# Rittal – The System.

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# Technical System Catalogue Ri4Power





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# Ri4Power Form 1-4

Ri4Power Form 1-4 – An individual system for the contiguration of tested low-voltage switchgear with inner Form separation. The flexible combination of Ri4Power field types supports optimum configuration for a wide range of applications. Ri4Power Form 1-4 offers a very high level of operator protection. Thanks to extensive busbar insulation and subdivision of the compartments, the occurrence and spread of accidental arcing is largely prevented.

#### Tested safety

- Design verification to the internationally valid standard IEC 61 439-1
- Tests with ASTA certification
- Protection category up to IP 54
- Tested accidental arcing protection to IEC 61 641
- Additional preventative accidental arcing protection

A list of planning instruction contents may be found on page 2 – 23.

# Ri4Power Form 1-4



### Modular system

- For low-voltage switchgear with design verification to IEC/EN 61 439-1 and -2.
- For control systems and power distributors.
- Structured system solution for switchgear with Form separation 1-4b.
- Simple, installation-friendly system assembly.





### Busbar systems up to 5500 A

- RiLine The compact busbar system up to 1600 A.
- Maxi-PLS The assembly-friendly system.
- Flat-PLS The flat bar system for high power requirements.
- Tested PE conductor system.
- High levels of short-circuit withstand strength up to I<sub>cw</sub> 100 kA for 1 sec./I<sub>pk</sub> 220 kA.



# Modular enclosure system

- Based on enclosure platform TS 8.
- Flexible, modular front design.
- Roof plates to suit every requirement.
- Modular compartment configuration for internal compartmentalisation up to Form 4b.
- Internal contact hazard protection covers for circuit-breaker and NH fuse-switch disconnector sections.
- Accessories for Ri4Power.





#### Power Engineering software Model No. SV 3020.500

- Configuration of low-voltage switchgear with design verification.
- Simple, fast assembly with automatically generated assembly plan.
- Generation of parts lists with graphical output.



# Ri4Power Form 1-4 – Universal design at its best



#### Benefits at a glance:

- Exceptional flexibility with the selection of modules and fields
- Simple, safe, tried-and-tested assembly
- High quality solution offering excellent value for money
- Fast, reliable system planning with the Rittal Power Engineering software



Thanks to the large number of different modules and fields plus Form separation 1-4, Ri4Power offers the right solution for every application. Be it in the process industry, industrial plant, energy generation or infrastructure, the Ri4Power system solution is at home in every environment.

#### **Process industry**

- Sewage treatment plants
- Heavy industry (mining, iron, steel)
- Cement works
- Waste disposal industry
- Paper industry
- Chemicals, petrochemicals
- Pharmaceutical industry

#### Industrial plants

- Automotive industry
- Mechanical engineering
- Shipbuilding, marine engineering

#### **Energy generation**

- Small power plants
- Wind and solar power
- Biomass power plants

#### **Buildings, infrastructure**

- Schools
- Banks
- Insurance companies
- Data centres
- Football stadiums
- Hospitals
- Festival halls and exhibition buildings
- Airports

# Ri4Power Form 1-4



#### **Circuit-breaker section**

- For switchgear from all well-known manufacturers such as Siemens, ABB, Mitsubishi, Eaton, Terasaki, Schneider Electric and General Electric.
- Use of air and moulded case circuit-breakers.





### **Coupling section**

- Combination of a circuit-breaker section with a spacesaving, side busbar riser.
- Reliable separation into individual busbar sections to boost equipment availability.





### **Outgoing section**

- Flexible design of the interior installation.
- Fully insulated distribution busbars with extensive connection system.
- For moulded-case circuit breaker and motor starter combinations.



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### **Cable chamber**

- Optional cable entry from above or below.
- Flexible installation with Rittal system accessories.
- Highest design concordance 4b thanks to optimum terminal compartments.



# Circuit-breaker section



#### Benefits at a glance:

- Consistently modular layout
- Fast, time-saving assembly technique
- To fit circuit-breakers from well-known manufacturers including ABB, Eaton, General Electric, Mitsubishi, Schneider Electric, Siemens and Terasaki

The circuit-breaker section is used as the power infeed to switchgear and to output large currents from the switchgear. Busbar systems up to 5500 A with Maxi-PLS or Flat-PLS are dimensioned and individually configured according to requirements.

The integrated modular concept and high manufacturing quality ensure fast, time-saving configuration.

The Ri4Power Form 1-4 system technology is designed to fit circuit-breakers from all well-known manufacturers.

All drawings of connection kits and connection brackets for connecting air circuit-breakers can be generated and printed with the Rittal Power Engineering software, from version 6.2. This means that all copper components can be prepared for mounting in advance.

# Circuit-breaker section

![](_page_6_Picture_1.jpeg)

### **Terminal space**

- 1 Stepped, assembly-friendly arrangement of the connection bars.
- 2 Cable connection system for optimum connection of all conductor types.
- 3 Flexible positioning of the bars in the connection space, thanks to the modular system.

![](_page_6_Picture_6.jpeg)

![](_page_6_Picture_7.jpeg)

- Circuit-breakers available as fixed or rack mounted, allowing free choice of positioning.
- Complete, matching connection system for air circuitbreakers (ACB) from all well-known manufacturers.
- 6 Modular configuration of the compartments, for circuitbreakers and function groups, in accordance with your requirements.

![](_page_6_Picture_11.jpeg)

![](_page_6_Picture_12.jpeg)

### Busbar system

- 7 Flat-PLS up to 5500 A, alternatively Maxi-PLS up to 4000 A
- 8 Main busbar system 3- or 4-pole.
- 9 Busbar positioning optionally in the roof, bottom or upper or lower rear section.
- "Section to section connection system" for all busbar systems, with no drilling required.

![](_page_6_Picture_18.jpeg)

# System example of a circuit-breaker section

![](_page_7_Picture_1.jpeg)

# **Overview of components**

![](_page_7_Picture_3.jpeg)

The components required for a circuitbreaker section are comprised of the enclosure, the enclosure system accessories, the compartment and the busbar systems.

# **Rittal Power Engineering**

The Rittal Power Engineering software is highly recommended for easy, fast configuration of section types and systems. This continuously updated, graphics oriented software tool supports customer-specific configuration and automatically produces bills of materials, CAD drawings and order lists of equipment and panels. The export interfaces mean that data and drawings are easily transmitted to other programs such as Word or Excel, or to Eplan Electric P8.

![](_page_7_Figure_7.jpeg)

![](_page_7_Figure_8.jpeg)

#### **Compartment configuration**

![](_page_7_Figure_10.jpeg)

**Busbar systems** 

![](_page_7_Figure_12.jpeg)

# System example of a circuit-breaker section

#### **Bill of materials**

![](_page_8_Picture_2.jpeg)

Configuration parameters:

Enclosure dimensions  $W \times H \times D$ : 800 x 2200 x 800 mm, with base/plinth 200 mm

Roof plate IP 2X Front trim panel IP 2X Form 4b

Busbar system, top Maxi-PLS 3200, 4-pole, in roof area, without cover

PE busbar design 80 x 10 mm

For air circuit-breaker (ACB) Mitsubishi AE, 3200 A, 4-pole, rack-mounted system, positioned behind the door, with cable connection system Maxi-PLS 3200 A, 4-pole

Enc	losure	Pc(s)1)	Packs of	Model No.
1	Modular enclosure W/H/D: 800 x 2200 x 800 mm	1	1	9670.828
Enc	losure system accessories			
2	Base/plinth components, front and rear, 200 mm high	1	1	8602.800
3	Base/plinth trim, side, 200 mm high	1	1	8602.080
4	Front trim panel IP 54, top, W/H: 800 x 300 mm	1	1	9672.328
	Front trim panel IP 2X, bottom, W/H: 800 x 300 mm	1	1	9674.358
5	Roof plate, vented IP 2X, W/D: 800 x 800 mm	1	1	9659.535
6	Partial door, W/H: 800 x 600 mm	2	1	9672.186
	Partial door, W/H: 800 x 400 mm	1	1	9672.184
Cor	npartment configuration			
7	Compartment side panel module, H/D: 600 x 800 mm	4	2	9673.086
8	Compartment side panel module, H/D: 150 x 800 mm	2	6	9673.085
9	Compartment side panel module connection space, H/D: 450 x 800 mm	2	2	9673.089
10	Mounting bracket for compartment divider for enclosure depth 800 mm	4	8	9673.408
11	Mounting bracket for ACB + compartment divider for enclosure depth 800 mm	2	2	9673.428
12	Air circuit-breaker support rail Form 2-4 for enclosure width 800 mm	2	2	9673.008
	Mounting kit for air circuit-breaker	1	1	9660.970
13	Compartment divider for busbar system gland, vented, W/D: 800 x 800 mm	3	4	9673.478
	Gland plate for compartment divider, W: 800 mm	3	4	9673.508
14	Partial mounting plate, W/H: 800 x 600 mm	1	1	9673.686
15	Stacking insulator	25	6	9660.200
16	Support rail for stacking insulator for enclosure width 800 mm	5	2	9676.198
Bus	bar systems			
17	Busbar support Maxi-PLS 3200	8	1	9659.000
18	End support Maxi-PLS 3200	8	2	9659.010
19	System attachment, Maxi-PLS 3200, 4-pole, in roof area	2	2	9650.080
20	Busbars Maxi-PLS 3200 691 mm	4	1	9650.231
21	Busbars Maxi-PLS 3200 799 mm	4	1	9650.251
22	Connection bracket, top, design code 828F8J1H8H6F16	1	1	9676.200
	Connection bracket, bottom, design code 828F8J1H8H6F16	1	1	9676.210
23	U contact makers Maxi-PLS 3200, W: 100 mm	4	1	9650.181
	Sliding blocks Maxi-PLS 3200, M12	8	15	9650.990
24	Connection kit, top, for ACB, design code 828F8J1H8H6F16	1	1	9676.910
25	Connection kit, bottom, for ACB, design code 828F8J1H8H6F16	1	1	9676.912
	Screw connection for connection bracket	2	8	9676.963
26	Busbars 80 x 10 mm, 792 mm	1	2	9661.180
27	PE/PEN combination angles, flat, 40 x 10 mm	2	4	9661.240

1) Required quantity.

# **Coupling section**

![](_page_9_Picture_1.jpeg)

#### Benefits at a glance:

- Reliable separation of the busbar sections thanks to extensive, stable compartmentalisation
- Total failures are prevented in the event of a malfunction
- Option of reducing the requirements of overall short-circuit withstand strength

Reliable disconnecting and connecting of the main busbar systems in low-voltage switchgear is the task of a coupling section. For systems with several infeeds, this prevents total failure and helps to reduce costs in the event of a malfunction. (Similarly, the requirements governing overall short-circuit withstand strength may be reduced).

Overall investment, operating and servicing costs are reduced with rising levels of reliability, since in the event of servicing individual busbar sections may be de-energised without having to switch off the entire system. The coupling section is a combination of a circuit-breaker section with a busbar riser optionally arranged on the left or right. The large number of identical parts and work stages therefore also translates into convincing cost and time benefits during assembly.

# **Coupling section**

![](_page_10_Picture_1.jpeg)

### **Coupling switch**

- 1 Complete, matching connection system for air circuitbreakers (ACB) from all well-known manufacturers.
- 2 The same system architecture as the circuit-breaker section reduces the number of different items and the required assembly work.
- 3 Standardised system accessories facilitate fast population.

![](_page_10_Picture_6.jpeg)

![](_page_10_Picture_7.jpeg)

- 4 Version with Maxi-PLS or alternatively Flat-PLS.
- 5 Space-saving, modular and flexible arrangement of the busbar riser (on the left, right, or both sides).
- 6 Solid compartmentalisation provides a high level of safety for humans and equipment.

![](_page_10_Picture_11.jpeg)

# **Busbar configuration**

- Z Main busbar routing in the rear panel area. Alternatively, other positions are also supported.
- Option of using the other compartments separately.
  Flexible design with standard items, e.g. for controlling and monitoring the coupling switch.
- Individual selection of the roof plate and front trim panel allows process-optimised population of the switchgear.

![](_page_10_Picture_16.jpeg)

# System example of a coupling section

![](_page_11_Picture_1.jpeg)

### **Overview of components**

![](_page_11_Picture_3.jpeg)

The components required for a coupling section are comprised of the enclosure, the enclosure system accessories, the compartment and the busbar systems.

### **Rittal Power Engineering**

The Rittal Power Engineering software is highly recommended for easy, fast configuration of section types and systems. This continuously updated, graphics oriented software tool supports customer-specific configuration and automatically produces bills of materials, CAD drawings and order lists of equipment and panels. The export interfaces mean that data and drawings are easily transmitted to other programs such as Word or Excel, or to Eplan Electric P8.

![](_page_11_Figure_7.jpeg)

![](_page_11_Figure_8.jpeg)

#### **Compartment configuration**

![](_page_11_Figure_10.jpeg)

**Busbar systems** 

![](_page_11_Figure_12.jpeg)

# System example of a coupling section

#### **Bill of materials**

![](_page_12_Picture_2.jpeg)

Configuration parameters:

Enclosure dimensions W x H x D:  $800 \times 2200 \times 600$  mm,  $200 \times 2200 \times 600$  mm, with base/plinth 200 mm

Roof plate IP 2X vented Front trim panel IP 2X vented Form 4b

Busbar system, top Maxi-PLS 2000, 4-pole, in rear area, without cover

#### PE busbar design 80 x 10 mm

For air circuit-breakers (ACB) ABB, E2, 2500 A, static installation, 4-pole, positioned behind the door

Busbar system, bottom Maxi-PLS 2000, 4-pole, directly underneath the circuit-breaker

Enc	losure	Pc(s) <sup>1)</sup>	Packs of	Model No.
1	Modular enclosure W/H/D: 800 x 2200 x 600 mm	1	1	9670.826
2	Busbar enclosure W/H/D: 200 x 2200 x 600 mm	1	1	9670.226
Enc	losure system accessories			
3	Base/plinth components, front and rear, 200 mm high	1	1	8602.000
4	Base/plinth trim, side, 200 mm high	1	1	8602.060
5	Front trim panel IP 54, top, W/H: 800 x 100 mm	1	1	9672.318
6	Front trim panel IP 2X, bottom, W/H: 800 x 300 mm	1	1	9672.358
7	Roof plate, vented, IP 2X, W/D: 800 x 800 mm	1	1	9659.535
	Partial door, W/H: 800 x 200 mm	1	1	9672.182
	Partial door, W/H: 800 x 300 mm	2	1	9672.183
8	Partial door, W/H: 800 x 600 mm	2	1	9672.186
9	Baying connector, external	6	6	8800.490
	Angular baying bracket TS/TS	4	4	8800.430
Cor	npartment configuration			
10	Punched section with mounting flange for coupling set section, for enclosure width	2	2	9674.058
11	TS punched section with mounting flange, 23 x 73 mm, for enclosure width 800 mm	1	4	8612.580
12	Compartment side panel module, H/D: 200 x 600 mm	2	6	9673.062
12	Compartment side panel module, H/D: 600 x 600 mm	3	2	9673.066
13	Compartment side panel module, H/D: 300 x 600 mm	2	2	9673.063
14	Compartment side panel module, H/D: 100 x 425 mm	2	6	9673.051
15	Compartment side panel module, H/D: 200 x 425 mm	4	2	9673.052
16	Mounting bracket for compartment divider for enclosure depth 600 mm	2	8	9673.406
17	Mounting bracket for compartment divider for enclosure depth 425 mm	6	8	9673.405
18	Mounting bracket for ACB + compartment divider for enclosure depth 600 mm	2	2	9673.426
19	Air circuit-breaker support rail Form 2-4 for enclosure width 800 mm	2	2	9673.008
	Mounting kit for air circuit-breaker	1	1	9660.970
20	Compartment divider, vented, W/D: 800 x 600 mm	3	4	9673.484
21	Compartment divider for busbar system gland, vented, W/D: 800 x 800 mm	2	4	9673.476
	Gland plate for compartment divider, W: 800 mm	2	4	9673.508
22	Partial mounting plate, W/H: 800 x 200 mm	1	1	9673.682
	Partial mounting plate, W/H: 800 x 300 mm	2	1	9673.683
23	Stacking insulator	5	6	9660.200
24	Support rail for stacking insulator for enclosure width 800 mm	1	2	9676.198
25	TS punched rail, 17 x 17 mm, L: 62.5 mm	2	12	9673.915
26	TS punched rail, 17 x 17 mm, L: 487.5 mm	2	12	9673.953
27	Frame connector piece for TS punched rail	4	24	9673.901
28	Corner connector for TS punched rail	2	10	9673.902
29	Coupling set mounting kit for enclosure depth 600 mm	1	1	9674.196

<sup>1)</sup> Required quantity.

# System example of a coupling section

#### **Bill of materials**

![](_page_13_Picture_2.jpeg)

Configuration parameters:

Enclosure dimensions W x H x D:  $800 \times 2200 \times 600$  mm,  $200 \times 2200 \times 600$  mm, with base/plinth 200 mm

Roof plate IP 2X vented Front trim panel IP 2X vented Form 4b

Busbar system, top Maxi-PLS 2000, 4-pole, in rear area, without cover

PE busbar design 80 x 10 mm

For air circuit-breakers (ACB) ABB, E2, 2500 A, static installation, 4-pole, positioned behind the door

Busbar system, bottom Maxi-PLS 2000, 4-pole, directly underneath the circuit-breaker

Bus	bar systems	Pc(s) <sup>1)</sup>	Packs of	Model No.
	Busbar support Maxi-PLS 2000	24	1	9649.000
30	Busbar support Maxi-PLS 2000, suitable for top-mounting	8	1	9649.160
31	End support Maxi-PLS 2000	4	2	9649.010
32	System attachment Maxi-PLS 2000/4, rear section, frame chassis	2	2	9640.098
	System attachment Maxi-PLS 2000/4, in the roof area	8	2	9640.080
33	Adaptor rail	2	4	8800.320
34	Busbars Maxi-PLS 2000 725 mm	4	1	9640.241
35	Busbars Maxi-PLS 2000 799 mm	4	1	9640.251
36	Busbars Maxi-PLS 2000, special length 1299 mm	1	1	9640.368
	Busbars Maxi-PLS 2000, special length 1399 mm	1	1	9640.368
	Busbars Maxi-PLS 2000, special length 1499 mm	1	1	9640.368
	Busbars Maxi-PLS 2000, special length 1599 mm	1	1	9640.368
37	Connection bracket for Maxi-PLS 1600/2000, 4-pole, 2 x 100 x 10 mm, design code 826D9A2G4H6D26	1	1	9676.210
38	Connection kit, top, for ACB, design code 826D9A2G4H6D26	1	1	9676.910
39	Connection kit, bottom, for ACB, design code 826D9A2G4H6D26	1	1	9676.912
	Threaded bolts M10 x 70 mm	16	8	9676.976
	Screw connection for connection bracket	8	8	9676.962
40	U contact makers Maxi-PLS 2000, W: 100 mm	8	1	9640.181
	Angular connector, design code 826D9X0A	4	1	9675.840
	Terminal studs M10 x 45 mm	16	8	9676.972
	Sliding blocks Maxi-PLS 2000, M10	16	15	9640.980
	Angular connector, design code 226X0D2B	1	1	9675.840
41	Busbars 80 x 10 mm, 992 mm	1	2	9661.100
42	PE/PEN combination angles, flat, 40 x 10 mm	2	4	9661.240
1) Re	quired quantity.			

![](_page_14_Picture_0.jpeg)

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# Outgoing section

![](_page_15_Picture_1.jpeg)

#### Benefits at a glance:

- For use with control units and power distribution
- Individual, targeted configuration of the compartments
- Simple, secure connection of the distribution bar system to the main bar system
- Flexible planning, simple adaptation, fast assembly and a high level of security are convincing features

Installation of switchgear, power supply outlets or controllers – the application areas of the outgoing section are very versatile. With multifunctional components, the individual compartments may be quickly assembled and configured to suit your requirements.

The busbar distribution system may be positioned adjacent to, behind or directly in the compartments and is easily and safely connected to the main busbar systems using system components. The benefits are impressive, both during assembly and subsequent operation: simple project planning, fast mounting, flexible adaptation and a high level of security.

# Outgoing section

![](_page_16_Picture_1.jpeg)

# **Distribution busbars**

- 1 RiLine is ideal for small rated currents. Alternatively, for higher currents, Maxi-PLS or Flat-PLS may be used for the main busbar.
- 2 Simple insulation and cover with standard parts.
- 3 T-connection kits for connecting main and distribution busbar systems.

![](_page_16_Picture_6.jpeg)

### Compartments with power outlet

- 4 Interior installation is individual, flexible and tailored to your requirements.
- Arrangement of the distribution busbar in the indoor busbar system, alternatively:
  - Behind the compartments/partial mounting plates
  - At the side adjacent to the modular outgoing section to the side infeed into the compartments.
- 6 Circuit-breaker component adaptor for time-saving, maintenance-friendly installation of circuit-breakers up to 630 A.

![](_page_16_Picture_13.jpeg)

# Compartments with control units

- **7** Use of control units to suit individual requirements.
- 8 For all well-known brands of switchgear and control devices from Siemens, ABB, Mitsubishi, Eaton, Schneider Electric, General Electric and Terasaki.
- Space-optimised configuration thanks to graduation of the compartment heights.
- 1 Rittal system accessories offer comprehensive configuration options and numerous design variants depending on the intended application.

![](_page_16_Picture_19.jpeg)

# System example of an outgoing section

![](_page_17_Picture_1.jpeg)

### **Overview of components**

![](_page_17_Picture_3.jpeg)

The components required for an outgoing section are comprised of the enclosure, the enclosure system accessories, the compartment and the busbar systems.

# **Rittal Power Engineering**

The Rittal Power Engineering software is highly recommended for easy, fast configuration of section types and systems. This continuously updated, graphics oriented software tool supports customer-specific configuration and automatically produces bills of materials, CAD drawings and order lists of equipment and panels. The export interfaces mean that data and drawings are easily transmitted to other programs such as Word or Excel, or to Eplan Electric P8.

![](_page_17_Figure_7.jpeg)

Enclosure system accessories

![](_page_17_Figure_9.jpeg)

#### **Compartment configuration**

![](_page_17_Figure_11.jpeg)

**Busbar systems** 

![](_page_17_Figure_13.jpeg)

# System example of an outgoing section

### **Bill of materials**

![](_page_18_Picture_2.jpeg)

Configuration parameters:

Enclosure dimensions W x H x D: 600 x 2200 x 600 mm, with base/plinth 200 mm

Roof plate IP 54, solid Front trim panel IP 54, solid Form 4a

Main busbar system RiLine, PLS 1600, 4-pole, in rear section, top, with busbar cover

PE busbar design 30 x 10 mm

Main busbar system RiLine, PLS 1600, 4-pole, in the compartment (indoor), with busbar cover

Device-specific design of the compartments and adaptors

Enc	losure	Pc(s) <sup>1)</sup>	Packs of	Model No.
1	Modular enclosure W/H/D: 600 x 2200 x 600 mm	1	1	9670.626
	I	L		
Enc	losure system accessories			
2	Base/plinth components, front and rear, 200 mm high	1	1	8602.600
3	Base/plinth trim, side, 200 mm high	1	1	8602.060
4	Front trim panel IP 54, top, W/H: 600 x 100 mm	1	1	9672.316
5	Front trim panel IP 54, bottom, W/H: 600 x 100 mm	7	5	9672.336
6	Solid roof plate. W/D: 600 x 600 mm	1	1	9671.666
	Partial door, W/H: 600 x 150 mm	2	1	9672.161
7	Partial door, W/H: 600 x 300 mm	1	1	9672.163
	Partial door, W/H: 600 x 400 mm	2	1	9672.164
	Partial door, W/H: 600 x 600 mm	1	1	9672.166
Cor	npartment configuration			
9	Compartment side panel module. H/D: 100 x 425 mm	2	6	9673.051
10	Compartment side panel module, H/D: 200 x 425 mm	2	6	9673.052
11	Compartment side panel module. H/D: 150 x 425 mm	2	6	9673.055
	Compartment side panel module, H/D: 100 x 600 mm	2	6	9673.061
12	Compartment side panel module, H/D: 600 x 600 mm	2	2	9673.062
	Compartment side panel module, H/D: 150 x 600 mm	2	6	9673.065
_	Compartment side panel module, H/D: 300 x 600 mm	2	2	9673.063
	Compartment side panel module, H/D: 400 x 600 mm	2	2	9673.064
13	Gland plates for compartment side panel modules	3	4	9673,194
14	Mounting bracket for compartment divider for enclosure depth 425 mm	6	8	9673.405
15	Mounting bracket for compartment divider for enclosure depth 120 mm	8	8	9673.406
16	Compartment divider for Billine, W/D: 600 x 401 mm	7	4	9673.454
	Partial mounting plate, W/H: 600 x 150 mm	1	1	9673.661
17	Partial mounting plate, W/H: 600 x 300 mm	2	1	9673.663
	Partial mounting plate, W/H: 600 x 400 mm	1	1	9673.664
18	Partial mounting plate, W/H: 600 x 600 mm	1	1	9673.666
19	Support frame for DIN rail-mounted devices, W: 600 mm, 2-row	1	1	9674.762
20	TS punched rail, 17 x 17 mm, L: 62.5 mm	2	12	9673.915
21	TS punched rail, 17 x 17 mm, L : 487.5 mm	2	12	9673.953
22	Frame connector piece for TS punched rail	4	24	9673.901
23	Corner connector for TS punched rail	2	10	9673.902
Bus	bar systems			
24	Busbar support PLS 1600 PLUS	7	4	9342.004
25	End cover for PLS 1600 PLUS	1	2	9342.074
26	Busbar PLS 1600 A, 495 mm long	4	3	3527.000
27	Base tray for PLS 1600 PLUS	2	2	9342.134
28	Cover section, L: 1100 mm	2	2	9340.214
	Support panel	14	5	9340.224
	Circuit-breaker component adaptor 160 A, 690 V, outlet at bottom, 3-pole	1	1	9342.510
29	Circuit-breaker component adaptor 160 A, 690 V, outlet at bottom, 4-pole	2	1	9342.514
	Circuit-breaker component adaptor 250 A, 690 V, outlet at bottom, 4-pole	2	1	9345.614
	Circuit-breaker component adaptor 630 A, 690 V, outlet at bottom, 3-pole	3	1	9345.710
	Insert strip, W: 25 mm, for SV 9345.710	4	4	9342.720
30	Busbar, 30 x 10 mm, for enclosure width 600 mm	1	2	9661.360
31	PE/PEN combination angles, 30 x 10 mm	2	4	9661.230
32	System attachment for enclosure width 600 mm	1	1	9674.006
33	T-connector, design code 626X0T2T1	1	1	9675.100
34	Distribution busbar PLS 1600, indoor, for enclosure height 2200 mm	4	1	9675.242

# Cable chamber

![](_page_19_Picture_1.jpeg)

#### Benefits at a glance:

- Versatile range of system accessories for optimum cable routing
- Cable entry optionally from below, from above, or from below and above

The distribution of cables into and out of the individual compartments is the task of the cable chamber. Depending on the main busbar system chosen, cable entry may be either from below, above, or below and above. Choose from a range of cable entry glands for the roof plate. The main busbar system is covered in a contact hazard-proof way, depending on the type and configuration.

- Choice of various different cable entry glands
- Finger-proof construction

Ri4Power offers every conceivable option for designing PE and N distribution busbars. In each case, the panel builder's requirements are effectively met to perfection.

# Cable chamber

### TS 8 cable chamber enclosure

- 1 Roof plate for cable gland plates, cable entry glands.
- 2 Covering of the main busbar system.
- **3** TS punched rail as auxiliary construction.
- 4 Main busbar system with RiLine, alternatively with Maxi-PLS or Flat-PLS.

![](_page_20_Picture_7.jpeg)

# **PE and N distribution busbars**

- 5 Busbar supports for PE and N distribution busbars.
- 6 Distribution busbar to match the enclosure heights.
- Supporting structure made from TS punched rails for individual attachment.

![](_page_20_Picture_12.jpeg)

# PE/PEN, cable entry, base/plinth

- PE/PEN busbar tailored to the enclosure width. Configurable in various cross-sections.
- 9 PE/PEN combination angles for attaching the PE busbar and incorporating the TS 8 enclosure into the protective measure.
- 10 C rails for cable attachment, alternatively cable clamp rail from the mounting angle.
- 11 Gland plates divided in the depth.
- 12 Base/plinth components, front and rear plus base/plinth trim, side.

![](_page_20_Picture_19.jpeg)

# System example of a cable chamber

![](_page_21_Picture_1.jpeg)

# **Overview of components**

![](_page_21_Picture_3.jpeg)

The components required for a cable chamber are comprised of the enclosure, the enclosure system accessories, the compartment and the busbar systems.

# **Rittal Power Engineering**

The Rittal Power Engineering software is highly recommended for easy, fast configuration of section types and systems. This continuously updated, graphics oriented software tool supports customer-specific configuration and automatically produces bills of materials, CAD drawings and order lists of equipment and panels. The export interfaces mean that data and drawings are easily transmitted to other programs such as Word or Excel, or to Eplan Electric P8.

![](_page_21_Figure_7.jpeg)

Enclosure system accessories

![](_page_21_Figure_9.jpeg)

**Compartment configuration** 

![](_page_21_Figure_11.jpeg)

**Busbar systems** 

![](_page_21_Figure_13.jpeg)

# System example of a cable chamber

### **Bill of materials**

![](_page_22_Picture_2.jpeg)

**Configuration parameters:** 

Enclosure dimensions W x H x D: 400 x 2200 x 600 mm, with base/plinth 200 mm

Roof plate for cable gland plates Form 4a

Main busbar system RiLine, PLS 1600, 4-pole, in rear section, top, with busbar cover

PE busbar design 30 x 10 mm

PE/N distribution busbar version PE + N  $PE 30 \times 10 \text{ mm}$ N 30 x 10 mm

Cable clamp rail C rail

Enclosure		Pc(s)1)	Packs of	Model No.
1	Modular enclosure W/H/D: 400 x 2200 x 600 mm	1	1	9670.426
Enc	losure system accessories			
2	Base/plinth components, front and rear, 200 mm high	1	1	8602.400
3	Base/plinth trim, side, 200 mm high	1	1	8602.060
4	Front trim panel IP 54, top, W/H: 400 x 100 mm	1	1	9672.314
	Front trim panel IP 54, bottom, W/H: 400 x 100 mm	1	1	9672.334
5	Partial door, W/H: 400 x 2000 mm	1	1	9672.150
6	Roof plate for cable gland plates, W/D: 400 x 600 mm	1	1	9671.546
7	Cable entry gland, M25/32/40/50/63	1	1	9665.760
	Cable entry gland, with entry fittings	1	1	9665.780
	Cable entry gland, solid	1	4	9665.785
8	Support rails for TS 8, W/D: 600 mm	4	2	9676.196
Cor	npartment configuration			
9	Cover plate for main busbar system, W: 400 mm	1	1	9673.542
10	TS punched rail, 17 x 17 mm, L: 62.5 mm	2	12	9673.920
11	TS punched rail, 17 x 17 mm, L: 262.5 mm	2	12	9673.940
12	TS punched rail, 17 x 17 mm, L: 787.5 mm	2	12	9673.983
13	TS punched rail, 17 x 17 mm, L: 487.5 mm	5	12	9673.953
14	TS punched rail, 17 x 17 mm, L: 862.5 mm	1	12	9673.995
15	Frame connector piece for TS punched rail	17	24	9673.901
16	Corner connector for TS punched rail	2	10	9673.902
17	T-connector piece for TS punched rail	3	24	9673.903
Bus	bar systems			
18	Busbar support PLS 1600 PLUS	2	4	9342.004
19	End cover for PLS 1600 PLUS	1	2	9342.074
20	Busbar PLS 1600 A, 495 mm long	4	3	3527.000
21	Base tray for PLS 1600 PLUS	1	2	9342.134
22	Cover section, L: 1100 mm	1	2	9340.214
	Support panel	2	5	9340.224
23	Busbar, 30 x 10 mm, for enclosure width 400 mm	1	2	9661.340
24	PE/PEN combination angles, 30 x 10 mm	2	4	9661.230
25	System attachment for enclosure width 400 mm	1	1	9674.004
26	Distribution busbar 30 x 10 mm, indoor, for enclosure height 2000 mm	2	1	9675.220
27	Busbar support N/PE, 2-pole	7	4	9340.040

<sup>1)</sup> Required quantity.

Pc(s)<sup>1)</sup> Packs Model No.

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ENCLOSURES

![](_page_23_Picture_16.jpeg)

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