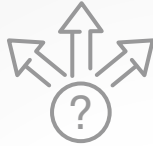


Connectwell's CSR Series - Slim Relay Modules are the thinnest control and protection relay modules with just 6mm space required on the DIN Rail for 1CO Relays and 12mm for 2 CO Relays. This allows you to build ever more complex control loops without having to worry about Panel Space.

Choice of
**ELECTROMECHANICAL
& ELECTRONIC
RELAYS**



Design to Save
Panel Space:
Upto **66%**
Saving



True Full
Contact Rating
**CONTINUOUS
OPERATION**



True Modular
Design with



IP 20 SAFETY Rating

Superior **AESTHETICS**
with consistent Profile
for 1 CO, 2CO
& 4CO Contacts

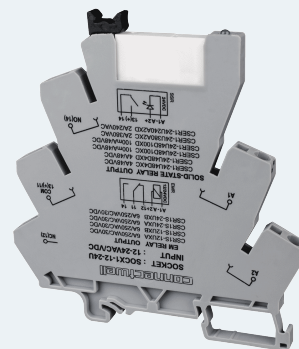


CE & UL
Approved



SLIM RELAYS - EMR1 CO

- Compact 6.0mm thin design
- Variety of Operating Voltages
- High switching current: up to 6A at 250VAC
- Low coil power consumption: 175 mW
- LED Indication on Coil activation
- No requirement on polarity of input voltage (except 5 VDC & 24VDC Relay)
- Possibility of Jumpering
- Easy Legibility marker
- Pluggable Electromechanical Relays
- Choice of Screw & Spring Clamp Connection
- Special RC Snubber based Slim Relays are Available (Optional)
- Integrated Input Protection (Reverse polarity and freewheeling diode)



INPUT DATA (COIL SIDE)

Coil Voltage	5VDC	24VDC	12VUC	24VUC	48-60VUC	120VUC	230VUC
Nominal input voltage	5VDC	24VDC	12V AC/DC	24 V AC/DC	48-60 V AC/DC	120V AC/DC	230 V AC/DC
Nominal input current	34mA	7mA	14.16mA	14.1 mA	6.2mA	7.4mA	3.9mA
Pickup voltage	3.75VDC	18VDC	9VDC	19 V	43 V	90 V	170V
Dropout voltage	0.25VDC	1.20VDC	0.6VDC	4.5 V	10.5 V	21 V	36V
Typical response time	8ms	8ms	8ms	8ms	8ms	8ms	8ms
Typical release time	10ms	10ms	10ms	10ms	10ms	10ms	10ms
Coil Resistance	147 ohm	3.43 k ohm	847.45 ohm	3.43 k ohm	9.75 k ohm	16.21 k ohm	58.97K ohm
Operating Voltage Display	3mm Green LED	3mm Green LED	3mm Green LED	3mm Green LED	3mm Green LED	3mm Green LED	3mm Green LED
Nominal input power	170mW	168mW	169.92mW	340 mW	300mW	890mW	897mW

ORDERING INFORMATION

AgNi Contact + Screw Termination	CSR1S-5DYA	CSR1S-24DYA	CSR1S-12UYA	CSR1S-24UYA	CSR1S-48-60UYA	CSR1S-120UYA	CSR1S-230UYA
AgNi Contact + Screw Termination + RC	--	--	--	--	--	CSR1S-120UYA-SN	CSR1S-230UYA-SN
AgNi Contact + Spring Termination	CSR1S-5DXA	CSR1S-24DXA	CSR1S-12UXA	CSR1S-24UXA	CSR1S-48-60UXA	CSR1S-120UXA	CSR1S-230UXA
AgNi Contact + Spring Termination + RC	--	--	--	--	--	CSR1S-120UXA-SN	CSR1S-230UXA -SN
AgSnO2 Contact + Screw Termination	CSR1S-5DYB	CSR1S-24DYB	CSR1S-12UYB	CSR1S-24UYB	CSR1S-48-60UYB	CSR1S-120UYB	CSR1S-230UYB
AgSnO2 Contact + Screw Termination + RC	--	--	--	--	--	CSR1S-120UYB-SN	CSR1S-230UYB-Sn
AgSnO2 Contact + Spring Termination	CSR1S-5DXB	CSR1S-24DXB	CSR1S-12UXB	CSR1S-24UXB	CSR1S-48-60UXB	CSR1S-120UXB	CSR1S-230UXB
AgSnO2 Contact + Spring Termination + RC	--	--	--	--	--	CSR1S-120UXB-SN	CSR1S-230UXB-SN

Pluggable Relay

12 VDC	SRL1-12D
24VDC	SRL1-24D
60VDC	SRL1-60D

OUTPUT DATA

Contact switching type	1CO
Contact resistance	100m ohm at 1A 6VDC
Contact material	AgNi / AgSnO ₂
Limiting continuous current	6A
Switching Voltage	230 VAC / 30 VDC
Maximum Switching power	1500VA, 180W

CONNECTION SPECIFICATION

Type of Connection	Spring / Screw Connection
Suitable wire / conductor	Copper wire (Temperature Range 60/75° C)
Wire Stripping Length	10 mm
Wire Size-Solid/Stranded/Flexible	
With Ferrule(IEC) without Ferrule	0.2 - 2.5 mm ²
Wire Size-Stranded/Flexible	
With Ferrule(IEC)	0.2 - 2.5 mm ²
Wire Size-Solid With Ferrule(IEC)	0.2 - 2.5 mm ²
Wire Size-Stranded/Flexible	
With Ferrule(UL)	24 - 14 AWG
Wire Size-Solid With Ferrule(UL)	24 - 14 AWG
Wire Size-Solid/Stranded/Flexible	
With Ferrule(UL) without Ferrule	24 - 14 AWG
Wire Size- Solid With TWIN Ferrule(UL)	24 - 16 AWG
Wire Size- Stranded/Flexible	
With TWIN Ferrule(IEC)	0.2 - 1.5 mm ²

ACCESSORIES

Jumpers

Coil Side & Contact Side - 2 Pole	JX4/2
Coil Side & Contact Side - 4 Pole	JX4/3
Coil Side & Contact Side - 4 Pole	JX4/4
Coil Side & Contact Side - 6 Pole	JX4/5
Coil Side & Contact Side - 10 Pole	JX4/10
Coil Side & Contact Side - 16 Pole	JX4/16
Marking Tag	CA509/K6WHT (Blank) CA509/K6WP (Printed)
Marker Card	MC6 (Blank) / MC6WP (Printed)
Screwdriver	SCS0.5/3
End Clamp	CA103 (6 mm Pitch) CA104 (10 mm Pitch)

Mounting Rail (1 M Length)

35mm x 7.5mm DIN Rail - Un slotted	CA701-1M
35mm x 7.5mm DIN Rail - Slotted	CA701-1M-S
35mm x 15mm DIN Rail - Un slotted	CA701-15-1M
35mm x 15mm DIN Rail - Slotted	CA701-15-1M-S

ENVIROMENTAL AND REAL LIFE CONDITION

Degree of protection (Relay Base)	IP20
Ambient Operating Temperature	-40 to 55 deg C
Housing Material	PA 6,6
Ambient temperature storage	-40 to 85 deg C

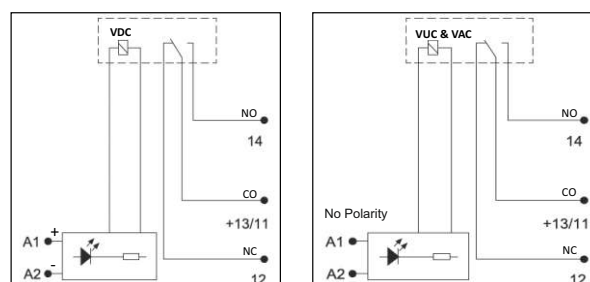
INSULATION

Insulation type	Class A (UL)
Insulation resistance	1000M ohm at 500 VDC
Insulation test voltage	5kV AC (1Min)
Over voltage category	III
Creepage Distance	10 mm
Pollution Degree	2
Dielectric strength:-	
1) Between Winding & Coil	4kV AC (50Hz 1min)
2) Between Contact Sets	2kV AC (50Hz 1min)
3) Between Open Contacts	1kV AC (50Hz 1min)
4) Between UUT Live Parts/ Din Rail	2kV AC (50Hz 1min)
Service Life Electrical	NO-30,000 OPS, NC-10,000 OPS

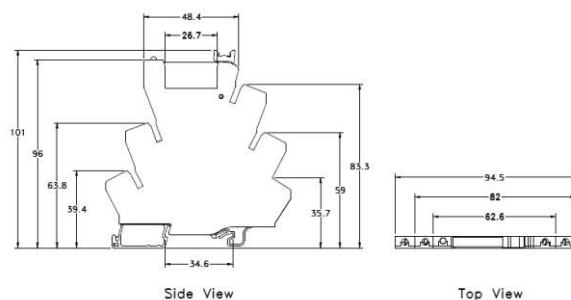
PROPERTIES

Product type	Electromechanical Relay
Product family	Slim Relay
Application	PLC, Power, Machine Building, Automation Panels
Mechanical Service Life	10,000,000 operations min.
Dimensions in mm (W x H x D)	6 x 94.5 x 96

ELECTRICAL CONNECTION DIAGRAM



MECHANICAL DIMENSIONS (mm)



SLIM RELAYS - EMR 2 CO

- Compact thin design
- Variety of Operating Voltages
- High switching current: up to 8A at 250VAC
- Low coil power consumption
- LED Indication on Coil activation
- No requirement on polarity of input voltage
- Possibility of Jumpering up to 8 channels with a single link
- Easy Legibility marker
- Pluggable Electromechanical Relays
- Integrated Input Protection. (Rectifier and freewheeling diode)



INPUT DATA (COIL SIDE)

Coil Voltage	12VUC	24VUC	48-60VUC	120VUC	230VUC
Nominal input voltage	12V AC/DC	24 V AC/DC	48-60 V AC/DC	120V AC/DC	230 V AC/DC
Nominal input current	32mA	24 mA	20 mA	5.1 mA	3.9 mA
Pickup voltage AC	9.7 VAC	18.5 VAC	42.5 VAC	76 VAC	120 VAC
Pickup voltage DC	10.8 VDC	19 VDC	43 VDC	80 VDC	110 VDC
Dropout Voltage AC	3.6 VAC	6 VAC	18.5 VAC	25 VAC	40 VAC
Dropout Voltage DC	2.7 VDC	5 VDC	16.5 VDC	19.5 VDC	40 VDC
Typical response time	8 ms	8 ms	10 ms	9 ms	9 ms
Typical release time	10 ms	10 ms	13 ms	12 ms	12 ms
Coil Resistance	360 ohm	1.44 k ohm	5.36 k ohm	23.56 k ohm	38.34 k ohm
Operating Voltage Display	3mm Green LED	3mm Green LED	3mm Green LED	3mm Green LED	3mm Green LED
Nominal input power	384 mW	480 mW	552 mW	612mW	660mW

ORDERING INFORMATION

AgNi Contact + Screw Termination	CSR2S-12UYA	CSR2S-24UYA	CSR2S-48-60UYA	CSR2S-120UYA	CSR2S-230UYA
AgNi Contact + Screw Termination+RC	-	-	-	CSR2S-120UYA-SN	CSR2S-230UYA-SN
Ag Alloy (Cd Free) + Screw Termination	CSR2S-12UYC	CSR2S-24UYC	CSR2S-48-60UYC	-	-

OUTPUT DATA

Contact switching type	2CO
Contact resistance	100m ohm
Contact material	AgNi / Ag Ni (90 /10)/Ag Alloy (Cd Free)
Limiting continuous current	8A
Switching Voltage	230 VAC / 30 VDC
Maximum Switching power	2000VA, 240W

ENVIROMENTAL AND REAL LIFE CONDITION

Degree of protection (Relay Base)	IP20
Ambient Operating Temperature	-40 to 55 deg C
Housing Material	PA 6,6
Ambient temperature storage	-40 to 85 deg C

CONNECTION SPECIFICATION

Type of Connection	Screw Connection
Suitable wire / conductor	Copper wire (Temperature Range 60/75° C)
Wire Stripping Length	10 mm
Wire Size-Solid/Stranded/Flexible	
With Ferrule(IEC) without Ferrule	0.2 - 2.5 mm ²
Wire Size-Stranded/Flexible	
With Ferrule(IEC)	0.2 - 2.5 mm ²
Wire Size-Solid With Ferrule(IEC)	0.2 - 2.5 mm ²
Wire Size-Stranded/Flexible	
With Ferrule(UL)	24 - 14 AWG
Wire Size-Solid With Ferrule(UL)	24 - 14 AWG
Wire Size-Solid/Stranded/Flexible	
With Ferrule(UL) without Ferrule	24 - 14 AWG
Wire Size- Solid With TWIN Ferrule(UL)	24 - 16 AWG
Wire Size- Stranded/Flexible	
With TWIN Ferrule(IEC)	0.2 - 1.5 mm ²

ACCESSORIES

Jumpers

Coil Side & Contact Side - 2 Pole	JX4/2
Coil Side & Contact Side - 4 Pole	JX4/3
Coil Side & Contact Side - 4 Pole	JX4/4
Coil Side & Contact Side - 6 Pole	JX4/5
Coil Side & Contact Side - 10 Pole	JX4/10
Coil Side & Contact Side - 16 Pole	JX4/16
Marking Tag	CA509/K6WHT (Blank) CA509/K6WP (Printed)
Marker Card	MC6 (Blank) / MC6WP (Printed)
Screwdriver	SCS0.5/3
End Clamp	CA103 (6 mm Pitch) CA104 (10 mm Pitch)

Mounting Rail (1 M Length)

35mm x 7.5mm DIN Rail - Un slotted	CA701-1M
35mm x 7.5mm DIN Rail - Slotted	CA701-1M-S
35mm x 15mm DIN Rail - Un slotted	CA701-15-1M
35mm x 15mm DIN Rail - Slotted	CA701-15-1M-S

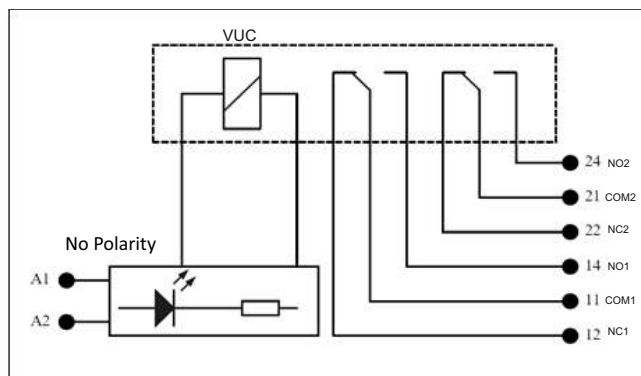
INSULATION

Insulation type	Class A (UL)
Insulation resistance	1000M ohm at 500 VDC
Insulation test voltage	5kV AC (1Min)
Over voltage category	III
Creepage Distance	10 mm
Pollution Degree	2
Dielectric strength:-	
1) Between Winding & Coil	4kV AC (50Hz 1min)
2) Between Contact Sets	2kV AC (50Hz 1min)
3) Between Open Contacts	1kV AC (50Hz 1min)
4) Between UUT Live Parts/ Din Rail	2kV AC (50Hz 1min)
Service Life Electrical	NO-30,000 OPS, NC-10,000 OPS

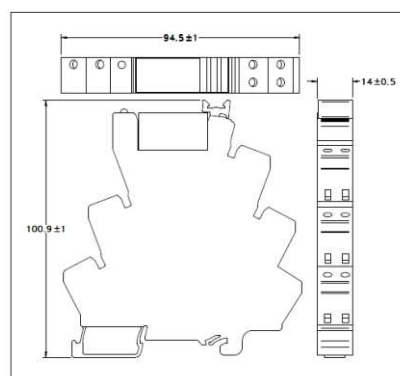
PROPERTIES

Product type	Electromechanical Relay
Product family	Slim Relay
Application	PLC, Power, Machine Building, Automation Panels
Mechanical Service Life	10,000,000 operations min.
Dimensions in mm (W x H x D)	14 x 94.5 x 96

ELECTRICAL CONNECTION DIAGRAM



MECHANICAL DIMENSIONS (mm)



SLIM RELAYS - SSR

- Compact 6.0mm thin design
- Variety of operating voltages
- High switching current: up to 4A at 48VDC and 2A at 230VAC
- Low drive current (<21mA)
- LED status indicator
- Opto isolation
- Zero cross turn on (AC output)
- BJT/MOSFET DC output
- TTL & CMOS compatible
- Suitable for PLC drive loads
- Pluggable Solid State Relays
- Choice of Screw & Spring Clamp Connection
- Integrated Input Protection. (Reverse polarity)



INPUT DATA (COIL SIDE)

Input Voltage	24VDC	24VUC	48-60VUC	120VUC	230VAC
Nominal input voltage	24VDC	24 V AC/DC	48-60 V AC/DC	120 V AC/DC	230 V AC
Nominal input current	7.5 mA	7 mA	6.2 mA	14.1 mA	14.1 mA
Pickup voltage AC	-	18.5 VAC	42.5 VAC	76 VAC	120 VAC
Pickup voltage DC	10.5 VDC	19 VDC	43 VDC	80 VDC	-
Dropout Voltage AC	-	6 VAC	18.5 VAC	25 VAC	40 VAC
Dropout Voltage DC	7.5 VDC	5 VDC	16.5 VDC	19.5 VDC	-
Operating Voltage Display	3mm Green LED	3mm Green LED	3mm Green LED	3mm Green LED	3mm Green LED
Switching Frequency (DC)	1.2 KHz	1.2 KHz	1.2 KHz	1.2 KHz	1.2 KHz

ORDERING INFORMATION

48 VDC / 4A Output+ Screw Termination	CSER1-24D48D4YC	CSER1-24U48D4YC	CSER1-4860U48D4YC	CSER1-120U48D4YC	CSER1-230A48D4YC
48 VDC / 100mA Output+ Screw Termination	CSER1-24D48D100YC	CSER1-24U48D100YC	CSER1-4860U48D100YC	CSER1-120U48D100YC	CSER1-230A48D100YC
380 VAC / 2A Output+ Screw Termination	CSER1-24D380A2YC	CSER1-24U380A2YC	CSER1-4860U380A2YC	CSER1-120U380A2YC	CSER1-230A380A2YC
48 VDC / 4A Output+ Spring Termination	CSER1-24D48D4XC	CSER1-24U48D4XC	CSER1-4860U48D4XC	CSER1-120U48D4XC	CSER1-230A48D4XC
48 VDC / 100mA Output+ Spring Termination	CSER1-24D48D100XC	CSER1-24U48D100XC	CSER1-4860U48D100XC	CSER1-120U48D100XC	CSER1-230A48D100XC
380 VAC / 2A Output+ Spring Termination	CSER1-24D380A2XC	CSER1-24U380A2XC	CSER1-4860U380A2XC	CSER1-120U380A2XC	CSER1-230A380A2XC

PROPERTIES

Product type	Solid State Relay
Product family	Slim Relay
Application	PLC, Power, Machine Building, Automation Panels
Mechanical Service Life	10,000,000 operations min.
Dimensions in mm (W x H x D)	6 x 94.5 x 96

ENVIROMENTAL AND REAL LIFE CONDITION

Degree of protection (Relay Base)	IP20
Ambient Operating Temperature	-40 to 55 deg C
Housing Material	PA 6,6
Ambient temperature storage	-40 to 85 deg C

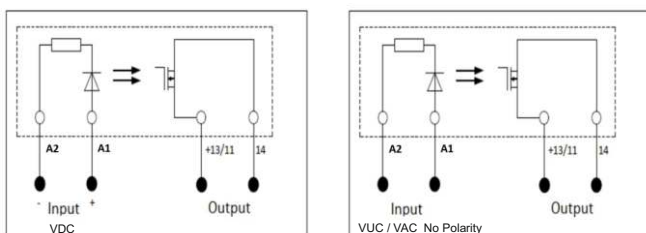
OUTPUT DATA

Contact switching type	1NO (Solid State)
Output Load	
Option 1	100 mA / 48 VDC Output
Option 2	4A / 48 VDC Output
Option 3	2A / 380 VAC Output
Low voltage range	
Option 1 & 2	3 - 58 VDC
Option 3	48 - 280 VAC
Maximum on state voltage drop	
Option 1	1.5 VDC (100 mA / 48 VDC Output)
Option 2	0.5 VDC (4A / 48 VDC Output)
Option 3	0.35 VDC (2A / 380 VAC Output)
Maximum Leakage Current	
Option 1 & 2	100 uA (DC Output)
Option 3	1.5 mA (AC Output)
Maximum Transient Voltage	
Option 1 & 2	58 VDC (DC Output)
Option 3	600 Vpk (AC Output)
Turn on time (0 cross turn on)	
Option 1 & 2	300 us
Option 3	1/2 AC Cycle + 1 ms
Turn off time	
Option 1 & 2	300 us
Option 3	1/2 AC Cycle + 1 ms

CONNECTION SPECIFICATION

Type of Connection	Spring / Screw Connection
Suitable wire / conductor	Copper wire (Temperature Range 60/75° C)
Wire Stripping Length	10 mm
Wire Size-Solid/Stranded/Flexible	
With Ferrule(IEC) without Ferrule	0.2 - 2.5 mm ²
Wire Size-Stranded/Flexible	
With Ferrule(IEC)	0.2 - 2.5 mm ²
Wire Size-Solid With Ferrule(IEC)	0.2 - 2.5 mm ²
Wire Size-Stranded/Flexible	
With Ferrule(UL)	24 - 14 AWG
Wire Size-Solid With Ferrule(UL)	24 - 14 AWG
Wire Size-Solid/Stranded/Flexible	
With Ferrule(UL) without Ferrule	24 - 14 AWG
Wire Size- Solid With TWIN Ferrule(UL)	24 - 16 AWG
Wire Size- Stranded/Flexible	
With TWIN Ferrule(IEC)	0.2 - 1.5 mm ²

ELECTRICAL CONNECTION DIAGRAM



INSULATION

Insulation type	Class A (UL)
Insulation resistance	1000M ohm at 500 VDC
Insulation test voltage	5kV AC (1Min)
Over voltage category	III
Creepage Distance	10 mm
Pollution Degree	2
Dielectric strength:-	
1) Between Winding & Coil	4kV AC (50Hz 1min)
2) Between Contact Sets	2kV AC (50Hz 1min)
3) Between Open Contacts	1kV AC (50Hz 1min)
4) Between UUT Live Parts/ Din Rail	2kV AC (50Hz 1min)
Service Life Electrical	NO-30,000 OPS, NC-10,000 OPS

ACCESSORIES

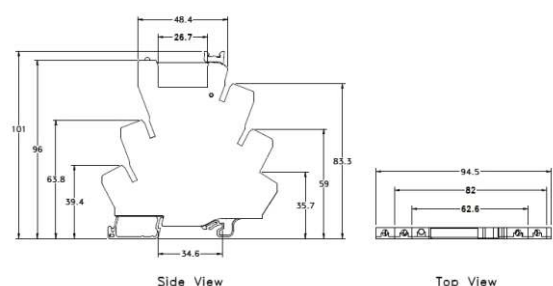
Jumpers

Coil Side & Contact Side - 2 Pole	JX4/2
Coil Side & Contact Side - 4 Pole	JX4/3
Coil Side & Contact Side - 4 Pole	JX4/4
Coil Side & Contact Side - 6 Pole	JX4/5
Coil Side & Contact Side - 10 Pole	JX4/10
Coil Side & Contact Side - 16 Pole	JX4/16
Marking Tag	CA509/K6WHT (Blank) CA509/K6WP (Printed)
Marker Card	MC6 (Blank) / MC6WP (Printed)
Screwdriver	SCS0.5/3
End Clamp	CA103 (6 mm Pitch) CA104 (10 mm Pitch)

Mounting Rail (1 M Length)

35mm x 7.5mm DIN Rail - Un slotted	CA701-1M
35mm x 7.5mm DIN Rail - Slotted	CA701-1M-S
35mm x 15mm DIN Rail - Un slotted	CA701-15-1M
35mm x 15mm DIN Rail - Slotted	CA701-15-1M-S

MECHANICAL DIMENSIONS (mm)



SLIM RELAY ADAPTOR WITH DSUB CONNECTOR

Wiring the electrical control panel take huge amount of time, The CW Slim Relay Adapter is an easy plug in accessory used for slim relay to connect it with the PLC/DCS Input or Output System. Thanks to compact, easy solution which allow user for quick and error free connections for wide range for applications. With the help of this pluggable slim relay adapter and prefab cable from Connectwell you can save up to 95% time over conventional screw or spring connection.

SUITABLE FOR

CSR1S-24DYA	Slim Relay Module 1CO 24VDC
CSR1S-24UYA	Slim Relay Module 1CO 24VUC
CSR1S-24DYB	CW Slim Relay Module 1CO 24VDC
CSR1S-24UYB	Slim Relay Module 1CO 24VUC
CSR1S-24DYBV0	CW Slim Relay Module 1CO 24VDC
CSR1S-24DXA	Slim Relay Module 1CO 24VDC
CSR1S-24UXA	Slim Relay Module 1CO 24VUC
CSR1S-24DXB	Slim Relay Module 1CO 24VDC



ORDERING INFORMATION

Cat. No.	Description	STD. PACK
ADID24V	Slim Relay Adapter -Input side-24VDC	1
ADOD24V	Slim Relay Adapter -Output side-24VDC	1
ADIF24V	Slim Relay Adapter -Input side-24VDC	1
ADOF24V	Slim Relay Adapter -Output side-24VDC	1

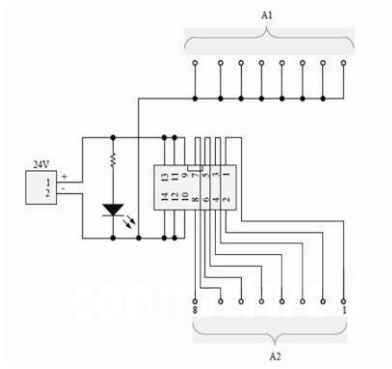


PRODUCT SPECIFICATIONS

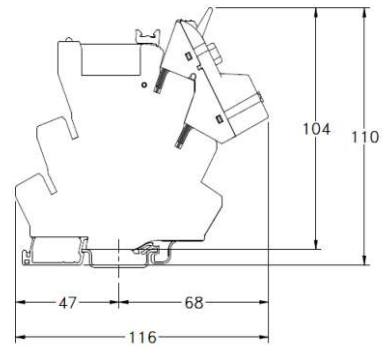
Conductor Cross Section in AWG	12 AWG
Conductor Cross Section in sq. mm	2.5 mm ²
Height	56.25 mm
Length	47.52 mm
Rated Current	2A
Rated Voltage	24 V
Suitable For	Slim Relay
Torque	0.4 Nm
Width (Thickness)	53.7 mm



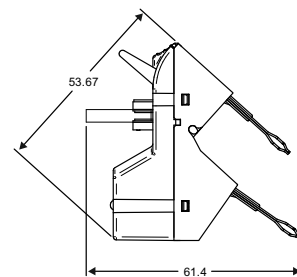
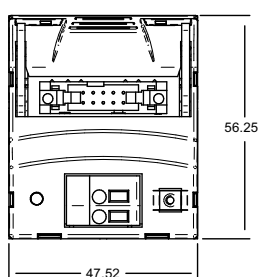
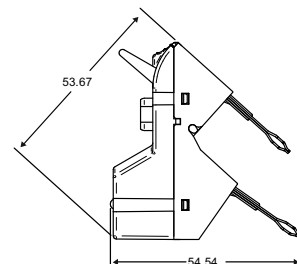
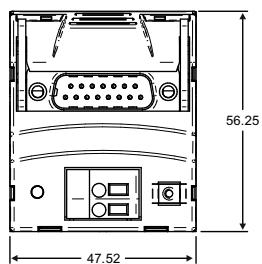
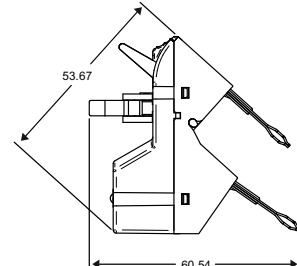
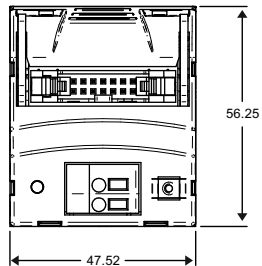
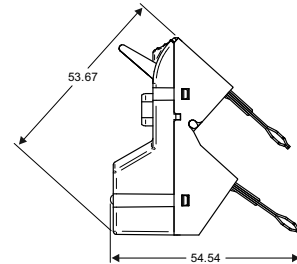
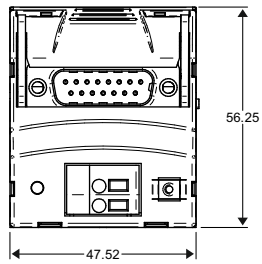
CIRCUIT DIAGRAM



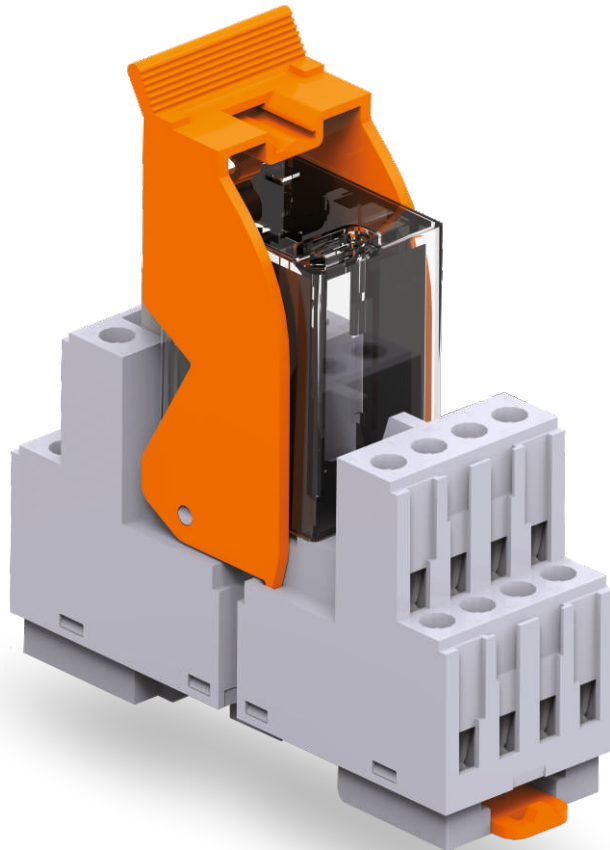
PRODUCT DIAGRAM



ELECTRICAL CONNECTION DIAGRAM



HIGH PERFORMANCE MODULAR RELAYS



BUILT TO LAST

Industrial applications can be quite demanding when it comes to their needs for switching and protection. Connectwell CRM Series High Performance Relay Modules are designed and built for such challenging applications which require a long operational life and when failure is not a choice. The rugged design of the Relay Base along with the superior electrical and mechanical performance of the Relays make these modules the right choice for the most demanding applications.

Superior Choice of

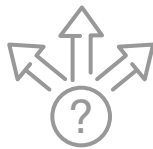
V0 GRADE

Flammability
Rating Housing



Choice of

**ELECTROMECHANICAL
& ELECTRONIC
RELAYS**



Superior **AESTHETICS**
with consistent Profile
for 1 CO, 2CO
& 4CO Contacts



True Modular
Design with



IP 20 SAFETY Rating

True Full
Contact Rating



**CONTINUOUS
OPERATION**

SUPERIOR RELAYS

with Increased
Operational life



MODULAR RELAYS - 1 CO

- Compact & Modular design with retainer clip
- Variety of operating voltages
- High switching current: up to 10A
- Low coil power consumption
- LED Indication on Coil activation
- Possibility of jumpering
- Long-life laser marking for circuit identification
- Pluggable Electromechanical Relays
- Integrated Input Protection (Freewheeling diode)



RoHS

INPUT DATA (COIL SIDE)

Coil Voltage	12VDC	24VDC	48VDC	110VDC	220VDC	24VAC	110VAC	230VAC
Maximum operating voltage	13.2VDC	26.4VDC	62.4VDC	121VDC	286VDC	26.4VAC	121VAC	253VAC
Nominal input current	72.7 mA	36.3 mA	80.8 mA	8.7 mA	4.1mA	53.8 mA	11.7 mA	5.5 mA
Pickup Voltage AC	9.6 VDC	19.2 VDC	38.4 VDC	88 VDC	176VDC	19.2 VAC	88 VAC	184 VAC
Dropout Voltage AC	1.2 VDC	2.4 VDC	4.8 VDC	11 VDC	22VDC	7.2 VAC	33 VAC	69 VAC
Typical response time	20 ms	20 ms	20ms	20 ms	20ms	20 ms	20 ms	20 ms
Typical release time	20 ms	20 ms	20ms	20 ms	20ms	20 ms	20 ms	20 ms
Coil Resistance	165 ohm	662 ohm	2.5 k ohm	11.44 k ohm	5.3 k ohm	180 ohm	3.75 k ohm	15.92 k ohm
Operating Voltage Display	LED	LED	LED	LED	LED	LED	LED	LED
Nominal input power	1W	1W	1W	1W	1W	1.2 VA	1.2 VA	1.2 VA

ORDERING INFORMATION

Socket	CRS1CO	CRS1CO	CRS1CO	CRS1CO	CRS1CO	CRS1CO	CRS1CO	CRS1CO
Relays								
Without Test Button	CRY1CO12D(A/B)*	CRY1CO24D(A/B)*	CRY1CO48D(A/B)*	CRY1CO110D(A/B)*	CRY1CO110D(A/B)*	CRY1CO24A(A/B)*	CRY1CO110A(A/B)*	CRY1CO230A(A/B)*
Socket + Relays								
Without Test Button	CRM1CO12DA(A/B)*	CRM1CO24DA(A/B)*	CRM1CO48DA(A/B)*	CRM1CO110DA(A/B)*	CRM1CO110DA(A/B)*	CRM1CO24A(A/B)*	CRM1CO110A(A/B)*	CRM1CO230A(A/B)*

OUTPUT DATA

Contact switching type	1CO
Contact resistance	100m ohm
Contact material	AgSnO ₂
Limiting continuous current	10A
Switching Voltage	230 VAC / 30 VDC
Maximum Switching power	2300VA, 300W

ENVIROMENTAL AND REAL LIFE CONDITION

Degree of protection (Relay Base)	IP20
Ambient Operating Temperature	-40 to 55 deg C
Housing Material	PA 6,6
Flammability Rating	V-0
Ambient temperature storage	-40 to 85 deg C

Note :
A/B- Based on internal availability A and B series will be suggested. v

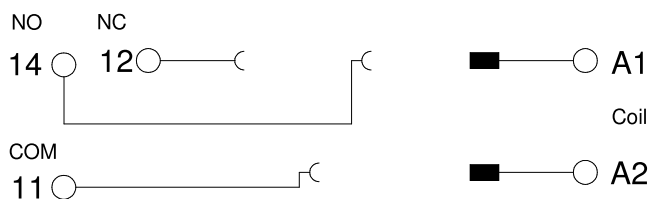
PROPERTIES

Product type	Electromechanical Relay
Product family	Modular Relay
Application	PLC, Power, Machine Building, Automation Panels
Mechanical Service Life	10,000,000 operations min.
Socket Dimensions in mm (W x H x D)	15 x 43.5 x 76
Relay Dimensions in mm (W x H x D)	13 x 29 x 25.5

CONNECTION SPECIFICATION

Type of Connection	Screw Connection
Suitable wire / conductor	Copper wire (Temperature Range 60/75° C)
Wire Stripping Length	8 mm
Wire Size-Solid/Stranded/Flexible	
With Ferrule(IEC) without Ferrule	0.2 - 4 mm ²
Wire Size-Stranded/Flexible	
With Ferrule(IEC)	0.2 - 4 mm ²
Wire Size-Solid With Ferrule(IEC)	0.2 - 4 mm ²
Wire Size-Stranded/Flexible	
With Ferrule(UL)	24 - 10 AWG
Wire Size-Solid With Ferrule(UL)	24 - 10 AWG
Wire Size-Solid/Stranded/Flexible	
With Ferrule(UL) without Ferrule	24 - 10 AWG
Wire Size- Solid With TWIN Ferrule(UL)	24 - 10 AWG
Wire Size- Stranded/Flexible	
With TWIN Ferrule(IEC)	0.2 - 2.5 mm ²

ELECTRICAL CONNECTION DIAGRAM



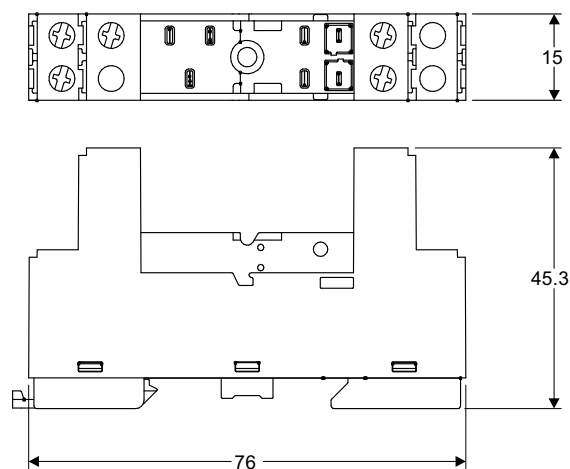
INSULATION

Insulation type	Class A (UL)
Insulation resistance	1000M ohm at 500 VDC
Insulation test voltage	5kV AC (1Min)
Over voltage category	III
Creepage Distance	8 mm
Pollution Degree	2
Dielectric strength:-	
1) Between Winding & Coil	5kV AC (50Hz 1min)
2) Between Contact Sets	3kV AC (50Hz 1min)
3) Between Open Contacts	1kV AC (50Hz 1min)
Service Life Electrical	NO-1,00,000 OPS, NC-1,00,000 OPS

ACCESSORIES

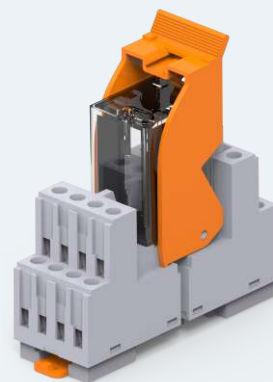
Mounting Rail (1 M Length)	
35mm x 7.5mm DIN Rail - Un slotted	CA701-1M
35mm x 7.5mm DIN Rail - Slotted	CA701-1M-S
35mm x 15mm DIN Rail - Un slotted	CA701-15-1M
35mm x 15mm DIN Rail - Slotted	CA701-15-1M-S
End Clamp	CA702 (6 mm Pitch) CA802 (10 mm Pitch)
Marking Tag	MT-CRM2CO
Marker Card	MC6 (Blank) / MC6WP (Printed)
Screwdriver	SCPH1
LED Plug	CRLD12-60V / CRLD110-230V

MECHANICAL DIMENSIONS (mm)



MODULAR RELAYS - 2 CO

- Compact & Modular design with retainer clip
- Variety of operating voltages
- High switching current: up to 10A
- Low coil power consumption
- LED Indication on Coil activation
- Possibility of jumpering
- Long-life laser marking for circuit identification
- Pluggable Electromechanical Relays
- Integrated Input Protection (Freewheeling diode)



RoHS

INPUT DATA (COIL SIDE)

Coil Voltage	12VDC	24VDC	48VDC	110VDC	220VDC	24VAC	110VAC	230VAC
Maximum operating voltage	13.2VDC	26.4VDC	62.4VDC	121VDC	286VDC	26.4VAC	121VAC	253VAC
Nominal input current	72.7 mA	36.3 mA	80.8 mA	8.7 mA	4.1mA	53.8 mA	11.7 mA	5.5 mA
Pickup Voltage AC	9.6 VDC	19.2 VDC	38.4 VDC	88 VDC	176VDC	19.2 VAC	88 VAC	184 VAC
Dropout Voltage AC	1.2 VDC	2.4 VDC	4.8 VDC	11 VDC	22VDC	7.2 VAC	33 VAC	69 VAC
Typical response time	20 ms	20 ms	20ms	20 ms	20ms	20 ms	20 ms	20 ms
Typical release time	20 ms	20 ms	20ms	20 ms	20ms	20 ms	20 ms	20 ms
Coil Resistance	165 ohm	662 ohm	2.5 k ohm	11.44 k ohm	5.3 k ohm	180 ohm	3.75 k ohm	15.92 k ohm
Operating Voltage Display	LED	LED	LED	LED	LED	LED	LED	LED
Nominal input power	1W	1W	1W	1W	1W	1.2 VA	1.2 VA	1.2 VA

ORDERING INFORMATION

Socket	CRS2CO	CRS2CO	CRS2CO	CRS2CO	CRS2CO	CRS2CO	CRS2CO	CRS2CO
Relays								
Without Test Button	CRY2CO12D(A/B)*	CRY2CO24DY(A/B)*	CRY2CO48DY(A/B)*	CRY2CO110DY(A/B)*	CRY2CO110DY(A/B)*	CRY2CO24AY(A/B)*	CRY2CO110AY(A/B)*	CRY2CO230AY(A/B)*
Socket + Relays								
Without Test Button	CRM2CO12DA(A/B)*	CRM2CO24DA(A/B)*	CRM2CO48DA(A/B)*	CRM2CO110DA(A/B)*	CRM2CO110DA(A/B)*	CRM2CO24A(A/B)*	CRM2CO110A(A/B)*	CRM2CO230A(A/B)*

OUTPUT DATA

Contact switching type	2CO
Contact resistance	100m ohm
Contact material	AgSnO ₂
Limiting continuous current	5A per CO
Switching Voltage	230 VAC / 30 VDC
Maximum Switching power	2300VA, 300W

ENVIROMENTAL AND REAL LIFE CONDITION

Degree of protection (Relay Base)	IP20
Ambient Operating Temperature	-40 to 55 deg C
Housing Material	PA 6,6
Flammability Rating	V-0
Ambient temperature storage	-40 to 85 deg C

Note :
A/B- Based on internal availability A and B series will be suggested.

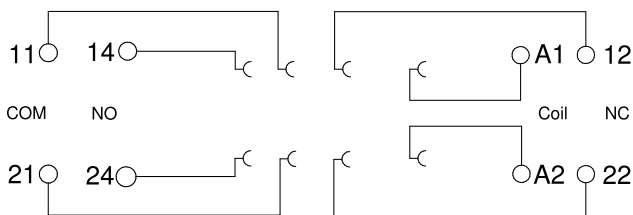
PROPERTIES

Product type	Electromechanical Relay
Product family	Modular Relay
Application	PLC, Power, Machine Building, Automation Panels
Mechanical Service Life	10,000,000 operations min.
Socket Dimensions in mm (W x H x D)	15 x 43.5 x 76
Relay Dimensions in mm (W x H x D)	13 x 29 x 25.5

CONNECTION SPECIFICATION

Type of Connection	Screw Connection
Suitable wire / conductor	Copper wire (Temperature Range 60/75° C)
Wire Stripping Length	8 mm
Wire Size-Solid/Stranded/Flexible	
With Ferrule(IEC) without Ferrule	0.2 - 4 mm ²
Wire Size-Stranded/Flexible	
With Ferrule(IEC)	0.2 - 4 mm ²
Wire Size-Solid With Ferrule(IEC)	0.2 - 4 mm ²
Wire Size-Stranded/Flexible	
With Ferrule(UL)	24 - 10 AWG
Wire Size-Solid With Ferrule(UL)	24 - 10 AWG
Wire Size-Solid/Stranded/Flexible	
With Ferrule(UL) without Ferrule	24 - 10 AWG
Wire Size- Solid With TWIN Ferrule(UL)	24 - 10 AWG
Wire Size- Stranded/Flexible	
With TWIN Ferrule(IEC)	0.2 - 2.5 mm ²

ELECTRICAL CONNECTION DIAGRAM



INSULATION

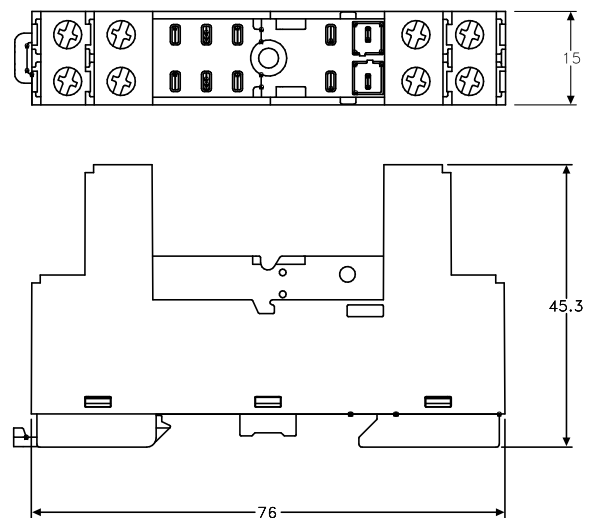
Insulation type	Class A (UL)
Insulation resistance	1000M ohm at 500 VDC
Insulation test voltage	5kV AC (1Min)
Over voltage category	III
Creepage Distance	8 mm
Pollution Degree	2
Dielectric strength:-	
1) Between Winding & Coil	5kV AC (50Hz 1min)
2) Between Contact Sets	3kV AC (50Hz 1min)
3) Between Open Contacts	1kV AC (50Hz 1min)
Service Life Electrical	NO-1,00,000 OPS, NC-1,00,000 OPS

ACCESSORIES

Mounting Rail (1 M Length)

35mm x 7.5mm DIN Rail - Un slotted	CA701-1M
35mm x 7.5mm DIN Rail - Slotted	CA701-1M-S
35mm x 15mm DIN Rail - Un slotted	CA701-15-1M
35mm x 15mm DIN Rail - Slotted	CA701-15-1M-S
End Clamp	CA702 (6 mm Pitch) CA802 (10 mm Pitch)
Marking Tag	MT-CRM2CO
Group Marker	CA509/G4
Marker Card	MC6 (Blank) / MC6WP (Printed)
Screwdriver	SCPH1
LED Plug	CRLD12-60V / CRLD110-230V

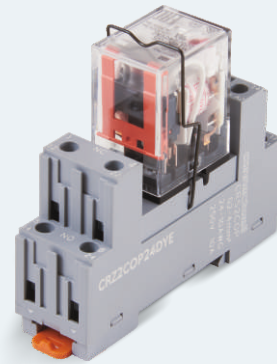
MECHANICAL DIMENSIONS (mm)



MODULAR RELAYS

- 2 CO POWER CONTACT

- Compact & Modular design with retainer clip
- Variety of operating voltages
- High switching current: up to 10A
- Low coil power consumption
- LED Indication on Coil activation
- Possibility of jumpering
- Long-life laser marking for circuit identification
- Pluggable Electromechanical Relays
- Integrated Input Protection (Freewheeling diode)



RoHS

INPUT DATA (COIL SIDE)

Coil Voltage	12VDC	24VDC	48VDC	110VDC	220VDC	24VAC	110VAC	230VAC
Maximum operating voltage	13.2VDC	26.4VDC	62.4VDC	121VDC	286VDC	26.4VAC	121VAC	253VAC
Nominal input current	72.7 mA	36.3 mA	80.8 mA	8.7 mA	4.1mA	53.8 mA	11.7 mA	5.5 mA
Pickup Voltage AC	9.6 VDC	19.2 VDC	38.4 VDC	88 VDC	176VDC	19.2 VAC	88 VAC	184 VAC
Dropout Voltage AC	1.2 VDC	2.4 VDC	4.8 VDC	11 VDC	22VDC	7.2 VAC	33 VAC	69 VAC
Typical response time	20 ms	20 ms	20ms	20 ms	20ms	20 ms	20 ms	20 ms
Typical release time	20 ms	20 ms	20ms	20 ms	20ms	20 ms	20 ms	20 ms
Coil Resistance	165 ohm	662 ohm	2.5 k ohm	11.44 k ohm	5.3 k ohm	180 ohm	3.75 k ohm	15.92 k ohm
Operating Voltage Display	LED	LED	LED	LED	LED	LED	LED	LED
Nominal input power	1W	1W	1W	1W	1W	1.2 VA	1.2 VA	1.2 VA

ORDERING INFORMATION

Socket	CRS2COP	CRS2COP	CRS2COP	CRS2COP	CRS2COP	CRS2COP	CRS2COP	CRS2COP
Relays								
Without Test button	CRY2COP12D(A/B)*	CRY2COP24D(A/B)*	CRY2COP48D(A/B)*	CRY2COP110D(A/B)*	CRY2COP110D(A/B)*	CRY2COP24A(A/B)*	CRY2COP110A(A/B)*	CRY2COP230A(A/B)*
With Test button	CRY2COP12DT(A/B)*	CRY2COP24DT(A/B)*	CRY2COP48DT(A/B)*	CRY2COP110DT(A/B)*	CRY2COP110DT(A/B)*	CRY2COP24AT(A/B)*	CRY2COP110AT(A/B)*	CRY2COP230AT(A/B)*
Socket + Relays								
Without Test button	CRM2COP12D(A/B)*	CRM2COP24D(A/B)*	CRM2COP48D(A/B)*	CRM2COP110D(A/B)*	CRM2COP110D(A/B)*	CRM2COP24A(A/B)*	CRM2COP110A(A/B)*	CRM2COP230A(A/B)*
With Test button	CRM2COP12DT(A/B)*	CRM2COP24DT(A/B)*	CRM2COP48DT(A/B)*	CRM2COP110DT(A/B)*	CRM2COP110DT(A/B)*	CRM2COP24AT(A/B)*	CRM2COP110AT(A/B)*	CRM2COP230AT(A/B)*

OUTPUT DATA

Contact switching type	2CO
Contact resistance	100m ohm
Contact material	AgSnO ₂
Limiting continuous current	10A per CO
Switching Voltage	230 VAC / 30 VDC
Maximum Switching power	2300VA, 300W

ENVIROMENTAL AND REAL LIFE CONDITION

Degree of protection (Relay Base)	IP20
Ambient Operating Temperature	-40 to 55 deg C
Housing Material	PA 6,6
Flammability Rating	V-0
Ambient temperature storage	-40 to 85 deg C

Note :
A/B- Based on internal availability A and B series will be suggested.

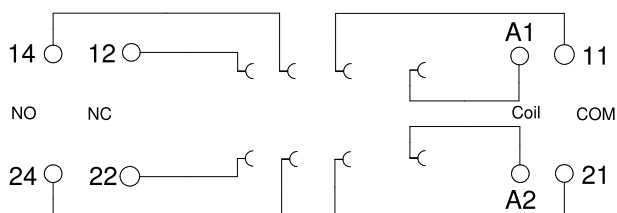
PROPERTIES

Product type	Electromechanical Relay
Product family	Modular Relay
Application	PLC, Power, Machine Building, Automation Panels
Mechanical Service Life	10,000,000 operations min.
Socket Dimensions in mm (W x H x D)	22 x 45.3 x 76
Relay Dimensions in mm (W x H x D)	13 x 29 x 25.5

CONNECTION SPECIFICATION

Type of Connection	Screw Connection
Suitable wire / conductor	Copper wire (Temperature Range 60/75° C)
Wire Stripping Length	8 mm
Wire Size-Solid/Stranded/Flexible	
With Ferrule(IEC) without Ferrule	0.2 - 4 mm ²
Wire Size-Stranded/Flexible	
With Ferrule(IEC)	0.2 - 4 mm ²
Wire Size-Solid With Ferrule(IEC)	0.2 - 4 mm ²
Wire Size-Stranded/Flexible	
With Ferrule(UL)	24 - 10 AWG
Wire Size-Solid With Ferrule(UL)	24 - 10 AWG
Wire Size-Solid/Stranded/Flexible	
With Ferrule(UL) without Ferrule	24 - 10 AWG
Wire Size- Solid With TWIN Ferrule(UL)	24 - 10 AWG
Wire Size- Stranded/Flexible	
With TWIN Ferrule(IEC)	0.2 - 2.5 mm ²

ELECTRICAL CONNECTION DIAGRAM



INSULATION

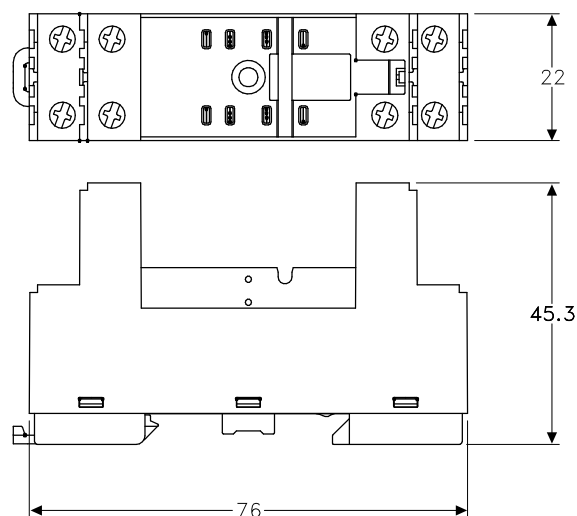
Insulation type	Class A (UL)
Insulation resistance	1000M ohm at 500 VDC
Insulation test voltage	5kV AC (1Min)
Over voltage category	III
Creepage Distance	8 mm
Pollution Degree	2
Dielectric strength:-	
1) Between Winding & Coil	5kV AC (50Hz 1min)
2) Between Contact Sets	3kV AC (50Hz 1min)
3) Between Open Contacts	1kV AC (50Hz 1min)
Service Life Electrical	NO-1,00,000 OPS, NC-1,00,000 OPS

ACCESSORIES

Mounting Rail (1 M Length)

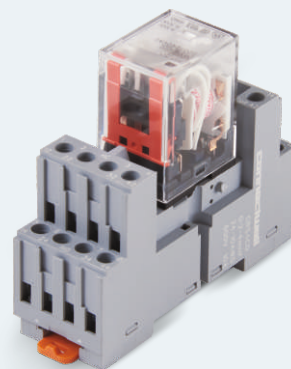
35mm x 7.5mm DIN Rail - Un slotted	CA701-1M
35mm x 7.5mm DIN Rail - Slotted	CA701-1M-S
35mm x 15mm DIN Rail - Un slotted	CA701-15-1M
35mm x 15mm DIN Rail - Slotted	CA701-15-1M-S
End Clamp	CA702 (6 mm Pitch) CA802 (10 mm Pitch)
Marking Tag	MT-CRM2CO
Group Marker	CA509/G4
Marker Card	MC6 (Blank) / MC6WP (Printed)
Screwdriver	SCPH1
LED Plug	CRLD12-60V / CRLD110-230V

MECHANICAL DIMENSIONS (mm)



MODULAR RELAYS - 4 CO

- Compact & Modular design with retainer clip
- Variety of operating voltages
- High switching current: up to 6A
- Low coil power consumption
- LED Indication on Coil activation
- Possibility of jumpering
- Long-life laser marking for circuit identification
- Pluggable Electromechanical Relays
- Integrated Input Protection (Freewheeling diode)



RoHS

INPUT DATA (COIL SIDE)

Coil Voltage	12VDC	24VDC	48VDC	110VDC	220VDC	24VAC	110VAC	230VAC
Maximum operating voltage	13.2VDC	26.4VDC	62.4VDC	121VDC	286VDC	26.4VAC	121VAC	253VAC
Nominal input current	72.7 mA	36.3 mA	80.8 mA	8.7 mA	4.1mA	53.8 mA	11.7 mA	5.5 mA
Pickup Voltage AC	9.6 VDC	19.2 VDC	38.4 VDC	88 VDC	176VDC	19.2 VAC	88 VAC	184 VAC
Dropout Voltage AC	1.2 VDC	2.4 VDC	4.8 VDC	11 VDC	22VDC	7.2 VAC	33 VAC	69 VAC
Typical response time	20 ms	20 ms	20ms	20 ms	20ms	20 ms	20 ms	20 ms
Typical release time	20 ms	20 ms	20ms	20 ms	20ms	20 ms	20 ms	20 ms
Coil Resistance	165 ohm	662 ohm	2.5 k ohm	11.44 k ohm	5.3 k ohm	180 ohm	3.75 k ohm	15.92 k ohm
Operating Voltage Display	LED	LED	LED	LED	LED	LED	LED	LED
Nominal input power	1W	1W	1W	1W	1W	1.2 VA	1.2 VA	1.2 VA

ORDERING INFORMATION

Socket	CRS4C0	CRS4C0	CRS4C0	CRS4C0	CRS4C0	CRS4C0	CRS4C0	CRS4C0
Relays								
Without Test button	CRY4C012D(A/B)*	CRY4C024D(A/B)*	CRY4C048D(A/B)*	CRY4C0110D(A/B)*	CRY4C0110D(A/B)*	CRY4C024A(A/B)*	CRY4C0110A(A/B)*	CRY4C0230A(A/B)*
With Test button	CRY4C012DT(A/B)*	CRY4C024DT(A/B)*	CRY4C048DT(A/B)*	CRY4C0110DT(A/B)*	CRY4C0110DT(A/B)*	CRY4C024AT(A/B)*	CRY4C0110AT(A/B)*	CRY4C0230AT(A/B)*
Socket + Relays								
Without Test button	CRM4C012D(A/B)*	CRM4C024D(A/B)*	CRM4C048D(A/B)*	CRM4C0110D(A/B)*	CRM4C0110D(A/B)*	CRM4C024A(A/B)*	CRM4C0110A(A/B)*	CRM4C0230A(A/B)*
With Test button	CRM4C012DT(A/B)*	CRM4C024DT(A/B)*	CRM4C048DT(A/B)*	CRM4C0110DT(A/B)*	CRM4C0110DT(A/B)*	CRM4C024AT(A/B)*	CRM4C0110AT(A/B)*	CRM4C0230AT(A/B)*

OUTPUT DATA

Contact switching type	4CO
Contact resistance	100m ohm
Contact material	AgSnO ₂
Limiting continuous current	6A per CO
Switching Voltage	230 VAC / 30 VDC
Maximum Switching power	2300VA, 300W

ENVIROMENTAL AND REAL LIFE CONDITION

Degree of protection (Relay Base)	IP20
Ambient Operating Temperature	-40 to 55 deg C
Housing Material	PA 6,6
Flammability Rating	V-0
Ambient temperature storage	-40 to 85 deg C

Note :
A/B- Based on internal availability A and B series will be suggested.