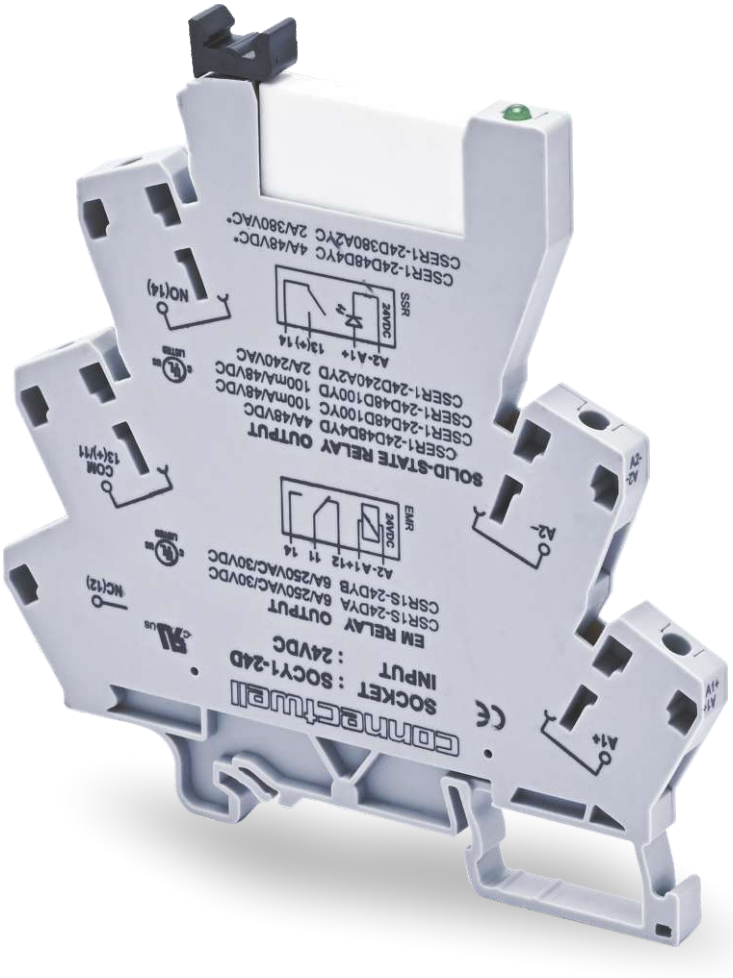
COMPACT SLIM RELAYS



BUILT TO SAVE PANEL SPACE

The world of automation is constantly evolving and becoming more complex with ever more sensor and actuator loops being incorporated into control systems. This brings about a need for miniaturizing every control component including relays so as to make Control Panels more dense yet managable.

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

True Modular Design with
IP 20 SAFETY Rating

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

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

True Full Contact Rating
CONTINUOUS OPERATION

CE & UL Approved

SLIM RELAYS

Electro Mechanical Relay - 1 Change Over

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

RoHS

INPUT DATA (COIL SIDE)

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

ORDERING INFORMATION

Screw Termination	CSR1S-5DYB	CSR1S-24DYB	CSR1S-12UYB	CSR1S-24UYB	CSR1S-48-60UYB	CSR1S-120UYB	CSR1S-230UYB
Screw Termination + RC	--	--	--	--	--	CSR1S-120UYB-SN	CSR1S-230UYB-Sn
Spring Termination	CSR1S-5DXB	CSR1S-24DXB	CSR1S-12UXB	CSR1S-24UXB	CSR1S-48-60UXB	CSR1S-120UXB	CSR1S-230UXB
Spring Termination + RC	--	--	--	--	–	CSR1S-120UXB-SN	CSR1S-230UXB-SN
Standard Pack	10	10	10	10	10	10	10
Pluggable Relay							
12 VDC		SRL1-12D	SRL1-12D				
24VDC				SRL1-24D	SRL1-24D	SRL1-24D	
60VDC							SRL1-60D
Standard Pack		15	15	15	15	15	15

OUTPUT DATA

Contact switching type	1CO (SPDT)
Contact resistance	100 mΩ @ 1A 6VDC
Contact material	$AgSnO_2$
Limiting continuous current	6 A
Switching Voltage	230 VAC / 30 VDC
Maximum Switching power	1500 VA, 180 W

ENVIROMENTAL AND REAL LIFE CONDITION

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

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	Cat. NO.	Standard Pack
Coil Side & Contact Side - 2 Pole	JX4/2	100
Coil Side & Contact Side - 3 Pole	JX4/3	50
Coil Side & Contact Side - 4 Pole	JX4/4	50
Coil Side & Contact Side - 5 Pole	JX4/5	50
Coil Side & Contact Side - 8 Pole	JX4/8	10
Coil Side & Contact Side - 10 Pole	JX4/10	10
Coil Side & Contact Side - 16 Pole	JX4/16	10
Marker Card	MC6 (Blank)	10
	MC6WP (Printed)	10
Screwdriver	SCS0.5/3	10
End Clamp	CA103	50
	CA104	50
Mounting Rail (1 M Length)		**Standard Pack**
35mm x 7.5mm DIN Rail - Un slotted	CA701-1M	50
35mm x 7.5mm DIN Rail - Slotted	CA701-1M-S	50
35mm x 15mm DIN Rail - Un slotted	CA701-15-1M	50
35mm x 15mm DIN Rail - Slotted	CA701-15-1M-S	50

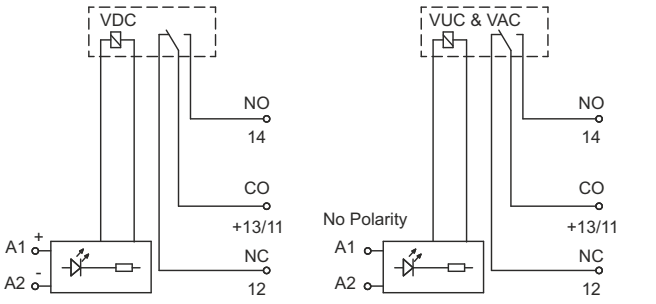
INSULATION

Insulation type	Class A (UL)
Insulation resistance	1000 MΩ at 500 VDC
Insulation test voltage	5000 VAC (1Min)
Over voltage category	III
Creepage Distance	10 mm
Pollution Degree	2
Dielectric strength:-	
1) Between Winding & Coil	4000 VAC (50Hz 1min)
2) Between Contact Sets	2000 VAC (50Hz 1min)
3) Between Open Contacts	1000 VAC (50Hz 1min)
4) Between UUT Live Parts/ Din Rail	2000 VAC (50Hz 1min)
Service Life Electrical	NO-30,000 OPS, NC-10,000 OPS

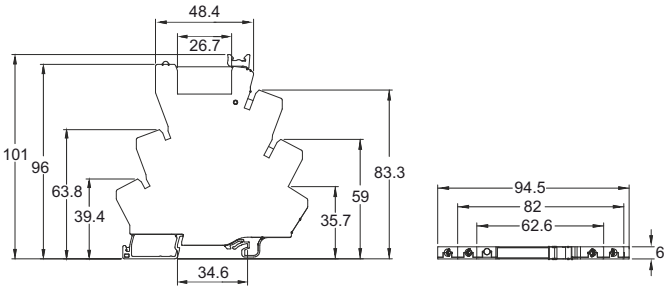
PROPERTIES

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

Electro Mechanical Relay - 2 Change Over

- Compact thin design
- Variety of Operating Voltages
- High switching current: up to 8 A at 250 VAC
- 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
- Integrated Input Protection. (Rectifier and freewheeling diode)

RoHS

INPUT DATA (COIL SIDE)

Coil Voltage	12 VUC	24 VUC	48-60 VUC	120 VUC	230 VUC
Nominal input voltage	12 V AC/DC	24 V AC/DC	48-60 V AC/DC	120 V AC/DC	230 V AC/DC
Nominal input current	32 mA	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 Ω	1.44 k Ω	5.36 k Ω	23.56 k Ω	38.34 k Ω
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	612 mW	660 mW

ORDERING INFORMATION

Screw Termination	CSR2S-12UYC	CSR2S-24UYC	CSR2S-48-60UYC	CSR2S-120UYA	CSR2S-230UYA
Screw Termination+RC	-	-	-	CSR2S-120UYA-SN	CSR2S-230UYA-SN
Standard Pack	10	10	10	10	10

OUTPUT DATA

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

ENVIROMENTAL AND REAL LIFE CONDITION

Degree of protection (Relay Base)	IP20
Ambient Operating Temperature	-40 to +55°C
Housing Material	PA 6,6
Ambient temperature storage	-40 to +85°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	Cat. NO.	Standard Pack
Coil Side - 2 Pole	JX1.5/14/2	100
Coil Side - 3 Pole	JX1.5/14/3	50
Coil Side - 4 Pole	JX1.5/14/4	50
Contact Side - 4 Pole	JX1.5/7/4	50
Contact Side - 6 Pole	JX1.5/7/6	50
Contact Side - 8 Pole	JX1.5/7/8	50
Marker Card	MC12 (Blank)	10
	MC12WP (Printed)	10
Screwdriver	SCS0.5/3	10
End Clamp	CA202	25
	CA702	50
Mounting Rail (1 M Length)		**Standard Pack**
35mm x 7.5mm DIN Rail - Un slotted	CA701-1M	50
35mm x 7.5mm DIN Rail - Slotted	CA701-1M-S	50
35mm x 15mm DIN Rail - Un slotted	CA701-15-1M	50
35mm x 15mm DIN Rail - Slotted	CA701-15-1M-S	50

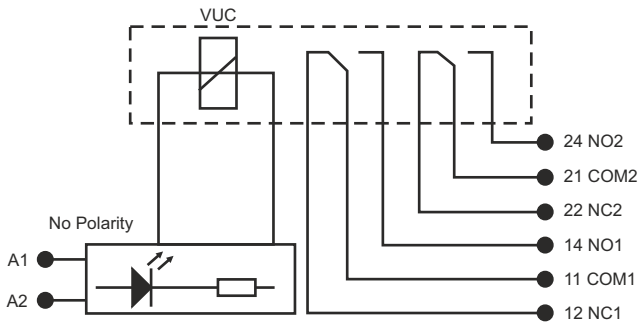
INSULATION

Insulation type	Class A (UL)
Insulation resistance	1000 MΩ at 500 VDC
Insulation test voltage	5000 VAC (1Min)
Over voltage category	III
Creepage Distance	10 mm
Pollution Degree	2
Dielectric strength:-	
1) Between Winding & Coil	4000 VAC (50Hz 1min)
2) Between Contact Sets	2000 VAC (50Hz 1min)
3) Between Open Contacts	1000 VAC (50Hz 1min)
4) Between UUT Live Parts/ Din Rail	2000 VAC (50Hz 1min)
Service Life Electrical	NO-30,000 OPS, NC-10,000 OPS

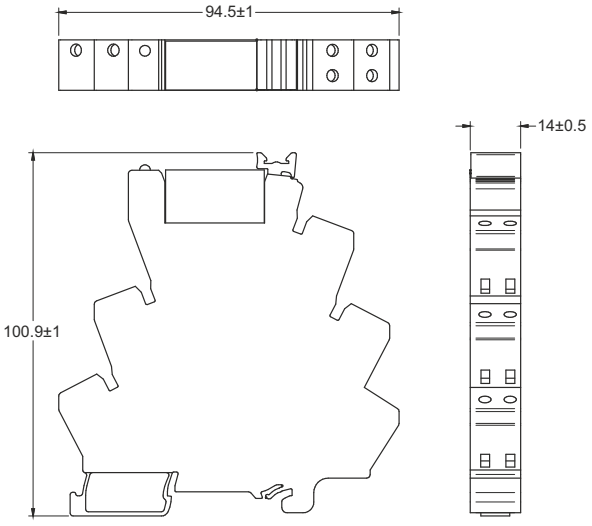
PROPERTIES

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

Solid State Relays

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

RoHS

INPUT DATA

Input Voltage	24 VDC	24 VUC	48-60 VUC	120 VUC	230 VAC
Nominal input voltage	24 VDC	24 V AC/DC	48-60 V AC/DC	120 V AC/DC	230 VAC
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

Screw Termination					
DC Output 48 V / 4A	CSER1-24D48D4YC	CSER1-24U48D4YC	CSER1-4860U48D4YC	CSER1-120U48D4YC	CSER1-230A48D4YC
DC Output 48 V / 100 mA	CSER1-24D48D100YC	CSER1-24U48D100YC	CSER1-4860U48D100YC	CSER1-120U48D100YC	CSER1-230A48D100YC
AC Output 380 V / 2A	CSER1-24D380A2YC	CSER1-24U380A2YC	CSER1-4860U380A2YC	CSER1-120U380A2YC	CSER1-230A380A2YC
Spring Termination					
DC Output 48 V / 4A	CSER1-24D48D4XC	CSER1-24U48D4XC	CSER1-4860U48D4XC	CSER1-120U48D4XC	CSER1-230A48D4XC
DC Output 48 V / 100 mA	CSER1-24D48D100XC	CSER1-24U48D100XC	CSER1-4860U48D100XC	CSER1-120U48D100XC	CSER1-230A48D100XC
AC Output 380 V / 2A	CSER1-24D380A2XC	CSER1-24U380A2XC	CSER1-4860U380A2XC	CSER1-120U380A2XC	CSER1-230A380A2XC
Standard Pack	10	10	10	10	10

PROPERTIES

Product type	Solid State Relay
Product family	Slim Relay
Application	PLC, Power, Machine Building, Automation Panels
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°C
Housing Material	PA 6,6
Ambient temperature storage	-40 to 85°C

OUTPUT DATA

Contact switching type	1NO (Solid State)
Output Load	
Option 1	100 mA / 48 VDC Output
Option 2	4 A / 48 VDC Output
Option 3	2 A / 380 VAC Output
Low voltage range	
Option 1 & 2	3 - 58 VDC
Option 3	48 - 380 VAC
Maximum on state voltage drop	
Option 1	1.5 VDC (100 mA / 48 VDC Output)
Option 2	0.5 VDC (4 A / 48 VDC Output)
Option 3	0.35 VDC (2 A / 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

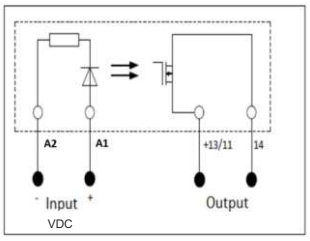
INSULATION

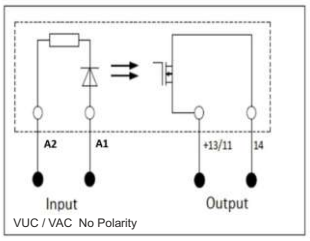
Insulation type	Class A (UL)
Insulation resistance	1000 MΩ at 500 VDC
Insulation test voltage	5000 VAC (1Min)
Over voltage category	III
Creepage Distance	10 mm
Pollution Degree	2
Dielectric strength:-	
1) Between Winding & Coil	4000 VAC (50Hz 1min)
2) Between Contact Sets	2000 VAC (50Hz 1min)
3) Between Open Contacts	1000 VAC (50Hz 1min)
4) Between UUT Live Parts/ Din Rail	2000 VAC (50Hz 1min)
Service Life Electrical	NO-30,000 OPS, NC-10,000 OPS

ACCESSORIES

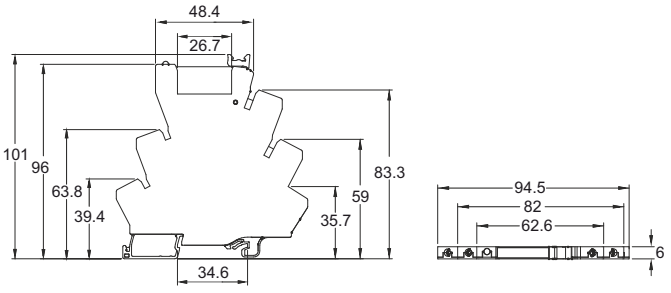
Jumpers	Cat. NO.	Standard Pack
Coil Side & Contact Side - 2 Pole	JX4/2	100
Coil Side & Contact Side - 3 Pole	JX4/3	50
Coil Side & Contact Side - 4 Pole	JX4/4	50
Coil Side & Contact Side - 5 Pole	JX4/5	50
Coil Side & Contact Side - 8 Pole	JX4/8	10
Coil Side & Contact Side - 10 Pole	JX4/10	10
Coil Side & Contact Side - 16 Pole	JX4/16	10
Marker Card	MC6 (Blank)	10
	MC6WP (Printed)	10
Screwdriver	SCS0.5/3	10
End Clamp	CA103	50
	CA104	50
Mounting Rail (1 M Length)		**Standard Pack**
35mm x 7.5mm DIN Rail - Un slotted	CA701-1M	50
35mm x 7.5mm DIN Rail - Slotted	CA701-1M-S	50
35mm x 15mm DIN Rail - Un slotted	CA701-15-1M	50
35mm x 15mm DIN Rail - Slotted	CA701-15-1M-S	50

ELECTRICAL CONNECTION DIAGRAM





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.

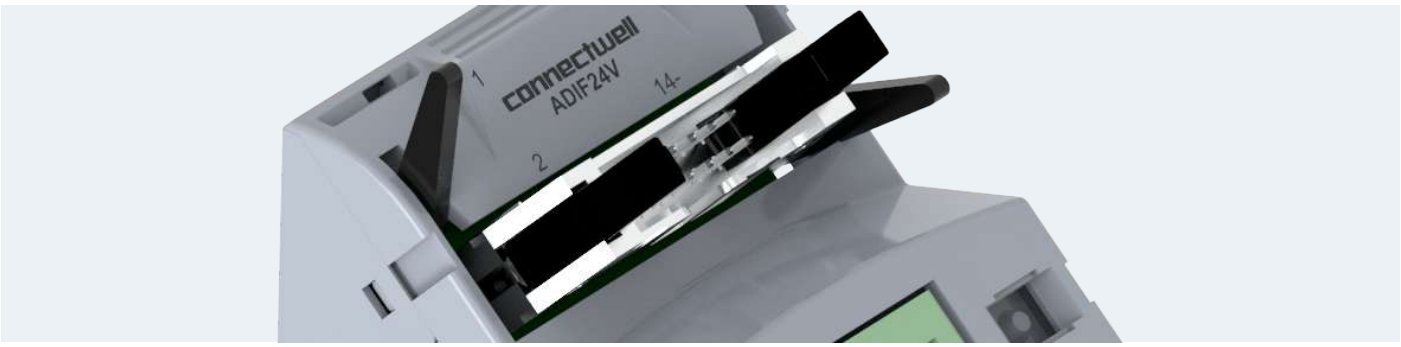
SUITABLE FOR	
CSR1S-24DYB	Slim Relay Module 1CO 24VDC - Screw Connection
CSR1S-24UYB	Slim Relay Module 1CO 24VUC - Screw Connection
CSR1S-24UXB	Slim Relay Module 1CO 24VUC - Spring Connection
CSR1S-24DXB	Slim Relay Module 1CO 24VDC - Spring Connection

ORDERING INFORMATION

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

PRODUCT SPECIFICATIONS

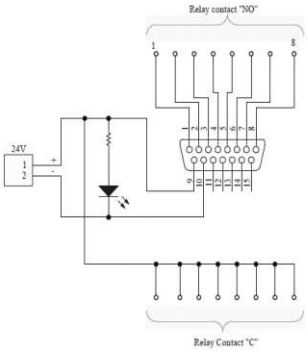
Conductor Cross Section in AWG	12 AWG
Conductor Cross Section in sq. mm	2.5 mm^2
Height	56.25 mm
Length	47.52 mm
Rated Current	2A
Rated Voltage	24 V
Suitable For	Slim Relay
Torque	0.4 Nm
Width (Thickness)	53.7 mm

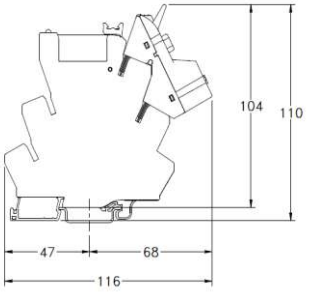


CIRCUIT DIAGRAM

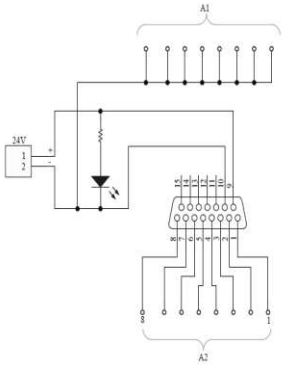
PRODUCT DIAGRAM

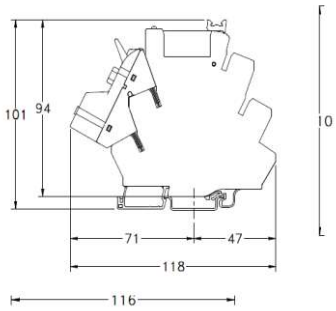
ADID24V



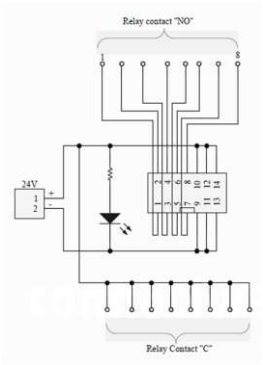


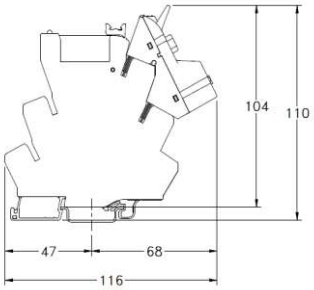
ADOD24V





ADIF24V





ADOF24V