

**Accelerate installation and service in confined spaces**  
**Compact DRI relays with robust, industry-compliant plug-in pins**  
Let's connect.

Digital signal processing



# Accelerate installation and service in confined spaces

## Compact DRI relays with robust, industry-compliant plug-in pins

In an industrial environment, service work needs to be carried out quickly, simply and reliably. Increasingly compact cabinets and miniaturised components in confined spaces are becoming a challenge. If components need to be replaced, the bended relay pins often cause errors which are difficult to locate.

As the handling of components in practice plays an increasingly important role, DRI relays have particularly robust plug-in pins for quick and safe mounting. The test button with final locking to detect manipulation can be actuated without tools. Easily visible LED illumination of the status indicator also allows clear determination of status.

Both during installation of the cabinets and during subsequent servicing in mechanical and plant construction, DRI relays are the optimum coupling element for confined installation conditions.



In quarrying operations or wind power plants: where the application gets the relays moving, a stable and reliable connection is required. In service cases, secure replacement with robust plug-in pins, simple handling using the test button and quick status identification by means of LED illumination.

Your  
special  
advantages:

### Robust plug-in pins

Compact 1 and 2 CO contact relay with industry-compliant plug-in pins for reliable contacting, even in ambitious applications.



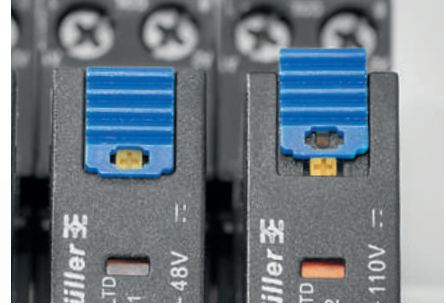
### Secure status identification

The highly visible status LED with large-scale illumination ensures clear status recognition.



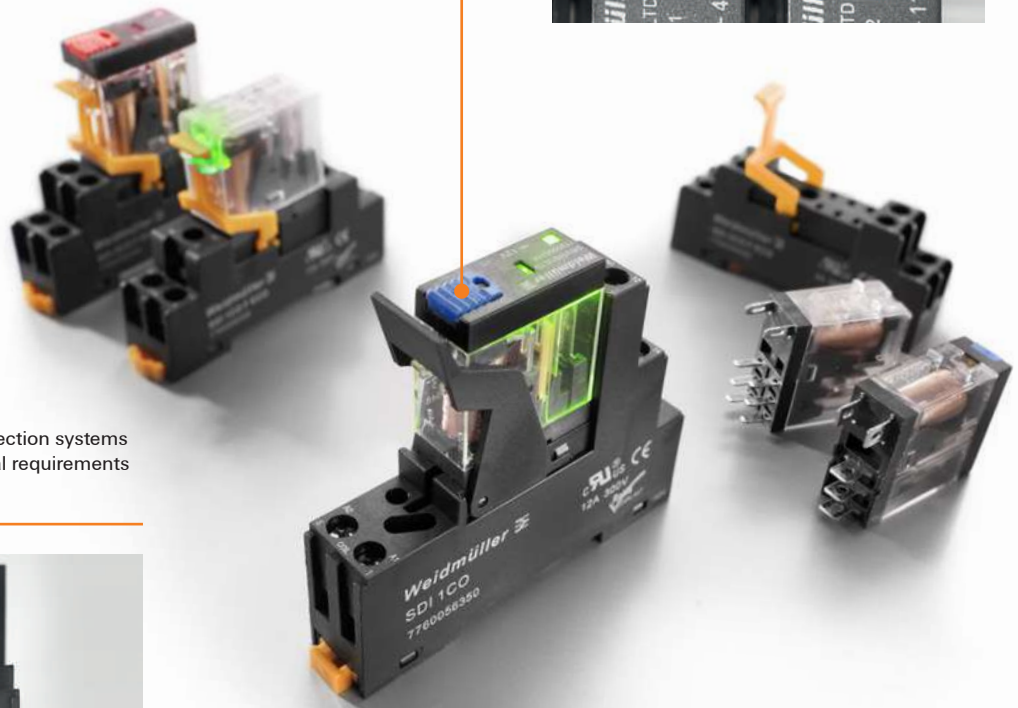
### Support for installation and service

The user-friendly test button slots into the end position. This means any manipulation can be seen directly.



### Variable connection

Bases with different screw connection systems are available for different regional requirements and conditions.



### Simple error reduction

Clearly legible product recognition and colour coding of the test button reduce errors in installation and service.



### D-SERIES

The D-SERIES offers a range of industrial relays for loads of up to 400 V / 30 A with coils from 5 V DC to 380 V AC.



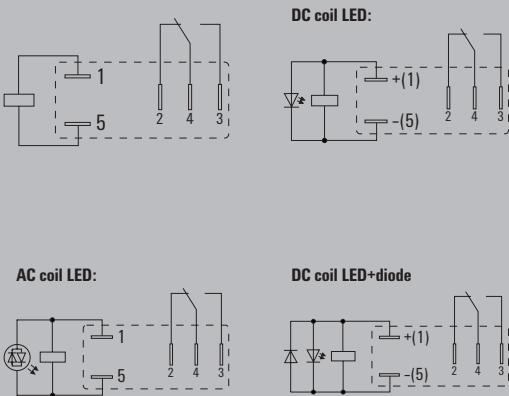
## DRI relay

### 1 CO contact, AC/DC coil

- Robust industrial plug-in connections
- Optional: latching / spring return operable test button with coloured control voltage identification (AC coil: red / DC coil: blue)
- Optional: Mechanical switch position indication (for version with test button)
- Optional: Bright status LED (AC coil: red / DC coil: green)
- Optional: free-wheeling diode



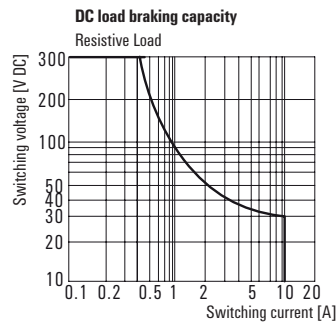
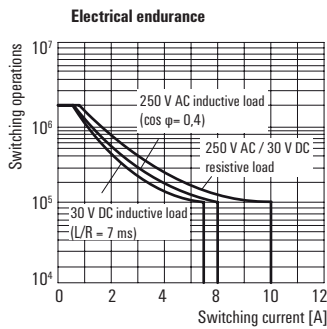
#### Circuit diagram



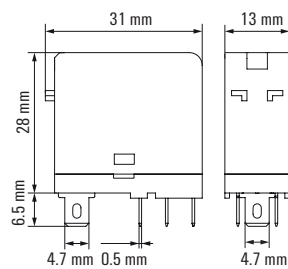
#### Technical data

Output	
Rated switching voltage / Continuous current	250 V AC / 10 A
Max. switching voltage, AC	250 V
Inrush current	
Min. switching power	10 mA @ 12 V, 100 mA @ 5 V
DC / AC Switching capacity (resistive), max.	240 W @ 24 V / 2500 VA
Contact material	AgNi
Mechanical service life	10 x 10 <sup>6</sup> switching cycles
Max. switching frequency at rated load	0.1 Hz
Rated data	
Ambient temperature (operational)	-40 °C...55 °C
Storage temperature	-40 °C...85 °C
Humidity	35...85 % rel. humidity, no condensation
Approvals	CE, cURus
Insulation coordination (EN 50178)	
Rated voltage	300 V
Impulse withstand voltage	5 kV (1.2/50 µs)
Dielectric strength input - output	5 kV <sub>eff</sub> / 1min
Dielectric strength of neighbouring contacts	
Dielectric strength to mounting rail	
Creepage and clearance distance input - output	≥ 4 mm
Overvoltage category	III
Pollution degree	2
Dimensions	
Depth x width x height	see dimensioned drawing
Plug-in connection	
Depth x width x height	see dimensioned drawing
Note	

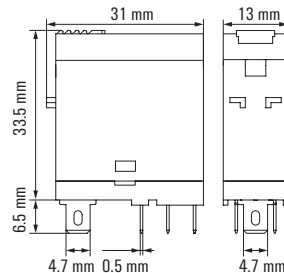
## Applications



Dimensioned drawing without test button



Dimensioned drawing with test button



**DRI relay**  
**1 CO contact, AC/DC coil**

Type code	<table border="1"> <tr> <td><b>DRI</b></td> <td></td> <td></td> <td></td> <td></td> </tr> </table>					<b>DRI</b>															
<b>DRI</b>																					
Type	DRI																				
Type of construction	<table border="1"> <tr> <td>314</td> <td>1 CO contact</td> </tr> <tr> <td>424</td> <td>2 CO contacts</td> </tr> </table>					314	1 CO contact	424	2 CO contacts												
314	1 CO contact																				
424	2 CO contacts																				
Coil voltage	<table border="1"> <tr> <td>012</td> <td>12 V DC</td> <td>524</td> <td>24 V AC</td> </tr> <tr> <td>024</td> <td>24 V DC</td> <td>615</td> <td>115 V AC</td> </tr> <tr> <td>048</td> <td>48 V DC</td> <td>730</td> <td>230 V AC</td> </tr> <tr> <td>110</td> <td>110 V DC</td> <td></td> <td></td> </tr> </table>					012	12 V DC	524	24 V AC	024	24 V DC	615	115 V AC	048	48 V DC	730	230 V AC	110	110 V DC		
012	12 V DC	524	24 V AC																		
024	24 V DC	615	115 V AC																		
048	48 V DC	730	230 V AC																		
110	110 V DC																				
LED	L (Red for AC coil; green for DC coil)																				
Test lever including mechanical status indicator	T (Red lever for AC coil; blue lever for DC coil)																				
Free wheeling diode	D (DC coil only)																				

**Ordering data**

	12 V DC 1CO	24 V DC 1CO	48 V DC 1CO	110 V DC 1CO
<b>Input</b>				
Rated control voltage	12 V DC	24 V DC	48 V DC	110 V DC
Rated current AC / DC	/ 44,4 mA	/ 21,8 mA	/ 11,2 mA	/ 4,8 mA
Power rating	530 mW	530 mW	530 mW	530 mW
Pull-in/drop-out voltage, typ.	9 V / 1.8 V DC	18 V / 3.6 V DC	36 V / 7.2 V DC	82.5 V / 16.5 V DC
Pull-in/drop-out current, typ.				
<b>Output</b>				
Switch-on delay	≤ 15 ms	≤ 15 ms	≤ 15 ms	≤ 15 ms
Switch-off delay	≤ 10 ms	≤ 10 ms	≤ 10 ms	≤ 10 ms

Ordering data					
Standard	Type	DRI314012	DRI314024	DRI314048	DRI314110
	Order No.	<b>7760056296</b>	<b>7760056297</b>	<b>7760056298</b>	<b>7760056299</b>
with LED	Type	DRI314012L	DRI314024L	DRI314048L	DRI314110L
	Order No.	<b>7760056303</b>	<b>7760056304</b>	<b>7760056305</b>	<b>7760056306</b>
with LED + freewheel diode	Type	DRI314012LD	DRI314024LD	DRI314048LD	DRI314110LD
	Order No.	<b>7760056310</b>	<b>7760056311</b>	<b>7760056312</b>	<b>7760056313</b>
with test button + LED	Type	DRI314012LTD	DRI314024LTD	DRI314048LTD	DRI314110LTD
+ Free-wheel diode	Order No.	<b>7760056314</b>	<b>7760056315</b>	<b>7760056316</b>	<b>7760056317</b>

<b>Note</b>				
-------------	--	--	--	--

**Ordering data**

	24 V AC 1CO	115 V AC 1CO	230 V AC 1 CO
<b>Input</b>			
Rated control voltage	24 V AC	115 V AC	230 V AC
Rated current AC / DC	50 mA /	9.3 mA /	4,9 mA /
Power rating	1.2 VA	1.1 VA	1.1 VA
Pull-in/drop-out voltage, typ.	19.2 V / 7.2 V AC	92 V / 34.5 V AC	184 V / 69 V AC
Pull-in/drop-out current, typ.			
<b>Output</b>			
Switch-on delay	≤ 15 ms	≤ 15 ms	≤ 15 ms
Switch-off delay	≤ 10 ms	≤ 10 ms	≤ 10 ms

Ordering data				
Standard	Type	DRI314524	DRI314615	DRI314730
	Order No.	<b>7760056300</b>	<b>7760056301</b>	<b>7760056302</b>
with LED	Type	DRI314524L	DRI314615L	DRI314730L
	Order No.	<b>7760056307</b>	<b>7760056308</b>	<b>7760056309</b>
with test button + LED	Type	DRI314524LT	DRI314615LT	DRI314730LT
	Order No.	<b>7760056318</b>	<b>7760056319</b>	<b>7760056320</b>
	Type			
	Order No.			

<b>Note</b>			
-------------	--	--	--

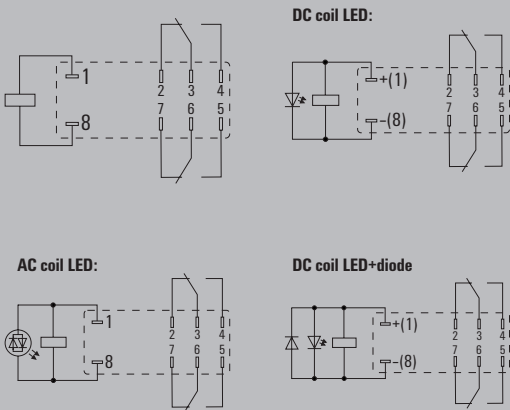
## DRI relay

### 2 CO contacts, AC/DC coil

- Robust industrial plug-in connections
- Optional: latching / spring return operable test button with coloured control voltage identification (AC coil: red / DC coil: blue)
- Optional: Mechanical switch position indication (for version with test button)
- Optional: Bright status LED (AC coil: red / DC coil: green)
- Optional: free-wheeling diode



#### Circuit diagram

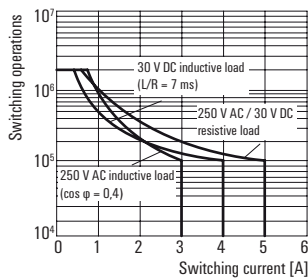


#### Technical data

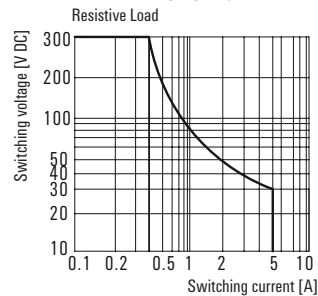
Output	
Rated switching voltage / Continuous current	250 V AC / 5 A
Max. switching voltage, AC	250 V
Inrush current	
Min. switching power	10 mA @ 12 V, 100 mA @ 5 V
DC / AC Switching capacity (resistive), max.	150 W @ 24 V / 1250 VA
Contact material	AgNi
Mechanical service life	10 x 10 <sup>6</sup> switching cycles
Max. switching frequency at rated load	0.1 Hz
Rated data	
Ambient temperature (operational)	-40 °C...55 °C
Storage temperature	-40 °C...85 °C
Humidity	35...85 % rel. humidity, no condensation
Approvals	CE, cURus
Insulation coordination (EN 50178)	
Rated voltage	300 V
Impulse withstand voltage	5 kV (1.2/50 µs)
Dielectric strength input - output	5 kV <sub>eff</sub> / 1min
Dielectric strength of neighbouring contacts	1.5 kV <sub>eff</sub> / 1min.
Dielectric strength to mounting rail	
Creepage and clearance distance input - output	≥ 4 mm
Overvoltage category	III
Pollution degree	2
Dimensions	
Depth x width x height	see dimensioned drawing
Plug-in connection	
Depth x width x height	see dimensioned drawing
Note	

## Applications

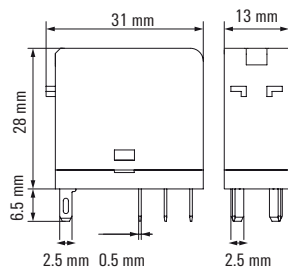
#### Electrical endurance



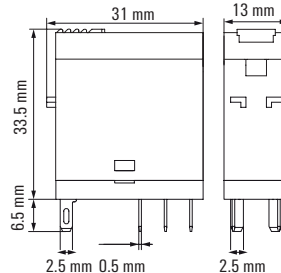
#### DC load braking capacity



#### Dimensioned drawing without test button



#### Dimensioned drawing with test button



**DRI relay**  
**2 CO contacts, AC/DC coil**

Type code	<table border="1"> <tr> <td><b>DRI</b></td> <td></td> <td></td> <td></td> <td></td> </tr> </table>					<b>DRI</b>															
<b>DRI</b>																					
Type	DRI																				
Type of construction	<table border="1"> <tr> <td>314</td> <td>1 CO contact</td> </tr> <tr> <td>424</td> <td>2 CO contacts</td> </tr> </table>					314	1 CO contact	424	2 CO contacts												
314	1 CO contact																				
424	2 CO contacts																				
Coil voltage	<table border="1"> <tr> <td>012</td> <td>12 V DC</td> <td>524</td> <td>24 V AC</td> </tr> <tr> <td>024</td> <td>24 V DC</td> <td>615</td> <td>115 V AC</td> </tr> <tr> <td>048</td> <td>48 V DC</td> <td>730</td> <td>230 V AC</td> </tr> <tr> <td>110</td> <td>110 V DC</td> <td></td> <td></td> </tr> </table>					012	12 V DC	524	24 V AC	024	24 V DC	615	115 V AC	048	48 V DC	730	230 V AC	110	110 V DC		
012	12 V DC	524	24 V AC																		
024	24 V DC	615	115 V AC																		
048	48 V DC	730	230 V AC																		
110	110 V DC																				
LED	L (Red for AC coil; green for DC coil)																				
Test lever including mechanical status indicator	T (Red lever for AC coil; blue lever for DC coil)																				
Free wheeling diode	D (DC coil only)																				

**Ordering data**

	12 V DC 2CO	24 V DC 2CO	48 V DC 2CO	110 V DC 2CO
<b>Input</b>				
Rated control voltage	12 V DC	24 V DC	48 V DC	110 V DC
Rated current AC / DC	/ 44,4 mA	/ 21,8 mA	/ 11,2 mA	/ 4,8 mA
Power rating	530 mW	530 mW	530 mW	530 mW
Pull-in/drop-out voltage, typ.	9 V / 1.8 V DC	18 V / 3.6 V DC	36 V / 7.2 V DC	82.5 V / 16.5 V DC
Pull-in/drop-out current, typ.				
<b>Output</b>				
Switch-on delay	≤ 15 ms	≤ 15 ms	≤ 15 ms	≤ 15 ms
Switch-off delay	≤ 10 ms	≤ 10 ms	≤ 10 ms	≤ 10 ms

Ordering data				
Standard	Type	DRI424012	DRI424024	DRI424048
	Order No.	<b>7760056321</b>	<b>7760056322</b>	<b>7760056323</b>
with LED	Type	DRI424012L	DRI424024L	DRI424048L
	Order No.	<b>7760056328</b>	<b>7760056329</b>	<b>7760056330</b>
with LED + freewheel diode	Type	DRI424012LD	DRI424024LD	DRI424048LD
	Order No.	<b>7760056335</b>	<b>7760056336</b>	<b>7760056337</b>
with test button + LED	Type	DRI424012LTD	DRI424024LTD	DRI424048LTD
+ Free-wheel diode	Order No.	<b>7760056339</b>	<b>7760056340</b>	<b>7760056341</b>

<b>Note</b>				
-------------	--	--	--	--

**Ordering data**

	24 V AC 2CO	115 V AC 2CO	230 V AC 2CO
<b>Input</b>			
Rated control voltage	24 V AC	115 V AC	230 V AC
Rated current AC / DC	50 mA /	9.3 mA /	4,9 mA /
Power rating	1.2 VA	1.1 VA	1.1 VA
Pull-in/drop-out voltage, typ.	19.2 V / 7.2 V AC	92 V / 34.5 V AC	184 V / 69 V AC
Pull-in/drop-out current, typ.			
<b>Output</b>			
Switch-on delay	≤ 15 ms	≤ 15 ms	≤ 15 ms
Switch-off delay	≤ 10 ms	≤ 10 ms	≤ 10 ms

Ordering data			
Standard	Type	DRI424524	DRI424615
	Order No.	<b>7760056325</b>	<b>7760056326</b>
with LED	Type	DRI424524L	DRI424615L
	Order No.	<b>7760056332</b>	<b>7760056333</b>
with test button + LED	Type	DRI424524LT	DRI424615LT
	Order No.	<b>7760056343</b>	<b>7760056344</b>
	Type		
	Order No.		

<b>Note</b>			
-------------	--	--	--

## Accessories for DRI relays

- Base, logical construction, input and output isolated
- Terminal-rail unlocking using screwdriver
- Wide assortment of functional modules

## Technical data

### Output

Rated switching voltage  
250 V  
Max. switching voltage, AC  
250 V  
Continuous current  
12 A

### Rated data

Ambient temperature (operational)  
-40 °C...70 °C  
Storage temperature  
-40 °C...85 °C  
Approvals  
CE; cURus

### Insulation coordination

Protection degree  
IP20  
Creepage and clearance distance input - output  
≥ 3 mm  
Dielectric strength input - output  
4 kV<sub>eff</sub> / 1 min.  
Dielectric strength of neighbouring contacts  
2.5 kV<sub>eff</sub> / 1 min.  
Impulse withstand voltage  
4.8 kV (1.2/50 µs)

### Connection data

Clamping range (nominal / min. / max.)  
1.5 / 0.25 / 4 mm<sup>2</sup>  
Tightening torque  
0.5...0.8 Nm  
Stripping length, rated connection  
8 mm

### Note

## Ordering data

Base on TS35 DIN rail

### Note

## Accessories

### LED / functional modules

Free-wheeling diode  
LED 6 - 24 V DC green and freewheeling diode  
LED 24 - 60 V DC green and free-wheeling diode  
LED 110 - 230 V DC green and free-wheeling diode  
LED 6 - 24 V UC green  
LED 24 - 60 V UC green  
LED 110 - 230 V UC green  
RC element 110 - 230 V AC; 4.7 kΩ / 10 nF  
RC element 110 - 230 V AC; 100 Ω / 220 nF and LED green

### Retaining clip

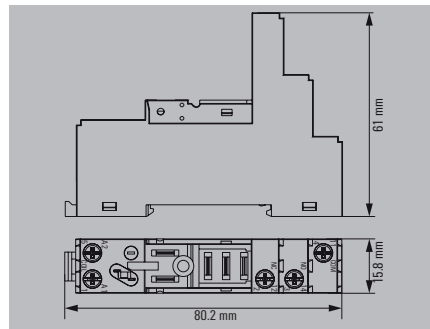
Plastic retaining clip

### Miscellaneous accessories

Screwdriver, insulated PH1 SlimLine  
Screwdriver, insulated PH1

### Note

## Base with clamping yoke connection, 1 CO contact



250 V AC  
250 V  
12 A

-40 °C...70 °C  
-40 °C...85 °C

CE; cURus

IP20  
≥ 3 mm  
4 kV<sub>eff</sub> / 1 min.  
4.8 kV (1.2/50 µs)

1.5 / 0.25 / 4 mm<sup>2</sup>  
0.5...0.8 Nm  
8 mm

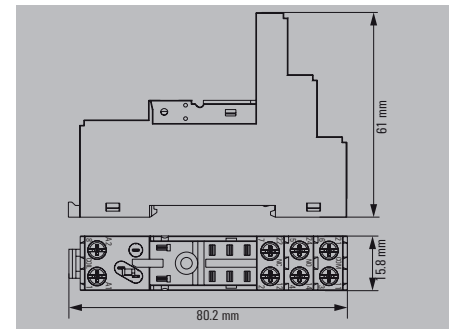
Type	Qty.	Order No.
SDI 1CO	10	<b>7760056350</b>

Type	Qty.	Order No.
RIM 1 6/230VDC	10	<b>7760056169</b>
RIM 2 6/24VDC	10	<b>7760056015</b>
RIM 2 24/60VDC	10	<b>7760056016</b>
RIM 2 110/230VDC	10	<b>7760056017</b>
RIM 3 6/24VUC	20	<b>7940018457</b>
RIM 3 24/60VUC	10	<b>7760056018</b>
RIM 3 110/230VUC	20	<b>7940018455</b>
RIM 3 110/230VAC	10	<b>7760056014</b>
RIM 3 110/230VAC LED	10	<b>7760056045</b>

Type	Qty.	Order No.
SDI CLIP	10	<b>7760056352</b>
SDI SL/PH 1	1	<b>1318330000</b>
SDIK PH1	1	<b>9008570000</b>

### Note

## Base with clamping yoke connection, 2 CO contacts



250 V AC  
250 V  
8 A

-40 °C...70 °C  
-40 °C...85 °C

CE; cURus

IP20  
≥ 3 mm  
4 kV<sub>eff</sub> / 1 min.  
2.5 kV<sub>eff</sub> / 1 min.  
4.8 kV (1.2/50 µs)

1.5 / 0.25 / 4 mm<sup>2</sup>  
0.5...0.8 Nm  
8 mm

Type	Qty.	Order No.
SDI 2CO	10	<b>7760056351</b>

Type	Qty.	Order No.
RIM 1 6/230VDC	10	<b>7760056169</b>
RIM 2 6/24VDC	10	<b>7760056015</b>
RIM 2 24/60VDC	10	<b>7760056016</b>
RIM 2 110/230VDC	10	<b>7760056017</b>
RIM 3 6/24VUC	20	<b>7940018457</b>
RIM 3 24/60VUC	10	<b>7760056018</b>
RIM 3 110/230VUC	20	<b>7940018455</b>
RIM 3 110/230VAC	10	<b>7760056014</b>
RIM 3 110/230VAC LED	10	<b>7760056045</b>

Type	Qty.	Order No.
SDI CLIP	10	<b>7760056352</b>
SDI SL/PH 1	1	<b>1318330000</b>
SDIK PH1	1	<b>9008570000</b>

### Note



## Accessories for DRI relays

- Flat design
- Pre-assembled plastic retaining clip
- Terminal-rail unlocking using screwdriver
- Touch-safe leaf spring connection

## Technical data

### Output

Rated switching voltage  
250 V  
Max. switching voltage, AC  
250 V  
Continuous current  
12 A

### Rated data

Ambient temperature (operational)  
-40 °C...70 °C  
Storage temperature  
-40 °C...85 °C  
Approvals  
CE

### Insulation coordination

Protection degree  
IP20  
Creepage and clearance distance input - output  
≥ 3 mm  
Dielectric strength input - output  
4 kV<sub>eff</sub> / 1 min.  
Dielectric strength of neighbouring contacts  
2.5 kV<sub>eff</sub> / 1 min.  
Impulse withstand voltage  
4.8 kV (1.2/50 µs)

### Connection data

Clamping range (nominal / min. / max.)  
1.5 / 0.5 / 2.5 mm<sup>2</sup>  
Tightening torque  
0.5...0.8 Nm  
Stripping length, rated connection  
8 mm

### Note

## Ordering data

Base on TS35 DIN rail

### Note

## Accessories

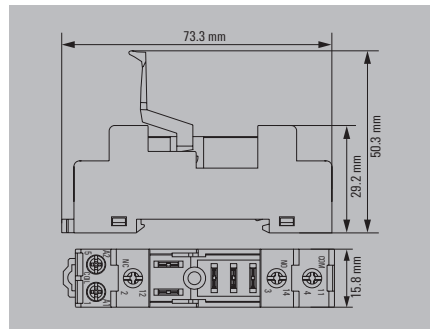
### Miscellaneous accessories

Screwdriver, insulated PH1 SlimLine  
Screwdriver, insulated PH1

### Insulated cable connector

Fork-type cable lug 0.5mm<sup>2</sup> - 1mm<sup>2</sup>  
Fork-type cable lug 1.5mm<sup>2</sup> - 2.5mm<sup>2</sup>  
Fork-type cable lug 0.5mm<sup>2</sup> - 1mm<sup>2</sup>  
Fork-type cable lug 1.5mm<sup>2</sup> - 2.5mm<sup>2</sup>

## Base with pressure clamping plate, 1 CO contact



250 V AC  
250 V  
12 A

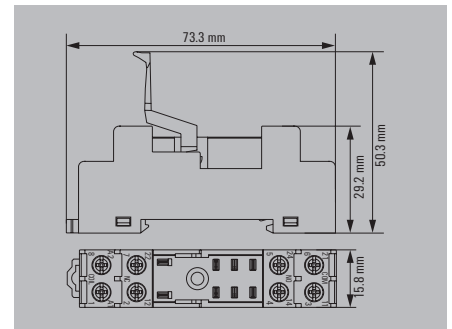
-40 °C...70 °C  
-40 °C...85 °C

CE

IP20  
≥ 3 mm  
4 kV<sub>eff</sub> / 1 min.  
4.8 kV (1.2/50 µs)

1.5 / 0.5 / 2.5 mm<sup>2</sup>  
0.5...0.8 Nm  
8 mm

## Base with pressure clamping plate, 2 CO contacts



250 V AC  
250 V  
8 A

-40 °C...70 °C  
-40 °C...85 °C

CE

IP20  
≥ 3 mm  
4 kV<sub>eff</sub> / 1 min.  
2.5 kV<sub>eff</sub> / 1 min.  
4.8 kV (1.2/50 µs)

1.5 / 0.5 / 2.5 mm<sup>2</sup>  
0.5...0.8 Nm  
8 mm

Type	Qty.	Order No.
SDI 1CO F ECO	10	<b>7760056348</b>

Type	Qty.	Order No.
SDI 2CO F ECO	10	<b>7760056349</b>

Type	Qty.	Order No.
SDI SL/PH 1	1	<b>1318330000</b>
SDIK PH1	1	<b>9008570000</b>
KQIG-M3/-1	100	<b>1492520000</b>
KQIG-M3/-2,5	100	<b>1492600000</b>
KQIG-M3,5/-1	100	<b>1492530000</b>
KQIG-M3,5/-2,5	100	<b>1492610000</b>

Type	Qty.	Order No.
SDI SL/PH 1	1	<b>1318330000</b>
SDIK PH1	1	<b>9008570000</b>
KQIG-M3/-1	100	<b>1492520000</b>
KQIG-M3/-2,5	100	<b>1492600000</b>

### Note

## **Weidmüller – Your partner in Industrial Connectivity**

As experienced experts we support our customers and partners around the world with products, solutions and services in the industrial environment of power, signal and data. We are at home in their industries and markets and know the technological challenges of tomorrow. We are therefore continuously developing innovative, sustainable and useful solutions for their individual needs. Together we set standards in Industrial Connectivity.

Weidmüller Interface GmbH & Co. KG  
Klingenbergstraße 16  
32758 Detmold, Germany  
T +49 5231 14-0  
F +49 5231 14-292083  
info@weidmueller.com  
www.weidmueller.com

Your local Weidmüller partner can  
be found on our website:  
[www.weidmueller.com/countries](http://www.weidmueller.com/countries)

Made in Germany  
05/2016/SMKD