x 65 mm

Accessories	Art.-No.	Dimension drawing	Load limit curve	De-rating curve	Switching capabilities to EN 60947																
Bridging link max. 2 A	90961				<table border="1"> <thead> <tr> <th></th> <th>AC 1</th> <th>AC 15</th> <th>DC 13</th> </tr> </thead> <tbody> <tr> <td>24 V</td> <td>6 A</td> <td>3 A</td> <td>1 A</td> </tr> <tr> <td>110 V</td> <td>6 A</td> <td>3 A</td> <td>0.2 A</td> </tr> <tr> <td>230 V</td> <td>6 A</td> <td>3 A</td> <td>0.1 A</td> </tr> </tbody> </table>		AC 1	AC 15	DC 13	24 V	6 A	3 A	1 A	110 V	6 A	3 A	0.2 A	230 V	6 A	3 A	0.1 A
	AC 1					AC 15	DC 13														
24 V	6 A					3 A	1 A														
110 V	6 A	3 A	0.2 A																		
230 V	6 A	3 A	0.1 A																		
Wire chain 16-pole	90977																				
Label plate	90901																				

Notes	Notes
	For screw-type terminal connection, the item number changes from 6652... to 52... (i.e. the prefix 66 is dropped). ¹⁾ When the listed values are exceeded the gold plating is destroyed. The relay will then take on the properties of an output type.

Terminal relays with enhanced features

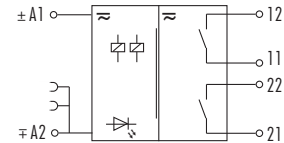
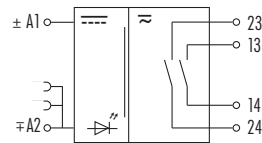
MIRO 12.4
Output relay
2 N/O contact/with enhanced features
for use in control cabinets in builing installations



MIRO 12.4
Output relay
2 N/O contacts



Circuit diagram



Ordering data

Input voltage	Art.-No.	Art.-No.
24 V DC		
24 V AC/DC	6652106	6652104
48 V DC		
110 V AC/DC		
230 V AC/DC		

Input

Input voltage/-current	
24 V DC	
24 V AC/DC	19.2 ... 30 V AC/DC /approx. 17 mA
48 V DC	
110 V AC/DC	
230 V AC/DC	195 ... 253 V AC/DC /approx. 3 mA (hold voltage \geq 70 V/hold current \geq 0.3 mA)

Status indicator

green LED

Output

Max. switched voltage	250 V AC/DC
Max. switched current	6 A (see table)
Min. load current	10 mA/12 V DC
Max. power rating (voltage dependent)	1500 VA/120 W
Contact material	Ag Sn O ₂
Energize/release/contact bounce time	10/15/1.5 ms

General data

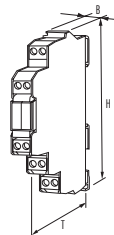
Mech./elect. life	2 x 10 ⁷ /load dependent (for inductive loads we recommend interference suppression components connected parallel to the coil)
Max. switching frequency	10 Hz
Test isolation voltage	4 kV/AC; safe separation to EN 60947-1
Air and creepage distance	6/8 mm
Temperature range	-20 ... +55 °C
Mounting method	DIN-rail mounting to EN 60715 (TH35)
Dimension H x B x T	90 x 12.4 x 65 mm

Accessories

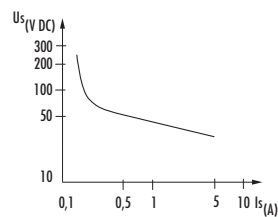
Art.-No.

Bridging link max. 2 A	90961
Wire chain 16-pole	90977
Label plate	90901

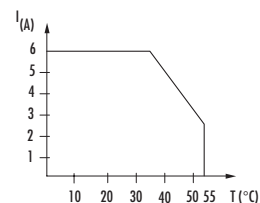
Dimension drawing



Load limit curve



De-rating curve



Switching capabilities to EN 60947

	AC 1	AC 15	DC 13
24 V	6 A	3 A	1 A
110 V	6 A	3 A	0.2 A
230 V	6 A	3 A	0.1 A

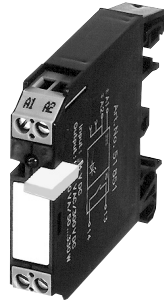
Notes

For screw-type terminal connection, the item number changes from 6652... to 52... (i.e. the prefix 66 is dropped).

Mini relay modules

RMM

Output relay
with minus plug-in jumper

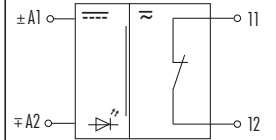
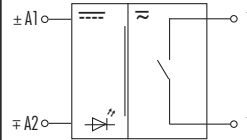
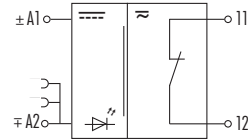
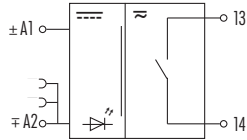


RMM

Output relay
without minus plug-in jumper



Circuit diagram



Ordering data

	Art.-No.	Art.-No.	Art.-No.	Art.-No.
Input voltage	1 relay; 1 N/O contact	1 relay; 1 N/C contact	1 relay; 1 N/O contact	1 relay; 1 N/C contact
24 V DC	51851	51808	51551	51508
48 V DC	51850		51550	
110 V AC			51552	
230 V AC			51515	51562

Input

Input voltage/-current	24 V AC/DC ±10 %/15 mA			
	48 V AC/DC ±10 %/10 mA			
	110 V AC +10 % -15 %/3.5 mA			
	230 V AC +10 % -15 %/3.5 mA			

Plug-in jumper	Art.-No. 90960 (included with relay)			-
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Status indicator	red LED			
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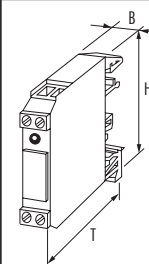
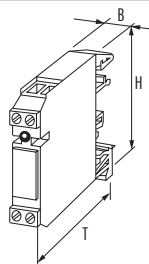
Output

Max. switched voltage	250 V AC/300 V DC			
Max. switched current	5 A			
Min. load current	100 mA			
Max. power rating (voltage dependent)	1250 VA/240 W			
Contact material	Ag Ni 0.15 hv; Ag hv			
Energize/release/contact bounce time	10/15/1.5 ms			

General data

Mech./elect. life	2 x 10 ⁷ /load dependent			
Max. switching frequency	10 Hz			
Test isolation voltage	4 kV/AC			
Temperature range	-20...+50 °C			
Mounting method	DIN-rail mounting to EN 60715 (TH35) or (G32)			
Dimension H x B x T	56 x 12 x 64 mm			

Dimension drawing



Notes

Accessories can be found in chapter 3.13

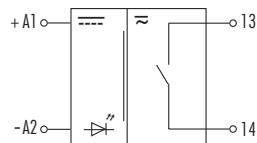
Mini relay modules

RMM

Output relay



Circuit diagram



Ordering data

Art.-No.

Input voltage 1 relay; 1 N/O contact

24 V DC

512764

48 V DC

110 V AC

230 V AC

Input

Input voltage/-current 24 V DC $\pm 10\%$ /15 mA

Status indicator green LED

Connection screw terminals

Output

Max. switched voltage 250 V AC/300 V DC

Max. switched current 5 A

Min. load current 100 mA

Max. power rating (voltage dependent) 1250 VA/240 W

Contact material Ag Ni 0.15 hv; Ag hv

Energize/release/contact bounce time 10/15/1.5 ms

Connection screw terminals

General data

Mech./elect. life 2×10^7 /load dependent

Max. switching frequency 10 Hz

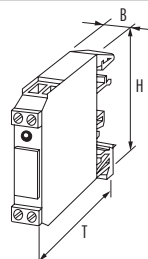
Test isolation voltage 4.0 kV AC

Temperature range $-20 \dots +50 \text{ }^\circ\text{C}$

Mounting method DIN-rail mounting to EN 60715 (TH35) or (G32)

Dimension H x B x T 56 x 12 x 64 mm

Dimension drawing



Notes

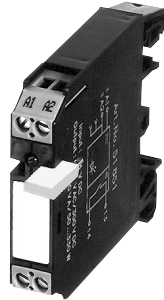
Accessories can be found in chapter 3.13

VW Id.Nr.: 1 232252

Mini relay modules

RMME

Input relays
with minus plug-in jumper

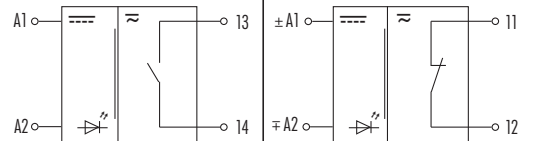
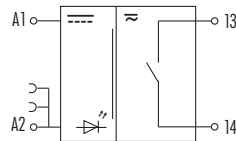


RMME

Input relays
without minus plug-in jumper



Circuit diagram



Ordering data

Input voltage	Art.-No.	Art.-No.	Art.-No.
24 V AC/DC	51860	51560	51571
48 V AC/DC		51553	
110 V AC		51526	
230 V AC		51517	

Input

Input voltage/-current	24 V AC/DC ±10 %/7 mA
	48 V AC/DC ±10 %/7 mA
	110 V AC +10 % -15 %/7 mA
	230 V AC +10 % -15 %/7 mA

Plug-in jumper	Art.-No. 90960 (included with relay)	-
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Status indicator	yellow LED
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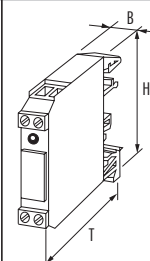
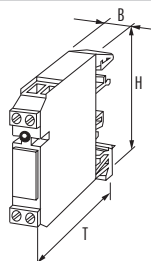
Output

Max. switched voltage	125 V AC/DC
Max. switched current	1 A
Min. load current	1 mA
Max. power rating (voltage dependent)	60 VA/30 W
Contact material	Pd Ni-Au Rh
Energize/release/contact bounce time	10/10/1 ms

General data

Mech./elect. life	1 x 10 ⁸ /load dependent
Max. switching frequency	15 Hz
Test isolation voltage	1.5 kV AC
Temperature range	-20...+60 °C
Mounting method	DIN-rail mounting to EN 60715 (TH35) or (G32)
Dimension H x B x T	56 x 12 x 64 mm

Dimension drawing



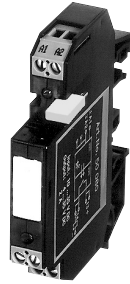
Notes

Accessories can be found in chapter 3.13

Relay modules with minus plug-in jumper

RMMD

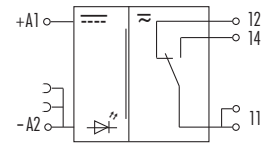
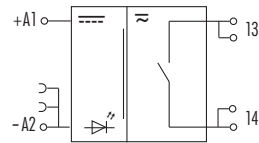
Output relay with minus plug-in jumper



RMMD

Output relay with minus plug-in jumper

Circuit diagram



Ordering data

Art.-No.

Art.-No.

Input voltage	1 relay; 1 N/O contact		1 relay; 1 N/C contact
24 V DC		¹⁾ 51100	¹⁾ 51120
48 V AC/DC			
110 V AC			
230 V AC		51108	

Input

Input voltage/-current 24 V DC $\pm 10\%$ /17 mA

230 V AC $+10\%$ -15%/5 mA (without Plug-in jumper)

Plug-in jumper Art.-No. 90960 (included with relay) plug-in jumper not possible with 230 V version

Status indicator red LED

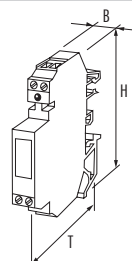
Output

Max. switched voltage	250 V AC/DC
Max. switched current	8 A (6 A at 230 V-type)
Min. load current	100 mA
Max. power rating (voltage dependent)	2000 VA/240 W
Contact material	Ag Ni 0.15 hv; Ag hv
Energize/release/contact bounce time	10/15/2 ms

General data

Mech./elect. life	2×10^7 /load dependent
Max. switching frequency	10 Hz
Test isolation voltage	5 kV AC; at Art.-No. 51108: 4.0 kV AC
Temperature range	-20...+50 °C
Mounting method	DIN-rail mounting to EN 60715 (TH35) or (G32)
Dimension H x B x T	82 x 12 x 68 mm

Dimension drawing



Notes

Accessories can be found in chapter 3.13

¹⁾Units with safe separation to VDE 0106, part 101/VDE 0160

Minus plug-in jumper

RMMD

Output relay
with low connection current

RMMDE

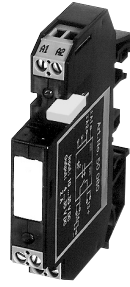
Input relays
with enhanced features

RMMDE

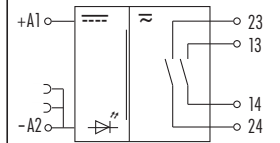
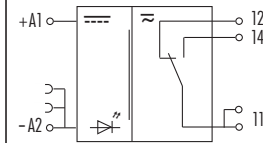
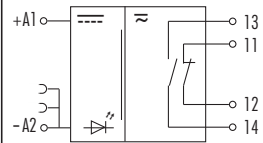
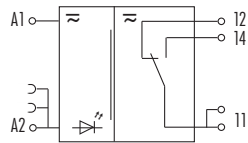
Input relays
with enhanced features

RMMDE

Input relays
with enhanced features



Circuit diagram



Ordering data

	Art.-No.	Art.-No.	Art.-No.	Art.-No.
Input voltage	1 relay; 1 C/O contact	1 relay; 1 N/O contact/1 N/C contact	1 relay; 1 C/O contact	1 relay; 2 N/O contacts
24 V AC/DC	¹⁾ 51125			
24 V DC		516014	51130	51140
110 V AC				
230 V AC			51138	
Input				
Input voltage/-current	24 V AC/DC ±10 %/max. 10 mA	24 V DC ±10 %/max. 20 mA	24 V DC ±10 %/max. 15 mA	24 V DC ±10 %/max. 15 mA
			230 V AC +10 % -15 %/5 mA	

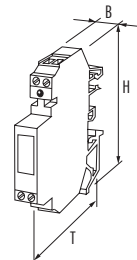
Plug-in jumper Art.-No. 90960 (included with relay) plug-in jumper not possible with 230 V version

Status indicator red LED yellow LED

Output				
Max. switched voltage	250 V AC/DC	250 V AC/DC	250 V AC/DC	250 V AC/DC
Max. switched current	8 A	3 A	5 A	2 A
Min. load current	100 mA	1 mA	1 mA	5 mA
Max. power rating (voltage dependent)	2000 VA/240 W	90 W/VA	60 VA/30 W	250 VA/150 W
Contact material	Ag Ni 0.15 hv; Ag hv	Ag-htv	Ag Ni 0.15 hv; Ag hv	Ag Au
Energize/release/contact bounce time	10/15/2 ms	6/3/2 ms	10/10/1 ms	10/10/1 ms

General data				
Mech./elect. life	2×10^7 /load dependent	2×10^7 /load dependent	1×10^8 /load dependent	2×10^7 /load dependent
Max. switching frequency	10 Hz	10 Hz	15 Hz	15 Hz
Test isolation voltage	5 kV AC	2.5 kV AC	4 kV AC	1.5 kV AC
Temperature range	-20...+50 °C	-20...+60 °C	-20...+60 °C	-20...+50 °C
Mounting method	DIN-rail mounting to EN 60715 (TH35) or (G32)			
Dimension H x B x T	82 x 12 x 68 mm			

Dimension drawing



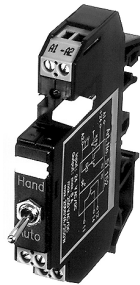
Notes

Accessories can be found in chapter 3.13
¹⁾Units with safe separation to VDE 0106, part 101/VDE 0160

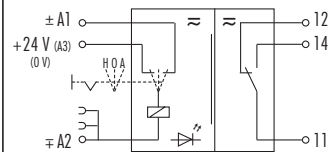
for use in Building Management Systems

RMMDH

Output relay with negative plug-in jumper and toggle switch for HAND-O-AUTO control



Circuit diagram



Ordering data

Art.-No.

Input voltage 1 relay; 1 C/O contact

24 V DC

24 V AC/DC

51152

110 V AC

230 V AC

Input

Input voltage/-current

24 V AC/DC $\pm 10\%$ / 16 mA

Plug-in jumper

Art.-No. 90960 (included with relay)

Status indicator

red LED

Output

Max. switched voltage

250 V AC/DC

Max. switched current

8 A

Min. load current

100 mA

Max. power rating (voltage dependent)

2000 VA/240 W

Contact material relay (switch)

Ag Ni 0.15 hv

Energize/release/contact bounce time

10/10/2 ms

General data

Mech./elect. life

3×10^7 / load dependent

Max. switching frequency

15 Hz

Test isolation voltage

3 kV AC

Temperature range

-20...+50 °C

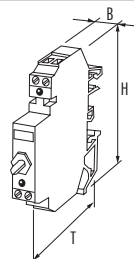
Mounting method

DIN-rail mounting to EN 60715 (TH35) or (G32)

Dimension H x B x T

82 x 12 x 82 mm

Dimension drawing/description



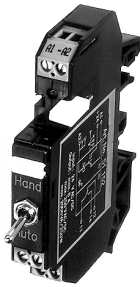
Notes

Accessories can be found in chapter 3.13

with HAND-O-AUTO

RMMDH

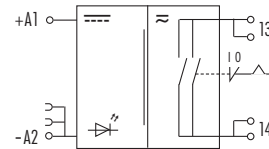
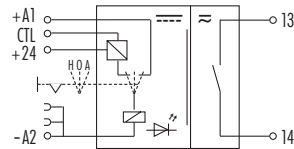
Output relay with negative plug-in and toggle switch for HAND-O-AUTO control has auxiliary alarm contact when in "HAND" position



RMMDH

Output relay with negative plug-in jumper and toggle switch to bridge working contact.

Circuit diagram



Ordering data

Input voltage	Art.-No.	Art.-No.
24 V DC	51153	51101
48 V DC		
110 V AC		
230 V AC		

Input

Input voltage/-current	24 V DC $\pm 10\%$ / 16 mA	24 V DC $\pm 10\%$ / 10 mA
------------------------	----------------------------	----------------------------

Plug-in jumper	Art.-No. 90960 (included with relay)
Status indicator	red LED

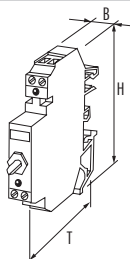
Output

Max. switched voltage	250 V AC/DC; CTL-alarm signal 24 V DC	250 V AC/30 V DC
Max. switched current	8 A; CTL-alarm signal 10 mA	6 A
Min. load current	100 mA	100 mA
Max. power rating (voltage dependent)	2000 VA/240 W	750 VA/90 W
Contact material relay (switch)	Ag Ni 0.15 hv	Ag Cd O (Ag)
Energize/release/contact bounce time	10/10/2 ms	

General data

Mech./elect. life	3×10^7 / load dependent	
Max. switching frequency	15 Hz	
Test isolation voltage	4 kV AC	3 kV AC
Temperature range	-20...+50 °C	
Mounting method	DIN-rail mounting to EN 60715 (TH35) or (G32)	
Dimension H x B x T	82 x 12 x 82 mm	

Dimension drawing



This relay enables the load to be controlled by a PLC with the added facility to manually switch the load on or off using the toggle switch. Art.-No. 51101 differs in that the relay contact is bridged by the hand operated switch.

Notes

Accessories can be found in chapter 3.13

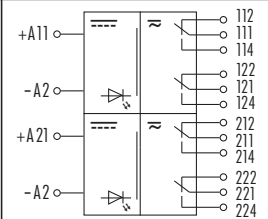
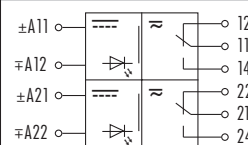
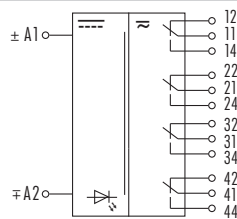
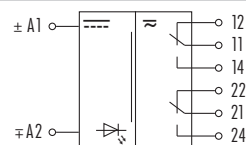
MCVO Relays

RM

Output relay



Circuit diagram



Terminal layout different for Art.-No. 510676

Ordering data	Art.-No.	Art.-No.	Art.-No.	Art.-No.
Input voltage	1 relay; 2 C/O contacts	1 relay; 4 C/O contacts	2 relays; each 1 C/O contact	2 relays; each 2 C/O contacts
24 V DC	51540	51410	51485	51465
48 V DC				
110 V AC				
230 V AC		51413	51412	
Input				
Input voltage/-current	24 V DC $\pm 10\%$ / 28 mA		24 V DC $\pm 10\%$ / 10 mA	24 V DC $\pm 10\%$ / 14 mA
	230 V AC $+10\%$ - 15% / 15 mA		230 V AC $+10\%$ - 15% / 10 mA	
Status indicator	red LED			
Output				
Max. switched voltage	250 V AC/DC	250 V AC/DC	250 V AC/DC	250 V AC/DC
Max. switched current	5 A	2 A	5 A	5 A
Min. load current	100 mA			
Max. power rating (voltage dependent)	1250 VA / 240 W	125 VA / 60 W	1250 VA / 240 W	
Contact material	Ag Ni 0.15	Ag hv	Ag Ni 0.15 hv; Ag hv	Ag Ni 0.15
Energize/release/contact bounce time	10/10/2 ms	10/20/2 ms	10/10/2 ms	
General data				
Mech./elect. life	5×10^7 / load dependent	5×10^7 / load dependent	2×10^7 / load dependent	
Max. switching frequency	10 Hz	10 Hz	10 Hz	
Test isolation voltage	4 kV AC	1.0 kV AC	4 kV AC	
Temperature range	-20...+50 °C			
Mounting method	DIN-rail mounting to EN 60715 (TH 35) or (G 32)			
Dimensions H x B x T	75 x 22.5 x 102 mm			
Dimension drawing				
Notes	Accessories can be found in chapter 3.13			

MCVO Relays

RM

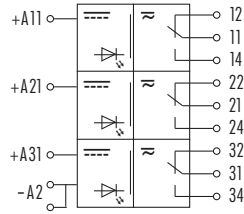
Output relay



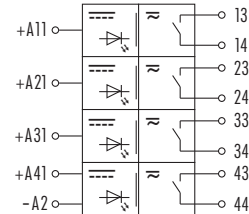
RM

Output relay

Circuit diagram



Common minus potential for all inputs = -A2



Common minus potential for all inputs = -A2

Ordering data	Art.-No.	Art.-No.
Input voltage	3 relays; each 1 C/O contact	4 relays; each 1 N/O contact
24 V DC	51403	512498
48 V DC		
110 V AC		
230 V AC		
Input		
Input voltage/-current	24 V DC \pm 10 %/16 mA	
Status indicator	red LED	
Output		
Max. switched voltage	250 V AC/DC	
Max. switched current	5 A	
Min. load current	100 mA	
Max. power rating (voltage dependent)	1250 VA/240 W	
Contact material	Ag Ni 0.15 hv; Ag hv	
Energize/release/contact bounce time	10/10/2 ms	
General data		
Mech./elect. life	2 x 10 ⁷ /load dependent	5 x 10 ⁷ /load dependent
Max. switching frequency	10 Hz	
Test isolation voltage	4 kV AC	
Temperature range	-20...+50 °C	
Mounting method	DIN-rail mounting to EN 60715 (TH 35) or (G 32)	
Dimensions H x B x T	75 x 22.5 x 102 mm	
Dimension drawing		
Notes	Accessories can be found in chapter 3.13	

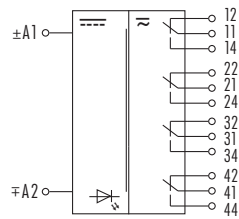
MCVO Relays

RME
Input relay

RME
Input relay



Circuit diagram



Ordering data

Art.-No.

Input voltage	1 relays; 4 C/O contacts	
24 V DC		516001
48 V DC		
110 V AC		
230 V AC		

Input

Input voltage/-current	24 V DC $\pm 10\%$ / 20 mA
Status indicator	yellow LED

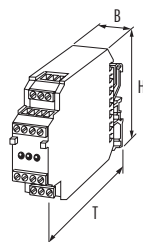
Output

Max. switched voltage	250 V AC/DC
Max. switched current	2 A
Min. load current	1 mA
Max. power rating (voltage dependent)	125 VA/60 W
Contact material	Ag hv
Energize/release/contact bounce time	10/10/1 ms

General data

Mech./elect. life	1 x 10 ⁸ / load dependent
Max. switching frequency	15 Hz
Test isolation voltage	1.5 kV AC
Temperature range	-20...+50 °C
Mounting method	DIN-rail mounting to EN 60715 (TH 35) or (G 32)
Dimensions H x B x T	75 x 22.5 x 102 mm

Dimension drawing



Notes

Accessories can be found in chapter 3.13

MCVO Relays

with positive displacement contact

RM

Output relay
with positive displacement contact

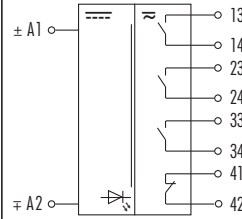
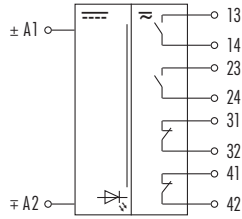


RM

Output relay
with positive displacement contact

Relays

Circuit diagram



Ordering data

Input voltage	Art.-No.	Art.-No.
24 V DC	51300	51301
48 V DC		
110 V AC		
230 V AC		

Input

Input voltage/-current	24 V DC \pm 10 % / 17 mA
Status indicator	red LED

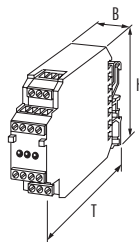
Output

Max. switched voltage	250 V AC/DC
Max. switched current	5 A
Min. load current	300 mA
Max. power rating (voltage dependent)	1000 VA/50 W
Contact material	Ag hr; Ag Sn O ₂
Energize/release/contact bounce time	15/15/2 ms

General data

Mech./elect. life	1 x 10 ⁶ / load dependent
Max. switching frequency	1 Hz
Test isolation voltage	2.5 kV AC
Temperature range	-20...+50 °C
Mounting method	DIN-rail mounting to EN 60715 (TH35) or (G32)
Dimensions H x B x T	75 x 22.5 x 102 mm

Dimension drawing



Notes

Accessories can be found in chapter 3.13