Interface relays
CA 3056, CB 3056, CC 3056

Translation of the original instructions

0255081

CA 3056

CB 3056

CC 3056

Your Advantages
- As option goldplated contacts (5 µm Au) to switch low loads
- CA 3056 and CB 3056:
  Protective separation acc. to IEC/EN 61140, IEC/EN 60947-1: 6 kV / 2

Features
- According to IEC/EN 60947-5-1
- 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

CE

Application

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

Product Description

The interface relays CA 3056, CB 3056 and CC 3056 are used for contact multiplication and are suitable as a link between the control and power level. The interface relays are available with different contact combinations and partly for switching small loads.

Indication

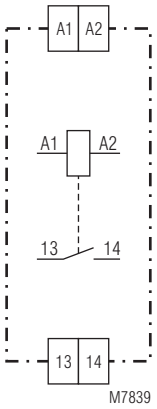
LED	On, when supply connected

Notes

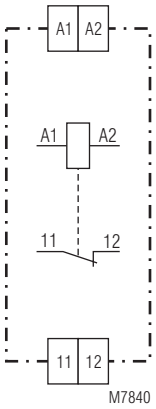
The interface relay CA 3056/1xx is for switching low loads 2 ... 60 V / 1 ... 300 mA / 10 mW ... 12 W. The contacts also permit the maximum switching current. However since the gold plating will be burnt off at this current level, the device is no longer suitable for switching small loads after this.

All technical data in this list relate to the state at the moment of edition. We reserve the right for technical improvements and changes at any time.

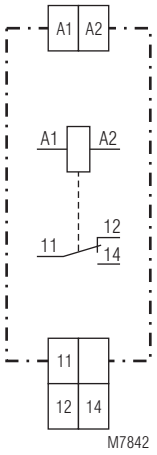
Circuit Diagrams



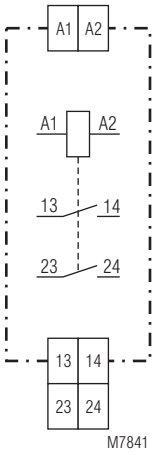
CA 3056.01



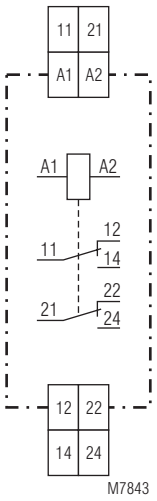
CA 3056.05



CB 3056.11



CB 3056.02



CC 3056.12

Connection Terminals

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

Technical Data

Input

Nominal voltage U_N

CA 3056:	AC 110 ... 130* V, AC 220 ... 240 V, 180 ... 254* V AC/DC 12, 24, 48 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
CB 3056, CC 3056:	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

Switching capacity

to AC 15		
NO contact:	3 A / AC 230 V	IEC/EN 60947-5-1
NC contact:	1 A / AC 230 V	IEC/EN 60947-5-1
To DC 13		
NO contact:	1 A / DC 24 V	IEC/EN 60947-5-1
NC contact:	1 A / DC 24 V (not at CA 3056.01/100)	IEC/EN 60947-5-1

Electrical life

to AC 15 at 3 A, AC 230 V:	> 8 x 10^5 switch. cycles (not at CA 3056.01/100)	IEC/EN 60947-5-1

Permissible switching frequency: 20 switching cycles / s

Short circuit strength

max. fuse rating:	6 A gG / gL	IEC/EN 60947-5-1

Mechanical life: > 30 x 10^6 switching cycles

Technical Data

General Data

Nominal operating mode	Continuous operation	
Temperature range:		
Operation:	- 25 ... + 60 °C	
Storage:	- 25 ... + 60 °C	
Altitude:	≤ 2000 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 60664-1
CC 3056:		
Input to Output:	4 kV / 2	IEC 60664-1
EMC		
Electrostatic discharge (ESD):	8 kV (air)	IEC/EN 61000-4-2
HF irradiation:		
80 MHz … 6 GHz:	10 V / m	IEC/EN 61000-4-3
Fast transients:	4 kV	IEC/EN 61000-4-4
Surge voltages between		
wires for power supply:	1 kV	IEC/EN 61000-4-5
Between wire and ground:	2 kV	IEC/EN 61000-4-5
Interference suppression:	Limit value class B	EN 55011
Degree of protection		
Housing:	IP 40	IEC/EN 60529
Terminals:	IP 20	IEC/EN 60529
Enclosure:	Thermoplastic with VO behaviour according to UL Subject 94	
Vibration resistance:	Amplitude 0.35 mm frequency 10 ... 55 Hz,	IEC/EN 60068-2-6
Climate resistance:	20 / 060 / 04	IEC/EN 60068-1
Wire connection		DIN 46228-1/-2/-3/-4
Fixed screw terminals		
Cross section:	1 x 4 mm² solid or 1 x 2.5 mm² 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 60715
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
• Output:	1 NO contact
• Nominal voltage U_N:	AC/DC 24 V
• Protective separation acc. to IEC/EN 61140, IEC/EN 60947-1:	6 kV / 2
• Width:	11.5 mm

Variants

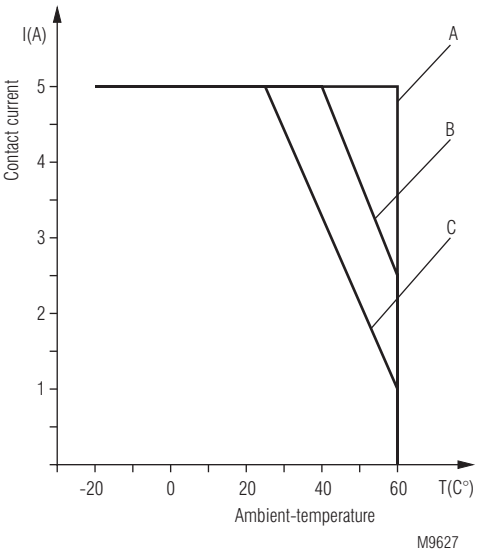
Ordering example for variants

C_ 3056 ._ _ /_ _ _ AC 220 ... 240 V 50/60 Hz

- 50/60 Hz: Nominal frequency
- AC 220 ... 240 V: Nominal voltage
- /_ _ _ 1st: 0 Without MOV / 1 With MOV
- /_ _ _ 2nd: 0 With protective separation / 1 Without protective separation
- /_ _ _ 3rd: 0 Contact AgNi 10 / 1 Contact AgNi 0.15 with 5 µm Au
- C_ 3056 ._ _: Contacts
- C_ 3056: Type: A: 4 Terminals, B: 6 Terminals, C: 8 Terminals

CA 3056._ _ /1_ _, CB 3056._ _ /1_ _ :	Contact with 5 µm Au
CC 3056._ _ /_1_:	Without protective separation
CA 3056._ _ /_ _1, CB 3056._ _ / _ _1:	With MOV on input to achieve higher surge immunity

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