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## OPT-...-DC/230AC/2

### Power Optocouplers for Switching AC Loads up to 2 A



### INTERFACE

#### Data Sheet

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#### Description

The pluggable and solder-in power optocoupler is designed for use in applications in which electromechanical relays quickly reach the end of their service life due to the high switching frequency.

#### Powerful Optocouplers

In practice, the 6.2 mm PLC optocoupler series with a maximum switching current of 750 mA is insufficient for some applications. Users who wish to switch e.g. motors with a current consumption of up to 2 A, can now insert the OPT-...-DC/230AC/2 power optocoupler in the corresponding 14 mm wide PLC-... basic terminal blocks (see right).

The optocoupler can also be used on Phoenix Contact PR1 relay bases and suitable VARIOFACE modules.

#### Features

- Wear-resistant switching up to 230 V / 2 A
- Electrical isolation between input and output 2.5 kV
- Integrated protective circuit on the output side
- Sealed IP67 housing for protection against external influences
- Resistant to vibrations and shocks
- Zero voltage switch

#### Suitable PLC basic terminal blocks for OPT-24DC/230AC/2

PLC-BSC-24DC/21-21, PLC-BSC-48DC/21-21,  
PLC-BSC-24DC/1-1/ACT, PLC-BSC-24DC/1IC/ACT,  
PLC-BSC-24DC/21HC, PLC-BSC-48DC/21HC,  
PLC-BSP-24DC/21-21, PLC-BSP-48 DC/21-21,  
PLC-BSP-24DC/1IC4ACT, PLC-BSP-24DC/21HC,  
PLC-BSP-48DC/21HC

#### Suitable PLC basic terminal blocks for OPT-60DC/230AC/2

PLC-BSC-60DC/21-21, PLC-BSC-60DC/21HC,  
PLC-BSP-60DC/21-21, PLC-BSP-60DC/21HC



Make sure you always use the latest documentation.  
It can be downloaded at [www.download.phoenixcontact.com](http://www.download.phoenixcontact.com).

A conversion table is available on the Internet at  
[www.download.phoenixcontact.com/general/7000\\_en\\_00.pdf](http://www.download.phoenixcontact.com/general/7000_en_00.pdf).



This data sheet is valid for all products listed on the following page:

## Ordering Data

Description	Type	Order No.	Pcs./Pck.
Power optocoupler for switching AC loads up to 2 A, input voltage 5 V DC	OPT- 5DC/230AC/2	29 82 16 8	20
Power optocoupler for switching AC loads up to 2 A, input voltage 24 V DC	OPT-24DC/230AC/2	29 82 17 1	20
Power optocoupler for switching AC loads up to 2 A, input voltage 60 V DC	OPT-60DC/230AC/2	29 82 18 4	20

## Technical Data

Input Data	...5DC...	...24DC...	...60DC...
Nominal input voltage $U_N$	5 V DC	24 V DC	60 V DC
Permissible input voltage range	$0.8 - 1.2 \times U_N$	$0.8 - 1.2 \times U_N$	$0.9 - 1.1 \times U_N$
Typical input current at $U_N$	15 mA	7 mA	2.6 mA
Typical switch-on time at $U_N$	10 ms	10 ms	10 ms
Typical switch-off time at $U_N$	10 ms	10 ms	10 ms

Output Data	
Maximum switching voltage	253 V AC
Minimum switching voltage	24 V AC
Limiting continuous current	2 A (see "Derating Curve for PLC Power Optocouplers" on page 3)
Maximum load value at 25 °C	$4 \text{ A}^2\text{s}/t_P = 10 \text{ ms}$
Surge current at 25 °C	30 A for 10 ms
Minimum switching current	25 mA
Output switching	2-wire floating ground
Output wiring	RC element
Voltage drop on limiting continuous current	$\leq 1 \text{ V}$

General Data	
Rated insulation voltage	250 V AC
Rated surge voltage	4 kV
Nominal operating mode	100% ED
Ambient operating temperature range	-20 °C ... +60 °C
Mounting position	Any
Mounting	see "Derating Curve for PLC Power Optocouplers" on page 3
Degree of contamination	2
Surge voltage category	III
Inflammability class	V0 according to UL 94
Basic insulation	According to EN 50178

## Dimensions

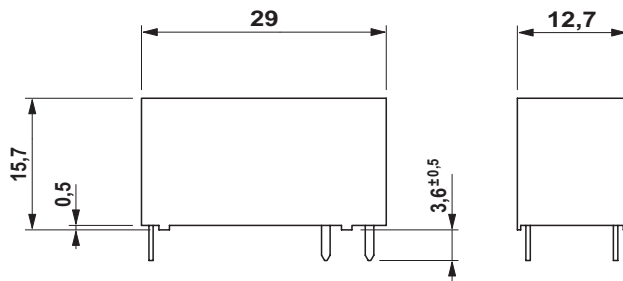


Figure 1 Dimensions (in mm)

## Perforations for Assembly

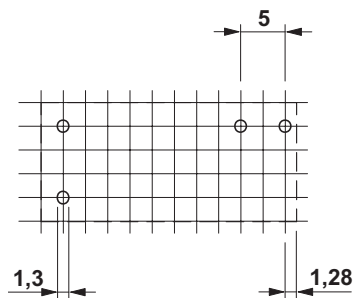


Figure 2 Perforations for assembly:  
View of the connections

## Block Diagram

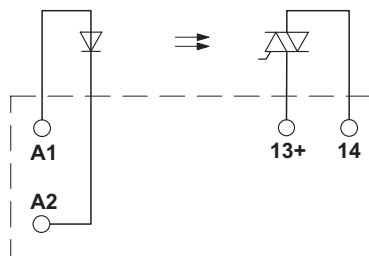
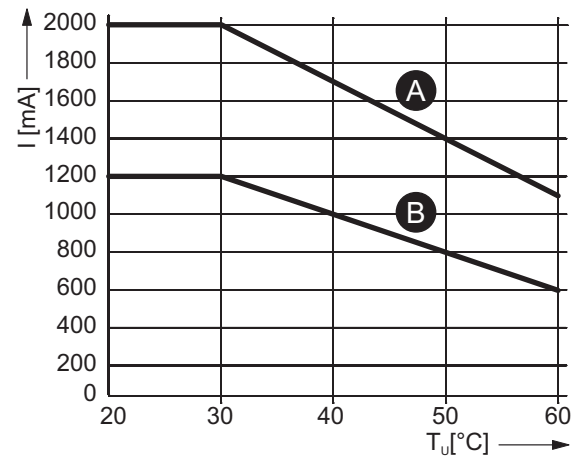


Figure 3 Block diagram

## Derating Curve for PLC Power Optocouplers



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- A Aligned with 10 mm spacing
- B Aligned with zero spacing

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