

Rittal – The System.

Faster – better – everywhere.

Wiring Workstation

Wire Station WS 540



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SOFTWARE & SERVICES



FRIEDHELM LOH GROUP

Wire Station WS 540 Wiring Workstation

For flexible, efficient wire assembly and wiring work in the workshop. The wiring workstation is the ideal interface between the fully automated production of wires with the Rittal Wire Terminal and wiring work on mounting plates or in the enclosure. The Wire Station WS 540 is an ergonomic process optimizer for use with all wiring-related activities.

- Universal accessories tailored to the application, such as component supports for semi-automatic machines
- Optional workstation add-ons help to boost flexibility and efficiency in essential manual process stages

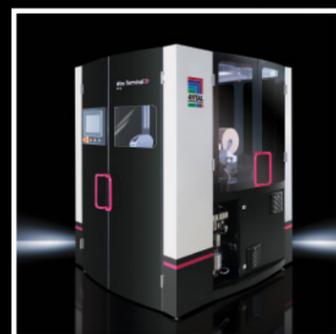
EPLAN Smart Wiring: Wiring made easy

- Using data from the Digital Twin
- Wire lists with filter function
- Visualization of cable routes
- Wiring plan revision management

- Stocking and processing of pre-produced wires from the Rittal Wire Terminal
- Complete project handling with variable arrangement of the wire magazines directly at the workstation

Wire management, stocking, and production

- Automatic cutting with the Rittal C8+ length-cutting machine accelerates and streamlines the manual wiring process



Wire Terminal WT fully automated wire processing machine

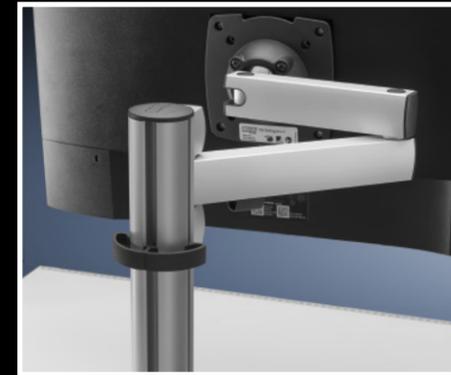
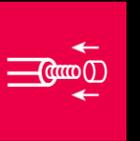
Fully automated wire processing with patented ordering system.



Rittal assembly frames

Flexible, straightforward handling in the workshop. Ergonomically adjustable assembly frames for building and wiring enclosures and mounting plates.

With the complete modular system surrounding the WS 540, your workstation can be functionally adapted to suit individual panel building and switchgear manufacturing requirements. Assistance is at hand for process-optimized project handling with EPLAN Smart Wiring, the Rittal length-cutting, insulation-stripping and crimping machines, and label printers. Another modular element to boost efficiency in modern panel building and switchgear manufacturing.



Optional monitor support



Integral scale and electrically adjustable operating height



Optional tool/drinks holder



Optional Mini-PC holder



Optional wire routing for up to 8 different wires



Integral socket strip



Integral shadow board to fit Rittal tools such as screwdrivers, side cutters, crimping tools, etc.

To fit the following products:			
Screwdrivers Uninsulated	4052.058	Screwdrivers Insulated	4052.141
Screwdrivers Insulated	4052.101	Screwdrivers Insulated	4052.142
Screwdrivers Insulated	4052.102	Crimping Tool - wire end ferrules	4054.002
Screwdrivers Insulated	4052.104	Crimping Pliers - wire end ferrules	4054.004
Screwdrivers Insulated	4052.106	Crimper - Cable lugs	4054.141
Screwdrivers Insulated	4052.107	Cable Stripper	4054.300
Screwdrivers Insulated	4052.121	Stripping Tool	4054.410
Screwdrivers Insulated	4052.122	Side Cutters	4054.600
Screwdrivers Insulated	4052.131	Electronic Side Cutter	4054.750
Screwdrivers Insulated	4052.132	Needle-nose Pliers	4054.850

Wire Station WS 540



Accessories for Wire Station 540 Page 5

Mobile wiring workstation, height adjustable, for flexible use in the workshop. For ergonomic, fatigue-free wire processing work.

Benefits:

- Electronically adjustable desk for the optimum working height, adjustable from 710 – 1250 mm
- Multiplex worktop, washable and scratch-resistant

Length-cutting machine C8+ Page 5

– Ideal solution in conjunction with the length-cutting and crimping machines plus pre-assembled wires with the Wire Terminal

– Integral scale for quick manual measurements

- Prepared to accommodate a monitor for wiring processing with EPLAN Smart Wiring
- Optionally expandable with shelves for wire boxes, wire reels and holders

Crimping machines from Page 6

for tools and small parts

- For flexible use in the workshop thanks to rubberized wheels
- Drawer with shadow board prepared for tools

Supply includes:

- Wiring table with electrical height adjuster
- Connection cable, 7 m
- 7-way socket strip, with rocker switch

Note:

- The vertical mounting braces, Model No. 4051.106 are required for accessories such as storage box holders, magazine supports etc.

Model No.	Packs of	4051.100	PG
Dimensions (W x H x D) mm		900 x 1350 x 781	
Working height (min./max.) mm		710 / 1205	
Input voltage		230 V AC, 50 Hz	
Weight kg		95.0	

Accessories

Accessories	Packs of	Model No.	PG
Shelf	2 pc(s).	4051.101	5
Component support, left	1 pc(s).	4051.102	5
Component support, right	1 pc(s).	4051.103	6
Monitor attachment	1 pc(s).	4051.104	6
LED work light	1 pc(s).	4051.105	7
Mounting braces, vertical	1 pc(s).	4051.106	7
Storage box holder	1 pc(s).	4051.107	8
Adaptor bracket	1 pc(s).	4051.108	8
Waste bin	1 pc(s).	4051.115	8
Socket strip	1 pc(s).	4051.114	9
Magazine support	1 pc(s).	4051.111	9
Wire routing for mounting braces, vertical	1 pc(s).	4051.120	9
Wire routing for component support, left	1 pc(s).	4051.121	10
Wire pack holder		see page	10
Wire coil holder		see page	11
Wire reel holder	1 pc(s).	4050.216	13
Tool holder, round	1 pc(s).	4051.113	11
Stripping machine console	1 pc(s).	4051.112	12
Universal utility shelf	1 pc(s).	4051.109	12
Mini-PC holder	1 pc(s).	4051.110	13

Accessories

for Wire Station WS 540

Shelf

for WS 540

Shelf set for mounting below the desktop. Different shelf depths provide ample knee and leg room for working seated at the workstation.

Benefits:

- For optimum use of the space beneath the desktop without restricting legroom
- Tool-free mounting of the shelves by simply hanging in place

Technical specifications:

- Top shelf (W x D): 510 x 335 mm
- Bottom shelf (W x D): 510 x 200 mm

Material:

- Sheet steel

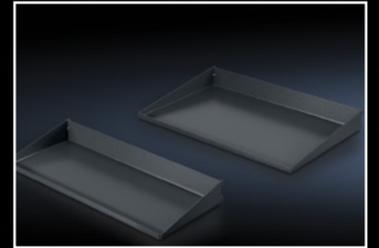
Color:

- RAL 7016

Supply includes:

- 2 shelves

Packs of	Model No.
2 pc(s).	4051.101



Component support, left

for WS 540

Component support unit to fit length-cutting machine C8+ and an additional shelf to accommodate most common label printer brands. Mounted on the left of the WS 540 Wire Station.

Benefits:

- Additional shelf for universal use
- Compact external mounting
- Flexibly adjustable in the width and height

Technical specifications:

- Component support (W x H x D): 360 x 335 x 20 mm, including height adjustment of 480 mm
- Support arm (W x H): 500 x 700 mm
- Shelf (W x H x D): 417 x 267 x 20 mm

Material:

- Sheet steel

Color:

- RAL 7016

Supply includes:

- Component support for the C8+ length-cutting machine
- Semi-automated machine support arm, left
- Universal shelf for printer/label printer
- Assembly parts

Packs of	Model No.
1 pc(s).	4051.102



Accessories

for Wire Station WS 540



Component support, right for WS 540

Component support unit to fit crimping machine RC or R8 E, for mounting on the right of the Wire Station WS 540.

Benefits:

- Compact external mounting
- Flexibly adjustable in the width and height

Technical specifications:

- Component support (W x H x D): 318 x 313 x 20 mm, including conduit for height adjustment of 480 mm
- Support arm (W x H): 500 x 700 mm

Material:

- Sheet steel

Color:

- RAL 7016

Supply includes:

- Component support for crimping machines
- Semi-automated machine support arm, right
- Assembly parts



Monitor attachment for WS 540

For mounting all commercially available monitors up to screen diagonals of 32" with Vesa 75/100.

Benefits:

- Stable monitor attachment
- Vertically hinged
- Height-adjustable

Technical specifications:

- Height-adjustable up to 285 mm
- Extendable up to 430 mm
- Swivel range left/right with full extension 90°
- Swivel range of ball head 35° all-round
- Vesa 75/100

Material:

- Aluminum / Sheet steel

Color:

- RAL 7016

Supply includes:

- Monitor attachment
- Assembly parts

Approvals

- GS-tested

Packs of	Model No.
1 pc(s).	4051.103

Load capacity max. kg	Packs of	Model No.
10	1 pc(s).	4051.104

Accessories

for Wire Station WS 540

LED work light for WS 540

For attaching to the table top, with clamping device.

Benefits:

- Bright, glare- and flicker-free lighting, homogeneous and shadow-free
- Selectable color temperature between warm white, neutral white, and daylight white promotes concentration and reduces symptoms of fatigue
- Excellent color fidelity and high contrast
- Aluminum spring arm with 3D head joint, swiveling, and lockable for free positioning of the light source

Technical specifications:

- Spring arm: Length 970 mm
- Color reproduction: 94 - 98 Ra
- Transmission angle: 100°

Material:

- Light housing Aluminum
- Glare control: Macrolon

Protection category IP to IEC 60 529

- IP 40

Protection class:

- III (SELV)

Supply includes:

- LED work light
- Assembly parts

Width mm	545
Height mm	90
Depth mm	35
Luminous flux lm	2930
Light	84 SMD LEDs
Rated operating voltage V, ~, Hz	110 - 240, 1~, 50/60
Power consumption W	26
Service life h	≥ 60000
Operating temperature	-10 °C... +40 °C
Length of connection cable m	3
Connection options	Plug-in power supply (CEE 7/16) with AC adaptor
Packs of	1 pc(s).
Model No.	4051.105

Mounting braces, vertical for WS 540

For optional attachment of accessories such as wire pack holders, open-fronted storage boxes, and shelves.

Benefits:

- Individual and functional configuration with component supports, storage box holders, consoles, wire pack holders, etc.
- Simple screw-fastening of accessories
- Individual height adjustment of the accessories with a rail system

Technical specifications:

- Dimensions (W x H x D): 85 x 1350 x 50 mm

Material:

- Sheet steel

Color:

- RAL 7016

Packs of	Model No.
1 pc(s).	4051.106



Accessories

for Wire Station WS 540



Storage box holder

for WS 540

For fastening to the vertical mounting braces of the WS 540 and for storing small parts and accessories.

Technical specifications:

- Dimensions of storage box holder (W x H x D): 110 x 350 x 15 mm
- Dimensions of open-fronted storage box (W x H x D): 100 x 85 x 160 mm

Material:

- Support: Sheet steel
- Open-fronted storage boxes: Plastic

Color:

- Support: RAL 7016
- Open-fronted storage boxes: Yellow

Supply includes:

- Storage box holder
- 2 open-fronted storage boxes
- Assembly parts

Packs of	Model No.
1 pc(s).	4051.107

! Also required:

- Mounting braces, vertical, see page 7



Adaptor bracket

for WS 540

For individual configuration and enlargement of the WS 540. The adaptor bracket is required for mounting additional vertical mounting braces and supports a range of width settings from 50 – 400 mm.

Technical specifications:

- Side dimensions (W x H): 483 x 383 mm

Material:

- Sheet steel

Color:

- RAL 7016

Packs of	Model No.
1 pc(s).	4051.108

! Also required:

- Mounting braces, vertical, see page 7



Waste bin

for WS 540

For waste disposal directly at the workstation.

Benefits:

- Front mounting without impairing legroom

Technical specifications:

- Dimensions (W x H x D): 150 x 290 x 320 mm
- Capacity: 12 liters

Material:

- Plastic

Color:

- Dark gray

Supply includes:

- Waste bin
- Bracket
- Assembly parts

Packs of	Model No.
1 pc(s).	4051.115



Accessories

for Wire Station WS 540



Socket strip

for WS 540

For mounting on the worktop of the WS 540.

Design:

- 5-way, with rocker switch (green)

Benefits:

- Ergonomic access thanks to the 45° angle on the worktop

Material:

- Extrusion: Aluminum
- Socket inserts: Plastic

Supply includes:

- Socket strip, connection cable, and earthing contact plug
- Assembly parts

Electrical connection V, Hz	Rated current A	Packs of	Model No.
230, 50	16	1 pc(s).	4051.114



Magazine support

for WS 540

To accommodate up to 4 wire rail magazines with pre-assembled wires from the Wire Terminal WT.

Benefits:

- For universal use on any mounting brace, vertical

Technical specifications

- Dimensions (W x H x D): 330 x 200 x 35 mm

Material:

- Sheet steel

Color:

- RAL 7016

Supply includes:

- Magazine support
- Assembly parts

Packs of	Model No.
1 pc(s).	4051.111

! Also required:

- Mounting braces, vertical, see page 7



Wire routing for mounting braces, vertical

for WS 540

Targeted wire routing for up to 8 different wires is supported. Mounting on the vertical mounting braces.

Benefits:

- Individually height-adjustable on the mounting brace
- Optimum running characteristic of the wires

Technical specifications

- Dimensions (W x H x D): 130 x 263 x 322 mm
- Depth adjustment directly at the wire guide up to 100 mm
- Wire routing from 0.5 – 2.5 mm² supported

Material:

- Holder: Sheet steel
- Reel and wire guide: Plastic

Packs of	Model No.
1 pc(s).	4051.120

! Also required:

- Mounting braces, vertical, see page 7



Accessories

for Wire Station WS 540



Wire routing for component support, left for WS 540

Targeted wire routing for up to 8 different wires is supported. For mounting on the component support, left.

Benefits:

- Optimum wire routing to the C8+ length-cutting center
- Optimum running characteristics of the wires

Technical specifications:

- Dimensions (W x H x D): 129 x 190 x 169 mm
- Wire routing from 0.5 – 2.5 mm² supported

Material:

- Holder: Sheet steel
- Reel and wire guide: Plastic

Packs of	Model No.
1 pc(s).	4051.121

! Also required:

- Component support, left, see page 5



Wire pack holder

Shelf for wire packs, to fit assembly frames and WS 540. Attached to the Wire Station on the vertical mounting braces on the left or right.

Technical specifications:

- Dimensions of wire pack holder (W x H x D): 207 x 105 x 207 mm
- Storage space to fit wire packs up to a maximum size of 207 x 207 mm

Material:

- Sheet steel

Color:

- RAL 7016

Supply includes:

- Wire pack holder
- Assembly parts

To fit Model No.	Design	Packs of	Model No.
4051.100 4050.150 4050.200 4050.300	left	1 pc(s).	4051.116
4051.100 4050.150 4050.200 4050.300	right	1 pc(s).	4051.117

! Also required:

- Mounting braces, vertical, see page 7



Accessories

for Wire Station WS 540

Wire coil holder

Wire coil shelf to fit assembly frames and WS 540. Attached to the Wire Station on the vertical mounting braces on the left or right.

Technical specifications:

- Storage space (W x H x D): 375 x 20 x 475 mm

Material:

- Sheet steel

Color:

- RAL 7016

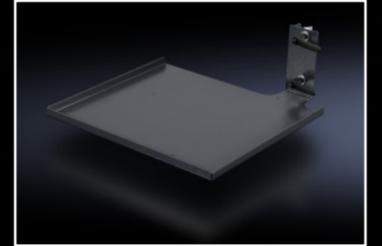
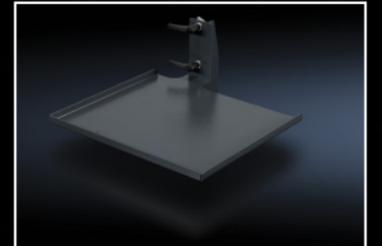
Supply includes:

- Wire coil holder
- Assembly parts

To fit Model No.	Design	Pack of	Model No.
4051.100 4050.150 4050.200 4050.300	left	1 pc(s).	4051.118
4051.100 4050.150 4050.200 4050.300	right	1 pc(s).	4051.119

! Also required:

- Mounting braces, vertical, see page 7



Tool holder, round for WS 540

For safe storage of hand-held devices or drinks. The tool holder is secured to the desktop.

Applications:

- Holder for hand tools such as cordless screwdrivers, heat guns, or beverage bottles
- For hand-held tools up to 80 mm in diameter

Technical specifications:

- Dimensions (W x H x D): 140 x 87 x 200 mm

Material:

- Sheet steel

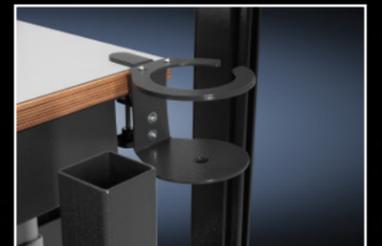
Color:

- RAL 7016

Supply includes:

- Tool holder, round
- Assembly parts

Packs of	Model No.
1 pc(s).	4051.113



Accessories

for Wire Station WS 540



Stripping machine console for WS 540

For positioning the S22 stripping machine on the WS 540. The console may be positioned on either the left or the right.

Technical specifications:

- Console area (W x D): 278 x 178 mm
- Height-adjustable up to 480 mm

Material:

- Sheet steel

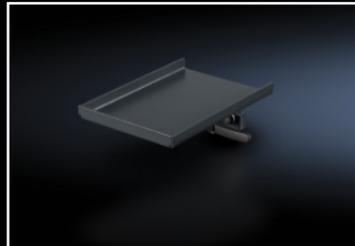
Color:

- RAL 7016

Packs of	Model No.
1 pc(s).	4051.112

 **Assembly:
instruction**

- The stripping machine console is also suitable for component supports 4051.102 and 4051.103



Universal utility shelf for WS 540

Universal utility shelf for mounting on the vertical mounting braces of the WS 540. Storage for tools or small parts.

Technical specifications:

- Dimensions (W x H x D): 130 x 15 x 190 mm

Material:

- Sheet steel

Color:

- RAL 7016

Supply includes:

- Universal utility shelf
- Assembly parts

Packs of	Model No.
1 pc(s).	4051.109

 **Also required:**

- Mounting braces, vertical, see page 7



Accessories

for Wire Station WS 540

Mini-PC holder for WS 540

For secure attachment of a mini-PC to the WS 540. The holder is mounted underneath the workbench on the left.

Technical specifications:

- Dimensions (W x H x D): 70 x 235 x 200 mm
- Individually adjustable up to 60 mm

Material:

- Sheet steel

Color:

- RAL 7016

Supply includes:

- Mini-PC holder
- Assembly parts

Packs of	Model No.
1 pc(s).	4051.110



Wire reel holder for assembly frame

For adapting wire reels or drums on assembly frames 150 MN, 200 EN and 300 ENH

To fit Model No.	Pack of	Model No.
4051.150 4050.200 4050.300 4051.100	1 pc(s).	4050.216



Strong partners for sustainable automation and control manufacturing

The U.S. manufacturing landscape's existing challenges have been exacerbated or accelerated by the global pandemic. Challenges such as labor shortages, long lead times, cost effectiveness, and inconsistent data have long been around, but a recent study conducted by The Workforce Institute at UKG revealed that while the U.S. manufacturing sector has certainly bounced back since mid-April 2020, nearly two-thirds of manufacturers are still struggling to overcome these challenges.



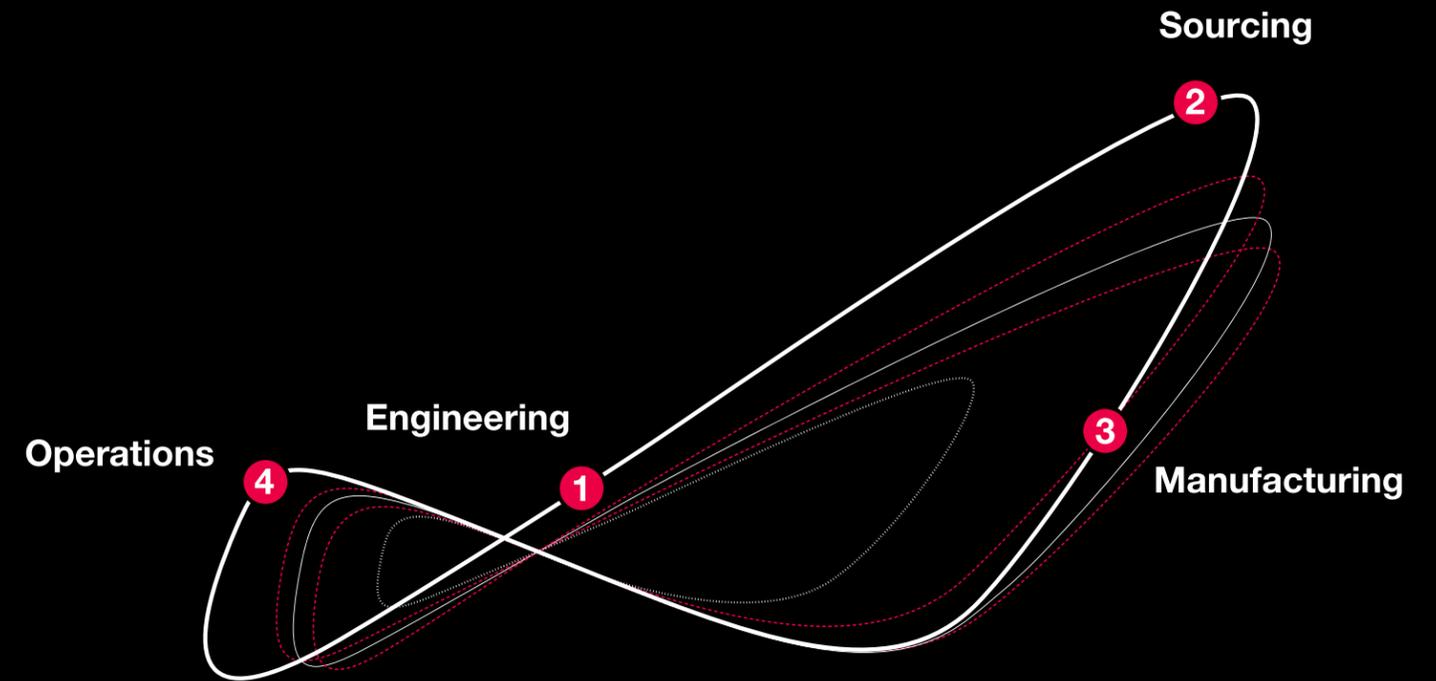
Simple enough solutions currently exist to solve some of these challenges, such as standardization of products, data, and processes.



Industry is making great strides with digitalization. Digital data, one of the most important resources, is becoming increasingly influential. The same applies to panel building and control manufacturing, which produce a key part of the infrastructure for virtually all vertical markets.

Digitalization and integration – clearly more efficient. Tight equipment production cycles put pressure on normal costs and timelines. Alongside a high-quality product, having the most efficient process also delivers a key competitive advantage. Control manufacturers that focus on the entire value chain – from planning and design through the placing of orders, production, delivery and service operations – can boost their efficiency and gain a vital edge on the market.

The digital twin, for example, is the virtual prototype of a system. Created at the engineering stage, it provides a crucial basis for production and also for the subsequent maintenance and repair of the finished product.



The digital twin – a crucial basis.

Digitalization, standardization and automation are key to cutting costs and avoiding unnecessary additional outlay. The central element is the digital twin, developed during the engineering process and links together all downstream process steps – from sourcing and manufacturing through to operation – and contains information about an enclosure's properties and operational behavior.

Engineering solutions from EPLAN – System and automation expertise from Rittal.

EPLAN supplies high-performance engineering solutions linked by the EPLAN Platform for control planning. The Rittal portfolio of solutions supports all steps in the production process where data generated in the digital twin at the engineering stage can be put to further use. This data can also be accessed for commercial processes and during operations such as monitoring, servicing or developing the next switchgear generation.

95%

Of companies have been able to **boost productivity**, while also **improving their products and services** thanks to digitalization*

Rittal – The System.

Faster – better – everywhere.

- Enclosures
- Power Distribution
- Climate Control
- IT Infrastructure
- Software & Services

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