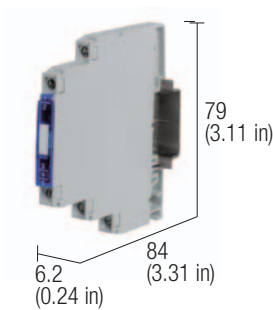


Solid state 12-24 Vdc  
single relay  
with electronic SPDT

- 10...40 Vdc rated voltage
- Output with SPDT simulation
- Output voltage 5...48 Vdc 500 mA
- Max switching frequency 1 KHz
- I/O isolation 3.75 kV



NOTES

Compared with standard relays, solid state relays offers many advantages: much longer life, higher switching frequency, lower EMI emissions, higher vibrations withstand capability, wider input voltage range and 70% lower input current. The output of solid state relays is a N.O. type "contact" and up to now SPDT type was not available, forcing to use a standard relay when SPDT function was required. Thanks to a new technology, this new solid state relay offers all the advatages of solid state relays with a SPDT contact output type, making a step ahead possible.

VERSIONS

- Pluggable relay
- Fixed relay

INPUT TECHNICAL DATA

Input signal
Level 1 (high) input signal (ON)
Level 0 (low) input signal (OFF)
Rated current
Protection device

OUTPUT TECHNICAL DATA

Output signal
Continuous load current
Switching delay
Protection device
Output Type

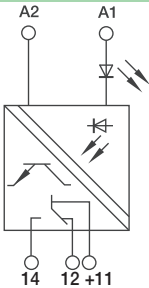
GENERAL TECHNICAL DATA

Operating temperature
I/O isolation
Max. switching frequency
Protection degree
Reference Standard
Pollution degree
Overvoltage category
Connection terminals
Housing material
Approx. weight
Mounting information

MOUNTING ACCESSORIES

Mounting rail type according to IEC60715/TH35
Mounting rail type according to IEC60715/G32
Replacement relay (1)
Plug-in jumper
Marking tags
blank
printed
printed
End plate

BLOCK DIAGRAM



Cat. No. X766083

CWOT 6-2083

24 Vdc (range 10...40 Vdc)
>5 Vdc
<5 Vdc
6 mA
suppressor diode

5...48 Vdc
10...500 mA
12 µs ON / 12 µs OFF
suppressor diode
NPN / PNP transistor, with changeover contact simulation

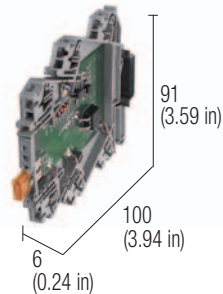
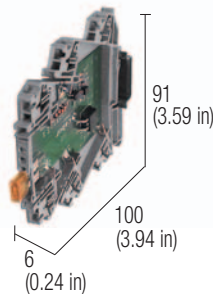
-25 ...+60°C
3.75 kVac / 60 s
<1 KHz
IP 20 IEC529 EN60529
IEC 664-1, DIN VDE
2
III
2.5 mm² fixed screw type
PPE
29 g (1.02 oz)
vertical on rail adjacent without gap

PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB

—
—
—
—
—
—

# Solid state 12-24 Vdc single relay with fuse

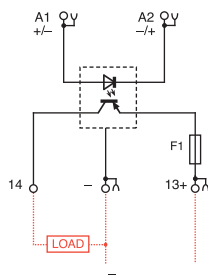
- 5 A / 24 Vdc rated current
- Common negative or positive input
- Overload, short-circuit protected output with replaceable fuse
- Status LED display, reverse polarity protection
- 6 mm wide
- Plug-in jumper available



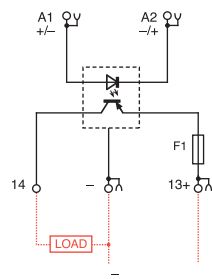
## NOTES

(1) The fast blow-out fuse is calibrated to protect the output stage of the module and it is connected in series to the positive pole; it is possible to replace the fuse with lower rated current values, selected to protect also the load and its wires; a fuse having a current rating higher than 5 A does not protect the output against short circuit and overloads.  
(2) In order to assure the IP20 protection degree, the last module must be protected and insulated using the CK/P.T end section.

## BLOCK DIAGRAM



## BLOCK DIAGRAM



## VERSIONS

Pluggable relay  
Fixed relay

Cat. No. XCKS15NA

CKS15NA

Cat. No. XCKS15NB

CKS15NB

## INPUT TECHNICAL DATA

Input voltage	4.5...12 Vdc
Level 1 (high) input signal	≥4.5 Vdc
Level 0 (low) input signal	≤4 Vdc
Rated current	≤5 mA @ 12 Vdc

19...30 Vdc
≥ 20 Vdc
≤18 Vdc
≤ 5 mA @ 24 Vdc

## OUTPUT TECHNICAL DATA

Output voltage	5.2...60 Vdc, max. 100 V (peak)
Continuous load current	5 A / 24 Vdc @ 25°C
Max. current	7.5 A / 1 s, 25 A / 50 ms
Min. applicable load	5.2 V / 10 mA
Leakage current 0 signal	25 µA @ 60 Vdc between 13 and 14
Isolation between open contacts	3 kVac / 60 s
Protection fuse (1)	F 5 A

5.2...60 Vdc, max. 100 V (peak)
5 A / 24 Vdc @ 25°C
7.5 A / 1 s, 25 A / 50 ms
5.2 V / 10 mA
25 µA @ 60 Vdc between 13 and 14
3 kVac / 60 s
F 5 A

## GENERAL TECHNICAL DATA

Operating temperature	-20...+60°C
I/O isolation	3 kVac / 60 s
Max. switching frequency	400 Hz max.
Protection degree	IP20 IEC529 EN60529
Reference Standard	IEC 664-1, EN50081-1
Pollution degree	2
Overvoltage category	II
Connection terminals	2.5 mm <sup>2</sup> (AWG 14), AWG26-14 spring type
Housing material	Polyamide UL94V-0
Approx. weight	32 g (1.13 oz)
Mounting information	vertical on rail adjacent without gap

-20...+60°C
3 kVac / 60 s
400 Hz max.
IP20 IEC529 EN60529
IEC 664-1, EN50081-1
2
II
2.5 mm <sup>2</sup> (AWG 14), AWG26-14 spring type
Polyamide UL94V-0
32 g (1.13 oz)
vertical on rail adjacent without gap

## MOUNTING ACCESSORIES

Mounting rail type according to IEC60715/TH35-7,5  
Mounting rail type according to IEC60715/G32  
Replacement relay (1)  
Plug-in jumper —  
Marking tags blank

PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB

Cat. No. PTCC42 (42 poles)  
Cat. No. NU0851

PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB

Cat. No. PTCC42 (42 poles)  
Cat. No. NU0851

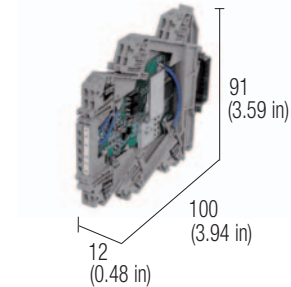
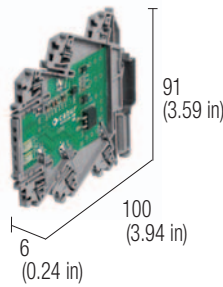
End plate

Cat. No. XCKPT

Cat. No. XCKPT

# Solid state 12-24 Vdc single relay with electronic

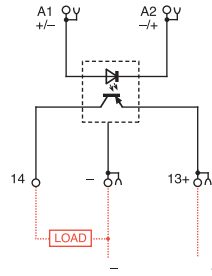
- Electronic protection from short circuit, overload, overtemperature
- Input and output status LED
- Output extravoltage suppressor diode
- Extralow current absorbing
- Plug-in jumper available



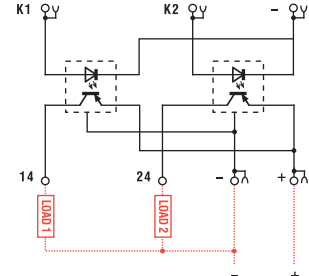
## NOTES

- (1) Maximum output current of each channel depends on surrounding air temperature, on the number of output contemporarily active and on the current flowing through them; the given value is measured with 4 active outputs and 4 not active
- (2) All outputs are overcurrent and overtemperature; when ovd or ovt protections cuts off the output current, the output display led turns off or reduces its light depending on ovd degree; the output turns on automatically when the ovd or ovt are removed.

## BLOCK DIAGRAM



## BLOCK DIAGRAM



## VERSIONS

Pluggable relay  
Fixed relay

Cat. No. XCKS15E

CKS15E

Cat. No. XCKS22

CKS22

## INPUT TECHNICAL DATA

Input voltage	5...24 Vdc (4.2...32 Vdc)
Level 1 (high) input signal	> 3.5 Vdc
Level 0 (low) input signal	< 3.5 Vdc
Rated current	≤ 5 mA @ 24 Vdc
Input channels	1

5...24 Vdc (4.2...32 Vdc)  
> 3.5 Vdc  
< 3.5 Vdc  
≤ 5 mA @ 24 Vdc  
1

## OUTPUT TECHNICAL DATA

Output voltage	5...24 Vdc (5...32 Vdc)
Continuous load current	5 A / 24 Vdc @ 45°C (1)
Max. current	7.5 A / 60 s, 2.5 A / 50 ms peak (1)
Min. applicable load	5.2 V / 100 mA
Max. switching frequency	200 Hz max.
Leakage current 0 signal	< 25 µA @ 24 Vdc
Isolation between open contacts	—
Protection	electronic from overload, overtemperature (2)

5...24 Vdc (5...32 Vdc)  
5 A / 24 Vdc @ 45°C (1)  
7.5 A / 60 s, 2.5 A / 50 ms peak (1)  
5.2 V / 100 mA  
200 Hz max.  
< 25 µA @ 24 Vdc  
—  
electronic from overload, overtemperature (2)

## GENERAL TECHNICAL DATA

Operating temperature	-20 ... +60°C (with therml protection) (2)
I/O isolation	3 kVac / 60 s
Max. switching frequency	—
Protection degree	IP20 IEC529 EN60529
Reference Standard	IEC 664-1, EN50081-1
Pollution degree	2
Overvoltage category	II
Connection terminals	2.5 mm <sup>2</sup> AWG26-14 fixed spring type
Housing material	Polyamide UL94V-0
Approx. weight	30 g (1.06 oz)
Mounting information	vertical on rail adjacent without gap

-20 ... +60°C (with therml protection) (2)  
3 kVac / 60 s  
—  
IP20 IEC529 EN60529  
IEC 664-1, EN50081-1  
2  
II  
2.5 mm<sup>2</sup> AWG26-14 fixed spring type  
Polyamide UL94V-0  
30 g (1.06 oz)  
vertical on rail adjacent without gap

## MOUNTING ACCESSORIES

Mounting rail type according to IEC60715/TH35-7,5	PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB
Mounting rail type according to IEC60715/G32	—
Replacement relay (1)	—
Plug-in jumper	Cat. No. PTCK42 (42 poles)
Marking tags	Cat. No. NU0851

PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB

Cat. No. PTCK42 (42 poles)  
Cat. No. NU0851

PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB

Cat. No. PTCK42 (42 poles)  
Cat. No. NU0851

End plate

Cat. No. XCKPT

Cat. No. XCKPT