



RST® MINI

Smallest pluggable installation connector with highest IP rating





RST[®] MINI connectors Table of contents

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Overview of the *RST*[®] product family Pluggable in many dimensions

Since its market launch the **RST**® installation system has systematically grown with the needs of the market and now presents itself as a complete electrical installation system. A choice can be made between three series as required:



Little connectors for extremely confined spaces

2- to 5-pole design, 250V/400V, 16A



All-rounders with the most comprehensive portfolio

2- to 5-pole design, 250/400V, 20 – 32A





4- to 5-pole design, 250/400V, 50A



All installation connectors have one thing in common:

They are innately fitter-friendly and adhere strictly to the system philosophy. Complex installations can be built flexibly, and consumers can simply be plugged into the installation. Mechanical codings within the product lines ensure a clear distinction between different circuits. This practically rules out incorrect connections.

Further information can be found in the catalog with order no. 0690.1 or in our service/download section at www.wieland-electric.com

The new **RST**® MINI connector series Optimized for installation in confined spaces

The new **RST**® MINI series marks a continuation of the story of the **RST**® installation system's success and logically follows the trend towards compact designs.

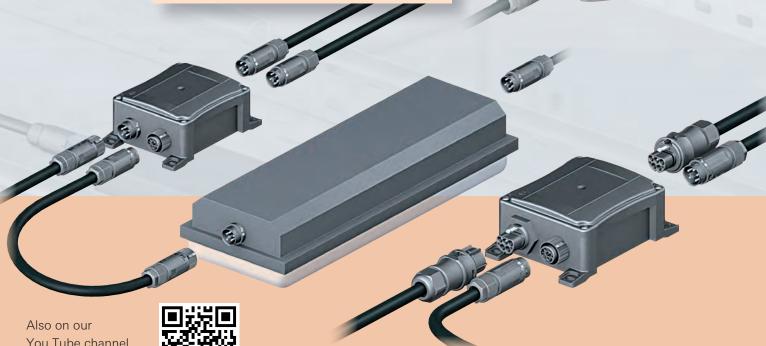
The 2- to 5-pole plug connectors and device connectors have been designed for 250/400V and 16A and are all available in the screw connection technology that electricians trust.

Customized distributors as well as pre-assembled cables round the system off perfectly and offer a huge range of different possible uses, not just in building automation or industry.



Benefits at a glance

- **TWISTLOCK technology**
- Compact design
- Color-coded and mechanically coded
- **■** Easy to install
- Save up to 80% of installation time



You Tube channel



RST® MINI plug & play

Simple and functional

Easy assembly

The housing of the connector has been designed in two parts and geared toward simple assembly right from the outset. The connector dispenses with the common technique of screwing individual parts and relies on an easy-to-use quick fastener.



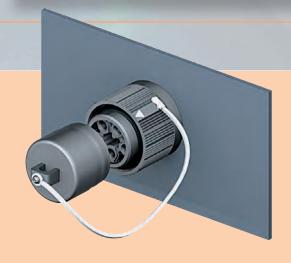


Retrofitting made easy

The device connectors have M20.2 (5-/4-pole) or M16 (3-/2-pole) threads. This means they can be directly integrated in M20 or M16 housing feed-throughs – taking the tolerances into account. It is therefore easy to switch from traditional cable glands to the convenient pluggable alternative. There is the option of using a flattened top on the thread of the device connector to fix it in position.

Safe and secure

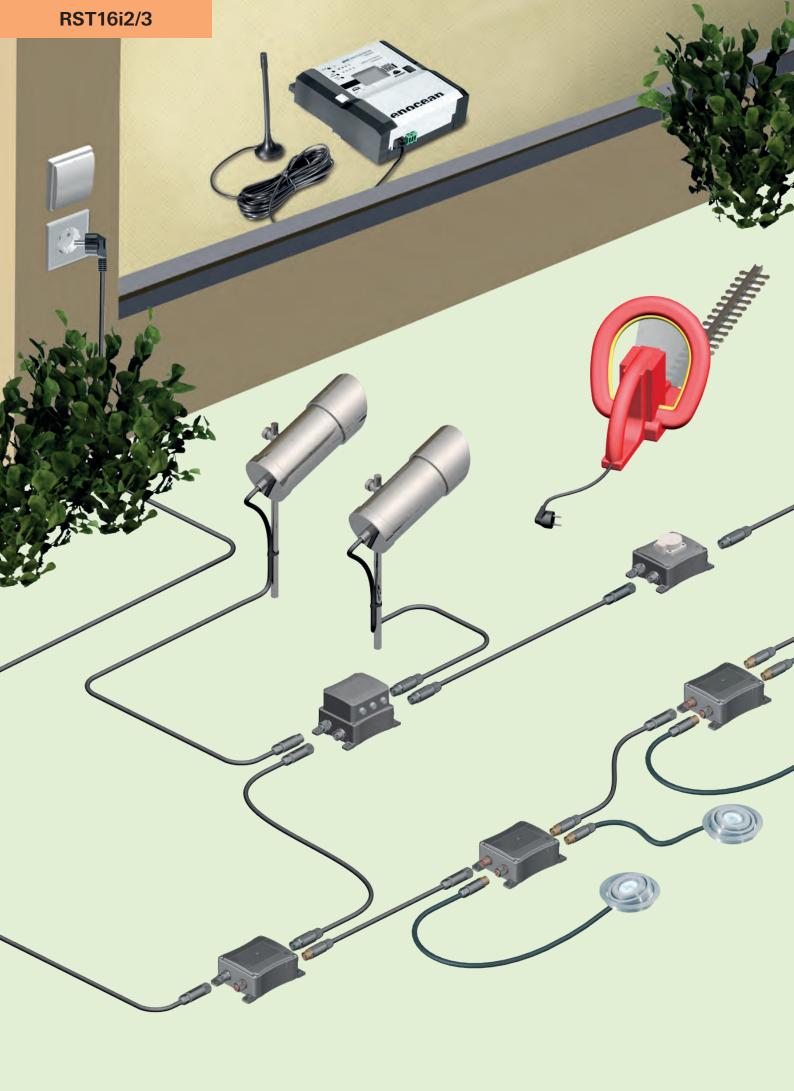
Unused slots must be protected against moisture and dirt penetration. The end caps for unused slots are joined to the connector directly using a strap and are therefore protected against loss.





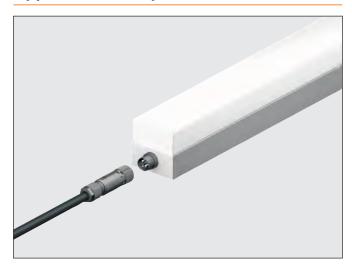
connection easily.

Open



The RST16i2/3 product line – mains connection, lighting installation, DALI, DMX, applications in the extra-low voltage range (LED technology), loudspeaker applications

Application example



General

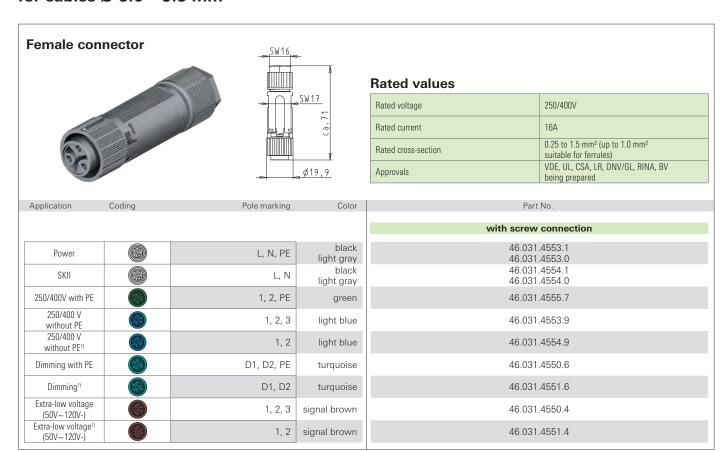
With the 2-/3-pole connectors, there are five available codings. These cover applications relating to the mains connection of electrical consumers, the connection of LED luminaires in the extra-low voltage range, and also the electrification of DALI, DMX, or loudspeaker systems. The main focus is the mains connection of electrical equipment with a compact design. The mechanical codings have the advantage that only associated pairs of male and female connectors can be connected, with the correct polarity ensured. This gives you the security of a clear distinction.

The connectors are also available in a 2-pole variant. This is based on the 3-pole housing, but with one pole not configured.

Coding

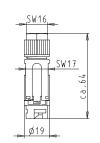
ooung							
	Application		er/SKII	250/400V with PE	Extra-low voltage	250/400V without PE	Dimming
		L, N, PE		1, 2, PE	1, 2, 3	1, 2, 3	D1, D2, PE
	Mechanical coding, for example						
Name	Description	black	light gray	green	signal brown	light blue	turquoise
Connectors							
M16 device connections							
	RST® compact and multiple distribution unit						
Distribution units	Distribution block 1E/2A						
	Individual distribution box	on request	on request	on request	on request	on request	on request
Cable assemblies	Device connection cable Male – free end			on request	on request	on request	on request
	Connection cable Female – free end			on request	on request	on request	on request
	Extension cable Female – male			on request	on request	on request	on request

Connectors, straight for cables Ø 5.0 - 9.5 mm²⁾



Male connector





Rated values

Rated voltage	250/400V
Rated current	16A
Rated cross-section	0.25 to 1.5 mm ² (up to 1.0 mm ² suitable for ferrules)
Approvals	VDE, UL, CSA, LR, DNV/GL, RINA, BV being prepared

Application	Coding	Pole marking	Color	Part No.
				with screw connection
Power		L, N, PE	black light gray	46.032.4553.1 46.032.4553.0
SKII		L, N	black light gray	46.032.4554.1 46.032.4554.0
250/400V with PE		1, 2, PE	green	46.032.4555.7
250/400 V without PE		1, 2, 3	light blue	46.032.4553.9
250/400 V without PE ¹⁾		1, 2	light blue	46.032.4554.9
Dimming with PE		D1, D2, PE	turquoise	46.032.4550.6
Dimming ¹⁾		D1, D2	turquoise	46.032.4551.6
Extra-low voltage (50V~120V-)		1, 2, 3	signal brown	46.032.4550.4
Extra-low voltage ¹⁾ (50V~120V-)		1, 2	signal brown	46.032.4551.4

¹⁾ One pole not configured ²⁾ Other diameters available upon request. Please note: Individual H07RN-F 1.5 cables can have a diameter of more than 9.5 mm.

M16 device connections straight

Female connector Rated values Rated voltage 250/400V Rated current 0.25 to 1.5 mm² (up to 1.0 mm² suitable for ferrules) Rated cross-section VDE, UL, CSA, LR, DNV/GL, RINA, BV Approvals being prepared Gehäuse-Wandstärken up to 8 mm For housing cut-out see Technical Data Application Coding Pole marking Color Part No. with screw connection 46.031.5053.1 black L, N, PE Power light gray 46.031.5053.0 46.031.5054.1 black SKII L, N light gray 46.031.5054.0 250/400V with PE 1, 2, PE 46.031.5055.7 green 250/400 V 46.031.5053.9 1, 2, 3 light blue without PE 250/400 V 46.031.5054.9 1, 2 light blue without PE1) Dimming with PE D1, D2, PE 46.031.5050.6 turquoise 46.031.5051.6 D1, D2 Dimming¹⁾ turquoise Extra-low voltage 1, 2, 3 signal brown 46.031.5050.4 (50V~120V-) Extra-low voltage¹⁾ 46.031.5051.4 1, 2 signal brown (50V~120V-)

Male connector **Rated values** 250/400V Rated voltage Rated current 0.25 to 1.5 mm² (up to 1.0 mm² suitable for ferrules) Rated cross-section VDE, UL, CSA, LR, DNV/GL, RINA, BV Approvals being prepared Gehäuse-Wandstärken up to 8 mm Ø19 For housing cut-out see Technical Data Application Coding Pole marking Color Part No.

			with screw connection
Power	L, N, PE	black light gray	46.032.5053.1 46.032.5053.0
SKII	L, N	black light gray	46.032.5054.1 46.032.5054.0
250/400V with PE	1, 2, PE	green	46.032.5055.7
250/400 V without PE	1, 2, 3	light blue	46.032.5053.9
250/400V without PE ¹⁾	1, 2	light blue	46.032.5054.9
Dimming with PE	D1, D2, PE	turquoise	46.032.5050.6
Dimming 1)	D1, D2	turquoise	46.032.5051.6
Extra-low voltage (50V~120V-)	1, 2, 3	signal brown	46.032.5050.4
Extra-low voltage ¹⁾ (50V~120V-)	1, 2	signal brown	46.032.5051.4

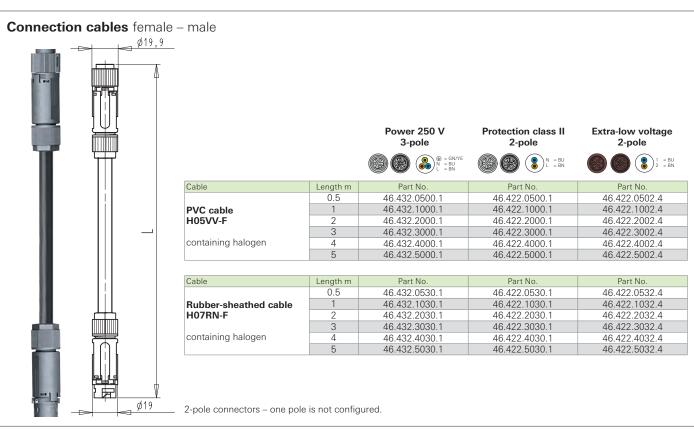
¹⁾ One pole not configured

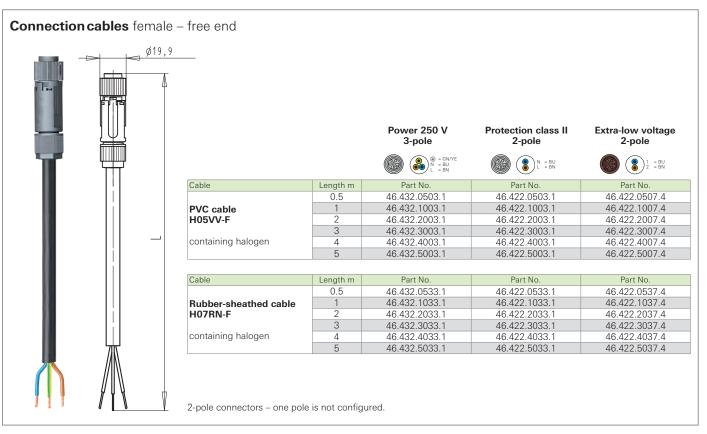
Cable assemblies

1.5 mm²; 16 A

Rated values		
Wire ends	(open cable end)	ultrason. welded
Sheath strip length	(open cable end)	35 mm
Insulation strip length	(open cable end)	9 mm

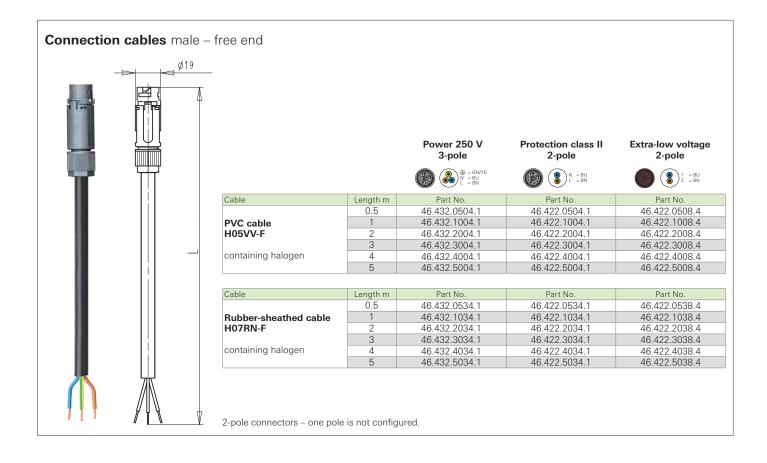
Connection type of cable	cable gland
Interlock	integrated
Color cable	black
Color handle shell	black





Cable assemblies

1.5 mm²; 16 A



Distribution units

RST compact distribution units

Dimensions 104 x 162 x 57.2 mm



Color	Application	Pole marking	Input	Outputs	Part No.
■ black	Mains	L, N, PE	1	3	46.030.0153.1
■ light gray	Mains	L, N, PE	1	3	46.030.0153.0
■ black	SKII	L, N	1	3	46.030.0154.1
■ light gray	SKII	L, N	1	3	46.030.0154.0
leaves green	250/400V with PE	1, 2, PE	1	3	46.030.0155.7
light blue	250/400V without PE	1, 2, 3	1	3	46.030.0153.9
■ light blue	250/400V without PE1)	1, 2	1	3	46.030.0154.9
turquoise blue	Dimming with PE	D1, D2, PE	1	3	46.030.0150.6
■ turquoise blue	Dimming ¹⁾	D1, D2	1	3	46.030.0151.6
■ signal brown	Extra-low voltage (50V~120V-)	1, 2, 3	1	3	46.030.0150.4
■ signal brown	Extra-low voltage ¹⁾ (50V~120V-)	1, 2	1	3	46.030.0151.4

1.5 mm² (halogen free)

Yes

RST® MINI distribution block 11/20

Color	Application	Pole marking	Input	Outputs	Part No.
■ black	Mains	L, N, PE	1	2	46.030.1253.1
light gray	Mains	L, N, PE	1	2	46.030.1253.0
■ black	SKII	L, N	1	2	46.030.1254.1
light gray	SKII	L, N	1	2	46.030.1254.0
■ leaves green	250/400V with PE	1, 2, PE	1	2	46.030.1255.7
■ light blue	250/400V without PE	1, 2, 3	1	2	46.030.1253.9
■ light blue	250/400V without PE1)	1, 2	1	2	46.030.1254.9
turquoise blue	Dimming with PE	D1, D2, PE	1	2	46.030.1250.6
turquoise blue	Dimming ¹⁾	D1, D2	1	2	46.030.1251.6
■ signal brown	Extra-low voltage (50V~120V-)	1, 2, 3	1	2	46.030.1250.4
■ signal brown	Extra-low voltage ¹⁾ (50V~120V-)	1, 2	1	2	46.030.1251.4

with separate mounting plate

Available 3rd quarter 2016

pre-wired with

Mounting option

Mounting option

Mounting plate for distribution block **RST**® MINI



for male

Part No. Part No. Z6.561.7253.0 Z6.561.6953.0 Z6.561.6953.1

for female

Accessories

Cover caps For the safe closure of female and male connectors. With mounting strap for snapping onto plug connectors and device connectors

for female

Color

light gray

black

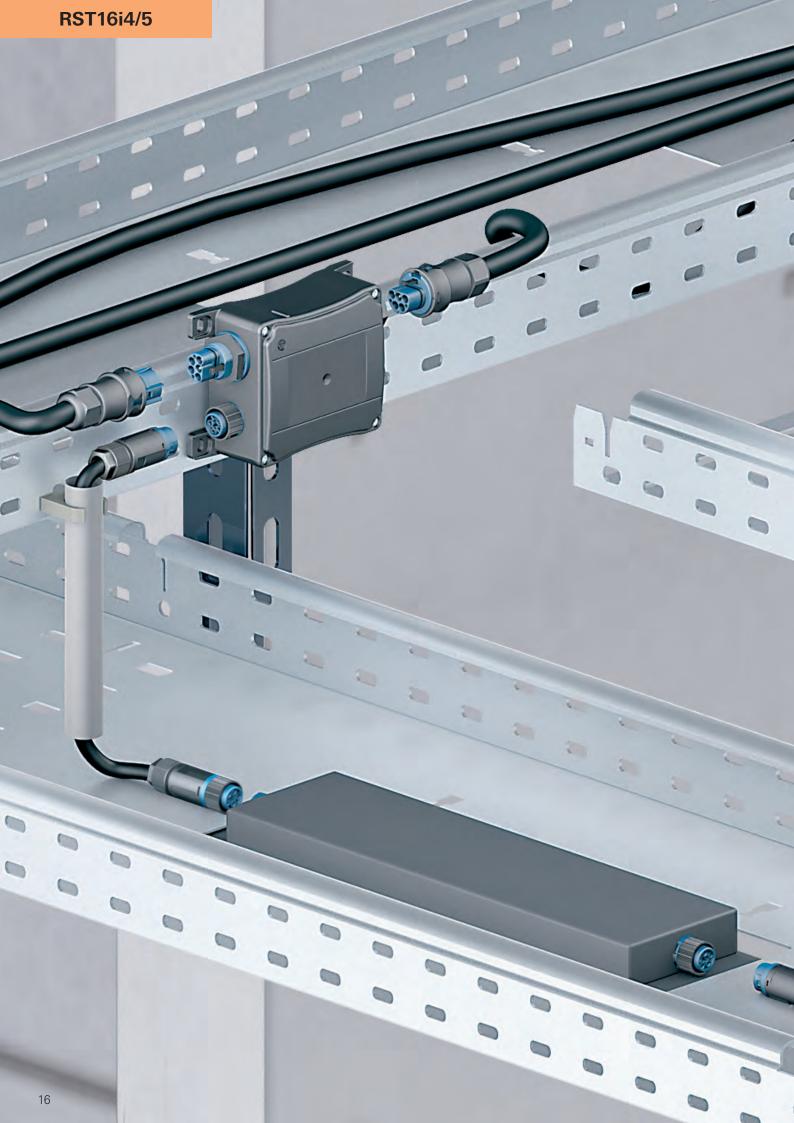


Sample kit

RST16i3 sample kit



Contents:	Part No.
Connectors	
Device connectors	99.674.0000.0
Contact parts in various codings	99.074.0000.0
Cover caps	



The RST16i4/5 product line – general network applications, lighting installation with dimming function, connection of electrical (sunblind) drives, applications in the extra-low voltage range (LED technology)

Application example



General

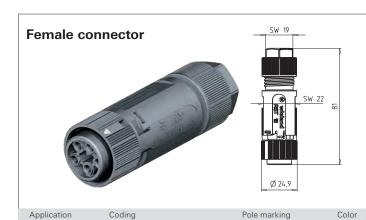
The **RST16i4/5** product line has a total of four mechanical codings and a wide variety of uses, from general network applications to applications in the extra-low voltage range. The main focus is the connection of dimmable luminaires with a compact design. This series is also tailored for the electrification of RGB or RGB-W/A outdoor spotlights. There are different mechanical codings available for every application. This means that only associated pairs of male and female connectors can be connected, with the correct polarity ensured. This gives you the security of a clear distinction.

The codings are also available in a 4-pole variant. This is based on the 5-pole housing, but with one pole not configured.

Coding

	Application		wer	Power/ Dimming	Extra-low voltage	250/400V without PE
		1, 2, 3	, N, PE	L, N, PE, 1, 2	1, 2, 3, 4, 5	1, 2, 3, 4, 5
	Mechanical coding, for example					
Name	Description	black	light gray	turquoise	signal brown	light blue
Connectors						
Device connectors M20,2						
	RST® compact and multiple distributors					
Distribution units	Distribution block 1E/2A					
	Individual distribution box	on request	on request	on request	on request	on request
	Device connector cable Male – free end		on request		on request	on request
Cable assemblies	Connection cable Female – free end		on request		on request	on request
	Extension cable Female — male		on request		on request	on request

Connectors, straight for cables Ø 7.1 – 13 mm²⁾

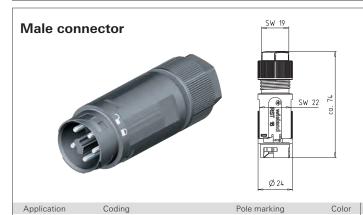


Rated values

Rated voltage	250/400V
Rated current	16A
Rated cross-section	0.25 to 1.5 mm ² (suitable for ferrules)
Approvals	VDE, UL, CSA, LR, DNV/GL, RINA, BV being prepared

Powe	r	1, 2, 3, N, PE	black light gray
Motor conn	ection ¹⁾	1, 2, 3, PE	black light gray
Power/Din	ıming	L, N, PE, 1, 2	turquoise
250/40 without		1, 2, 3, 4, 5	light blue
Extra-low v (50V~/12		1, 2, 3, 4, 5	signal brown
Extra-low vo (50V~/12		1, 2, 3, 4	signal brown

Part No.
with screw connection
with screw connection
46.051.4553.1
46.051.4553.0 46.051.4554.1
46.051.4554.0
46.051.4553.6
46.051.4553.9
46.051.4550.4
46.051.4551.4



Rated values

250/400V
16 A
0.25 to 1.5 mm ² (suitable for ferrules)
VDE, UL, CSA, LR, DNV/GL, RINA, BV being prepared

Part No.

			with screw connection
			with screw connection
Power	1, 2, 3, N, PE	black	46.052.4553.1 46.052.4553.0
Motor connection ¹⁾	1, 2, 3, PE	light gray black light gray	46.052.4554.1 46.052.4554.1 46.052.4554.0
Power/Dimming	L, N, PE, 1, 2	turquoise	46.052.4553.6
250/400V without PE	1, 2, 3, 4, 5	light blue	46.052.4553.9
Extra-low voltage (50V~/120V-)	1, 2, 3, 4, 5	signal brown	46.052.4550.4
Extra-low voltage ¹⁾ (50V~/120V-)	1, 2, 3, 4	signal brown	46.052.4551.4

¹⁾ One pole not configured ²⁾ Other diameters available upon request

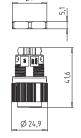
M20.2 device connector

straight

Coding

Female connector

Application



Pole marking

Rated values

Rated voltage	250/400V		
Rated current	16A		
Rated cross-section	0.25 to 2.5 mm² (up to 1.5 mm² suitable for ferrules)		
Approvals	VDE, UL, CSA, LR, DNV/GL, RINA, BV being prepared		
Gehäuse-Wandstärken	bis 5 mm		

_		_		
	Power		1, 2, 3, N, PE	black light gray
	Motor connection ¹⁾		1, 2, 3, PE	black light gray
	Power/Dimming		L, N, PE, 1, 2	turquoise
	250/400V without PE		1, 2, 3, 4, 5	light blue
	Extra-low voltage (50V~/120V-)		1, 2, 3, 4, 5	signal brown
	Extra-low voltage ¹⁾ (50V~/120V-)		1, 2, 3, 4	signal brown

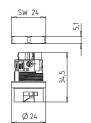
For housing cut-out see Technical Data

	Part No.
	with screw connection
	46.051.5053.1
ı	46.051.5053.0
	46.051.5054.1
	46.051.5054.0
	46.051.5053.6
	46.051.5053.9
	46.051.5050.4
	46.051.5051.4

Male connector



For housing cut-out see Technical Data



Rated values

Rated voltage	250/400V
Rated current	16A
Rated cross-section	0.25 to 2.5 mm² (up to 1.5 mm² suitable for ferrules)
Approvals	VDE, UL, CSA, LR, DNV/GL, RINA, BV being prepared
Gehäuse-Wandstärken	bis 5 mm

Application	Coding	Pole marking	Color	Part No.
				with screw connection
Power		1, 2, 3, N, PE	black	46.052.5053.1
TOWGI	(0)	1, 2, 0, 11, 1 L	light gray	46.052.5053.0
Motor connection ¹⁾		1, 2, 3, PE	black	46.052.5054.1
		1, 2, 3, 1 L	light gray	46.052.5054.0
Power/Dimming		L, N, PE, 1, 2	turquoise	46.052.5053.6
		2,11,12,1,2	tarquoiso	10.002.0000.0
250/400V		1, 2, 3, 4, 5	light blue	46.052.5053.9
without PE		1, 2, 0, 4, 0	light blue	40.002.0000.0
Extra-low voltage		1, 2, 3, 4, 5	signal brown	46.052.5050.4
(50V~/120V-)	(6)	1, 2, 0, 4, 0	Signal brown	40.002.0000.4
Extra-low voltage ¹⁾		1, 2, 3, 4	signal brown	46.052.5051.4
(50V~/120V-)	405	1, 2, 3, 4	Signal brown	40.002.3031.4

¹⁾ One pole not configured

Cable assemblies

1.5 mm²; 16 A

Rated values		
Wire ends	(open cable end)	ultrason. welded
Sheath strip length	(open cable end)	35 mm
Insulation strip length	(open cable end)	9 mm

Connection type of cable	cable gland
Interlock	integrated
Color cable	black
Color handle shell	black

Power/Dimming

5-pole

Part No.

46.452.0503.6

46.452.1003.6

46.452.2003.6

46.452.3003.6

46.452.4003.6

46.452.5003.6

Part No.

46.452.0533.6

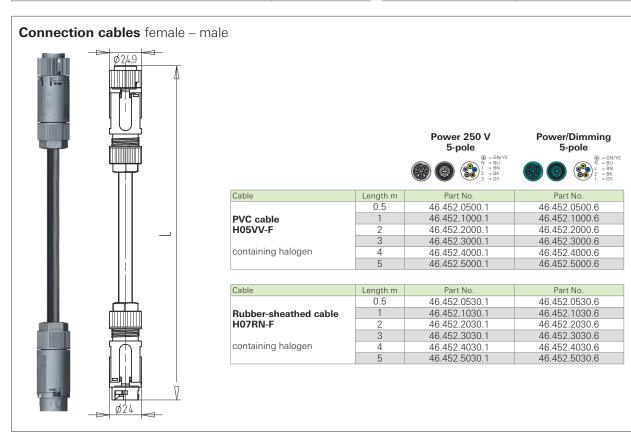
46.452.1033.6

46.452.2033.6

46.452.3033.6

46.452.4033.6

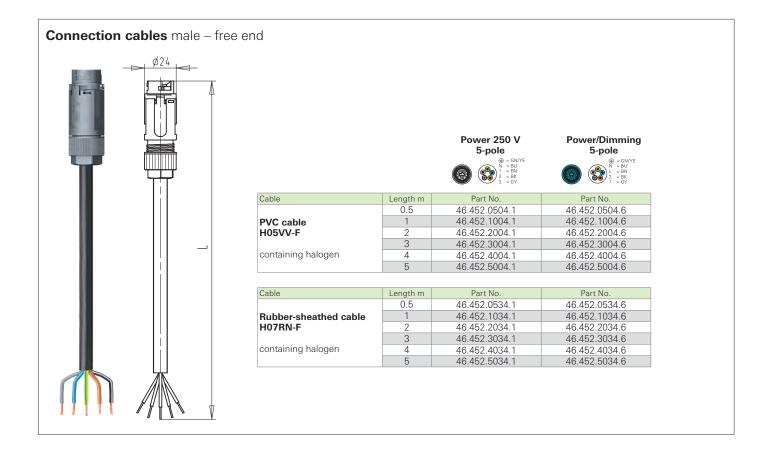
46.452.5033.6





Cable assemblies

1.5 mm²; 16 A



Distribution units

RST compact distribution units

Dimensions 104 x 162 x 57.2 mm

viounting option		yes	
Color	Application		
■ black	Mains		

pre-wired with



Color	Application	Pole marking	Input	Outputs	Part No.
■ black	Mains	1, 2, 3, N, PE	1	2	46.050.0153.1
■ light gray	Mains	1, 2, 3, N, PE	1	2	46.050.0153.0
■ black	Motor connection1)	1, 2, 3, PE	1	2	46.050.0154.1
■ light gray	Motor connection ¹⁾	1, 2, 3, PE	1	2	46.050.0154.0
turquoise blue	Mains/Dimming	L, N, PE, 1, 2	1	2	46.050.0153.6
■ light blue	up to 400V without PE	1, 2, 3, 4, 5	1	2	46.050.0153.9
■ signal brown	Extra-low voltage (50V~120V-)	1, 2, 3, 4, 5	1	2	46.050.0150.4
■ signal brown	Extra-low voltage ¹⁾ (50V~120V-)	1, 2, 3, 4	1	2	46.050.0151.4

1.5 mm²

RST® MINI distribution block 11/20

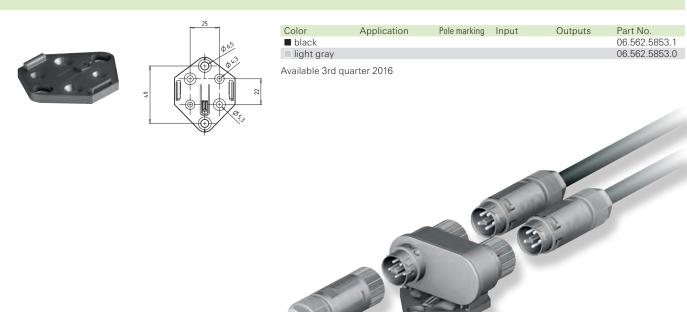
Color	Application	Pole marking	Input	Outputs	Part No.
■ black	Mains	1, 2, 3, N, PE	1	2	46.050.1253.1
■ light gray	Mains	1, 2, 3, N, PE	1	2	46.050.1253.0
■ black	Motor connection ¹⁾	1, 2, 3, PE	1	2	46.050.1254.1
■ light gray	Motor connection ¹⁾	1, 2, 3, PE	1	2	46.050.1254.0
turquoise blue	Mains/Dimming	L, N, PE, 1, 2	1	2	46.050.1253.6
■ light blue	up to 400V without PE	1, 2, 3, 4, 5	1	2	46.050.1253.9
■ signal brown	Extra-low voltage (50V~120V-)	1, 2, 3, 4, 5	1	2	46.050.1250.4
■ signal brown	Extra-low voltage ¹⁾	1, 2, 3, 4	1	2	46.050.1251.4

with separate mounting plate

Available 3rd quarter 2016

Mounting option

Mounting plate for distribution block **RST**® MINI



for male

Part No. Part No. Z6.561.7153.0 Z6.561.6853.0 Z6.561.6853.1

for female

Accessories

Cover caps For the safe closure of female and male connectors. With mounting strap for snapping onto plug connectors and device connectors

for female

Color

light gray

black

Sample kit

RST16i5 sample kit



Contents:	Part No.
Connectors	
Device connectors	99.675.0000.0
Contact parts in various codings	33.075.0000.0
Cover caps	

Technical data RST® MINI

	RST16i2/3	RST16i4/5
Rated voltage	250/400V	250/400V
Rated current	16A	16A
Number of poles	2/3	4/5

Connector

temperature range: - 40 °C to 100 °C

Material: Contact parts: brass, surface-treated

Housing parts: Polyamide, halogen-free, V2

Sealing material: NBR

Pollution degree: 3 (when connected)
Degree of protection: IP66/68 (3m; 2h)/69K

IK-Code IK07 (2 Joule)

Plugging cycles: according to IEC 61535

100x without load and

50x under nominal load (cos phi = 0.6)

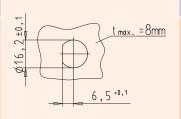
Approvals: VDE (IEC 61535)

UL (UL 2238 / UL 1977)

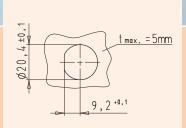
CSA (C22.2 No.182.1 / C22.2 No.182.3)

RINA, LR, DNV/GL, BV

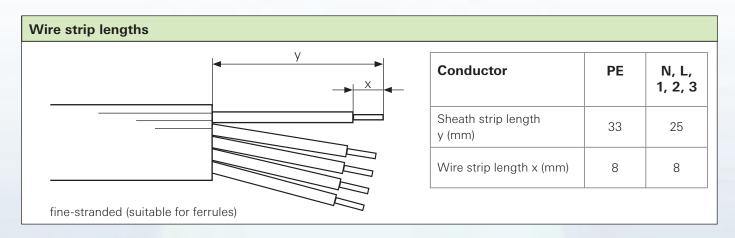
Housing cut-out RST16i2/3



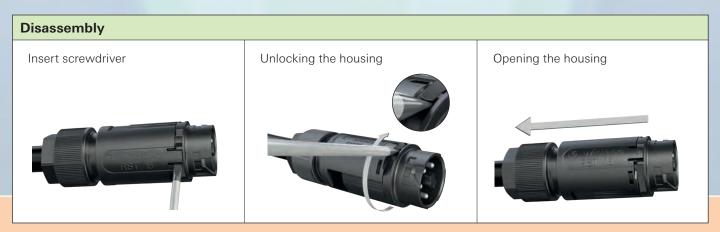
Housing cut-out RST16i4/5



Wire strip lengths Installation instructions RST16i2/3 / RST16i4/5







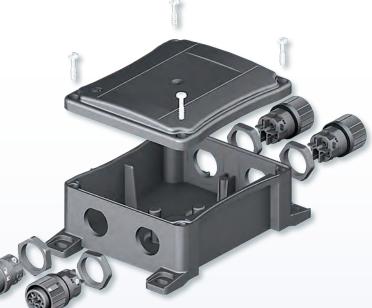
Please note that electrical connections and installation shall only be done by trained experts. Observe the included installation instructions!

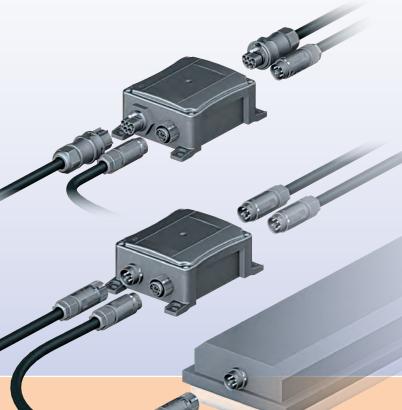
Detailed installation instructions can be found under https://eshop.wieland-electric.com

Compact and multiple distributors

Flexibility according to RST® modularity

The pluggable distributors play a major role in power or signal distribution. In their simplest function, they merely have to provide branches in the required locations. Practice shows, however, that the requirements may be much more complex. Examples can be found in rotary A/C current distributors and distributors with integrated fine fuses, all the way through to boxes with integrated electronics, such as constant current sources, voltage sources, or radio actuators.





Two housing variations are the basis:

a flat design with up to four slots, and a high design with a total of up to eight slots. Alongside a customized configuration with the new RST16i device connectors, the existing components of the RST20i and RST25i lines can also be used for variety, of course.

The coded connectors give you the security of a clear distinction between different circuits – no need to redo any incorrect connections.

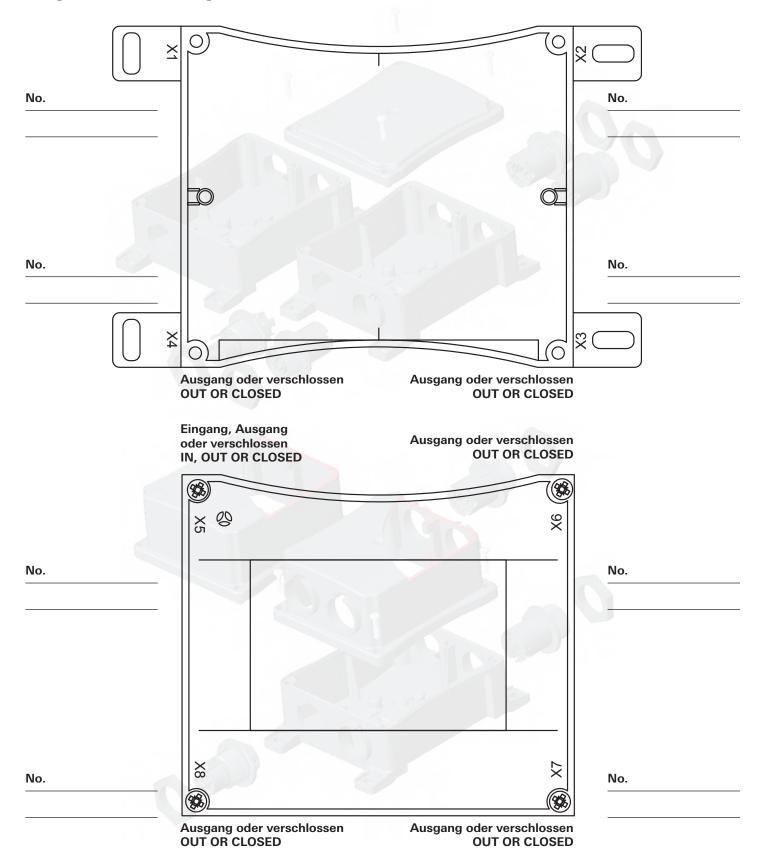
In addition to the compact and multiple distributors, standard distribution boxes can also be customequipped with device connectors.



Example



Special variant request – please complete and fax: +49-951-9326-996



Cable assemblies

By default, we offer the low-cost H05VV-F cable, but its field of applications is restricted to indoor areas. This cable is not suitable for outdoor areas and constantly humid or wet rooms! Protection from foreign bodies (IP6X) is at the fore here.

Temporary wetness for cleaning purposes, however, is allowed. Temporary outdoor installations without special demands can be implemented using H07RN-F

rubber-sheathed cables. However, here too it is essential to check whether or not any additional action, such as laying inside installation pipes, is required. A higher-quality cable is recommended for installations that will be exposed to greater environmental influences for quite some time.

H07RN-F rubber-sheathed cable

Use inside dry, and wet rooms, as well as outdoors, but not directly in the ground.

Limited UV resistance.

Minimum bending radius: 4 x outside diameter

Service temperature: 60 °C













PVC cable H05VV-F

Use inside dry rooms, not outdoors, not directly in the ground. Not UV resistant.

Minimum bending radius: 4 x outside diameter Service temperature: 70 °C

Cables for increased requirements (e.g. Ölflex® Black)

Use outdoors, may be laid in the ground, UV-resistant.

Minimum bending radius: 4 x outside diameter Service temperature: 80 °C









Definition of IP protection degrees (DIN EN 60529-1)

Documentation: Example: IP69K

1st digit 2nd digit

IP protection ratings against ingress of objects and contact

IP protection ratings against ingress of water

	Protection against contact	Protection against ingress of objects
0	no protection	no protection
1	Any large surface of the body (e.g. back of hand)	Large foreign objects (> 50 mm in Ø)
2	Finger	Medium-sized foreign objects (> 12 mm in Ø)
3	Tools and wires (> 2.5 mm in diameter)	Small foreign objects (> 2.5 mm in Ø)
4	Tools and wires (> 1.0 mm in diameter)	Grain-shaped foreign objects (> 12 mm in Ø)
5	Complete protection against contact	Dust deposition
6	Complete protection against contact	Dust ingress
7		
8		
9		

IP protection ratings against ingress of water			
0	no protection		
1	Protection against vertically falling water		
2	Protection from diagonally (up to 15°) falling water drops		
3	Protection against spraying water up to 60° to the vertical		
4	Protection from splashing water from any direction		
5	Protection against jet spray water		
6	Protected against powerful water jets		
7	Protection against temporary immersion in water		
8	Protection against continuous immersion in water		
9K*)	Protection against high pressure, high temperature spray downs		
w)	B.W. 400 F0		

^{*)} according to DIN 400 50

As an innovative installation system, Wieland offers a global concept for efficient outdoor installation and industrial application.

In many applications, electrotechnical devices and systems must reliably work for many years under tough environmental conditions. To ensure a reliable function, it is essential to prevent the penetration of humidity or particles (e.g. dust, oil, soot, etc.) in production plants, garages or in outdoor areas. Even an unplanned immersion is possible with the **RST**® system within the scope of the specified degree of protection.

The system is not designed for permanent operation under water.

It is not possible to lay the components directly in the ground.

According to VDE 0100-520, connectors must be protected using suitable additional facilities and must be accessible for visual inspection, testing, and maintenance.

Refer also to the installation instructions.

Degree of protection achieved:

IP65 Water jets

IP68

IP66 Powerful water jets

IP67 Temporary immersion

Continuous immersion (for 2 hours at a water

depth of 3 m)

IP69K High-pressure spray down

Installation instructions for outdoor electrical installations

Outdoor electrical installations are particularly tricky. Constant temperature changes, high UV radiation, high ozone values and, not least, mechanical wear leading to material fatigue, water ingress, and, finally, system failure.

What is crucial is the perfect interaction between the materials used and the very specific environmental conditions. While all connectors and distributors are designed for continuous indoor and outdoor operation, the cables are clearly a different matter. Selection of the appropriate cable plays a major role for continuous operation of the installation.

Installation instructions

A horizontal installation position is preferable in order to ensure that water drains off. In accordance with installation regulation IEC 60364-5-52 (DIN VDE 0100-522.3), cable systems must be designed in such a way that damage caused by the ingress of water is avoided.

Cable systems must satisfy the required degree of protection. If water can accumulate or water condensation can occur, provisions for water drainage must be made! This particularly applies to sealing points in the area of the strain relief.

If abrasion might occur (in flexible installations), wear of the pre-assembled cable must be taken into consideration and must be monitored.

Avoid any bending of the cable in the area of the strain relief.

Control mechanical bending in the area of the strain relief using suitable measures (e.g. cable clamps).

Laying of the system components directly in the ground is not possible. According to VDE 0100-520, connectors must be protected using suitable additional facilities and must be accessible for visual inspection, testing, and maintenance.

The connector system is not designed for continuous operation under water. However, unplanned immersion is possible as foreseen by the specification.



Further information can be found in our White Paper "Installation instructions for outdoor electrical installations", order no. 0693.1





Technical consultation and general information

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contacts are green.