



PRODUCT RANGE

Phoenix Contact offers an innovative portfolio of industrial electro-technology. The best connections “from sensor to the controller”.

From the classic terminal block to splashproof machine connectors and wireless ethernet, Phoenix Contact provides innovations that do more than our customers expect.

- Cables and wires
- Connectors
- Controllers
- Electronics housing
- Electronic switchgear and motor control
- Fieldbus components and systems
- Functional Safety
- HMIs and industrial PCs
- I/O Systems
- Industrial communication technology
- Industrial Ethernet
- Installation and mounting material
- Lighting and signaling
- Marking and labeling
- Measurement and control technology
- Modular terminal blocks
- Monitoring
- PCB terminal blocks and PCB connectors
- Power supply units and UPS
- Protective devices
- Relay modular
- Sensor/actuator cabling
- Software
- Surge protection and interference filters
- System cabling for controllers
- Tools
- Wireless data communication

COMPANY OVERVIEW

Phoenix Contact is a leading developer and manufacturer of electrical connection, electronic interface and industrial automation technologies. Founded more than 80 years ago in Germany, our diverse product range includes components and system solutions for industrial and device connection, automation, electronic interface, and surge protection.

Phoenix Contact is a global company with more than 12,300 employees worldwide. There are more than 40 subsidiaries and sales representatives in another 30 nations. Around the world, our focus on innovation and trusting partnerships with customers creates solutions that benefit all involved.

Our customers operate in a diverse range of industries, from Electrical & Industrial Manufacturing, Solar and Clean energy, Automation & Process Control, to Energy, Water, Mining, and Petrochemical industries. These technical environments require a high degree of expertise and face to face support. With nine locations across Australia and New Zealand, Phoenix Contact has been providing our customers with inspiring innovations and local support since 1995.

“Satisfaction isn’t enough. We want to inspire.” *Klaus Eisert*



www.phoenixcontact.com.au

THE GLOBAL NETWORK

So that we can work as closely with our customers as possible, we have also established Regional Centers of Competence in Asia and the Americas. It's here that tailor-made solutions are created.

Our development sites

Germany, USA, China, India

Our production sites

Germany, USA, China, India, Brazil, Argentina, Poland, Greece, Turkey, Sweden

Our sales subsidiaries

Argentina, Australia, Austria, Belarus, Belgium, Brazil, Canada, Chile, China, Czech Republic, Denmark, Estonia, Finland, France, Germany, Hungary, India, Indonesia, Ireland, Israel, Italy, Japan, Kazakhstan, Lithuania, Luxembourg, Malaysia, Mexico, Netherlands, New Zealand, Norway, Philippines, Poland, Portugal, Romania, Russia, Singapore, Slovakia, Spain, South Africa, South Korea, Sweden, Switzerland, Taiwan, Thailand, Turkey, Ukraine, United Arab Emirates, United Kingdom, USA, Vietnam

Representatives in more than 30 other countries worldwide.

GERMANY - Blomberg



GERMANY - Bad Pyrmont



USA - Harrisburg



CHINA - Nanjing





“With 60,000 products, together we can find your solution.”

Electronics housing, electronic switching devices and motor control, fieldbus components and systems, functional safety, HMI and industrial PCs, I/O systems, Industrial Ethernet, lighting and signaling, industrial communication technology, installation and mounting material, cables and wires, PCB terminal blocks and PCB connectors, marking and labeling, measurement and control technology, monitoring, modular terminal blocks, relay modules, protective devices, sensor/actuator cabling, software, connectors, controllers, power supply units and UPS, system cabling for controllers, surge protection and interference filters, tools, wireless data communication



**“At Phoenix Contact,
everything revolves around
future-oriented solutions.”**

INDUSTRY SOLUTIONS

Each sector of industry places particular demands on machine and system automation. In our dedicated Industry Teams, we work together with our industry partners and focus on these challenges. This is how we design tailor-made turn-key solutions based on innovative products and intelligent engineering services. In this way, with the knowledge and enthusiasm of our employees, we find the best possible solution for many sectors of industry.

1300 786 411





1

Terminal Blocks

2017/2018



Terminal blocks



Sensor/actuator cabling and connectors

- Sensor/actuator cabling
- Cables and lines
- Connectors



Marking systems, tools and mounting material

- Marking and labeling
- Tools
- Installation and mounting material



Power supplies, surge protection and device circuit breakers

- Surge protection and interference suppression filters
- Power supplies and UPS
- Protective devices



Interface technology and switching devices

- Electronic switching devices and motor control
- Measurement and control technology
- Monitoring
- Relay modules
- System cabling for controllers



Automation

- Lighting and signaling
- Fieldbus components and systems
- Functional safety
- HMIs and industrial PCs
- I/O systems
- Industrial cloud computing
- Industrial communication technology
- Software
- Controllers



PCB terminal blocks and PCB connectors

To quickly select a product, use our e-Paper.

i Webcode: #1517

Find out more with the web code

On some of the catalog pages, you can find our webcode: a hash symbol followed by a four-digit number combination.

i Web code: #1234 (example)

This allows you to access information on our website quickly.

It could not be easier:

1. Go to the Phoenix Contact website
2. Enter # and the number combination in the search field
3. Get more information and product versions

Or use the direct link:

phoenixcontact.net/webcode/#1234

You will find the latest information and all new products directly in the product area of our website:

phoenixcontact.net/products

Also discover the Phoenix Contact catalog app interactively on your tablet.



Table of contents

Product range overview in pictures

4

From here, you can access the desired product directly

System features

15

CLIPLINE complete

PT Push-in connection terminal blocks
PTPOWER high-current terminal blocks
PTFIX distribution blocks



27

ST spring-cage connection terminal blocks



147

QT fast connection terminal blocks



197

Terminal blocks

CLIPLINE complete

UT screw connection terminal blocks



213

COMBI plug-in connection solutions



269

RT bolt connection terminal blocks



373

Accessories



393

Terminal blocks

UK universal terminal blocks



417

SK shield connection clamps



Industry-specific solutions

Energy technology, process technology,
photovoltaics, and building installation



585

Services

Terminal strips, CLIPSAFE junction boxes,
CLIP PROJECT planning and marking
software



631

Technical information and index

640

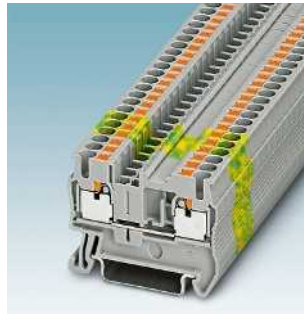
Product range in pictures

From here, you can access the desired product directly

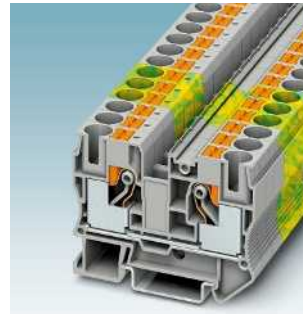
PT Push-in connection terminal blocks



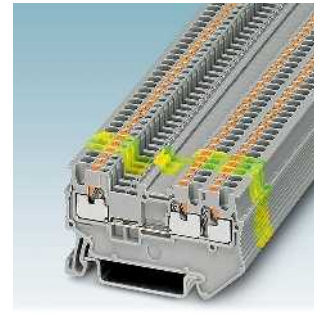
Page 27



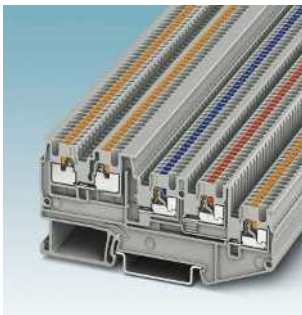
Feed-through, multi-conductor, and multi-level terminal blocks and ground terminals
1.5 mm² ... Page 36
2.5 mm² ... Page 68
4 mm² ... Page 92



6 mm² ... Page 104
10 mm² ... Page 114
16 mm² ... Page 116



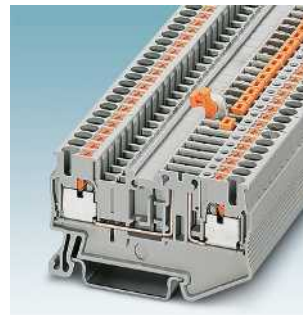
Three-conductor terminal blocks
1.5 mm² ... Page 37
2.5 mm² ... Page 69
4 mm² ... Page 93
6 mm² ... Page 105



Initiator/actuator terminal blocks
2.5 mm² ... Page 39



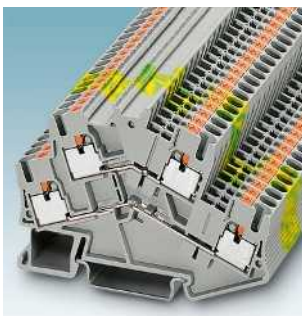
Fuse terminal blocks
4 mm² ... Page 95
6 mm² ... Page 106
10 mm² ... Page 115



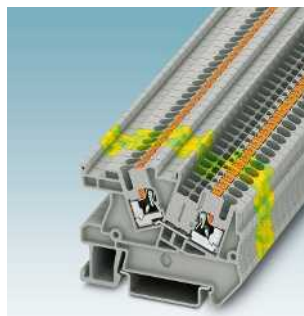
Disconnect and knife disconnect terminal blocks
1.5 mm² ... Page 40
2.5 mm² ... Page 72
4 mm² ... Page 97
6 mm² ... Page 107



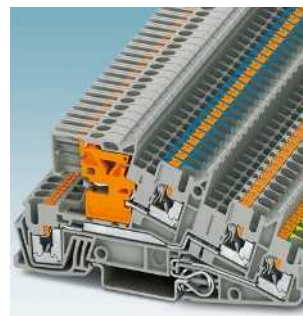
Diode terminal blocks
2.5 mm² ... Page 79
4 mm² ... Page 98
6 mm² ... Page 110



Double-level terminal blocks, desk design
1.5 mm² ... Page 42
2.5 mm² ... Page 83
4 mm² ... Page 101



Installation terminal blocks
2.5 mm² ... Page 85
4 mm² ... Page 102
6 mm² ... Page 112
16 mm² ... Page 118



Multi-level installation terminal blocks
2.5 mm² ... Page 86
4 mm² ... Page 103

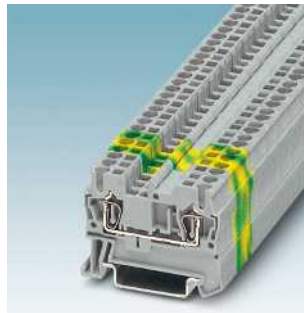


Mini feed-through and ground terminal
1.5 mm² ... Page 43
2.5 mm² ... Page 91

ST spring-cage connection terminal blocks



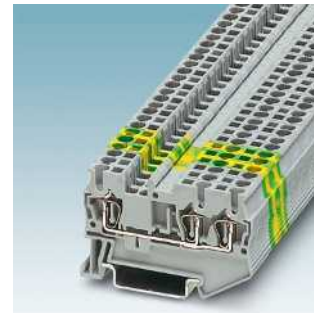
Page 147



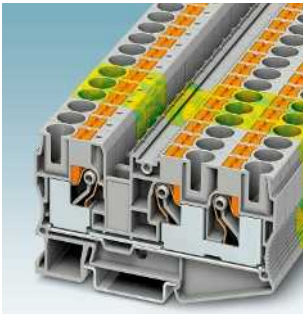
Feed-through, multi-conductor, and multi-level terminal blocks and ground terminals
1.5 mm² ... Page 152
2.5 mm² ... Page 156
4 mm² ... Page 174



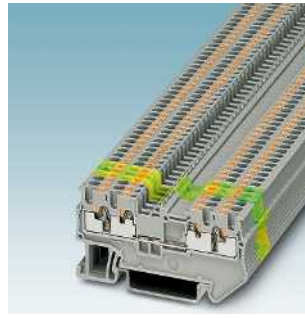
6 mm² ... Page 182
10 mm² ... Page 188
16 mm² ... Page 192
35 mm² ... Page 194



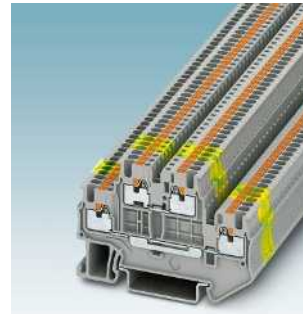
Three-conductor terminal blocks
1.5 mm² ... Page 153
2.5 mm² ... Page 157
4 mm² ... Page 175
6 mm² ... Page 183



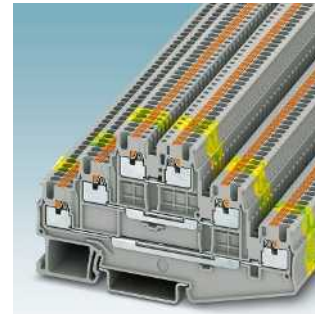
10 mm² ... Page 115
16 mm² ... Page 117



Four-conductor terminal blocks
1.5 mm² ... Page 37
2.5 mm² ... Page 69
4 mm² ... Page 93
6 mm² ... Page 105



Double-level terminal blocks
1.5 mm² ... Page 37
2.5 mm² ... Page 70
4 mm² ... Page 93



Three-level terminal blocks
1.5 mm² ... Page 38
2.5 mm² ... Page 71
4 mm² ... Page 94



Measuring transducer disconnect terminal blocks
4 mm² ... Page 99
6 mm² ... Page 108



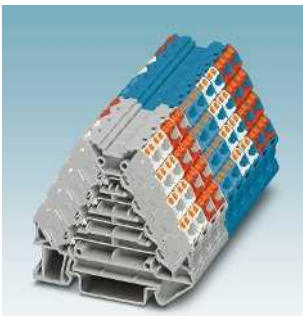
Hybrid terminal blocks with single-sided screw connection
2.5 mm² ... Page 82
4 mm² ... Page 100
6 mm² ... Page 109
35 mm² ... Page 120



Feed-through terminal blocks and ground terminals, desk design
1.5 mm² ... Page 42
2.5 mm² ... Page 82
4 mm² ... Page 101



Three-/four-conductor terminal blocks, desk design
1.5 mm² ... Page 42
2.5 mm² ... Page 82
4 mm² ... Page 101
1.5 mm² ... Page 42
2.5 mm² ... Page 83
4 mm² ... Page 101



Marshalling terminals
2.5 mm² ... Page 44



Marshalling patchboards
2.5 mm² ... Page 55

PTPOWER

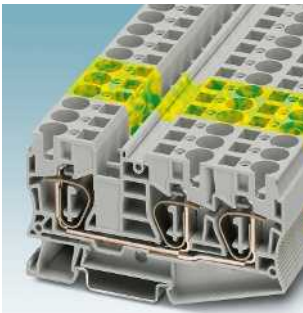


High-current terminal blocks and high-current terminal block bases
35 mm² ... Page 122
50 mm² ... Page 127
95 mm² ... Page 129
150 mm² ... Page 131

PTFIX



Distribution blocks
1.5 mm² ... Page 43
2.5 mm² ... Page 132



10 mm² ... Page 189
16 mm² ... Page 193



Four-conductor terminal blocks
1.5 mm² ... Page 153
2.5 mm² ... Page 157
4 mm² ... Page 175



Double-level terminal blocks
1.5 mm² ... Page 154
2.5 mm² ... Page 158
4 mm² ... Page 176



Three-level terminal blocks
2.5 mm² ... Page 159

Product range in pictures

From here, you can access the desired product directly



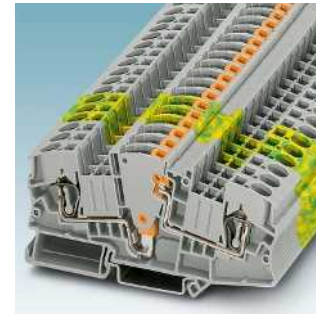
Initiator/actuator terminal blocks
2.5 mm² ... Page 160



Fuse terminal blocks
4 mm² ... Page 177
6 mm² ... Page 187



Disconnect and knife disconnect terminal blocks
2.5 mm² ... Page 162
4 mm² ... Page 178



Measuring transducer disconnect terminal blocks
6 mm² ... Page 183



Three-conductor terminal blocks, desk design
2.5 mm² ... Page 167
4 mm² ... Page 179
6 mm² ... Page 185



Four-conductor terminal blocks, desk design
2.5 mm² ... Page 167
4 mm² ... Page 180



Double-level terminal blocks, desk design
2.5 mm² ... Page 167
4 mm² ... Page 180



Disconnect and knife disconnect terminal blocks, desk design
2.5 mm² ... Page 168
4 mm² ... Page 181

QT fast connection terminal blocks



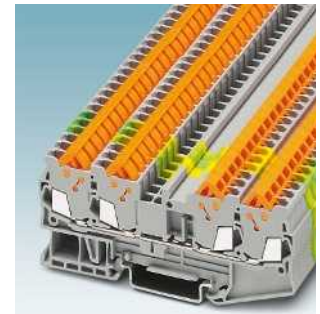
Page 197



Feed-through and multi-conductor terminal blocks
1.5 mm² ... Page 202
2.5 mm² ... Page 208



Three-conductor terminal blocks
1.5 mm² ... Page 203
2.5 mm² ... Page 209



Four-conductor terminal blocks
1.5 mm² ... Page 203
2.5 mm² ... Page 209

UT screw connection terminal blocks



Hybrid terminal blocks with spring-cage connection on one side
1.5 mm² ... Page 207
2.5 mm² ... Page 211



Page 213



Feed-through, multi-conductor, and multi-level terminal blocks and ground terminals
2.5 mm² ... Page 218
4 mm² ... Page 228
6 mm² ... Page 242



10 mm² ... Page 250
16 mm² ... Page 252
35 mm² ... Page 254
50 mm² ... 240 mm² Page 256



Diode terminal blocks
2.5 mm² ...
4 mm² ...

Page 164
Page 178



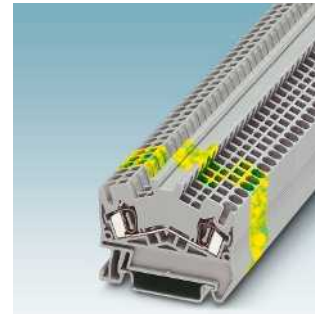
Double-level diode terminal blocks
2.5 mm² ...

Page 165



Hybrid terminal blocks with single-sided
screw connection
2.5 mm² ...
4 mm² ...
10 mm² ...
35 mm² ...

Page 166
Page 179
Page 190
Page 195



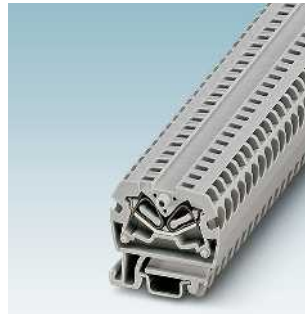
Feed-through terminal blocks and ground
terminals, desk design
2.5 mm² ...
4 mm² ...
6 mm² ...

Page 167
Page 179
Page 185



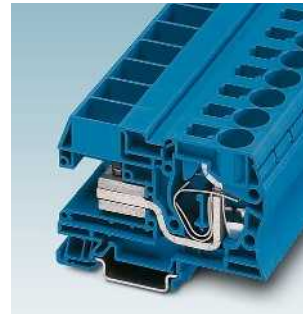
Mini feed-through terminal blocks and
ground terminals, with vertical conductor exit
2.5 mm² ...

Page 168



Mini feed-through terminal blocks and
ground terminals, with horizontal conductor
exit
2.5 mm² ...

Page 171



Installation terminal blocks
35 mm² ...

Page 195



Double-level terminal blocks
1.5 mm² ...

Page 204



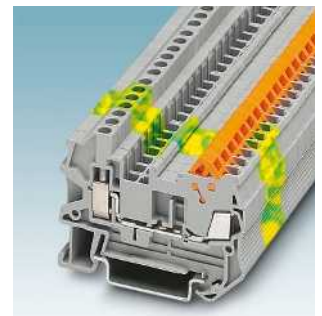
Fuse terminal blocks
2.5 mm² ...

Page 210



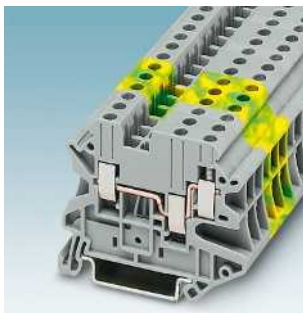
Disconnect and knife disconnect terminal
blocks
1.5 mm² ...

Page 204



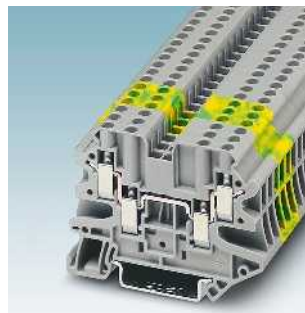
Hybrid terminal blocks with single-sided
screw connection
1.5 mm² ...
2.5 mm² ...

Page 206
Page 210



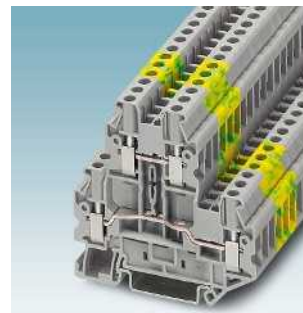
Three-conductor terminal blocks
2.5 mm² ...
4 mm² ...

Page 219
Page 229



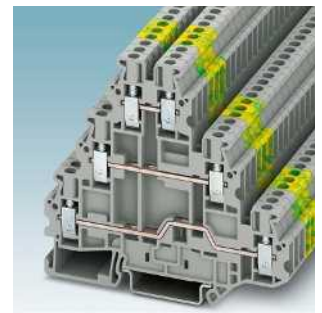
Four-conductor terminal blocks
2.5 mm² ...
4 mm² ...

Page 219
Page 229



Double-level terminal blocks
2.5 mm² ...
4 mm² ...

Page 219
Page 230



Three-level terminal blocks
2.5 mm² ...
4 mm² ...
6 mm² ...

Page 220
Page 230
Page 243

Product range in pictures

From here, you can access the desired product directly



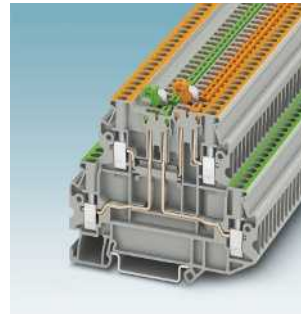
Fuse terminal blocks
4 mm² ...
6 mm² ...

Page 231
Page 243



Disconnect terminal blocks
2.5 mm² ...
4 mm² ...
6 mm² ...

Page 221
Page 233
Page 244



Knife disconnect terminal blocks
2.5 mm² ...
4 mm² ...
6 mm² ...

Page 222
Page 235
Page 245



Measuring transducer disconnect terminal blocks
4 mm² ...
6 mm² ...

Page 238
Page 246

COMBI plug-in connection solutions



Page 269



Feed-through, multi-conductor, and multi-level terminal blocks and ground terminals with Push-in connection
1.5 mm² ...
2.5 mm² ...
4 mm² ...
6 mm² ...

Page 278
Page 286
Page 298
Page 302



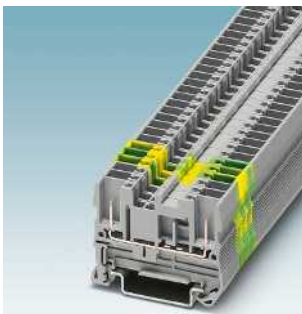
Terminal blocks that can be connected on both sides
1.5 mm² ...
2.5 mm² ...
4 mm² ...

Page 280
Page 289
Page 299



Plug-in measuring transducer disconnect terminal blocks
6 mm² ...

Page 303



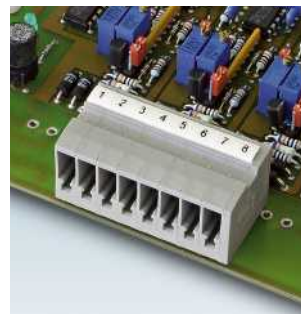
Terminal blocks that can be connected on both sides
2.5 mm² ...
4 mm² ...

Page 314
Page 326



Couplings with spring-cage connection - assembled and for self-assembly
2.5 mm² ...
4 mm² ...

Page 315
Page 329



Headers
2.5 mm² ...
4 mm² ...

Page 319
Page 332



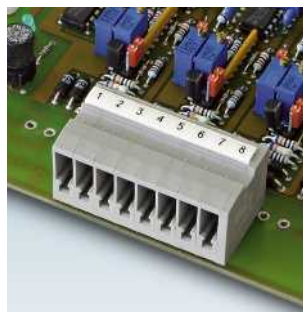
Connectors with spring-cage connection - assembled and for self-assembly
2.5 mm² ...
4 mm² ...

Page 320
Page 333



Measuring transducer disconnect terminal blocks
4 mm² ...

Page 347



Headers
2.5 mm² ...
4 mm² ...

Page 341
Page 349



Connectors with screw connection - assembled and for self-assembly
2.5 mm² ...
4 mm² ...
6 mm² ...

Page 342
Page 351
Page 356



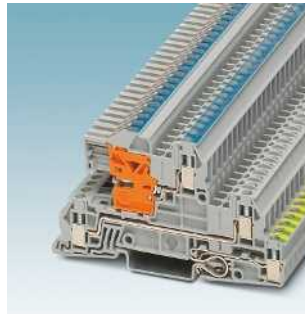
Latching and strain relief
PR ..., PRZ ...

Page 363



Diode terminal blocks
2.5 mm² ...
4 mm² ...

Page 223
Page 239

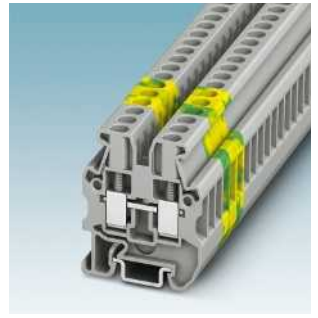


Installation terminal blocks
2.5 mm² ...
4 mm² ...
6 mm² ...
10 mm² ...

Page 224
Page 240
Page 248
Page 251

16 mm² ...
35 mm² ...

Page 253
Page 255



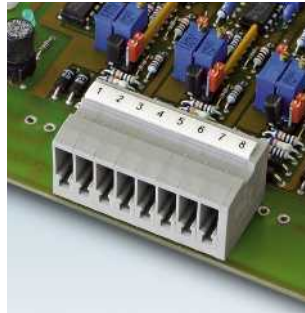
Mini feed-through and ground terminal
2.5 mm² ...
4 mm² ...

Page 227
Page 241



Couplings with Push-in connection -
assembled and for self-assembly
1.5 mm² ...
2.5 mm² ...
6 mm² ...

Page 282
Page 291
Page 306



Headers
2.5 mm² ...
4 mm² ...

Page 293
Page 300



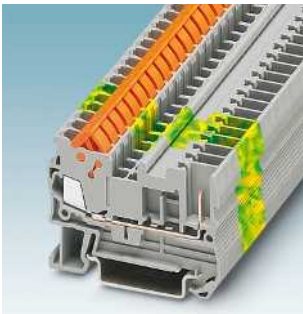
Connectors with Push-in connection -
assembled and for self-assembly
1.5 mm² ...
2.5 mm² ...
4 mm² ...
6 mm² ...

Page 284
Page 294
Page 301
Page 308



Feed-through, multi-conductor, and multi-
level terminal blocks and ground terminals
with spring-cage connection
2.5 mm² ...
4 mm² ...

Page 310
Page 326



Feed-through and multi-level terminal blocks
and ground terminals with fast connection
1.5 mm² ...

Page 334



Connectors with fast connection -
assembled and for self-assembly
1.5 mm² ...

Page 336



Feed-through, multi-conductor, and multi-
level terminal blocks and ground terminals
with screw connection
2.5 mm² ...
4 mm² ...
6 mm² ...

Page 338
Page 344
Page 354



Terminal blocks that can be connected on
both sides
2.5 mm² ...
4 mm² ...

Page 340
Page 346



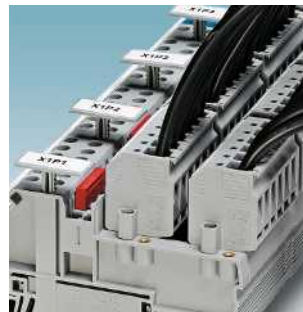
Latching
PR ..., UPR ...

Page 363



Cable housing for COMBI connectors
PH ...

Page 366



Self-locking flange covers
DFS ...
Screw flange and flange covers
UP ...-F

Page 369
Page 370
Page 370

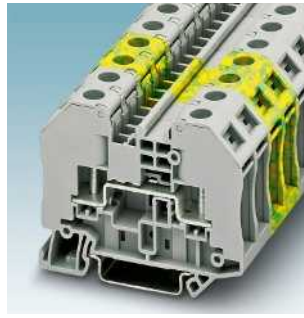
Product range in pictures

From here, you can access the desired product directly

RT bolt connection terminal blocks

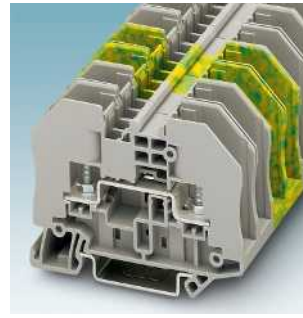


Page 373



Feed-through terminal blocks
2.5 mm² ...
6 mm² ...
35 mm² ...

Page 376
Page 378
Page 382



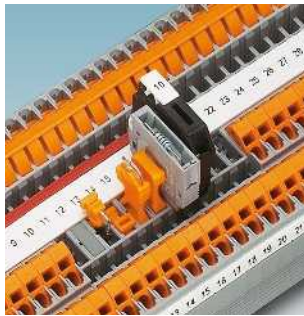
Feed-through terminal blocks, open design
2.5 mm² ...
6 mm² ...
35 mm² ...

Page 377
Page 379
Page 383



Disconnect terminal blocks
6 mm² ...

Page 381



Isolating plugs and component connectors
P-...

Page 409



Marker carriers/warning labels
STP ...
For end clamps and DIN rails, see Catalog 3

Page 412

UK universal terminal blocks



Page 417



Feed-through terminal blocks and ground
terminals
UK ..., USLKG ...

Page 420



Screw cap fuse terminal blocks
UK ...-DREHSI

Page 458



Fuse terminal blocks for NEOZED® and
DIAZED® fuse inserts
USEN ...

Page 468



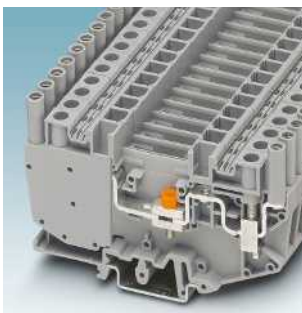
Basic terminal block for isolating plugs and
component connectors
UK ...-TG

Page 470



Fuse plugs, isolating plugs, and component
connectors
ST-BE, BES 6

Page 472



Measuring transducer disconnect terminal
blocks
URTK/SP

Page 489



Double-level diode terminal blocks
UKK ...-DIO

Page 492



Thermoelectric voltage terminal blocks
MTKD ...

Page 496



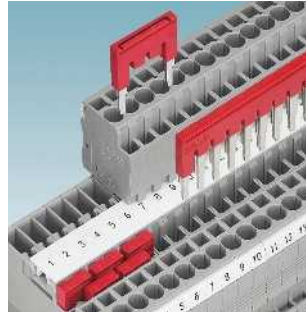
Ground disconnect terminal blocks
GTF 76

Page 497

Accessories

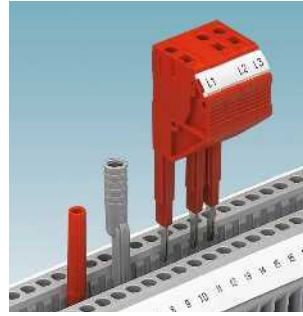


Page 393



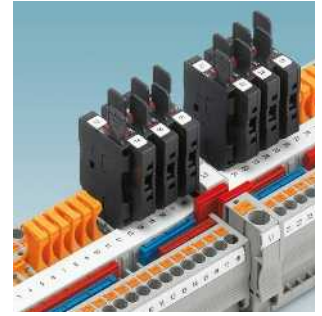
Plug-in bridges
FBS ...
FBSR ...

Page 396
Page 400



Test accessories
PS ..., MPS ..., PAI ...

Page 404



Fuse plugs
P-FU...-5

Page 408



Three- and four-conductor terminal blocks
UK ...TWIN
UDK ...

Page 428
Page 432



Double-level terminal blocks
UKK ...

Page 434



Initiator/actuator terminal blocks
DIK ..., DOK ..., VIOK ...

Page 442



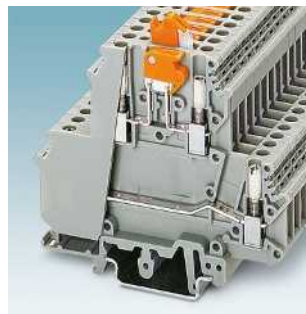
Lever-type fuse terminal blocks
UK 5-HESI N

Page 452



Knife disconnect terminal blocks
MTK ...
UK ...MTK

Page 476
Page 477



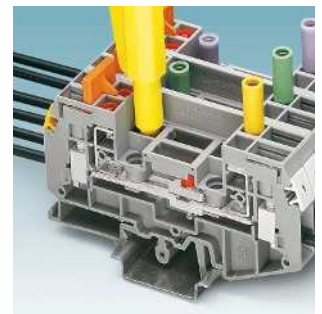
Double-level knife disconnect terminal blocks
UKK ...MTK

Page 478



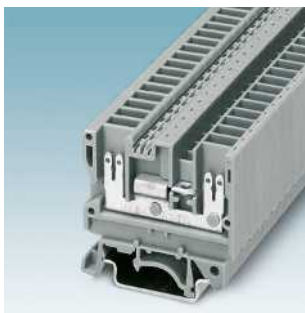
Cross connection terminal blocks
UGSK/S

Page 481



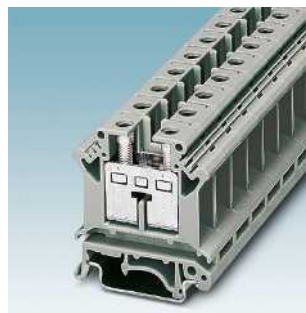
Measuring transducer disconnect terminal blocks
URTK 6

Page 487



Terminal blocks with spade connection
UVKB 4-FS/FS ...

Page 498



Installation terminal blocks
UIK ...

Page 504



Installation ground terminals
UISLKG ...

Page 506



Neutral disconnect terminal blocks
UKN ...

Page 507

Product range in pictures

From here, you can access the desired product directly



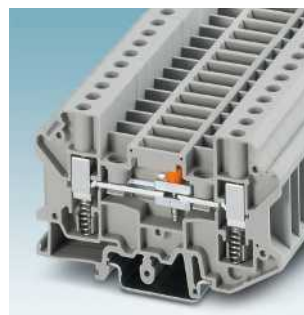
Ceramic terminal blocks
SSK ...

Page 510



Spring-assisted screw terminal blocks
USST ...

Page 514



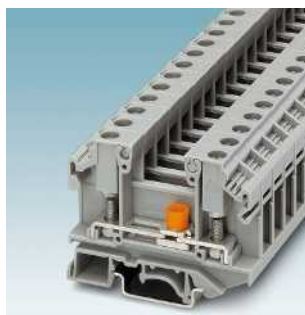
Spring-assisted disconnect terminal blocks
USST-T ...

Page 518



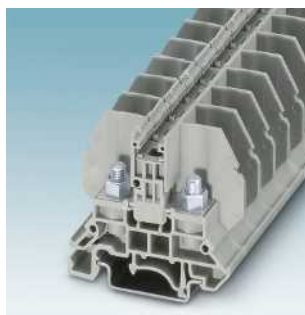
Micro/mini terminal blocks
MT 1,5 ...

Page 522



Bolt connection terminal block with
disconnect function
OTTA 6-T

Page 536



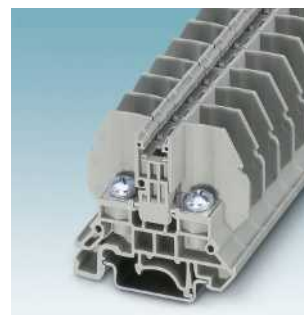
Bolt connection terminal blocks for DIN rail
and direct mounting
RBO ...

Page 538



Bolt connection terminal blocks with
covering hood
RBO ...-HC

Page 544



Bolt connection terminal blocks for DIN rail
and direct mounting
RSC ...

Page 546

Accessories



Potential distributors
See Catalog 5, page 598



Test plugs for UK series
PS ...

Page 564



Test plugs for UK series
MPS ...
PS-UK ...

Page 569
Page 569



Warning labels
WS ...

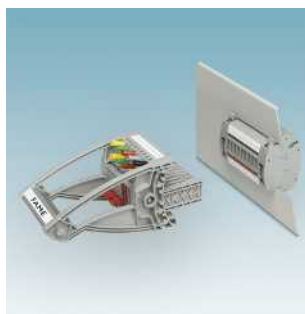
Page 571

Sector-specific solutions



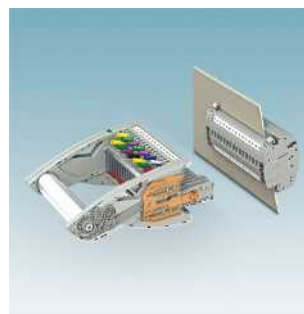
Supports for direct mounting
AB ...

Page 581



FAME 1 plug-in test system with operating
plug and transformer short circuit in the
plug-in test socket

Page 588



FAME 2 plug-in test system without
operating plug and transformer short circuit
in the test plug

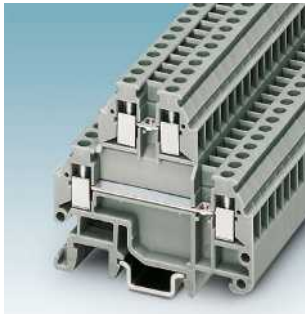
Page 596



FAME 3 plug-in test system without
operating plug and transformer short circuit
in the plug-in test socket

Page 610

From here, you can access the desired product directly



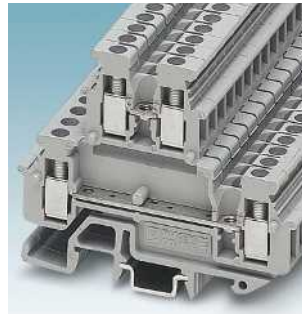
Micro/mini terminal blocks
MTTB 1,5 ...

Page 525



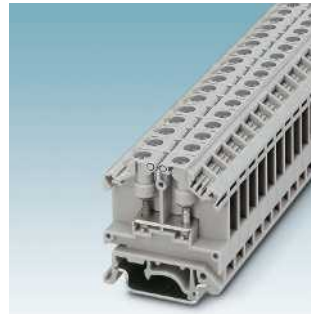
Mini strip terminal blocks
MBK ...

Page 528



Mini double-level terminal blocks
MBKKB ...

Page 530



Bolt connection terminal blocks for DIN rail
and direct mounting
OTTA ...

Page 533



High-current connectors
HV M ...

Page 551



High-current connectors
UHV ...

Page 554



Device terminal blocks
G ..., GE ...

Page 558



Trunk line branch terminals
UDB 2X...

Page 562

SK shield connection clamps



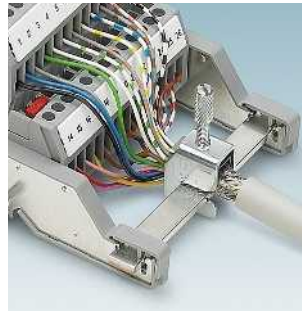
Shield connection clamps
SK ...

Page 572



Shield connection clamps
SKS ...

Page 575



Shielded supports for neutral busbars
AB-SK ..., AB/SS ...

Page 576



Double supports
AB-SK 65-D ...

Page 578

Services: Terminal strips, CLIPSAFE junction boxes, and empty enclosures



Service

Page 631



Terminal strips

Page 632



CLIPSAFE junction boxes and empty
enclosures

Page 634

Planning and marking software



Planning and marking software
CLIP PROJECT

Page 636



2

Sensor/Actuator Cabling and Connectors

2017/2018



Sensor/actuator cabling and connectors



Terminal blocks

- Terminal blocks



Interface technology and switching devices

- Electronic switching devices and motor control
- Measurement and control technology
- Monitoring
- Relay modules
- System cabling for controllers



Marking systems, tools and mounting material

- Marking and labeling
- Tools
- Installation and mounting material



Automation

- Lighting and signaling
- Fieldbus components and systems
- Functional safety
- HMIs and industrial PCs
- I/O systems
- Industrial cloud computing
- Industrial communication technology
- Software
- Controllers



Power supplies, surge protection and device circuit breakers

- Surge protection and interference suppression filters
- Power supplies and UPS
- Protective devices



PCB terminal blocks and PCB connectors

To quickly select a product, use our e-Paper.

i Web code: #1517

Find out more with the web code

On some of the catalog pages, you can find our webcode: a hash symbol followed by a four-digit number combination.

i Web code: #1234 (example)

This allows you to access information on our website quickly.

It could not be easier:

1. Go to the Phoenix Contact website
2. Enter # and the number combination in the search field
3. Get more information and product versions

Or use the direct link:

phoenixcontact.net/webcode/#1234

You will find the latest information and all new products directly in the product area of our website:

phoenixcontact.net/products

Also discover the Phoenix Contact catalog app interactively on your tablet.



Table of contents

Connection technologies from Phoenix Contact

4

We will always have the right connection technology for your application

Product range overview

6

The illustrated table of contents will help you find the right product more quickly

Circular connectors

Sensor/actuator connectors for assembly in M5 to M12, valve connectors, power connectors in M17 to M40



13

Sensor/actuator cabling

Assembled sensor/actuator cables in M5 to M40, connectors and distributors in M5 to M40



189

Data connectors and cables

Connectors, device connectors, and cables for fieldbuses and networks: M8, M12, 7/8", RJ45, SC-RJ, D-SUB, and USB



339

Installation system

Panel feed-throughs, cable connectors, connectors, and distributors with QUICKON fast connection technology for easy installation



465

Heavy-duty connectors

HEAVYCON complete connector housings and contact inserts for signal, power, and data transmission



493

Installation and mounting material

CES cable entry system for space-saving feed-through, plug assembly frames, cable glands, and service interfaces



683

Charging technology for E-Mobility

Charging cables with Vehicle Connector, Infrastructure Socket Outlets, charging controllers for charging stations and charging technology sets



735

Technical information

770

General information on the degree of protection, properties of plastics, approvals, insulation coordination, etc.

Index

784



Screw connection

The screw connection is the most universal and globally accepted conductor connection technology. An important characteristic is the maintenance-free conductor contact. It is not necessary to retighten the connection screw.

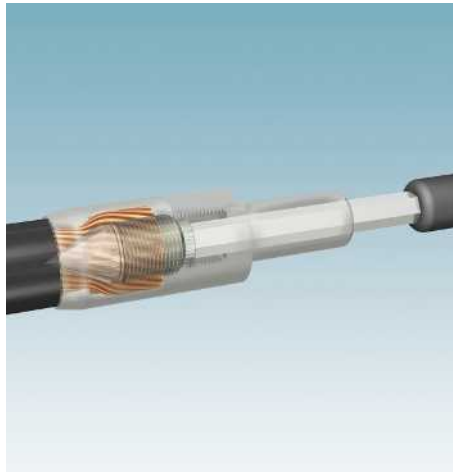
All kinds of copper wires can be clamped without any pretreatment, thereby making gas-tight and permanent contact.

The wire protection, which protects the individual litz wires from damage, is located between the screw and the conductor. The wire protection also performs a screw locking function to prevent release due to vibrations and temperature fluctuations.

Splicing protection can be implemented in the form of ferrules.

With a screw connection, several conductors may also be clamped under one screw.

The conductive parts of the screw connections are made from high-grade copper alloys that are resistant to stress cracking and corrosion.



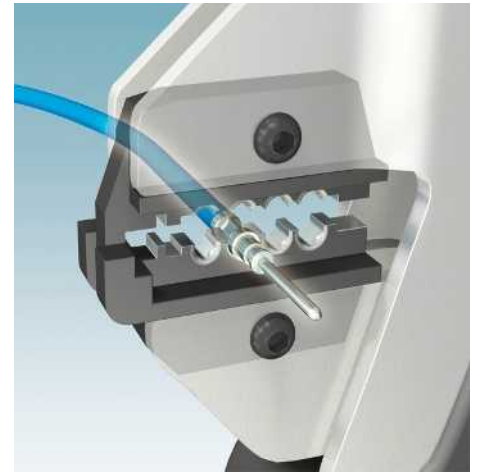
Axial screw connection

With this method, the wire end to be contacted is guided into the connection area of the pin or socket contact.

A tapered mandrel (part of the contact) is then screwed into the stranded wire from the front. Radial pressure is applied to the strands of the wire, pressing them against the contact wall. This results in a gas-tight connection with long-term stability between the wire and contact. It is important that the specified tightening torque is observed.

The mandrel is pressed in using an Allen key which is applied to the front of the contact. This connection technology combines the advantages of screw and crimp connection.

The axial screw connection requires very little space, is easy to use, and only requires a standard Allen key.



Crimp connection

The crimp connection impresses with its small space requirements and its cost-effective creation in series production. For a reliable connection, it is essential that the wire cross section, the crimp contact, and the crimping tool are compatible. Since the crimping tools are subject to a certain degree of wear, the crimping process must be monitored during large-scale production.

Crimp connections can be established with the aid of crimping pliers or crimping machines through specific deformation of the crimping area of the contact.

The requirements for crimp connections are defined in DIN EN 60352-2. Proof of the quality of a crimp connection can be seen in the tensile strength of the connection and crack-free deformation of the crimp contact. Crimping must not result in impermissible elongation of crimp contacts, as this would prevent them from latching correctly in the contact carrier.

The contact is released using an unlocking tool. Assembly tools are also available for very thin conductors.



Push-in connection for contact inserts

Stranded conductors with ferrules or solid conductors can be quickly and easily inserted directly into the connection without tools. The contact spring is formed in such a way that it opens automatically when the conductor is pushed in. It thereby provides the required pressure force against the current bar for a gas-tight, vibration-proof, and shock-proof connection.

To release conductors or connect smaller cross sections, the spring is opened by means of the orange push button – this is done easily and without direct contact with live parts.

The conductive metals are made from high-grade copper alloys. All metal parts of the connection are made from corrosion-resistant materials.



Push-Lock connection for circular connectors

Stranded conductors without ferrules can be easily connected using the lever. The terminal point is completely opened by the color lever and remains in this open position. Even small cross sections are easy to insert. The lever must be closed for the connection.

Wire solid conductors and conductors with ferrules easily and without using tools by means of direct insertion. The contact point does not have to be opened first.

To release a connected conductor, the lever is opened. The conductors can be removed with ease.

All metal parts of the connection are made from corrosion-resistant materials.



IDC displacement connection

The QUICKON connection is equipped with an IDC insulation displacement contact. The term "IDC" stands for Insulation Displacement Connection. With this connection method, an unprepared wire with insulation is positioned in front of the gap of the insulation displacement contact and then pushed into the blade gap through insulation displacement. In so doing, the wire insulation is severed and gas-tight contact is made between the wire and the contact. This reduces connection time by at least 60%.

The connection force is independent of the user and completely reliable provided the permissible conductor cross sections and connection conditions are observed. Solid and stranded conductors can be rewired up to 10 times. However, the wire end should be cut off before connecting again.

QUICKON connections have proven themselves in numerous applications for Phoenix Contact over recent years, such as connectors, for COMBICON, and terminal blocks to CEE plug-in equipment from 0.14 to 6.0 mm².

Circular connectors



M8 connector, for assembly

Page 14



M12 connector, for assembly

Page 17



7/8" connector, for assembly

Page 25



Valve connectors, for assembly

Page 26



M5 and M8 device connectors with litz wires

Page 30



M12 device connectors with litz wires

Page 33



M12 device connectors with square flange

Page 38



M17 signal connectors

Page 56



M23 signal connectors

Page 72



M23 feedback connectors

Page 98



M23 hybrid connectors

Page 110



M40 hybrid connectors

Page 122



M17 power connectors

Page 132



M23 power connectors

Page 148



M40 power connectors

Page 160



M58 power connectors

Page 170

Sensor/actuator cabling



3-pos. sensor/actuator cables in sizes M5, M8, and M12

Page 190



4-pos. sensor/actuator cables in sizes M8 and M12

Page 200



5-pos. sensor/actuator cables in sizes M8 and M12

Page 206



6-pos. sensor/actuator cables in size M8

Page 211



8-pos. sensor/actuator cables in sizes M8 and M12

Page 213



12- and 17-pos. sensor/actuator cables in sizes M12 and M23

Page 218



Cables with plastic molded M17 to M40 signal and power connectors

Page 222



Cables with plastic molded M23 hybrid connectors

Page 232



Cable with valve connector

Page 234



Cables with valve connectors, Deutsch

Page 250



Cables with valve connectors, Superseal

Page 253



M8 and M12 Y-cables

Page 254



M8 and M12 Y/T-distributors

Page 258



M8 and M12 adapters

Page 260



Valve connector adapters

Page 262



M5 distributor boxes with metal thread

Page 275

Sensor/actuator cabling and connectors

Product range overview



M8 distributor boxes with metal thread
Page 266



M12 distributor boxes with plastic and metal thread
Page 268



Distributor boxes with QUICKON fast connection
Page 272



M12 distributor boxes, shielded
Page 274



Cabling for the railway industry
Page 276



Cabling for the food industry
Page 278



Cabling for outdoor applications
Page 280



Cabling for robots and drag chains
Page 282



M12 cabling for power applications
Page 284



Cable rings
Page 304



Cable drum
Page 305



Accessories
Page 308

Data connectors and cables



M12 connectors for Gigabit Ethernet, for assembly
Page 344



M12 connectors for networks, for assembly
Page 345



Version 1 connectors
Page 350



Version 4 connectors
Page 352



Version 6 connectors

Page 354



Version 14 connectors

Page 362



IP20 connectors

Page 376



Accessories for network components

Page 387



Assembled cables with RJ45 or M12 connectors for networks

Page 398



Assembled fiber optic cables

Page 410



M12 connectors for fieldbuses

Page 422



M12 device connectors for fieldbuses

Page 424



Assembled cables with M8 or M12 connectors for fieldbuses

Page 428



Cables, connectors, and distributors for AS-Interface

Page 438



D-SUB-based fieldbus connectors

Page 444



USB cables, socket inserts, and panel mounting frames, IP67

Page 452

Installation system



H and T-distributors
1.5 mm²
2.5 mm²
6.0 mm²

Page 466
Page 475
Page 483



Cable connectors
1.5 mm²
2.5 mm²
6.0 mm²

Page 468
Page 477
Page 485



Panel feed-throughs
1.5 mm²
2.5 mm²
6.0 mm²

Page 470
Page 478
Page 486



Connectors
1.5 mm²
2.5 mm²
6.0 mm²

Page 473
Page 481
Page 487

Product range overview

Heavy-duty connectors



Contact inserts, D7 series
A3, A4
D7, D8, Q7, Q12
Q2, Q3, Q4, Q5

Page 500
Page 502
Page 504



D7 series housing
Plastic
Metal

Page 508
Page 509



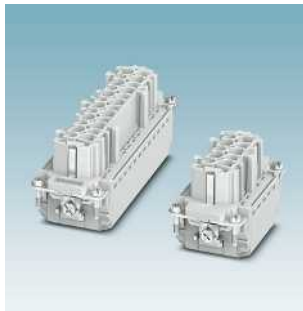
Contact inserts, D series
A10 ... A16
D15 ... D25

Page 512
Page 516



D series housing
Plastic
Metal

Page 518
Page 519



Contact inserts, B series
D40 ... DD108
B6 ... BBB64
HV03 ... K

Page 528
Page 534
Page 550



Modular contact inserts, B series

Page 560



Terminal adapters, B series
D40 ... D64
B6 ... B24

Page 530
Page 544



ADVANCE B series housing

Page 586



EVO B series housing
Plastic
Metal

Page 588
Page 589



STANDARD B series housing

Page 590



ADVANCE housing for outdoor applications, B series

Page 642



HPR housing, D7 and B series

Page 496



Compact series contact inserts

Page 648



Compact series housing

Page 650



Accessories for contact inserts and housing

Page 652



Stackable power distribution
Connector sets
Contact inserts
Housings

Page 674
Page 676
Page 678

Installation and mounting material



Modular cable entry system
for assembled cables

Page 684



Feed-through plates
for non-assembled cables

Page 690



Plug assembly frames

Page 692



Cable glands

Page 694



Service interfaces

Page 714

Charging technology for E-Mobility



DC charging systems

Page 736



AC charging systems

Page 740



AC charging controller

Page 760



AC set solutions

Page 768



3

Marking Systems, Tools and Mounting Material

2017/2018



Marking systems, tools and mounting material



Terminal blocks

- Terminal blocks



Sensor/actuator cabling and connectors

- Sensor/actuator cabling
- Cables and lines
- Connectors



Power supplies, surge protection and device circuit breakers

- Surge protection and interference suppression filters
- Power supplies and UPS
- Protective devices



Interface technology and switching devices

- Electronic switching devices and motor control
- Measurement and control technology
- Monitoring
- Relay modules
- System cabling for controllers



Automation

- Lighting and signaling
- Fieldbus components and systems
- Functional safety
- HMIs and industrial PCs
- I/O systems
- Industrial cloud computing
- Industrial communication technology
- Software
- Controllers



PCB terminal blocks and PCB connectors

To quickly select a product, use our e-Paper.

i Web code: #1517

Find out more with the web code

On some of the catalog pages, you can find our webcode: a hash symbol followed by a four-digit number combination.

i Web code: #1234 (example)

This allows you to access information on our website quickly.

It could not be easier:

1. Go to the Phoenix Contact website
2. Enter # and the number combination in the search field
3. Get more information and product versions

Or use the direct link:

phoenixcontact.net/webcode/#1234

You will find the latest information and all new products directly in the product area of our website:

phoenixcontact.net/products

Also discover the Phoenix Contact catalog app interactively on your tablet.



Table of contents

Product range overview in pictures

4

From here, you can access the desired product directly

Marking and labeling

MARKING system

Planning and marking software
Customer-specific printing service
MARKING system app



14

Marking systems



24

Terminal marking



64

Wire and cable marking



184

Equipment marking



260

Plant marking



356

Hand tools



388

Tools

TOOL fox

Automatic devices



502

Installation and mounting material

CABINET add-on

CLIPSAFE stainless steel Ex junction boxes and empty enclosures, CLIPSAFE ABS junction boxes, component mounting, shielding, cable management



520

Technical information

668

Index

686

Marking systems, tools, mounting material

Product range overview in pictures

Planning and marking software



Planning and marking software
CLIP PROJECT
Customer-specific printing
MARKING system app

Page 16
Page 20
Page 22

Marking systems - MARKING system



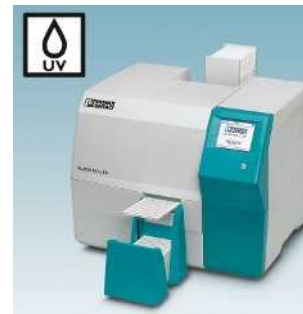
TOPMARK LASER for industrial marking
TOPMARK LASER

Page 32



TOPMARK LASER set

Page 33



BLUEMARK CLED for printing UniCard materials - as easy as printing on paper
BLUEMARK CLED

Page 35



Thermal transfer printer for roll material
THERMOMARK ROLL

Page 46



THERMOFOX

Page 47



Thermal transfer printer for roll material
THERMOMARK ROLLMASTER

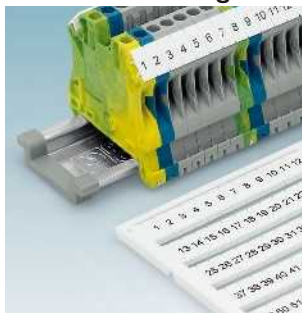
Page 54



Thermal transfer printer for shrink sleeves (double-sided printing possible)
THERMOMARK W2

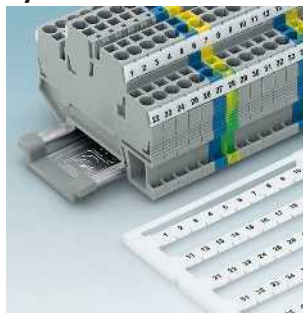
Page 55

Terminal marking - MARKING system



UniCard terminal marking for a tall marker groove, for printing with BLUEMARK UC-TM...

Page 118



UniCard terminal marking for tall and flat marker groove, for printing with BLUEMARK UC-TM...

Page 118



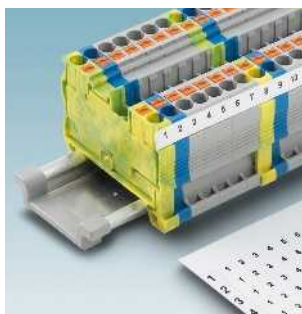
UniCard terminal marking for marking stud holders, for printing with BLUEMARK UC-TMN...

Page 122



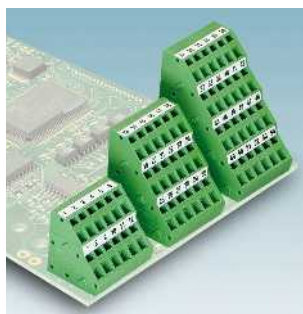
Zack marker strip terminal marking for a tall marker groove, for printing with plotter ZB...

Page 124



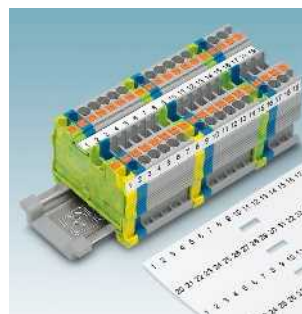
UniSheet terminal marking for tall and flat marker grooves, for printing with THERMOMARK CARD and THERMOMARK PRIME US-TMF...
UCT1... UCT5-TM...

Page 145
Page 170



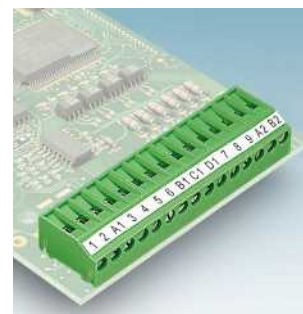
Self-adhesive marker strips for terminal blocks without a marker groove, for printing with a thermal transfer roll printer US-TML...

Page 146



Marker strips for terminal marking, for tall and flat marker grooves, for printing with a thermal transfer roll printer TMT...

Page 148



Self-adhesive marker strips for terminal blocks without a marker groove, for printing with a thermal transfer roll printer TML...
SK...

Page 154
Page 156



Printer set
BLUEMARK CLED SET

Page 35



Thermal transfer printer for mobile or stationary use.
THERMOMARK PRIME

Page 36



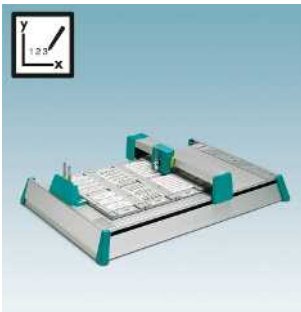
Thermal transfer printer sets
MARKING BOX

Page 40



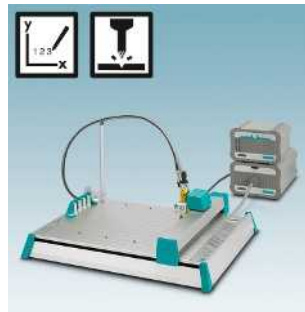
Thermal transfer printer for printing plastic material in UCT and US format
THERMOMARK CARD

Page 42



Plotter
PLOTMARK

Page 56



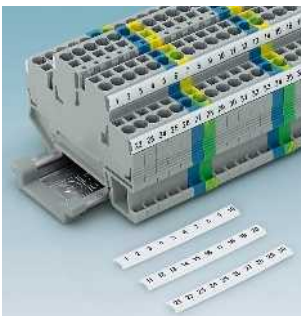
Plotter with engraving unit
ENGRAVING UNIT

Page 57



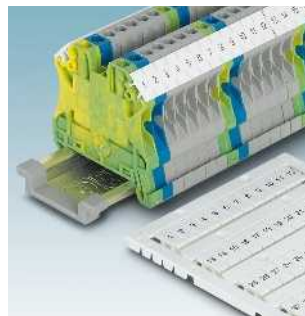
RFID system
RFMARK HF/UHF handheld

Page 63



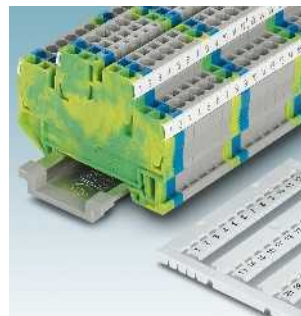
Zack marker strip terminal marking for tall and flat marker groove, for printing with plotter
ZB...

Page 124



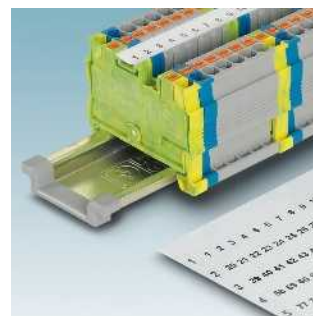
UniCard terminal marking for a tall marker groove, TOPMARK LASER, BLUEMARK, THERMOMARK PRIME, and THERMOMARK CARD
UCT-TM...

Page 140



UniCard terminal marking for a tall and flat marker groove, TOPMARK LASER, BLUEMARK, THERMOMARK PRIME, and THERMOMARK CARD
UCT-TM...

Page 140



UniSheet terminal marking for a universal marker groove, for printing with THERMOMARK CARD and THERMOMARK PRIME
US-TM...

Page 144



Group marking for printing with TOPMARK LASER, BLUEMARK, and THERMOMARK CARD, and THERMOMARK PRIME

Page 160



UniCard marking for terminal blocks from other manufacturers, BLUEMARK, TOPMARK LASER, and THERMOMARK CARD

Page 164



Stainless steel or aluminum laser cable marking for marking with TOPMARK LASER
LS-WMTB...

Page 197



Aluminum cable marking for assembly with cable binders, for printing with BLUEMARK CLED
WMTB-AL...

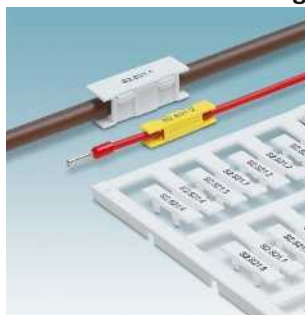
Page 200

Wire and cable marking - MARKING system

Marking systems, tools, mounting material

Product range overview in pictures

Wire and cable marking - MARKING system



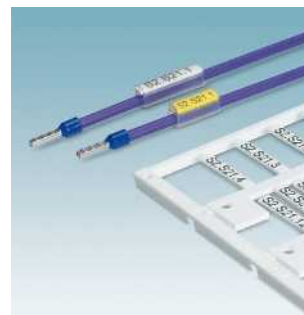
UniCard clip-on wire marking, for printing with BLUEMARK UC-WMC... Page 202



UniCard wire marking for threading, for printing with BLUEMARK UC-WMCO... Page 206



Wire marking with ferrules that can be marked for printing with BLUEMARK AI-WM... Page 209



UniCard wire marking for marking collars, for printing with BLUEMARK UC-WMT... Page 210



UniCard wire marking for marking with TOPMARK LASER, BLUEMARK, THERMOMARK PRIME, and THERMOMARK CARD UCT-WMTBA... Page 218



UniCard wire marking for marking with TOPMARK LASER, BLUEMARK, THERMOMARK PRIME, and THERMOMARK CARD UCT-WMTB... Page 219



UniSheet wire marking for marking collars, for printing with THERMOMARK CARD and THERMOMARK PRIME US-WMT... Page 220



UniSheet cable marking for assembly with cable binders, for printing with THERMOMARK CARD and THERMOMARK PRIME US-WMTB... Page 222



Wire marking, for threading on, for printing with thermal transfer roll printers WMT... Page 238



Cable marking, for assembly with cable binders, for printing with thermal transfer roll printers WMTB... Page 239



Halogen-free wire and cable marking for assembly with cable binders, for printing with thermal transfer roll printers WMTB-HF... Page 240



Plastic cable markers for insert labels KMK... Page 242

Equipment marking - MARKING system



Stainless steel or aluminum laser equipment marking for marking with TOPMARK LASER LS-EMSP... Page 290
LS-EMLP... Page 292
LS-EMP... Page 294



Stick-on aluminum equipment marking, for printing with BLUEMARK CLED EMLP-AL Page 301



Aluminum equipment marking to be screwed in or riveted, for printing with BLUEMARK CLED EMSP-AL... Page 302



Aluminum equipment marking that can be snapped into marker carriers, for printing with BLUEMARK CLED EMP-AL... Page 303



UniCard cable marking for assembly with cable binders, for printing with BLUEMARK UC-WMTB...
UC-WMTBA...
Page 212
Page 213



UniCard wire marking for marking with TOPMARK LASER, BLUEMARK, THERMOMARK PRIME, and THERMOMARK CARD UCT-WMT...
Page 214



Slide-on UniCard wire marking, for printing with TOPMARK LASER, BLUEMARK, THERMOMARK PRIME, and THERMOMARK CARD UCT-WMS...
Page 216



UniCard wire marking for marking with TOPMARK LASER, BLUEMARK, THERMOMARK PRIME, and THERMOMARK CARD UCT-WMCO...
Page 217



Self-adhesive wire marking with transparent protective film, for printing with thermal transfer roll printers WML... WML-HF...
Page 224
Page 226



Self-adhesive wire marking as a flag, for printing with thermal transfer roll printers WML-FLAG...
Page 227



Shrink sleeves in conductor and continuous format, for printing with thermal transfer roll printers WMS-2 HF... WMS...
Page 228
Page 232



Insert wire marking for marking collars, for printing with thermal transfer roll printers EMT...
Page 236



Cable markers for marking cables and conductors with larger cross sections SD-WMTBS...
Page 253



Stainless steel cable marking SD-WMTBS...VA
Page 254



Marking collars for insert labels PATG... PATO... PATG-HF...
Page 256
Page 257
Page 258



UniCard stick-on equipment marking with high adhesive strength, for printing with BLUEMARK UC-EMLP...
Page 304



UniCard stick-on equipment marking, for marking with BLUEMARK UC-EMLP...EX
Page 305



UniCard equipment marking for screwing or riveting, for printing with BLUEMARK UC-EMSP...
Page 306



Marker carriers for UC-EMP .../US-EMP ... snap-in labels, for printing with BLUEMARK
Page 350

Marking systems, tools, mounting material

Product range overview in pictures

Equipment marking - MARKING system



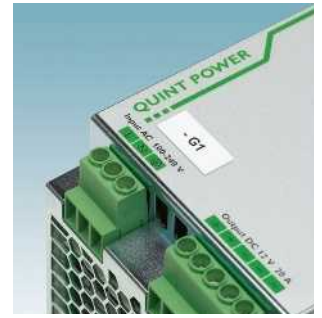
UniCard equipment marking that can be snapped into marker carriers, for printing with BLUEMARK UC-EMP... Page 307



UniCard snap-in equipment marking, for printing with BLUEMARK UC-EM... Page 309



Snap-in UniCard equipment marking for various manufacturers, for marking with TOPMARK LASER, BLUEMARK, PRIME, and CARD UCT-EM... Page 312



UniSheet stick-on equipment marking, for printing with THERMOMARK CARD and THERMOMARK PRIME US-EMLP... Page 318



Equipment marking for marking in the Ex area, for printing with a thermal transfer roll printer EML...-EX Page 332



Self-adhesive equipment marking, for printing with thermal transfer roll printers EMLP... Page 333



Self-adhesive equipment marking, can be engraved or marked, for printing with thermal transfer roll printers EMLP 24... EMLP 30... Page 335



Highly-flexible PVC equipment marking, for printing with thermal transfer roll printers EMLF... EMLC... Page 336



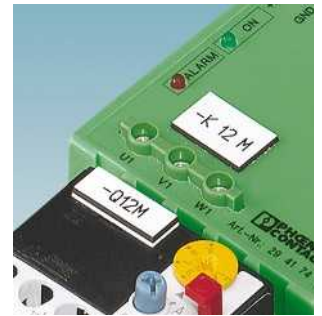
Self-adhesive equipment marking for anti-tamper protection, for printing with thermal transfer roll printers EMLS... Page 342



Equipment marking for rotary switches from Phoenix Contact, for printing with thermal transfer roll printers EML-RS... Page 343



Snap-in UniCard equipment marking for Axioline E series, for printing with thermal transfer roll printer EMT...R Page 344



Stick-on equipment marking, can be engraved or labeled with writing GPE... Page 348



Marker carrier for UC-PMP... and PMLP-RFID marking labels CARRIER(L)-PMP... Page 360



Self-adhesive warning labels, preprinted and for printing with thermal transfer printers, preprinted PML-W... Page 368



Stick-on warning labels, with lightning flash and warning instruction PML-W301... Page 371



Prohibition sign for affixing, for printing with thermal transfer printers PML-P100... Page 372



UniSheet equipment marking that can be snapped into marker carriers, for printing with THERMOMARK CARD and PRIME US-EMP... Page 321



Self-adhesive equipment marking and additional screws or rivets, for printing with THERMOMARK CARD and PRIME US-EMLSP... Page 324



Self-adhesive equipment marking for marking with THERMOMARK CARD and THERMOMARK PRIME US-EML... Page 326
US-EMLF... Page 327



Self-adhesive equipment marking, for printing with thermal transfer roll printers EML... Page 328



Self-adhesive equipment marking, on rough or textured surfaces, for printing with thermal transfer roll printers EML-HA... Page 338



Self-adhesive equipment marking, for high-temperature applications, for printing with thermal transfer roll printers EML-HT... Page 339



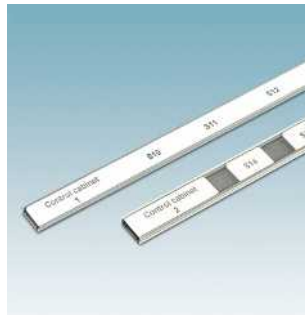
Self-adhesive equipment marking, for ESD applications, for printing with thermal transfer roll printers EML-ESD... Page 340



Self-adhesive equipment marking, can be removed, for printing with thermal transfer roll printers EML-RM... Page 341



Marker carrier for buttons and control devices CARRIER-EMP 22... Page 350
CARRIER-EMLP 22... Page 351



Equipment marking for snapping into marker carriers, for printing with THERMOMARK CARD and THERMOMARK PRIME P-SS-ZB.../ P-ZB... Page 352



Marking labels with integrated RFID transponder, for marking with BLUEMARK CLED PMLP-RFID... Page 360
PMP-RFID... Page 361



Marking labels in UniCard format for sticking on or inserting into marker carriers, for marking with BLUEMARK CLED UC-PMLP... Page 362
UC-PMP... Page 363



Mandatory sign for affixing, for printing with thermal transfer printers PML-M100... Page 374



Self-adhesive emergency stop button marking, for printing with thermal transfer roll printers US-PML-ESS... Page 376



Self-adhesive fire alarm plant marking, for printing with thermal transfer roll printers US-PML-F... Page 377



Self-adhesive pipeline markers, for printing with thermal transfer roll printers PML-T101... Page 378

Plant marking - MARKING system

Marking systems, tools, mounting material

Product range overview in pictures

Plant marking - MARKING system



Hazardous substance labels for affixing, for printing with thermal transfer printers PML-GHS100... Page 378



Magnetic sign, unprinted, for printing with thermal transfer roll printers PMM... Page 386

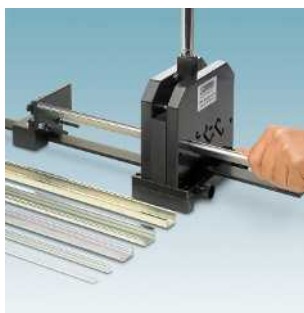
Hand tools - TOOL fox



Cable cutter CUTFOX... Page 392



Cable cutter with ratchet function for minimum effort CUTFOX... Page 392



DIN rail cutter PPS... Page 402



Electronic, cutting, gripping, and bending pliers MICROFOX... Page 404



Stripping tools, angled WIREFOX... Page 406



Stripping tools WIREFOX... Page 406



Multifunctional crimping pliers for cutting, stripping, twisting, and pressing ferrules. CRIMPFOX 4 IN 1... Page 421



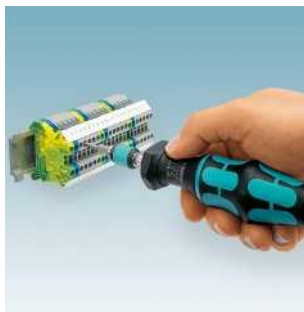
Crimp pliers for ferrules CRIMPFOX... Page 424



CRIMPFOX CENTRUS Page 426



Crimping pliers for various connectors CRIMPFOX... Page 428



Torque screwdrivers TSD-M... Page 451



Cordless screwdrivers SF-ASD Page 452



Preset torque screwdriver TSD... Page 458



Universal control cabinet keys SF-CCK... Page 459



Combi pliers
UNIFOX-CE VDE...

Page 397



Cable binder pliers for plastic and stainless
steel cable binders
UNIFOX-CT...

Page 398



Cable duct cutter
CUTFOX-CD

Page 401



Cable duct cutter
PPS CD M

Page 401



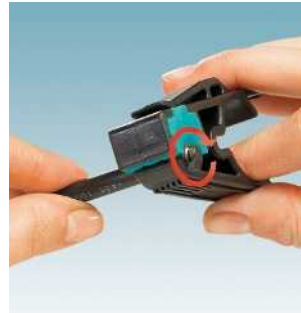
Stripping tool
WIREFOX-D...

Page 414



Stripping tool for coaxial cables
WIREFOX-D...

Page 414



Stripping tool for solar cables
WIREFOX-D SR...

Page 415



Portable crimping device, for stripping and
crimping in just one step
CRIMPHANDY

Page 416



Basic pliers for accommodating various
crimp inserts
CRIMPFOX-C...

Page 433



Crimping pliers for solar connectors
CRIMPFOX-SR...

Page 439



Basic pliers for accommodating various
crimp inserts
CRIMPFOX-M...

Page 439



Screwdrivers
SF...

Page 442



Voltage and continuity tester
DUSPOL...

Page 461



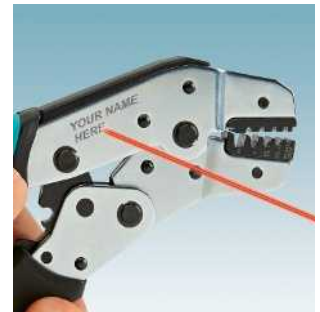
Digital multimeters and current probes
TESTFOX...

Page 461



Tool sets
TOOL...

Page 464



Pliers, laser marked according to customer
specifications
CRIMPFOX...CUS
WIREFOX...CUS

Page 473
Page 475

Marking systems, tools, mounting material

Product range overview in pictures

Hand tools - TOOL fox



Tool sets equipped according to customer requirements
Page 476



Tool bags with customized marking
Page 478



Ferrules, slip-on sleeves/plugs, cable lugs
Al...
C...
Page 481
Page 490

Automatic devices - TOOL fox



Automatic cutting device for conductors and cables
CUTFOX 10...
Page 506

Mounting material - CABINET add-on



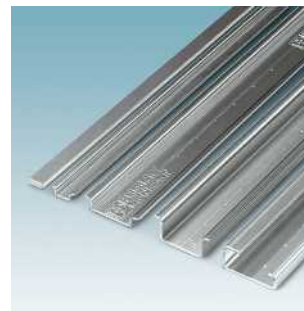
CLIPSAFE junction boxes and empty enclosures
Page 522
CLIPSAFE ABS junctions boxes
Page 550



CLIPSAFE polyester.....
Page 534



Ex cable glands
Page 554



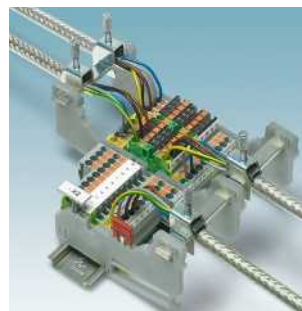
DIN rails
NS...
Page 566



Sockets
SD-D...
Page 610



Shield connection clamps
SK...
Page 612



Shield connection clamp accessories
AB-SK...
AB/SS...
Page 614
Page 596



CGSA....
Page 622



Spiral hoses
WG-S HF...
Page 645



Plastic cable markers for insert labels
KMK...
Page 652



Cable binders
Page 658



Stripping machine
WF 1000...

Page 507



Portable crimping machine for ferrules, cable
lugs, and connectors
CF 500...

Page 510



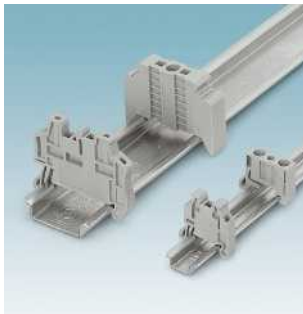
Portable crimping device
CF CRIMPHANDY 1,0
CF CRIMPHANDY 1,5

Page 514
Page 515



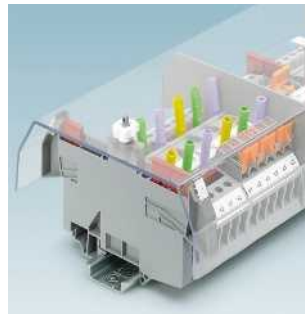
Stripping and crimping devices for ferrules
CF 3000...
CF 1000...

Page 516
Page 518



End bracket
CLIPFIX...

Page 582



Cover profiles
EA...
AP...
A/U...

Page 594
Page 590
Page 590



Power, branch, and L/N/PE connection
terminal blocks
AK.../AKG...
EK...
AZK 35...

Page 598
Page 597
Page 597



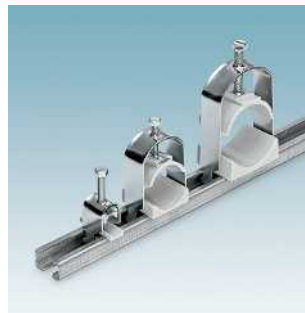
European and junction box connectors
EC...
JBC...

Page 600
Page 604



Cable ducts and accessories
CD...

Page 623



Cable clamps and accessories
WCC...

Page 627



Protective hoses
WP...

Page 628



Protective hose accessories
WP-G HF...

Page 630



4

Power Supplies, Surge Protection and Device Circuit Breakers

2017/2018



Power supplies, surge protection and device circuit breakers



Terminal blocks

- Terminal blocks



Interface technology and switching devices

- Electronic switching devices and motor control
- Measurement and control technology
- Monitoring
- Relay modules
- System cabling for controllers



Sensor/actuator cabling and connectors

- Sensor/actuator cabling
- Cables and lines
- Connectors



Automation

- Lighting and signaling
- Fieldbus components and systems
- Functional safety
- HMIs and industrial PCs
- I/O systems
- Industrial cloud computing
- Industrial communication technology
- Software
- Controllers



Marking systems, tools and mounting material

- Marking and labeling
- Tools
- Installation and mounting material



PCB terminal blocks and PCB connectors

To quickly select a product, use our e-Paper.

i Web code: #1517

Find out more with the web code

On some of the catalog pages, you can find our webcode: a hash symbol followed by a four-digit number combination.

i Web code: #1234 (example)

This allows you to access information on our website quickly.

It could not be easier:

1. Go to the Phoenix Contact website
2. Enter # and the number combination in the search field
3. Get more information and product versions

Or use the direct link:

phoenixcontact.net/webcode/#1234

You will find the latest information and all new products directly in the product area of our website:

phoenixcontact.net/products

Also discover the Phoenix Contact catalog app interactively on your tablet.



Table of contents

Overview

The illustrated table of contents will help you find the right product more quickly

4

Surge protection and interference suppression filters



7

Power supplies and UPS



198

Device circuit breakers



306

Technical information

336

Index

350

Introduction

Product range overview

Surge protection for the power supply



Type 1/2 combination protective device
FLASHTRAB SEC HYBRID ... Page 28
FLASHTRAB SEC PLUS 440 ... Page 29
FLASHTRAB SEC PLUS 350 ... Page 31
FLASHTRAB SEC PLUS 264 ... Page 34



Type 1/2 combination protective device
POWERTRAB Page 40
VALVETRAB MS T1/T2 Page 36



Type 1+2 protective device combination
FLASHTRAB SEC T1+T2... Page 42



Type 2 surge protective device
VALVETRAB SEC Page 45
VALVETRAB MS Page 52

Set solutions



Type 3 device protection
PLUGTRAB SEC / PT Page 71
BLOCKTRAB Page 73
MAINTRAB Page 74



Building set Page 76



FLASHTRAB ISG Page 78

Surge protection for measurement and control technology



DIN rail modules
TERMITRAB complete Page 92
PLUGTRAB Page 96
LINETRAB Page 100



Special systems
LSA-PLUS modules Page 101
Page 102



For networks Page 142
For interfaces Page 144



MAINTRAB Page 74
TERMITRAB complete Page 150
PLUGTRAB PT-IQ Page 163

Surge protection for transceiver systems



For mobile phone networks Page 176
For video communication Page 177



For radio and television sets Page 180

EMC solutions



Mains interference filters with integrated surge protection Page 184
Interference suppression filters Page 187

Lightning monitoring system



LM-S Page 188

Test devices



CHECKMASTER 2

Page 192

Power supplies

QUINT POWER with NFC
QUINT POWER
QUINT POWER,
with protective coating

Page 206

Page 210

Page 216



TRIO POWER

Page 218



UNO POWER

Page 226

DC/DC converters



MINI POWER

Page 234



STEP POWER

Page 238

QUINT DC/DC converters
QUINT DC/DC converters,
with protective coating
MINI DC/DC converters

Page 248

Page 254

Page 256



Redundancy modules

QUINT ORING
QUINT S-ORING
QUINT DIODE
TRIO DIODE
UNO DIODE, STEP DIODE

Page 260

Page 262

Page 264

Page 266

Page 267

UPS for the control cabinet

QUINT DC UPS
QUINT UPS

Page 274

QUINT/TRIO AC UPS
QUINT UPS
TRIO UPS-2G

Page 280

Page 282

Energy storage for
QUINT UPS

Page 284

UPS with integrated energy storage
QUINT UPS
QUINT BUFFER
STEP UPS, UNO UPS

Page 294

Page 295

Page 298

Device circuit breakers

UPS with integrated power supply
TRIO UPS
MINI UPSPage 300
Page 301Multi-channel electronic circuit breakers –
CBM/CBMC

Page 310



Single-channel device circuit breakers

Page 318

TCP thermal circuit breakers
Fuse terminal blocks, see Catalog 1

Page 334



5

Interface Technology and Switching Devices

2017/2018



Interface technology and switching devices



Terminal blocks

- Terminal blocks



Power supplies, surge protection and device circuit breakers

- Surge protection and interference suppression filters
- Power supplies and UPS
- Protective devices



Sensor/actuator cabling and connectors

- Sensor/actuator cabling
- Cables and lines
- Connectors



Automation

- Lighting and signaling
- Fieldbus components and systems
- Functional safety
- HMIs and industrial PCs
- I/O systems
- Industrial cloud computing
- Industrial communication technology
- Software
- Controllers



Marking systems, tools and mounting material

- Marking and labeling
- Tools
- Installation and mounting material



PCB terminal blocks and PCB connectors

To quickly select a product, use our e-Paper.

i Web code: #1517

Find out more with the web code

On some of the catalog pages, you can find our webcode: a hash symbol followed by a four-digit number combination.

i Web code: #1234 (example)

This allows you to access information on our website quickly.

It could not be easier:

1. Go to the Phoenix Contact website
2. Enter # and the number combination in the search field
3. Get more information and product versions

Or use the direct link:

phoenixcontact.net/webcode/#1234






You will find the latest information and all new products directly in the product area of our website:

phoenixcontact.net/products

Also discover the Phoenix Contact catalog app interactively on your tablet.



Table of contents

Complete overview		4
Electronic switching devices and motor control		8
Measurement and control technology		54
Monitoring		198
Relay modules		282
System cabling for controllers		460
Technical information/index		602

Complete overview

Product range overview

Electronic switching devices and motor control



Motor management

Page 14



Hybrid motor starters

Page 23



Solid-state contactors

Page 40



IP67 motor starters

Page 50



Multiplexer for HART signals

Page 166



Process indicators and field devices

Page 178



Controllers
See Catalog 6

Monitoring



Energy meters, function and communication
modules
Page 208



Test disconnect terminal blocks
See Catalog 1



Current transducers, current protector
Page 240



SOLARCHECK photovoltaic panel
shutdown
Page 252



SOLARCHECK
Photovoltaic string monitoring
Page 256



Multifunctional time relays

Page 278



Function modules

Page 280



Lightning monitoring system
See Catalog 4



HMIs
See Catalog 6

Measurement and control technology



Frequency inverters

Page 52



Highly compact signal conditioners with plug-in connection technology

Page 68



(Ex i) signal conditioners with SIL functional safety

Page 140



(Ex i) signal conditioners with PL functional safety

Page 168



Complete packages for data logging

Page 215



Compressed air meters

Page 216



Current transformers

Page 220



Current transformers for retrofitting

Page 234



Charging technology for E-Mobility
See Catalog 2



Compact monitoring relays

Page 262



Multifunctional monitoring relays

Page 266



Ultra-narrow time relays

Page 276



Signal towers
See Catalog 6

Complete overview

Product range overview

Relay modules



RIFLINE complete

Page 296



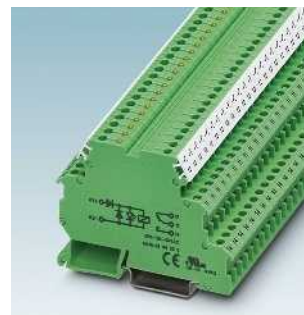
PLC-INTERFACE

Page 372



Programmable logic relay system PLC logic

Page 426



DEK series

Page 437

System cabling for controllers



Controller-specific system cabling

Page 470



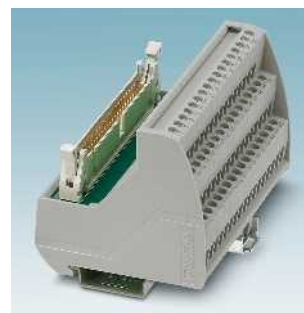
V8 adapters

Page 425



Retrofit and modernization components

Page 558



Universal modules

Page 566



Safety devices
See Catalog 6



Monitoring relays

Page 262



Time relays

Page 276



Universal cables

Page 582



Potential distributors

Page 598

HMI and industrial PCs

HMI and industrial PCs are the key to the efficient operation and monitoring of your systems and machines. You can work with a fully enclosed IP65 panel PC directly on site – or design detailed user interfaces as the interface to your system using a powerful HMI device.

Industrial PCs and HMIs from Phoenix Contact are so versatile and flexible that they do not present any restrictions for your operation and monitoring concepts. Visu+ and WebVisit are the corresponding visualization software tools.

HMIs

Human-machine interfaces, or HMIs for short, represent cost-effective automation based on efficient input and monitoring. Depending on your requirements, you can select devices for WebVisit or Visu+ software, or for HTML5 applications. Whether directly on site, centrally in the control center, high performance or multifunctional: it is you who determines the features of the HMIs.

Industrial PCs

Industrial PCs, or IPCs for short, combine the computing capacity of modern processors with the robustness and reliability of industrial components. Together with the right software, IPCs are efficient and versatile solutions for controlling, operating, and monitoring systems and machines.

HMIs and industrial PCs for outdoor applications

Outdoor HMIs and industrial PCs are designed for permanent exposure to weather influences. Thanks to the IP67-protected front, a display that can be read under direct sunlight, and an extended temperature range, you can use these devices, for example, in charging stations and in other outdoor applications such as wastewater treatment plants.

HMIs and industrial PCs for maritime applications

For demanding use on ships, Phoenix Contact offers robust operator and display panels. HMIs and industrial PCs for maritime applications are specially tested and approved for shipbuilding.

Product overview	12
<hr/>	
HMIs	
HMI for HTML5 applications	14
HMI for WebVisit software	16
HMI for Visu+ software	18
<hr/>	
Industrial PCs	
Box PCs	24
Rackmount PC	28
Panel PCs	30
Tablet PCs	40
Monitors with touch function	43
<hr/>	
HMIs and IPCs for outdoor applications	44
<hr/>	
HMIs and IPCs for maritime applications	48

HMIs and industrial PCs

Product overview

HMIs for HTML5 applications



Web panels with open browser
Page 14

HMIs for WebVisit software



Minitouch
Page 16



Web panel
Page 17

Box PCs



Box PCs
Page 24



Box PCs
Page 25



Box PCs
Page 26

Panel PCs



Embeddeline panel PCs
Page 30



Valueline panel PCs
Page 36



Panel PCs with IP65
Page 38

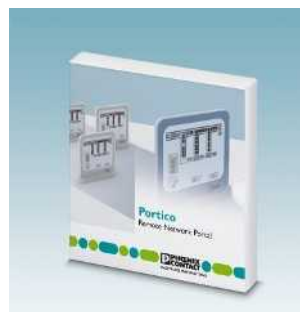
Software



WebVisit – development software for web-based visualizations
Page 59



Visu+ – SCADA visualization, development and runtime licenses
Page 60



VL Portico server ... – remote control of networked IPCs
Page 68

HMI for Visu+ software



Touch panels

Page 18



Touch panels

Page 22

Rackmount PCs



Rackmount PC – 4U

Page 28



Rackmount PC – 2U

Page 28

Software PLC


PC WORX RT BASIC – software PLC with
realtime extension

Page 29


PC WORX SRT – software PLC without
realtime extension

Page 29

Tablet PCs



Tablet PCs

Page 40

Monitors with touch function



Monitors with touch function

Page 43

HMI and IPCs for outdoor applications



Web panels and panel PCs

Page 44

HMI and IPCs for maritime applications



Touch panels and panel PCs

Page 48

Software

Software is the key to more efficient automation. Phoenix Contact offers software from configuration to system operation – intelligent solutions that guide you through every stage of the value added chain of your automation solution. All products interact perfectly and impress with their innovative functions and intuitive, user-friendly operation. In addition, a wide range of ready-to-use block libraries is also available.

Programming

Software products for programming, from small to medium-sized applications with small-scale controllers to complex system automation with high-end PLCs.

Visualization

Intelligent tools for designing operation and monitoring interfaces – in the control room or directly in the machine.

Device parameterization

Central and efficient – parameterize your field devices from the comfort of your PC.

Configuration, monitoring, diagnostics

Software tools for fast startup, constant monitoring, and reliable diagnostics.

Drivers and interfaces

Everything you need to connect additional systems to your automation solution.

Planning and configuration

Expert support with the planning and configuration of technical components. So that everything works together perfectly.

Remote control

Flexible solutions for controlling distributed automation units.

System simulation

Startup and testing made easy – in a completely virtual environment.

Marking software

Software tools for efficient marking – even in series production.

Product overview	54
Programming	
PC WORX EXPRESS/PC WORX	56
PC Worx Target for Simulink	58
Function blocks/libraries	91
Visualization	
WebVisit	59
Visu+	60
Visu+ Express	61
Device parameterization	
Startup+	54
Configuration, monitoring, diagnostics	
Config+	62
Diag+	64
Drivers and interfaces	
OPC server	66
Planning and configuration	
Project+	54
Remote control	
Portico	68
Resy+	91

Software

Product overview

Programming



PC WORX – software package for Phoenix Contact controllers programmed according to IEC 61131

Page 56



PC WORX Target for Simulink - firmware library

Page 58



Logic+ – intuitive programming software for quick and easy configuration
• See Catalog 5 - relay modules section

 Your web code: #1104



SafetyProg – programming software for PROFIsafe controllers

Page 306



Functional and industry-specific software and drivers

Page 91

Visualization



WebVisit – development software for web-based visualizations

Page 59



Visu+ – SCADA visualization, development and runtime licenses

Page 60



Visu+ Express – free development software for HMI visualization

Page 61

Device parameterization



Startup+ – software for wiring checks on Axoline F I/O stations

 Your web code: #1164



FL MGuard DM ... – central management software for FL MGuard devices

Page 440



SAFECONF – configuration software for TRISAFE and SafetyBridge modules

Page 304



PSR-CONF-WIN – configuration software for PSR-RSM4 with connecting cable

Page 305

Configuration, monitoring, and diagnostics



Config+ – tool for INTERBUS configuration and diagnostics

Page 62



Diag+ – diagnostics software for INTERBUS, PROFINET, and Ethernet networks

Page 64



Diag+ NetScan – diagnostics software for cyclic INTERBUS diagnostics

Page 64



FL VIEW – network diagnostics software

Page 440

Drivers and interfaces



OPC UA – communication interface for PC Worx-programmed controllers

Page 66



AX OPC server – communication interface for PC Worx-programmed controllers

Page 67



FL SNMP OPC server – monitoring/configuration of SNMP-compatible devices in HMI and SCADA systems

Page 67

Planning and configuration



Project+ – software for planning the I/O configuration

Your web code: #1161

Marking



CLIP PROJECT – planning and marking software
• See Catalog 3 – marking and labeling section

Your web code: #1093

Remote control



VL Portico server ... – remote control of networked IPCs

Page 68



Resy+ – function blocks for extending standard control and I/O components with remote control protocols

Page 91

System simulation



WinMOD AX ... – system software incl. INTERBUS/PROFINET IO simulation software
Info: www.winmod.com



IB Emulator – hardware required to simulate INTERBUS configurations with the WinMOD software
Order No. 2988638

Controllers

Product overview

Programmable logic relay system



Programmable logic relay system
Page 74

Modular controllers in Axio format



Class 1000 small-scale controllers
Page 76



Class 3000 high-performance controllers
Page 77



Controller for the power industry
Page 78

Modular controllers in Inline format



Controller for building infrastructure
Page 79



Class 100 small-scale controllers
Page 80



Class 100 small-scale controllers for machine building
Page 82



Class 100 small-scale controllers for remote communication
Page 83

Compact controllers



Class 300 controllers
Page 84

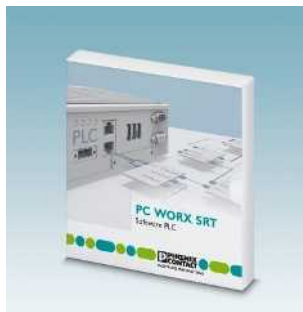


Class 400 compact controllers
Page 87

Software PLC



PC WORX RT BASIC – software PLC with realtime extension
Page 88



PC WORX SRT – software PLC without realtime extension
Page 89

Starter kits



Starter kit for automation with small-scale controllers – PROFINET
Page 90



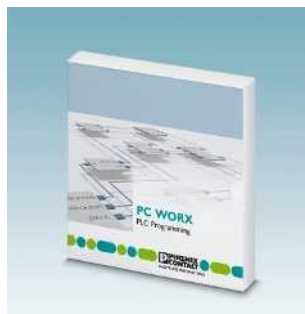
Starter kit for automation with small-scale controllers – INTERBUS
Page 90

Software for control technology



Functional and industry-specific software and drivers

Page 91



PC Worx – software package for Phoenix Contact controllers programmed according to IEC 61131

Page 56



PC Worx EXPRESS – free programming environment for class 100 modular small-scale controllers

Page 56



WebVisit – development software for web-based visualizations

Page 59

Services for automation



Services – hotline, on-site service, startup support, professional workshops

Page 92



Training – individual training concepts, training courses

Page 92



Engineering – configuration, programming, visualization, coaching

Page 92

I/O systems



I/O systems for the control cabinet (IP20)

Page 124



I/O systems for field installation (IP67)

Page 190

System cabling



• See Catalog 5 – system cabling for controllers

i Your web code: #0702

AC charging controllers



• See Catalog 2 – Charging technology for E-Mobility

i Your web code: #0501

I/O systems

I/O systems from Phoenix Contact are the perfect solution for control cabinet engineering or field installation.

I/O systems for the control cabinet

Axioline F

Axioline F is fast, robust, and easy. Open to all Ethernet-based communication protocols and PROFIBUS, Axioline F enables the shortest response times, fast installation, and is characterized by its particularly robust design and easy handling.

Inline

Inline, our I/O automation kit, can be used to connect sensors and actuators with a maximum range of functions.

These I/Os can also be found in safety applications or potentially explosive areas.

I/O systems for field installation

Axioline E

The I/O system features a fast response time, robust design, and easy handling.

The comprehensive portfolio with optional plastic or zinc die-cast housing enables use in a wide range of environments.

Fieldline

The devices in the Fieldline product range with IP65/IP67 protection are optimized for use in machine building and systems manufacturing directly in the field.

AS-Interface

The digital I/O devices in the Fieldline Extension AS-Interface product range offer significant installation advantages thanks to their innovative connection technology.

Product overview 96

For the control cabinet (IP20)

Axioline F

Product overview 98

I/O modules 100

Inline

Product overview 124

I/O terminals 127

Inline Block IO

Product overview 188

INTERBUS Smart Terminals

Product overview 189

For field installation (IP67)

Axioline E

Product overview 190

I/O devices 192

Fieldline Modular

Product overview 208

I/O devices 210

AS-Interface

Product overview 224

I/O devices 226

Fieldline Stand-Alone

Product overview 236

Ruggedline

Product overview 237

I/O systems

Product overview

I/O systems for the control cabinet (IP20)



Axioline F

Page 98



Inline

Page 124



Inline Block IO

Page 188



INTERBUS ST

Page 189

I/O systems for field installation (IP67)



Axioline E – devices in plastic and metal version

Page 190



Fieldline Modular

Page 208



Fieldline Stand-Alone

Page 236



AS-Interface

Page 224

Controllers



Modular controllers

Page 71

Functional Safety



Safe I/Os

Page 296

Wireless data communication



Wireless I/O

Page 466

Sensor/actuator cabling



• See Catalog 2 –
Corresponding cabling for I/O systems

Your web code: #0564

Marking and labeling



• See Catalog 3 – marking and labeling
section

Your web code: #0575

Functional Safety

Safety devices

- Modules for all common applications such as emergency stop, safety doors, light grids, etc.
- Modules for monitoring various speeds during operation and downtime
- Modules for coupling digital output signals from failsafe controllers to I/O devices

Configurable safety modules

- Multifunctional evaluation module with 20 safe inputs and 4 safe outputs
- Monitoring of all the safety-related functions of a machine, such as emergency stop, safety doors, light grids, etc.
- Flexible extension with safe digital I/O modules
- Easy configuration using the SAFECONF software

Safe I/Os

- SafetyBridge I/O modules exchange safe signals via an automation network
- Flexible use: compatible with all common bus systems
- PROFIsafe I/O modules in conjunction with safe PROFIsafe controllers enable a cost-effective solution for large applications in machine building and systems manufacturing

Safe control technology

- Controls even large numbers of I/Os reliably, thanks to high-performance technology
- Reduced wiring effort, thanks to the joint transmission of control and safety protocols via a single Ethernet cable
- Uniform configuration worldwide, thanks to standardized programming according to IEC 61131
- Easily integrate safe I/O modules, thanks to Safety Plug and Play solution

Services for functional safety

Comprehensive support for all aspects of safety regarding your machinery. If you operate machinery, manufacture machinery as a whole or in parts, deal in machinery, import machinery or even integrate technical systems into machinery – we are on hand to assist you with services that are tailored to your needs.

Product overview	240
Selection guide for safety relay modules and modules	242
<hr/>	
Safety relay modules for machine building	
Safety relays - PSRmini	247
Safety relays - PSRclassic	260
Modular safety relay system - PSRmodular	264
Multifunctional safety relays - PSRmultifunction	266
Applications	268
<hr/>	
Safety relay modules for speed and downtime monitoring	
Zero-speed and over-speed safety relays - PSRmotion	275
<hr/>	
Safety relay modules – safe coupling relays	
Coupling relays – PSRclassic	277
<hr/>	
Safety relay modules for the process industry	
Safe coupling relays - PSRmini	280
Safe coupling relays - PSRclassic	286
Termination Carriers for PSRmini and PSRclassic	289
Applications	290
<hr/>	
Configurable safety modules	
TRISAFE-S	292
TRISAFE-M	293
TRISAFE extension modules	294
<hr/>	
Safe I/Os	
Logic modules	296
Safe I/O modules	297
<hr/>	
Software	
SAFECONF configuration software	304
PSR-CONF-WIN configuration software	305
SafetyProg programming software	306
Safe analog value processing	307
<hr/>	
Safe control technology	
Safe PROFINET gateway	308
Safe PROFIsafe controller	309
Control solution for functional safety	310
<hr/>	
Services for Functional Safety	312

Safety relay modules for machine building – safety relays



PSRmini – highly compact safety relays for all common applications

Page 247



PSRclassic – safety relays for all common applications, with time function, extension modules

Page 260



PSRmodular – modular safety relay system with DIN rail connector

Page 264



PSRmultifunction – safety relay for three safety functions in a single device

Page 266

Zero-speed and over-speed safety relays



PSRmotion – zero-speed and over-speed safety relays that can be parameterized via software

Page 275



PSRmotion – sensor-free downtime monitoring of 1- and 3-phase alternating current and direct current motors

Page 276



PSRclassic – coupling relays

Page 277

Safety relay modules for the process industry – safe coupling relays



PSRmini – highly compact, safe coupling relays for failsafe controllers and F&G applications

Page 281



PSRclassic – safe coupling relays for failsafe controllers

Page 286



PSRclassic – Termination Carriers for the alignment and easy mounting of coupling relays

Page 289



PSRmini – Termination Carriers for the alignment and easy mounting of highly compact coupling relays
Further information:
phoenixcontact.net/products

Configurable safety modules



TRISAFE-S – master module, cannot be extended

Page 292



TRISAFE-M – master module that can be safely extended

Page 293



TRISAFE – extension modules

Page 294

Safe I/Os



Logic modules for safe signal exchange using a SafetyBridge system
Page 296



Safe I/O modules for safe signal exchange in popular networks
Page 297



Safe I/O modules – output module with relay outputs, Inline ECO safety module with two sensor circuits
Page 298



Safe I/O modules for safe signal exchange in popular networks
Page 302

Safe control technology



Safe PROFINET gateway
Page 308



Safe PROFIsafe controller
Page 309



Control solution for functional safety
Page 310

Safe signal conditioners



• See Catalog 5 – Interface technology and switching devices

Your web code: #1135

Software



SAFECONF – configuration software for TRISAFE and SafetyBridge modules
Page 304



PSR-CONF-WIN – configuration software for PSR-RSM4 with connecting cable
Page 305



SafetyProg – programming software for PROFIsafe controllers
Page 306



Safety AI – function blocks for safe analog value processing
Page 307

Services for functional safety



Consultation and presentation
Individual consultation and on-site process assistance
Page 312



Engineering and product support
Free 24-hour safety hotline, on-site service, workshops, concept support
Page 312



Seminars and workshops
Theoretical and practical know-how for machine safety
Page 312



Safety in the process industry
Safe design of protective functions in the process industry
Page 312

Industrial communication technology

The increasing degree of automation in modern systems and machinery is placing ever growing demands on the performance capabilities of the communication networks used.

The main arteries of these networks consist of various types of serial data connections. They are not compatible with each other nor do they meet the increasing requirements with regard to immunity to interference, bandwidth, and speed.

With our products, you can achieve interference-free and high-performance data transmission, even in harsh industrial environments.

Copper transmission

High-performance isolators, repeaters, and converters are available for all leading networks. The devices excel thanks to their high insulation voltages between the interfaces, which effectively prevent faults and compensating currents.

Fiber optic transmission

Fiber optic data transmission has become the norm, particularly in critical applications with very high requirements regarding availability. Whether immunity to interference, high performance, electrical isolation or network expansion, the use of fiber optic technology is unavoidable.

Remote communication

Global networking of machines and systems. Alarm generation, remote maintenance, and continual data acquisition. From classic analog modems to fast mobile phone routers: the right system for every application.

Wireless data communication

Modern wireless systems are a flexible, extendable, and low-cost alternative. Depending on the distance to be covered and the signals to be transmitted, various wireless technologies are available such as Trusted Wireless, Bluetooth or WLAN.

Product overview	316
<hr/>	
Copper transmission	
Repeater	318
Active PROFIBUS termination	320
RS-232 interface converters	321
<hr/>	
Fiber optic transmission	
FO converters:	
- For PROFIBUS	325
- For DeviceNet™, and CANopen®	327
- For RS-485 2-wire bus systems	329
- For INTERBUS, RS-422, and RS-485 4-wire bus systems	331
- For RS-232	333
Fiber optic cables, tools, and measuring devices	334
<hr/>	
Industrial Ethernet	
Media converters for fiber optics	336
Serial device servers and gateways	341
Electrical Ethernet isolators and patch panels	344
<hr/>	
Remote communication	
Alarm generation	348
Remote maintenance	350
Remote maintenance and remote control	358
Remote control	360
Antennas and surge protection	367
Protocol converters	368
<hr/>	
Fast connection technology	
PROFIBUS cables and fast connection tools	371
D-SUB fast connection, M12	372
D-SUB fast connection for PROFIBUS	374
D-SUB fast connection for CANopen® and SafetyBUS p	376
D-SUB fast connection for Modbus, INTERBUS, RS-232, RS-422, RS-485	378
USB and RS-232 cables, RS-485 connection distributors	380
<hr/>	
Wireless data communication	449

Product overview

Copper transmission



Repeaters for electrical isolation and increasing the range

Page 318



Termination resistor for active bus termination

Page 320



Interface converters

Page 322



Device couplers for FOUNDATION Fieldbus and PROFIBUS PA

Page 512

Fiber optics transmission



FO converters for RS-232

Page 333



FO accessories – FO cables, connectors, and tools

Page 334

Industrial Ethernet



Universal media converters for conversion to fiber optics

Page 336



Media converters for realtime protocols and IEC 61850 environments

Page 338

Industrial Ethernet



Switches, interface modules, hubs, Power over Ethernet modules

Page 383



Secure networks – routers with firewall for control cabinet and mobile use, PCI

Page 432

Remote communication



Alarm generation – remote signaling and remote control system

Page 348



Remote maintenance – mGUARD security router

Page 350

Remote communication



Remote control – mobile routers

Page 365



Protocol converters

Page 368

Wireless



Radioline wireless modules, WirelessHART, and accessories

Page 449



Bluetooth wireless modules (2.4 GHz) Wireless multiplexer with antennas

Page 466

Fiber optics transmission



FO converters for PROFIBUS

Page 325



FO converters for DeviceNet™ and CANopen®

Page 327



FO converters for RS-485 2-wire bus systems

Page 329



FO converters for INTERBUS

Page 331



Serial device servers, 1 port, for conversion to Ethernet

Page 341



Serial device servers and protocol converters, multiport, for conversion to Ethernet

Page 342



Isolator for electrical isolation

Page 344



Passive mini patch panels with various connection options

Page 346



Remote maintenance – Cloud Client

Page 352



Remote control and remote maintenance – DSL broadband router/modem with firewall, VPN, and serial device server

Page 358



Remote control – managed Ethernet extenders

Page 360



Remote control – unmanaged Ethernet extenders

Page 361

Fast connection technology



Type A Fast Connect PROFIBUS cable and quick stripping tool

Page 371



M12 D-SUB fast connection for PROFIBUS and CANopen®

Page 372



D-SUB fast connection for PROFIBUS and CANopen®

Page 374



D-SUB fast connection for Modbus, INTERBUS, RS-232, RS-422, RS-485

Page 378

Industrial Ethernet

Make the most of all the options offered by your Ethernet network.

Phoenix Contact offers you more realtime, more wireless, more safety, and more reliability.

Industrial Ethernet from Phoenix Contact can be easily integrated in your automation infrastructure - because we make Ethernet easy.

Benefit from our experience in automation which spans decades and the experience we have gained in industrial Ethernet networks over the past ten plus years.

We know and understand the expectations and demands placed on automation. This is evident and embodied in our products and solutions.

Product overview	384
Unmanaged Switches	
- Standard switches with basic functions	386
- Standard switches	389
- Standard Gigabit Switches	392
- Standard switches with wide temperature range	394
- Standard switches with flat design	396
- 1000 series Unmanaged Switches	431
- IP67 switches, hub, and Power over Ethernet	399
Managed Switches	
- 2000 series Managed Switches	402
- 3000 series Managed Switches	408
- 4000 series Managed Gigabit Switches	410
- SMN and SMCS series Managed Switches	412
- PROFINET realtime switches	416
- 7000 series Managed Switches	418
- Routers and Layer 3 switches	421
- Interface modules	422
Network infrastructure for IEC 61850	
431	
Security routers and firewalls	
Security routers for DIN rails	433
Firewall/router for office-based/mobile use	438
Software for Ethernet networks	440
Services for Industrial Ethernet	442
Gateways and proxies	444
Network installation	446
Wireless Ethernet	452

Unmanaged Switches



Standard Switches with basic function
Page 386

Hubs



Ethernet hubs with 8/16 RJ45 ports
Page 399

Power over Ethernet



Power over Ethernet switches
Page 401

Managed Switches



Managed Switches, up to 8 ports (RJ45/FO)
Page 402



Managed Switches feature flexible, scalable performance
Page 408



Smart Managed Compact Switches with up to 16 ports (RJ45/FO)
Page 414



PROFINET Realtime Switch (RJ45/SC-RJ)
Page 416

Managed Switches



Switches for high-availability EtherNet/IP™ networks
Page 418



Gigabit Modular Switches with up to 28 ports (RJ45/FO)
Page 421

Accessories



Plug-in I/O module and replaceable configuration connector
Page 422

Network infrastructure for IEC 61850



Managed Switch for the DIN rail
Page 426



Managed Switch for 19" rack mounting
Page 428



Redundancy modules
Page 430



Unmanaged Switch
Page 431

Secure networks



Routers and Layer 3 switches

Page 420



Security routers for DIN rail

Page 432



Security routers without DIN rail

Page 438



VPN routers for mobile communication

Page 350

Software



Network management software

Page 440

Services



Service packages for Industrial Ethernet

Page 442

Industrial cloud computing



Professional cloud solutions for industry

Page 6

Wireless Ethernet



Industrial WLAN

Page 452



Industrial Bluetooth

Page 455

Wireless accessories



Antennas, adapter cables, and surge protection

Page 472

Gateways/proxies



Proxies as a link between PROFINET networks and other fieldbus systems

Page 444

Media converters



Media converters for conversion to fiber optics

Page 336

Serial device servers



Device servers for converting serial interfaces

Page 340

ISOLATOR



Isolator for electrical isolation

Page 344

Patch panels



Passive mini patch panels with various connection options

Page 346

Wireless data communication

Signals that could previously only be acquired with a great deal of effort, or not at all, can now be acquired and transmitted quickly and efficiently using wireless systems.

Wireless LAN

WLAN is a wireless standard according to IEEE 802.11 a/b/g/n for creating wireless networks.

- High data rates of up to 300 Mbps
- Fast roaming
- Device mobility in wide area networks
- High degree of reliability thanks to MIMO (multiple input, multiple output) technology

Trusted Wireless

Trusted Wireless is a form of wireless technology that has been designed specifically for industrial applications.

- Long range from a few hundred meters to several kilometers
- Robust and reliable communication in industrial environments
- License-free ISM band
- High local system density of several hundred networks possible
- Can be operated in parallel with WLAN 802.11 and Bluetooth systems without interference
- FHSS method for high immunity to interference

WirelessHART

WirelessHART is a transmission technology intended for process automation.

- Wireless module according to IEEE 802.15.4
- Time-synchronized communication
- Supports fully meshed networks
- Secure data transfer

Bluetooth

With Bluetooth, you can configure local wireless networks with up to seven devices.

- Range of up to 100 m in industrial halls and up to 200 m outdoors
- Cyclic and fast data transmission of small data packets
- High local system density, i.e., WLAN 802.11 systems can be operated in parallel without interference
- High data security thanks to 128-bit data encryption
- FHSS method for high immunity to interference

Product overview	450
Wireless Ethernet	
Industrial WLAN	452
Industrial Bluetooth	455
Wireless I/O / Wireless Serial	
Radioline wireless transceivers (2.4 GHz, 900 MHz, 868 MHz)	457
Multipoint multiplexer	459
Wireless I/O	
I/O extension modules	460
WirelessHART gateway and adapter (2.4 GHz)	464
Bluetooth wireless modules (2.4 GHz)	466
Trusted Wireless Ethernet	
RAD-Line wireless transceiver (2.4 GHz, 900 MHz)	468
I/O extension modules	470
Antennas and cables	472
Remote communication	348

Wireless data communication

Product overview

Wireless Ethernet



Industrial WLAN – WLAN access point and Ethernet adapter

Page 452



Industrial WLAN – WLAN access point

Page 453



Industrial Bluetooth – access point and Ethernet adapter

Page 455

Wireless I/O / Wireless Serial



2.4 GHz – wireless transceiver for serial interfaces

Page 457



868 MHz – wireless transceiver for serial interfaces

Page 457



900 MHz – wireless transceiver for serial interfaces

Page 457



Multipoint multiplexer for RS-485 bus system

Page 459

Wireless I/O



Analog/digital I/O module, 2 digital I/Os and 1 analog I/O

Page 460



Digital I/O modules, 4 inputs or 4 relay outputs, 8 inputs or 8 transistor outputs

Page 460



Analog I/O modules, 4 inputs or 4 outputs

Page 462



Temperature I/O module, 4 Pt 100 inputs

Page 463

Wireless I/O



Bluetooth wireless modules (2.4 GHz)

Page 466

WirelessHART



WirelessHART gateway

Page 464



WirelessHART adapter

Page 465

Trusted Wireless Ethernet



900 MHz – wireless transceiver
with Trusted Wireless, for Ethernet

Page 468



2.4 GHz – wireless transceiver
with WLAN 802.11b/g, for Ethernet

Page 469

Trusted Wireless Ethernet



Analog module for
four inputs or four outputs

Page 470



Digital module for
eight inputs or eight outputs

Page 470



Analog/digital module for
two digital I/Os and one analog I/O

Page 471



Digital module for
two counter/frequency inputs or
two counter/frequency outputs

Page 471

Remote communication



Alarm generation –
remote signaling and remote control system

Page 348



Remote maintenance –
mGUARD security router

Page 350



Remote control –
mobile router

Page 364

Antennas and cables



Antennas

Page 472



Adapters, extension cables

Page 480

Lighting and signaling

The LED lights, signal lights, and signal towers from Phoenix Contact are highly efficient, durable, and maintenance-free. They therefore represent the perfect solution for optimum application lighting and clear status signaling.

LED enclosure lights

Optimum illumination of the control cabinet ensures fast troubleshooting and wiring errors can be avoided. The LED enclosure lights in the PLD (Phoenix Contact Lighting Devices) product range provide optimum illumination inside your control cabinets right down to the bottom. Thanks to tool-free mounting, the lights can be mounted in no time at all.

LED machine lights

The LED machine lights from the PLD (Phoenix Contact Lighting Devices) product range illuminate your machines efficiently, homogeneously, and without glare. Select your machine lights from the comprehensive range: tailored to your application in terms of size, length, degree of protection, and beam angle.

LED tower lighting

The LED lights illuminate towers and shafts reliably and efficiently.

LED signal lights

With the robust LED signal lights, you can design reliable and energy-efficient signaling systems for maritime use, e.g., for locks, bridges or ports.

LED signal towers

Thanks to the considerable signal diversity of the modular signal towers in the PSD (Phoenix Contact Signaling Devices) product range, you can implement unambiguous signaling of your machine and system states. This reduces downtimes and avoids unnecessary costs.

Product overview	484
<hr/>	
Enclosure lights	
Class 400 LED enclosure lights	485
Class 600 LED enclosure lights	486
<hr/>	
Machine lights	
Class 100 LED machine lights	488
Class 200 LED machine lights	490
<hr/>	
Tower lighting	
LED tower lighting	494
<hr/>	
Signal lights	
LED signal lights	497
<hr/>	
Signal towers	
Optical signal elements	499
Audible signal elements	502
Connection and mounting elements	504

Enclosure lights



Class 400 LED enclosure lights
Page 485



Plug-in power supply for class 400 LED enclosure lights
Page 485



Class 600 LED enclosure lights
- With motion detector
Page 486



Class 600 LED enclosure lights
- With motion detector and socket
Page 487

Machine lights



Class 100 LED machine lights
Width 23 mm, degree of protection IP67
Page 488



Class 200 LED machine lights
Ø 40 mm, degree of protection IP67
Page 490



Class 200 LED machine lights
Ø 70 mm, degree of protection IP67
Page 492



Class 200 LED machine lights
Length 284 mm, degree of protection IP69
Page 491

Tower lights



LED tower lighting
Page 494

Signal lights



LED signal lights
Page 497

Signal towers



Optical signal elements
Page 499



Audible signal elements
Page 502



Voice output element
Page 503



Connection and mounting elements
- For surface and tube mounting
Page 504

Process infrastructure

Process infrastructure connects the control level to the field level via modern fieldbuses, I/O modules, and wireless communication systems.

Modern process technology, including WirelessHART, FOUNDATION Fieldbus, PROFIBUS PA, and I/O solutions for potentially explosive areas can be used in numerous different industries, including mining, water/waste water, and oil and gas. Phoenix Contact offers flexible solutions for all applications and customer requirements.

- Process infrastructure is suitable for all applications and environments
- Failure times are reduced thanks to high integrity and hot swapping
- Multifunctional remote I/Os enable greater flexibility
- Remote access to error diagnostics means that ex areas do not have to be entered
- Approvals for all applications

Product overview	508
<hr/>	
Process fieldbus	
Field connection boxes	511
Device couplers for the field	512
Power supply	517
Field diagnostic modules	518
Accessories	519
Modbus gateways	520
Ethernet HART multiplexer	521
<hr/>	
Inline Ex i	
Intrinsically safe I/Os for the Ex area	168

Process fieldbus



Field connection boxes in stainless steel
Page 511



Device couplers for the field
Page 512



Fieldbus barrier installed in Zone 1
Page 514



Device couplers for Fieldbus
installed in Zone 2
Page 514



Power supply
Connector for the power supply
Page 517



Power supply
Base for the power supply
Page 517



Power supply
Base for redundant four-channel
fieldbus power supply
Page 517



Field diagnostic modules
FOUNDATION Fieldbus diagnostic module
Page 518

Surge protection



Surge protection for fieldbus systems
Page 519

Modbus protocol converters



Modbus gateways for PROFIBUS DP/PA
and FOUNDATION Fieldbus
Page 520

Wired HART



Ethernet HART multiplexer
Page 521

Inline Ex i – intrinsically safe I/Os for the ex area



Intrinsically safe power supply terminal
Page 168



Intrinsically safe digital I/O terminals
Page 169



Intrinsically safe analog I/O terminals
Page 169



Intrinsically safe temperature input terminal
Page 169

Wireless data communication



WirelessHART gateway
Page 464



WirelessHART adapter
Page 465



Radioline wireless modules
Page 457

Surge protection for MCR technology



• See Catalog 4 –
PLUGTRAB PT-IQ –
Surge protection for Ex i circuits

i Your web code: #0292



• See Catalog 4 –
TERMITRAB complete –
terminal blocks (intrinsically safe) with multi-
stage surge protection

i Your web code: #0292



• See Catalog 4 –
SURGETRAB – field devices directly at the
sensor head (intrinsically safe)

i Your web code: #0292

Measurement and control technology



• See Catalog 5 –
Ex i signal conditioners with functional safety

i Your web code: #0293



• See Catalog 5 –
Ex i 2-wire field devices

i Your web code: #0294



“With 60,000 products, together we can find your solution.”

Electronics housing, electronic switching devices and motor control, fieldbus components and systems, functional safety, HMI and industrial PCs, I/O systems, Industrial Ethernet, lighting and signaling, industrial communication technology, installation and mounting material, cables and wires, PCB terminal blocks and PCB connectors, marking and labeling, measurement and control technology, monitoring, modular terminal blocks, relay modules, protective devices, sensor/actuator cabling, software, connectors, controllers, power supply units and UPS, system cabling for controllers, surge protection and interference filters, tools, wireless data communication