

Interface relays

Input Interface Relay - Output Interface Relay

CA 3056, CB 3056, CC 3056



0255081



CA 3056



CB 3056



CC 3056

- According to IEC/EN 60 947-5-1
- Protective separation acc. to IEC/EN 61 140, IEC/EN 60 947-1: 6 kV / 2, at CA / CB
- As option goldplated contacts (5 µm Au) to switch low loads
- LED indication
- Optionally with 1 NO contact, 1 NC contact, 1 C/O contact, 2 C/O contacts, 2 NO contacts
- Optionally with MOV on input to achieve higher surge immunity
- Width: 11.5 mm

Approval and Markings



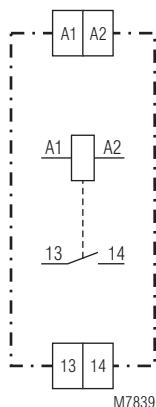
Application

- Link between the control and the power level
- For separating potentials

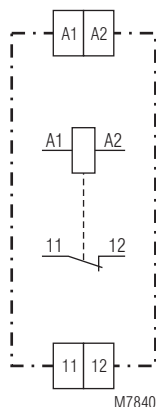
Indication

LED on, when supply connected

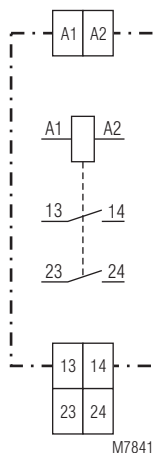
Circuit Diagrams



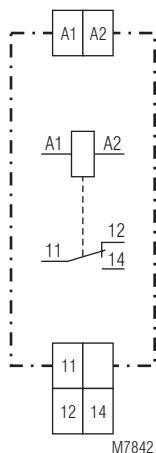
CA 3056.01



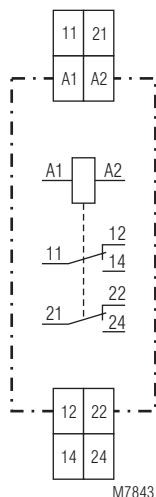
CA 3056.05



CB 3056.02



CB 3056.11



CC 3056.12

Connection Terminals

Terminal designation	Signal designation
A1, A2	Operating voltage
11 ... 24	Output contacts see circuit diagrams

Technical Data

Input

Nominal voltage U_N

CA 3056: DC 24, 48* V
AC 110 ... 130* V, 220 ... 240 V
AC/DC 12 V
CB 3056, CC 3056: AC/DC 24, 48* V
AC 110 ... 130* V, 220 ... 240 V
* on request

Voltage range

CA 3056: DC 90 ... 125 % U_N
(residual ripple < 10 %)
AC 80 ... 110 % U_N
DC 80 ... 110 % U_N
(residual ripple ≥ 10 ... 48 %)

Nominal consumption:

DC 24 V / 0.5 W
AC 230 V / 0.8 VA

Nominal frequency:

50 / 60 Hz

Frequency range:

± 5 %

Output

Contacts

CA 3056.01: 1 NO contact
CA 3056.05: 1 NC contact
CB 3056.11: 1 C/O contact
CB 3056.02: 2 NO contacts
CC 3056.12: 2 C/O contacts
Operate time: < 10 ms
Release time: < 20 ms
Nominal output voltage: AC 250 V
Thermal current I_{th} : 5 A (not at CA 3056.01/100)

Technical Data		
Switching capacity		
to AC 15		
NO contact:	3 A / AC 230 V	IEC/EN 60 947-5-1
NC contact:	1 A / AC 230 V	IEC/EN 60 947-5-1
to DC 13		
NO contact:	1 A / DC 24 V	IEC/EN 60 947-5-1
NC contact:	1 A / DC 24 V	IEC/EN 60 947-5-1
(not at CA 3056.01/100)		
permissible contact-loading capacity at CA 3056.01/100: 0.1...60 V / 1...300 mA		

Electrical life		
to AC 15 at 3 A, AC 230 V:	> 8 x 10 ⁵ switch. cycles IEC/EN 60 947-5-1 (not at CA 3056.01/100)	
Permissible switching frequency:	20 switching cycles / s	
Short circuit strength		
max. fuse rating:	6 A gG / gL	IEC/EN 60 947-5-1
Mechanische Lebensdauer:	> 30 x 10 ⁶ switching cycles	

General Data

Nominal operating mode	continuous operation	
Temperature range:		
Operation:	- 25 ... + 60 °C	
Storage:	- 25 ... + 60 °C	
Altitude:	< 2.000 m	
Air gap and creepage distance		
Rated insulation voltage:	300 V	
Overvoltage category:	III	
Rated impulse voltage / pollution degree:		
CA 3056, CB 3056:		
Input to Output:	6 kV / 2	IEC 60 664-1
CC 3056:		
Input to Output:	4 kV / 2	IEC 60 664-1
EMC		
Electrostatic discharge (ESD):	8 kV (air)	IEC/EN 61 000-4-2
HF irradiation:		
80 MHz ... 2.7 GHz:	10 V / m	IEC/EN 61000-4-3
Fast transients:	4 kV	IEC/EN 61 000-4-4
Surge voltages between wires for power supply:	1 kV	IEC/EN 61 000-4-5
between wire and ground:	2 kV	IEC/EN 61 000-4-5
interference suppression:	Limit value class B	EN 55 011
Degree of protection		
Housing:	IP 40	IEC/EN 60 529
Terminals:	IP 20	IEC/EN 60 529
Enclosure:	thermoplastic with VO behaviour according to UL Subject 94	
Vibration resistance:	amplitude 0.35 mm frequency 10 ... 55 Hz, IEC/EN 60 068-2-6	
Climate resistance:	20 / 060 / 04 IEC/EN 60 068-1	
Wire connection	DIN 46 228-1/-2/-3/-4	
Fixed screw terminals		
Cross section:	1 x 4 mm ² solid or 1 x 2.5 mm ² stranded wire with sleeve	
Insulation of wires or sleeve length:	8 mm	
Wire fixing	Captive plus-minus terminal screws M3.5 box terminals with wire protection	
Fixing torque:	0,8 Nm	
Mounting:	DIN rail IEC/EN 60 715	
Weight:		
CA 3056:	45 g	
CB 3056:	50 g	
CC 3056:	55 g	

Dimensions

Width x height x depth	
CA 3056:	11.5 x 60 x 62 mm
CB 3056:	11.5 x 75 x 62 mm
CC 3056:	11.5 x 90 x 62 mm

Standard Type

CA 3056.01 AC/DC 24 V 50 / 60 Hz	
Article number:	0041412
• Ausgang:	1 NO contact
• Nominal voltage U _N :	AC/DC 24 V
• Protective separation acc. to IEC/EN 61 140,	
IEC/EN 60 947-1:	6 kV / 2
• Width:	11.5 mm

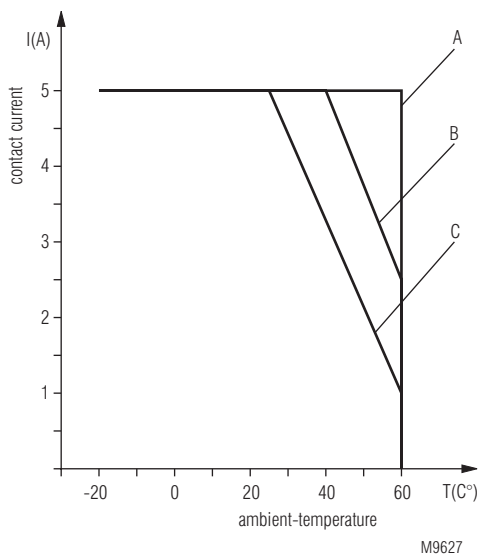
Variants

CA 3056.___ / 1___,	Contact with 5 µm Au without protective separation
CB 3056.___ / 1___:	
CC 3056.___ / 1___:	
CA 3056.___ / ___1,	with MOV on input to achieve higher surge immunity
CB 3056.___ / ___1:	

Ordering example for variants

C 3056.___ / ___	AC 220... 240 V 50/60 Hz
Nominal frequency	
Nominal voltage	
0 without MOV	
1 with MOV	
0 with protective separation	
1 without protective separation	
0 Contact AgNi 10	
1 Contact AgNi 0.15 with 5 µm Au	
Contacts	
Type:	
A 4 Terminals	
B 6 Terminals	
C 8 Terminals	

Characteristic



A = Mounted with 2 cm distance between units
 B = Mounted without distance, 1 contact leading current
 C = Mounted without distance, 2 contacts leading current

Continuous current limit curve