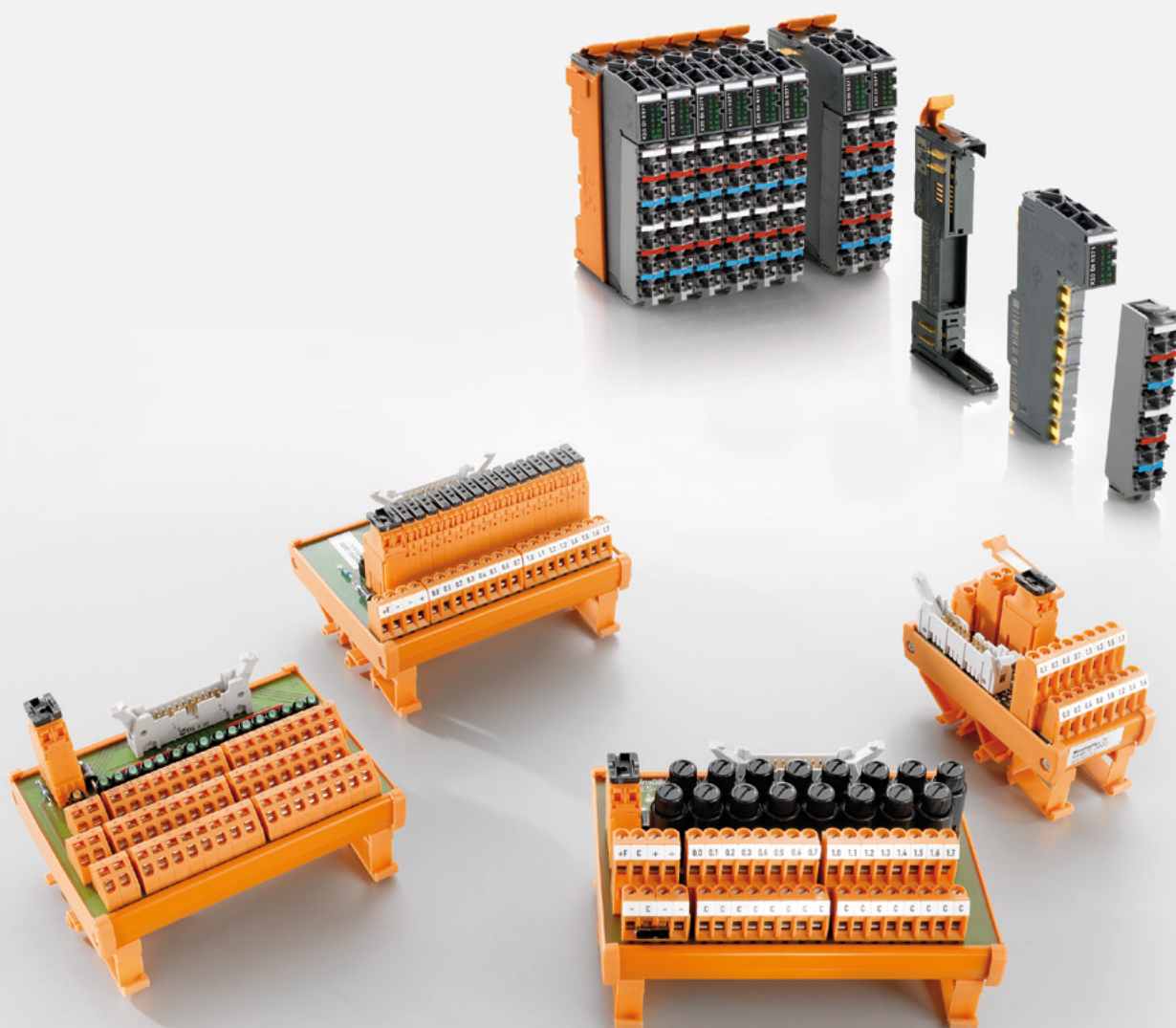


PLC System Cabling

# Interfaces and Pre-assembled cables for B&R X20



# Universal solutions for PLC input/output cards

Aimed at reducing costs, and to save space and time in the construction of electrical cabinets, the universal cabling system for PLCs is provided as an effective alternative to end-to-end cabling design. Weidmüller offers a wide range of pre-assembled cables and interfaces:

- The interfaces are used as an interconnection element between the control and the process, and are supplied with tension clamp or screw connection. Those interfaces, with a compact design, provide different functions such as LEDs, fuses, disconnectors or relays.
- The pre-assembled cables are supplied with the manufacturer's own connector at one end and are available in different lengths.

## Product Finder and automatic selection guides:

To help you choose the right products for your application, Weidmüller offers this **Product finder** with a selection table which can be found on the following pages.

In addition, on our website, we have an automatic selection guide, using intuitive software that can help you to choose the appropriate interface cable for your Input/Output cards. This can be found at [www.weidmueller.com](http://www.weidmueller.com)

The screenshot shows the Weidmüller website's 'Product assistant' interface. At the top, there are navigation links for 'Product catalogue', 'Website', and 'English'. The main header features the Weidmüller logo and a shopping cart icon with '0' items. Below the header, the breadcrumb trail reads: 'Product Catalogue >> Product assistant >> Interface units and preconfigured cables for PLC and Weidmüller u-remote'. There are links for 'Restart' and 'Parts list'. The main heading is 'Selection wizard for pre-assembled cables for PLC interface units and Weidmüller u-remote'. A sub-heading explains: 'The selection wizard allows you to quickly find interface units and the matching pre-assembled cables for your existing PLC systems or Weidmüller u-remote.' The first step is '1. Selection of PLC or Weidmüller u-remote', which is currently expanded. It contains two sections: 'Search for PLC' with a text input field for 'PLC or Weidmüller u-remote name' and a 'Search' button; and 'Selection of PLC according to manufacturer or Weidmüller u-remote specifications' with a dropdown menu for 'Manufacturer', a text input for 'Channels per card or Weidmüller u-remote', and a text input for 'Card or module name'. Below this, steps '2. Interface unit selection' and '3. Cable selection' are listed with plus signs. A QR code is located in the bottom right corner of the screenshot area.

**Access to Weidmüller Product Finder:**  
[http://galaxy.weidmueller.com/wi\\_plc](http://galaxy.weidmueller.com/wi_plc)

# Interfaces and Pre-assembled cables for B&R X20

The following selection tables help you to choose the pre-assembled cables

## 1. Select the PLC card from the corresponding table

For example: X20DI2371

## 2. Check the code of the cable to be ordered:

- Cable code 3033460xxx
- Quantity: 1 unit (by card)

The last 3 digits indicate the length:  
For example, 015 indicates 1.5 m

## 3. Locate the module family and the quantity required

Example:

- H2016 System Quantity: 1 unit (by card)
- Take the notes into account (if there are any)

## 4. Once the module family is chosen (step 3 - eg H2016), search it in the Interface selection tables and choose the proper interface according to the need of the application: 1, 2 or 3 wires, screw or tension clamp connection, with fuse, LED, switch

In the case that an input/output card does not appear in this table, you can check our on-line PLC selection guide at [www.weidmueller.com](http://www.weidmueller.com) where you will always find the most up-to-date information.

	PLC		Cables		Interfaces					
	Input/Output cards		Standard		Direct inputs/outputs		Insulated inputs		Insulated outputs	
	Manufacturer code	Number/Type of channels	Order No.	Quantity	Type	Quantity	Type	Quantity	Type	Quantity
DI	X20DI2371	2 DI - Sink <sup>B)C)</sup>	3033460xxx	1	H2016 <sup>F)</sup>	1				
	X20DI2377	2 DI - Sink <sup>B)C)</sup>	3033460xxx	1	H2016 <sup>F)</sup>	1				
	X20DI4375	4 DI - Sink <sup>B)C)</sup>	3033470xxx	1	H2016 <sup>F)</sup>	1				
	X20DI4372 <sup>A)</sup>	4 DI - Source <sup>B)C)</sup>	3033470xxx	1	H2016 <sup>F)</sup>	1				
	X20DI4371	4 DI - Sink <sup>B)C)</sup>	3033470xxx	1	H2016 <sup>F)</sup>	1				
	X20DI4653	4 DI - 100VAC-240VAC <sup>B)C)</sup>	3033630xxx	1	R2416 <sup>E)</sup>	1				
	X20DI6371	6 DI - Sink <sup>B)C)</sup>	3033480xxx	1	H2016 <sup>D)</sup>	1				
	X20DI6372 <sup>A)</sup>	6 DI - Source <sup>B)C)</sup>	3033480xxx	1	H2016 <sup>E)</sup>	1				
	X20DI6553	6 DI - 100-120VAC <sup>B)C)</sup>	3033640xxx	1	R2416 <sup>E)</sup>	1				
	X20DI0371	8 DI - Sink <sup>B)C)</sup>	3033520xxx	1	H2016 <sup>D)</sup>	1				
	X20DI8371	8 DI - Sink <sup>B)C)</sup>	3033490xxx	1	H2016 <sup>D)</sup>	1				
	X20DI0471	10 DI - Sink (48V) <sup>B)C)</sup>	3033500xxx	1	H2016 <sup>D)</sup>	1				
	X20DI9372 <sup>A)</sup>	12 DI - Source <sup>B)C)</sup>	3005270xxx	1	H2016 <sup>E)</sup>	1				
	X20DI9371	12 DI - Sink <sup>B)C)</sup>	3005270xxx	1	H2016 <sup>D)</sup>	1				
	X20DIF371	16 DI - Sink <sup>B)</sup>	3033510xxx	1	H2016 <sup>D)</sup>	1				
	DO	X20DO2322	2 DO - Source <sup>B)C)</sup>	3033460xxx	1	H2016 <sup>F)</sup>	1			
X20DO4332-1		4 DO - Source <sup>B)C)</sup>	3033470xxx	1	H2016 <sup>F)</sup>	1				
X20DO4321 <sup>A)</sup>		4 DO - Sink <sup>B)C)</sup>	3033470xxx	1	H2016 <sup>F)</sup>	1				
X20DO4322		4 DO - Source <sup>B)C)</sup>	3033470xxx	1	H2016 <sup>F)</sup>	1				
X20DO4332		4 DO - Source <sup>B)C)</sup>	3033470xxx	1	H2016 <sup>F)</sup>	1				
X20DO6322		6 DO - Source <sup>B)C)</sup>	3033480xxx	1	H2016 <sup>E)</sup>	1			02008	1
X20DO8322		8 DO - Source <sup>B)C)</sup>	3033490xxx	1	H2016 <sup>E)</sup>	1			02008N	1
X20DO9321 <sup>A)</sup>		12 DO - Sink <sup>B)C)</sup>	3005270xxx	1	H2016 <sup>D)</sup>	1			02016N	1
X20DO9322		12 DO - Source <sup>B)C)</sup>	3005270xxx	1	H2016 <sup>E)</sup>	1			02016	1
X20DOF322		16 DO - Source <sup>B)</sup>	3033510xxx	1	H2016 <sup>E)</sup>	1			02016	1
DI/DO	X20DMF320	16 DI + 16 DI <sup>B)</sup>	3005290xxx <sup>H)</sup>	2	H2016	2	I2016	2		
		16 DI + 16 DO <sup>E)</sup>			H2016	2	I2016	1	02016	1
		16 DI + 16 DI <sup>E)</sup>			H2016	2	I2016	2		
		16 DI + 16 DO <sup>E)</sup>	3005310xxx <sup>I)</sup>	2	H2016	2	I2016	1	02016	1
AI	X20AI2622	2 AI - Voltage applications	3033530xxx	1	A1504	1				
	X20AI2622	2 AI - Current applications	3033540xxx	1	A1504	1				
	X20AI2222	2 AI	3033530xxx	1	A1504	1				
	X20AI2322	2 AI	3033540xxx	1	A1504	1				
	X20AI2632-1	2 AI - Voltage applications	3033530xxx	1	A1504	1				
	X20AI2632-1	2 AI - Current applications	3033540xxx	1	A1504	1				
	X20AI2632	2 AI - Voltage applications	3033530xxx	1	A1504	1				
	X20AI2632	2 AI - Current applications	3033540xxx	1	A1504	1				
	X20AI2636	2 AI - Voltage applications	3033530xxx	1	A1504	1				
	X20AI2636	2 AI - Current applications	3033540xxx	1	A1504	1				
	X20AI4636	4 AI - Voltage applications	3033550xxx	1	A1504	1				
	X20AI4636	4 AI - Current applications	3033560xxx	1	A1504	1				
	X20AI4632-1	4 AI - Voltage applications	3033550xxx	1	A1504	1				
	X20AI4632-1	4 AI - Current applications	3033560xxx	1	A1504	1				
	X20AI4322	4 AI	3033560xxx	1	A1504	1				
	X20AT4222	4 AI (AT) - 2wire	3033590xxx	1	A1504	1				
	X20AT4222	4 AI (AT) - 3wire	3033600xxx	1	A15	1				
	X20AT2222	2 AI (AT) - 2wire	3033610xxx	1	A1504	1				
	X20AT2222	2 AI (AT) - 3wire	3033620xxx	1	A15	1				
	X20AI4622	4 AI - Voltage applications	3033550xxx	1	A1504	1				
	X20AI4622	4 AI - Current applications	3033560xxx	1	A1504	1				
	X20AI4222	4 AI	3033550xxx	1	A1504	1				
	X20AI4632	4 AI - Voltage applications	3033550xxx	1	A1504	1				
	X20AI4632	4 AI - Current applications	3033560xxx	1	A1504	1				
	X20AI8321	8 AI	3033570xxx	1	A2508	1				
	X20AI8221	8 AI	3033570xxx	1	A2508	1				
AO	X20AO2622	2 AO - Voltage applications	3033530xxx	1	A1504	1				
	X20AO2622	2 AO - Current applications	3033540xxx	1	A1504	1				
	X20AO2438	2 AO	3033580xxx	1	A1504	1				
	X20AO2437	2 AO	3033580xxx	1	A1504	1				
	X20AO2632-1	2 AO - Voltage applications	3033530xxx	1	A1504	1				
	X20AO2632-1	2 AO - Current applications	3033540xxx	1	A1504	1				
	X20AO2632	2 AO - Voltage applications	3033530xxx	1	A1504	1				
	X20AO2632	2 AO - Current applications	3033540xxx	1	A1504	1				
	X20AO4632	4 AO - Voltage applications	3033550xxx	1	A1504	1				
	X20AO4632	4 AO - Current applications	3033560xxx	1	A1504	1				
	X20AO4632-1	4 AO - Voltage applications	3033550xxx	1	A1504	1				
	X20AO4632-1	4 AO - Current applications	3033560xxx	1	A1504	1				
	X20AO4622	4 AO - Voltage applications	3033550xxx	1	A1504	1				
	X20AO4622	4 AO - Current applications	3033560xxx	1	A1504	1				
	X20AO4635	4 AO - Voltage applications	3033550xxx	1	A1504	1				
	X20AO4635	4 AO - Current applications	3033560xxx	1	A1504	1				

**Note** A) Attention! Only use interfaces without LEDs.  
 B) Power supply (24VDC) has to be connected to the Interface.  
 C) Connect the sensors/actuators to the first channels. Last channels will remain unused.  
 D) Recommended to use 2wire interfaces. Customer has to connect the Common (C) of the interface with the + with a jumper provided with the interface.  
 E) Recommended to use 2wire interfaces. Customer has to connect the Common (C) of the interface with the - with a jumper provided with the interface.  
 F) Recommended to use 3wire interfaces.  
 G) Pins 1-16 are DI and Pins 18-32 can be configured as DI or DO, (DI - Sink and DO - Source).  
 H) Cable ended in 1x B2CF 16P connector.  
 I) Cable ended in 2x B2CF 8P connectors.

- Please, always take into account the characteristics of the PLC card (voltage, current...) when selecting interfaces.
- In some cases, the card can work at higher voltages than those indicated in the interface.
- The interfaces are intended to be used inside an IP20 enclosure at least.
- The last 3 digits of the cable code indicate its length in decimetres. For example, if the code ends in 100, the cable would be 10 m long.

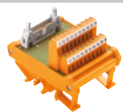
\* In the case that an input/output card does not appear in this table, you can check our on-line PLC selection guide at [www.weidmueller.com](http://www.weidmueller.com) where you will always find the most up-to-date information.

## Selection table for digital input/output cards with direct wiring interfaces

### H10

1:1

- 10-pole ribbon connector
- Connection 1 to 1



	Screw	T. clamp
without LED	0224961001	8537190000

### H14

1:1

- 14-pole ribbon connector
- Connection 1 to 1



	Screw	T. clamp
without LED	0225061001	8537200000

### H20

1:1

- 20-pole ribbon connector
- Connection 1 to 1



	Screw	T. clamp
without LED	0224261001	8537110000

### H2008

2 wires

- 8 channels
- 20-pole ribbon connector
- Direct wiring

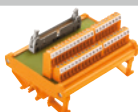


	Screw	T. clamp
with LED	9445530000	on demand

### H40

1:1

- 40-pole ribbon connector
- Connection 1 to 1



	Screw	T. clamp
without LED	0224461001	8537140000

### H2016

1 wire

- 16-channel
- 20-pole ribbon connector
- Direct wiring



	Screw	T. clamp
without LED	9445700000	1311750000
with LED	9445710000	1311770000

1 wire

- 16-channel
- 20-pole ribbon connector
- Disconnector



	Screw	T. clamp
with LED	9445810000	1311780000

2 wires

- 16-channel
- 20-pole ribbon connector
- Direct wiring



	Screw	T. clamp
without LED	9445720000	1311790000
with LED	9445730000	1311800000

2 wires

- 16-channel
- 20-pole ribbon connector
- Disconnector



	Screw	T. clamp
without LED	1311810000	1311820000
with LED	9445750000	1311830000

2 wires

- 16-channel
- 20-pole ribbon connector
- Fus



	Screw	T. clamp
without LED	9445820000	1311840000
with LED	1311850000	1311870000

3 wires

- 16-channel
- 20-pole ribbon connector
- Direct wiring

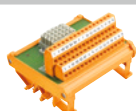


	Screw	T. clamp
without LED	9445760000	1311880000
with LED	9445770000	1311890000

### R2416

1 wire

- 16-channel
- 24-pole RSV connector
- Direct wiring



	Screw	T. clamp
without LED	9441500000	On demand

1 wire

- 16-channel
- 24-pole RSV connector
- Disconnector



	Screw	T. clamp
without LED	9441860000	On demand

2 wires

- 16-channel
- 24-pole RSV connector
- Direct wiring



	Screw	T. clamp
without LED	9441700000	On demand

2 wires

- 16-channel
- 24-pole RSV connector
- Fus



	Screw	T. clamp
without LED	9441560000	On demand

3 wires

- 16-channel
- 24-pole RSV connector
- Disconnector



	Screw	T. clamp
without LED	9441600000	On demand

### R3632

1 wire

- 32-channel
- 36-pole RSV connector
- Direct wiring



	Screw	T. clamp
without LED	9441510000	On demand

1 wire

- 32-channel
- 36-pole RSV connector
- Disconnector



	Screw	T. clamp
without LED	9441870000	On demand

2 wire

- 32-channel
- 36-pole RSV connector
- Direct wiring



	Screw	T. clamp
without LED	9441710000	On demand

2 wires

- 32-channel
- 36-pole RSV connector
- Fus



	Screw	T. clamp
without LED	9441570000	On demand

## Selection table for analogue input/output cards with direct wiring interfaces

### A15

1:1

- 15-pole male, Sub-D connector
- Connection 1 to 1



	Screw	T. clamp
without LED	8005201001	8537390000

### A1504

- 4 channels
- 15-pole male, Sub-D connector
- Direct wiring



	Screw	T. clamp
without LED	9448000000	1308230000

- 4 channels
- 15-pole male, Sub-D connector
- Test point and disconnecter



	Screw	T. clamp
without LED	9448100000	1308240000

### A25

1:1

- 25-pole male, Sub-D connector
- Connection 1 to 1



	Screw	T. clamp
without LED	8005181001	8537370000

### A2508

- 8 channels
- 25-pole male, Sub-D connector
- Direct wiring



	Screw	T. clamp
without LED	9448010000	1308250000

- 8 channels
- 25-pole male, Sub-D connector
- Test point and disconnecter



	Screw	T. clamp
without LED	9448110000	9449110000

### A37

1:1

- 37-pole male, Sub-D connector
- Connection 1 to 1



	Screw	T. clamp
without LED	8003881001	8537240000

### A3716

- 16 channels
- 37-pole male, Sub-D connector
- Direct wiring



	Screw	T. clamp
without LED	9448020000	1308270000

- 16 channels
- 37-pole male, Sub-D connector
- Test point and disconnecter

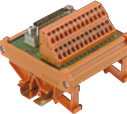


	Screw	T. clamp
without LED	9448120000	1308280000

### A50

1:1

- 50-pole male, Sub-D connector
- Connection 1 to 1



	Screw	T. clamp
without LED	8005161001	8537350000


### A2508P

- 8 channels
- 25-pole male, Sub-D connector
- Voltage/current configuration





	Screw	T. clamp
without LED	9448030000	On demand


## Selection table for digital input cards with isolated interfaces

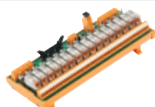
I2016		
<b>Slim relay 1CO 6A</b>		
<ul style="list-style-type: none"> <li>• 16-channel</li> <li>• 20-pole ribbon connector</li> <li>• Gold contact relay</li> </ul> 		
	<b>Screw</b>	<b>T. clamp</b>
24 V DC Input	1312000000	1312010000
48 V DC Input	1312020000	

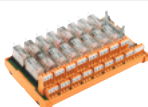
## Selection table for digital output cards with isolated interfaces


O2008		
<b>Slim relay 1CO 6A</b>		
<ul style="list-style-type: none"> <li>• 8-channel</li> <li>• 20-pole ribbon connector</li> <li>• 1 Changeover</li> </ul> 		
	<b>Screw</b>	<b>T. clamp</b>
without SWITCH	1456540000	1456570000
with SWITCH	1128990000	1129000000

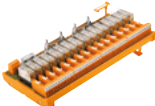
<b>Relay 1CO 16A</b>		
<ul style="list-style-type: none"> <li>• 8-channel</li> <li>• 20-pole ribbon connector</li> <li>• 1 Changeover</li> </ul> 		
	<b>Screw</b>	<b>T. clamp</b>
without SWITCH	9445000000	9447000000


O2016 (positive switching)			
<b>Slim relay 1CO 6A</b>			
<ul style="list-style-type: none"> <li>• 16-channel</li> <li>• 20-pole ribbon connector</li> <li>• 1 Changeover</li> </ul> 			
	<b>Screw</b>	<b>T. clamp</b>	
without SWITCH	1457300000	1457320000	
with SWITCH	1129030000	1129040000	


<b>Relay 1CO 16A</b>		
<ul style="list-style-type: none"> <li>• 16-channel</li> <li>• 20-pole ribbon connector</li> <li>• 1 Changeover</li> </ul> 		
	<b>Screw</b>	<b>T. clamp</b>
without SWITCH	1448280000	1448300000
with SWITCH	1129120000	1129130000


<b>Relay 1CO 16A</b>		
<ul style="list-style-type: none"> <li>• 16-channel</li> <li>• 20-pole ribbon connector</li> <li>• 1 Changeover</li> </ul> 		
	<b>Screw</b>	<b>T. clamp</b>
without SWITCH	9445100000	9447100000


<b>Relay 1CO 16A + Fus</b>		
<ul style="list-style-type: none"> <li>• 16-channel</li> <li>• 20-pole ribbon connector</li> <li>• 1 changeover with fus</li> </ul> 		
	<b>Screw</b>	<b>T. clamp</b>
without SWITCH	9445120000	9447120000

<b>Relay 1CO 16A + Disconnectors</b>		
<ul style="list-style-type: none"> <li>• 16-channel</li> <li>• 2x 20-pole ribbon connector</li> <li>• 1 changeover with disconnector</li> </ul> 		
	<b>Screw</b>	<b>T. clamp</b>
without SWITCH	1431720000	On demand

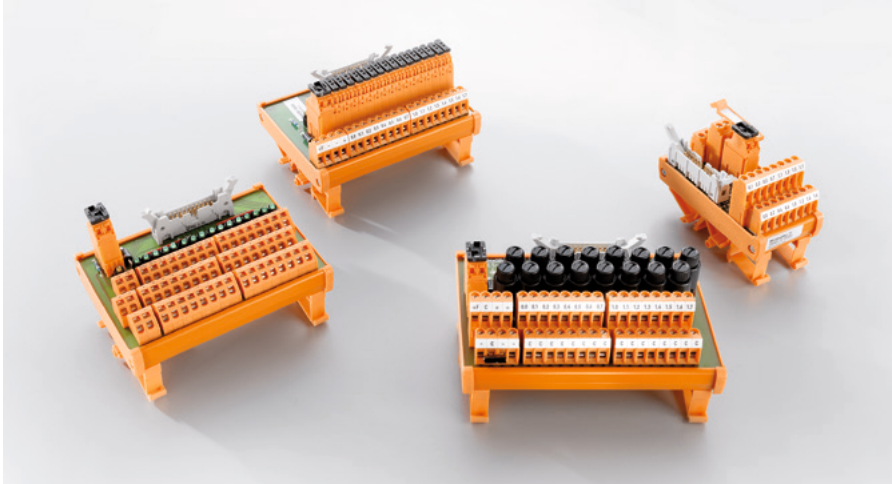
<b>Relay 2CO 8A</b>		
<ul style="list-style-type: none"> <li>• 16-channel</li> <li>• 20-pole ribbon connector</li> <li>• 2 Changeover</li> </ul> 		
	<b>Screw</b>	<b>T. clamp</b>
without SWITCH	1449210000	1449230000

O2016N (Negative switching)		
<b>Slim relay 1CO 6A</b>		
<ul style="list-style-type: none"> <li>• 16-channel</li> <li>• 20-pole ribbon connector</li> <li>• 1 Changeover</li> </ul> 		
	<b>Screw</b>	<b>T. clamp</b>
without SWITCH	1457310000	1457330000

<b>Relay 1CO 16A</b>		
<ul style="list-style-type: none"> <li>• 16-channel</li> <li>• 20-pole ribbon connector</li> <li>• 1 Changeover</li> </ul> 		
	<b>Screw</b>	<b>T. clamp</b>
without SWITCH	1448290000	1448310000

<b>Relay 2CO 8A</b>		
<ul style="list-style-type: none"> <li>• 16-channel</li> <li>• 20-pole ribbon connector</li> <li>• 2 Changeover</li> </ul> 		
	<b>Screw</b>	<b>T. clamp</b>
without SWITCH	1449220000	1449250000

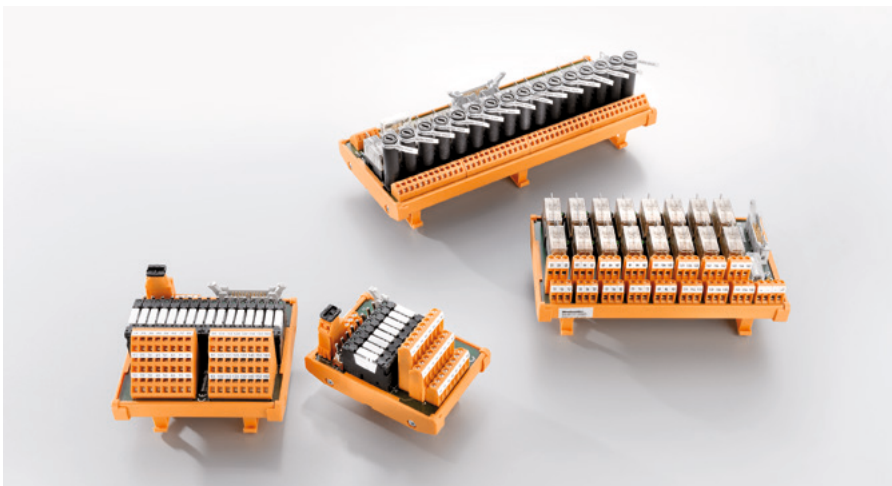
## Main advantages



### Wide range of passive interfaces

The range includes passive input/output interfaces for digital and analogue signals. The interfaces are available in screw or tension clamp connection and the sensors/actuators can be connected with 1, 2 or 3 wires, whichever is needed. You can also choose from a large variety of functions:

- LED indication
- Fuse
- Disconnectors
- Test points



### Wide range of relay insulated interfaces

Available in versions with 8-12 and 16 relays, the RSM family offers the possibility of insulating digital signals both in input and output cards.

Options include our compact format (6 mm relays) or standard (RCL relay), with additional features including:

- Switch in coil and contact
- Fuse in contact
- 1 or 2 CO contacts



### Guaranteed connection

The original PLC connector is on one end of the cable and standard connectors are on the other end: ribbon cable with fixing housing for digital signals and SUB-D connector for analogue signals. Available in different lengths.

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

We cannot guarantee that there are no mistakes in the publications or software provided by us to the customer for the purpose of making orders. We try our best to quickly correct errors in our printed media.

All orders are based on our general terms of delivery, which can be reviewed on the websites of our group companies where you place your order. On demand we can also send the general terms of delivery to you.

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10/2024/SMM