

Wireless set - ILB BT ADIO MUX



2702875

<https://www.phoenixcontact.com/pc/products/2702875>

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Wireless MUX set, two modules with 16 digital inputs and outputs and 2 analog inputs and outputs (0 ... 20 mA, 0 ... 10 V) each, RSMA (female) antenna connection, without antennas

Product Description

The Wireless MUX transmits 16 digital and 2 analog signals bidirectionally. The Wireless MUX is supplied ready to use: Unpack – connect – switch on – and you have a working wireless path.

Your advantages

- Wireless diagnostics by means of bar graph
- Range of 50 m ... 100 m in industrial halls with omnidirectional antennas and up to 400 m outdoors with directional antennas
- Quick connection establishment and signal transmission
- Current Bluetooth 4.0 technology
- Plug and play - startup without configuration
- It couldn't be simpler: unpack – connect – switch on

Commercial Data

Item number	2702875
Packing unit	1 pc
Minimum order quantity	1 pc
Product Key	DNC662
Catalog Page	Page 386 (C-6-2019)
GTIN	4055626369846
Weight per Piece (including packing)	650 g
Weight per Piece (excluding packing)	630 g
Customs tariff number	85176200
Country of origin	DE

Technical Data

Product properties

Type	Block design
Product type	Multiplexer
Application	I/O
MTTF	1458 Years (SN 29500 standard, temperature 25°C, operating cycle 21%)
	557 Years (SN 29500 standard, temperature 40°C, operating cycle 34.25%)
	219 Years (SN 29500 standard, temperature 40°C, operating cycle 100%)
Diagnostics messages	Short-circuit or overload of the digital outputs LED
	Wireless connection FS LED
	Logic and actuator voltage LED
	Link quality of the wireless connection 4 LEDs

Insulation characteristics

Overvoltage category	II
Pollution degree	2

Times

Delay time	≤ 10 ms (Latency, typical)
	≤ 800 ms (Failsafe function for wireless interruption)

Electrical properties

Supply: Module electronics

Connection method	Inline connector
Supply voltage	24 V DC
Supply voltage range	19.2 V DC ... 30.5 V DC (via power connector)
Current consumption	60 mA (at 24 V DC, at 25 °C)
Protective circuit	Polarity protection, surge protection

Input data

Analog

Input name	Analog inputs
Description of the input	Single ended
Number of inputs	2
Current input signal	0 mA ... 20 mA
Input resistance current input	50 Ω
Voltage input signal	0 V ... 10 V
Input resistance of voltage input	130 kΩ
Measured value resolution	12 bits
Protective circuit	Surge voltage; Suppressor diodes in the analog inputs, current

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	limitation via internal protective circuit
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Digital

Input name	Digital inputs
Number of inputs	16
Connection method	Spring-cage connection
Connection technology	1-conductor
Input voltage range "0" signal	< 5 V
Input voltage range "1" signal	> 15 V
Nominal input voltage U_{IN}	24 V DC
Typical input current per channel	2.3 mA

Output data

Analog

Output name	Analog outputs
Number of outputs	2
DAC resolution	12 Bit
Current output signal	0 mA ... 20 mA
Load/output load current output	$\leq 500 \Omega$
Voltage output signal	0 V ... 10 V
Load/output load voltage output	$\geq 2 \text{ k}\Omega$

Digital

Output name	Digital outputs
Connection method	Spring-cage connection
Connection technology	1-conductor
Number of outputs	16
Protective circuit	Short-circuit protection, overload protection, protected against reverse voltages
Output current	8 A
Maximum output current per channel	500 mA
Nominal output voltage	24 V DC
Output current when switched off	$\leq 10 \mu\text{A}$ (When not loaded, a voltage can be measured even at an output that is not set.)
Nominal load, inductive	12 VA (1.2 H, 50 Ω)
Nominal load, lamp	12 W
Nominal load, ohmic	12 W (48 Ω)
Reverse voltage resistance to short pulses	Reverse voltage proof
Behavior with overload	Auto restart
Behavior with inductive overload	Output can be destroyed
Behavior at voltage switch-off	The output follows the power supply without delay

Connection data

Conductor cross section, rigid	0.2 mm ² ... 1.5 mm ²
Stripping length	8 mm

Interfaces

Functions

Wireless licenses	Europe, additional countries in the e-shop
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Wireless

Modulation type	GFSK (Gaussian Frequency Shift Keying)
Antenna connection method	RSMA (female)
No. of channels	40
Frequency range	2.402 GHz ... 2.48 GHz (ISM bandwidth)
Frequency band	2.4 GHz
Wireless standard	Bluetooth
Transmission power	5 dBm
Receiver sensitivity	-95 dBm

LED signaling

Diagnostic messages

Diagnostics	Short-circuit or overload of the digital outputs
Message	LED

Diagnostic messages

Diagnostics	Wireless connection
Message	FS LED

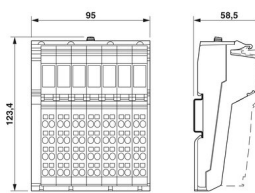
Diagnostic messages

Diagnostics	Logic and actuator voltage
Message	LED

Diagnostic messages

Diagnostics	Link quality of the wireless connection
Message	4 LEDs

Dimensions

Dimensional drawing	
Width	95 mm
Height	123.4 mm
Depth	57 mm
Note on dimensions	with connectors

Material specifications

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Color	green
Housing material	PA 6.6-FR

Environmental and real-life conditions

Ambient conditions

Ambient temperature (operation)	-25 °C ... 60 °C
Degree of protection	IP20
Air pressure (operation)	795 hPa ... 1080 hPa (up to 2000 m above sea level)
Air pressure (storage/transport)	66 kPa ... 108 kPa (up to 3500 m above sea level)
Ambient temperature (storage/transport)	-25 °C ... 85 °C
Permissible humidity (operation)	95 % (non-condensing)
Permissible humidity (storage/transport)	95 %

Approval data

CE

Certificate	CE-compliant
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UL, USA / Canada

Identification	508 Listed
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Wireless approval, Europe

Note	RED 2014/53/EU
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Wireless approval USA, FCC

Identification	YG3ADIOMUX
Note	FCC directive, part 15.247

Wireless approval India, WPC

Certificate	NR-ETA/5957
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Wireless approval Japan, MIC

Identification	Japan MIC (RF) ID:202-LSF002
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Wireless approval Canada, IC

Certificate	4720B-ADIOMUX
Note	ISC directive RSS 210

Wireless approval Mexico, IFT

Certificate	IFT RCPPHIL19-2130
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Wireless approval South Africa, ICASA

Certificate	TA-2006/032
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KC approval for South Korea

Certificate	MSIP-CRI-PCK-2884208
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EMC data

Electromagnetic compatibility	Conformance with EMC Directive 2014/30/EU
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Electrostatic discharge

Standards/regulations	EN 61000-4-2
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Electrostatic discharge

Contact discharge	± 6 kV (Test Level 3)
Discharge in air	± 8 kV (Test Level 3)
Comments	Criterion B

Electromagnetic HF field

Standards/regulations	EN 61000-4-3
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Electromagnetic HF field

Frequency range	26 MHz ... 3 GHz (Test Level 3)
Field intensity	10 V/m
Comments	Criterion A

Fast transients (burst)

Standards/regulations	EN 61000-4-4
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Fast transients (burst)

Input	± 2 kV (Test Level 3)
Signal	± 2 kV (Signal line)
Comments	Criterion B

Surge current load (surge)

Standards/regulations	EN 61000-4-5
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Surge current load (surge)

Input	± 0.5 kV (symmetrical) ± 1 kV (asymmetrical)
Signal	± 1 kV (Signal line, asymmetrical)
Comments	Criterion B

Conducted interference

Standards/regulations	EN 61000-4-6
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Conducted interference

Frequency range	0.15 MHz ... 80 MHz
Comments	Criterion A
Voltage	10 V

Emitted interference

Emitted radio interference in acc. with EN 55011	EN 55016-2-3 Class A industrial applications
Criterion A	Normal operating behavior within the specified limits.
Criterion B	Temporary impairment to operational behavior that is corrected by the device itself.

Standards and regulations

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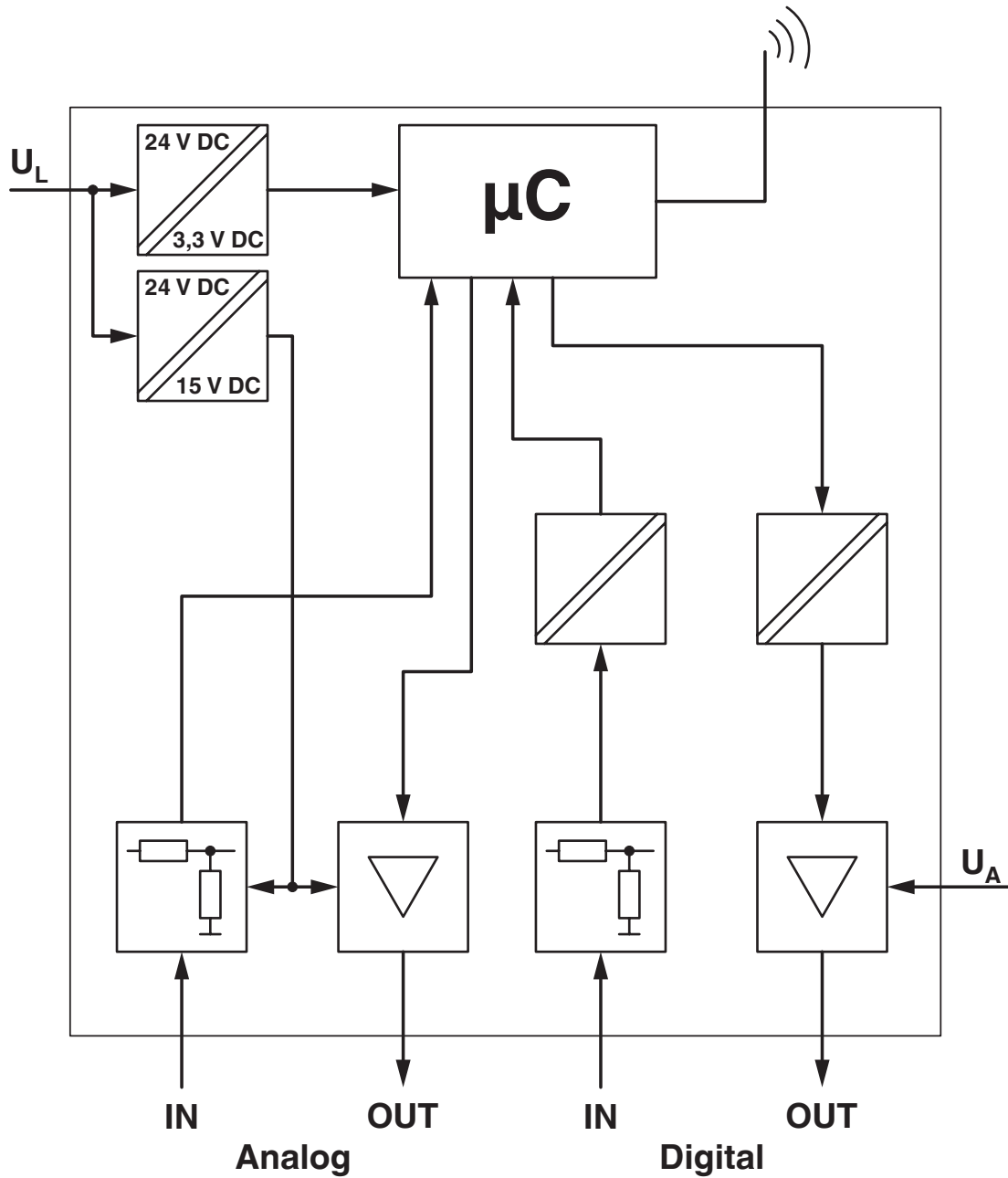
Protection class	III
Free from substances that could impair the application of coating	according to P-VW 3.10.7 57 65 0 VW-AUDI-Seat central standard
Standards/specifications	EN 300328
	EN 61000-6-4
	EN 61000-6-2
	EN 62311
	EN 60950

Mounting

Mounting type	DIN rail mounting
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Drawings

Block diagram



Basic circuit diagram

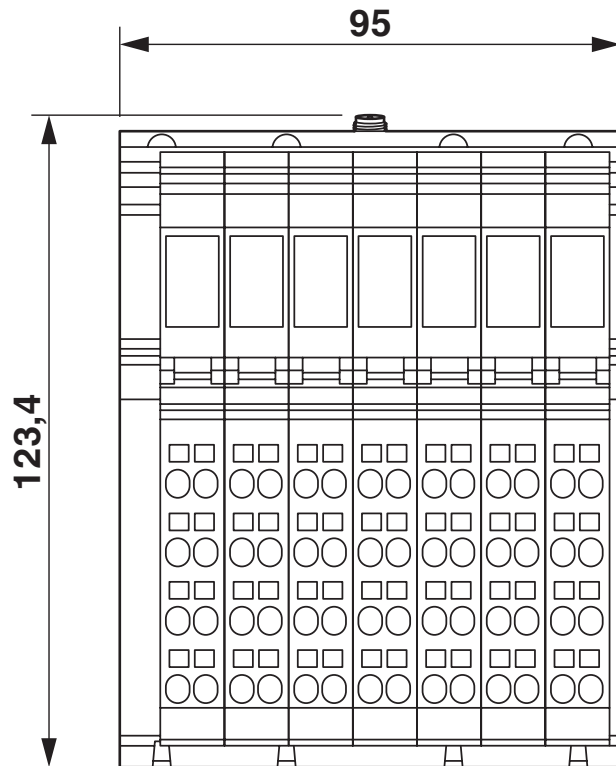
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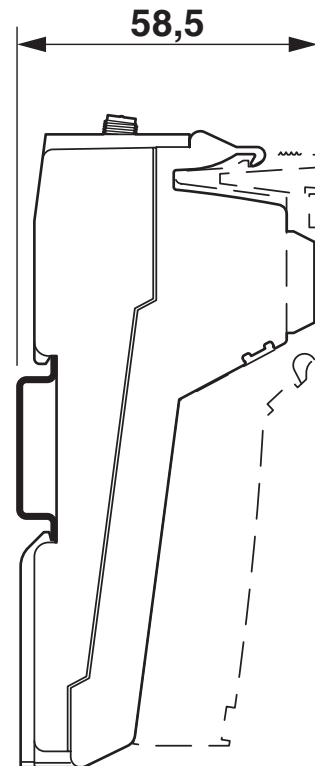
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Dimensional drawing



Dimensional drawing

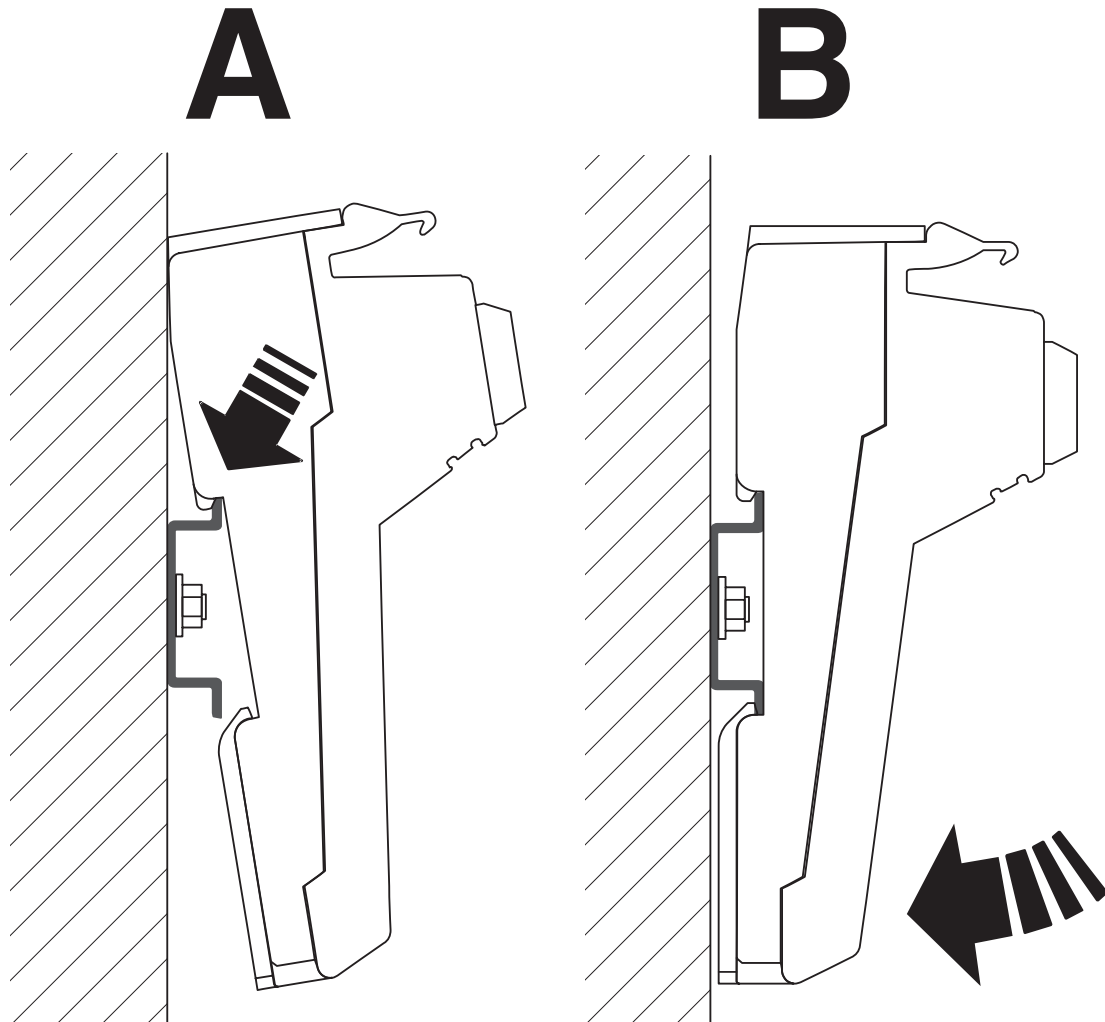


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Schematic diagram



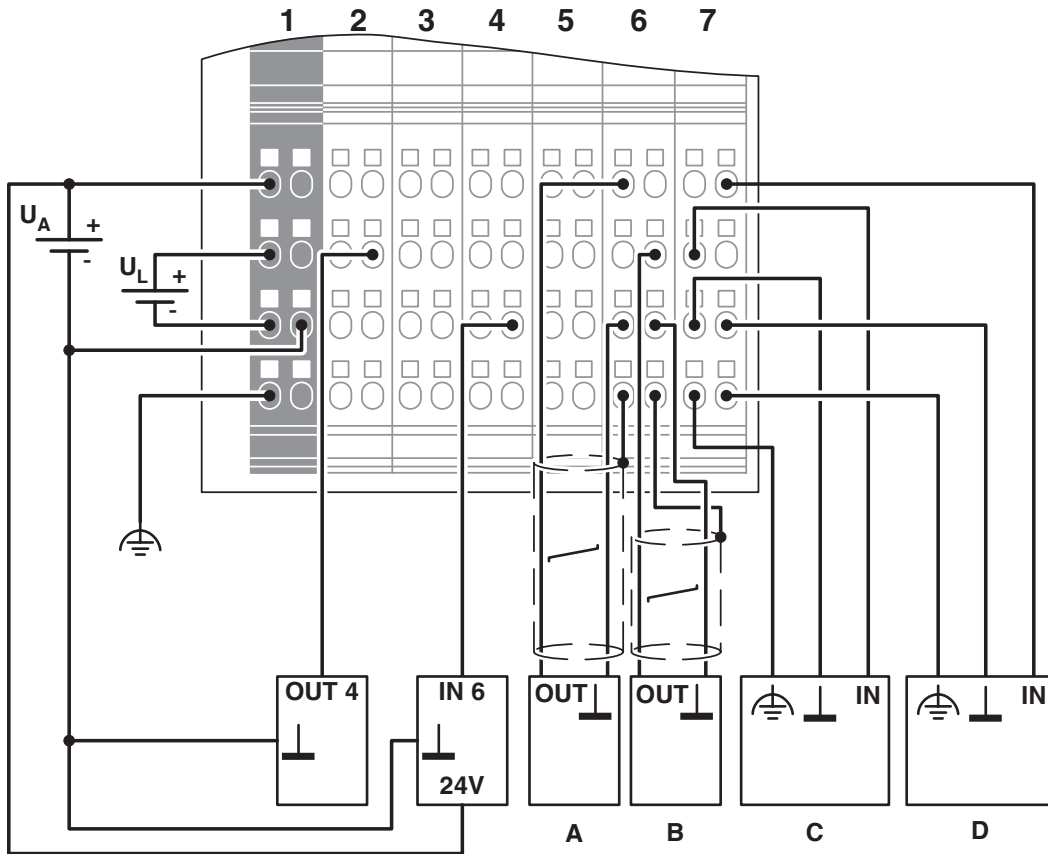
Mounting

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Connection diagram



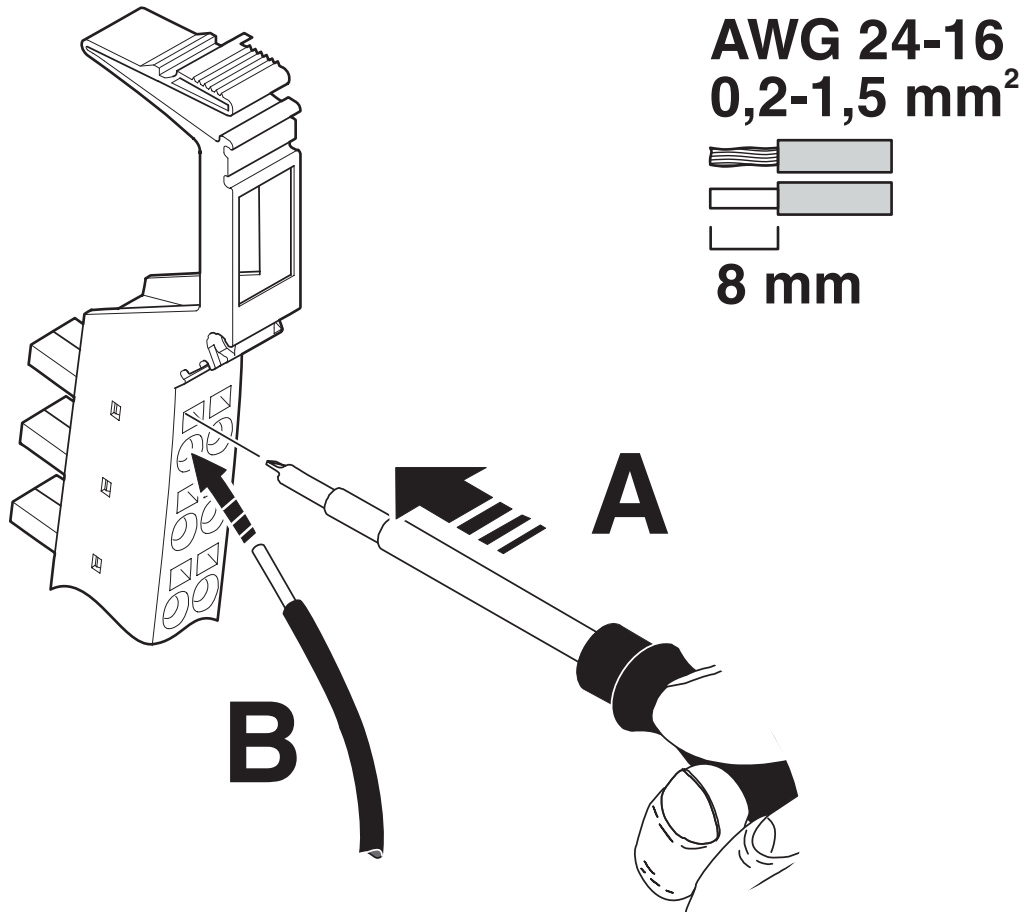
Device connections

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Schematic diagram



Connecting cables

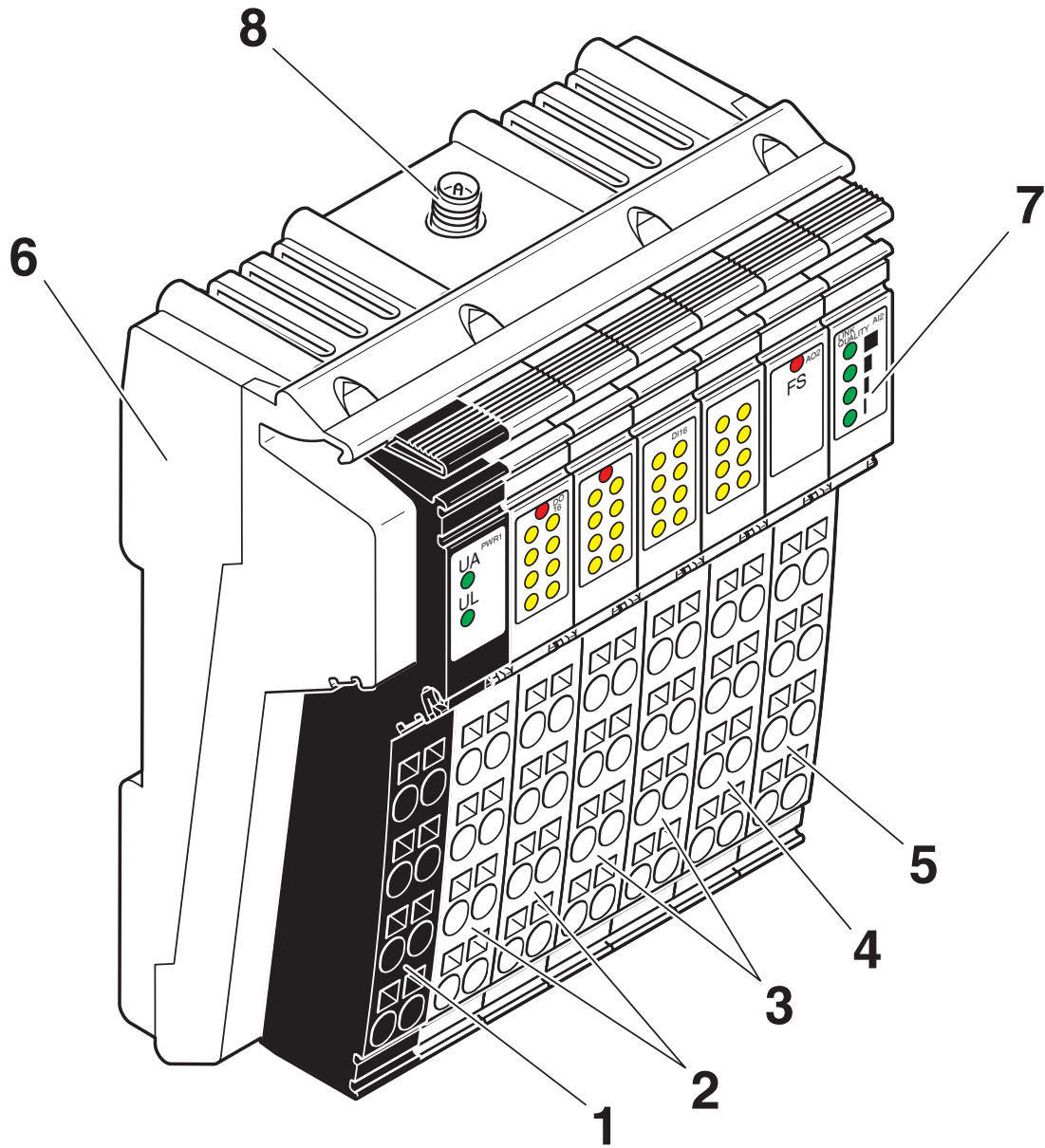
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Schematic diagram



Function elements

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Approvals



UL Listed

Approval ID: FILE E 140324



cUL Listed

Approval ID: FILE E 140324

FCC

Approval ID: YG3ADIOMUX

Industry Canada

Approval ID: 4720B-ADIOMUX



MIC

Approval ID: 202-LSF002

cULus Listed

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Classifications

ECLASS

ECLASS-9.0	27242602
ECLASS-10.0.1	27242602
ECLASS-11.0	27242602

ETIM

ETIM 8.0	EC001597
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UNSPSC

UNSPSC 21.0	32151600
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Environmental Product Compliance

REACH SVHC	Lead 7439-92-1
China RoHS	Environmentally Friendly Use Period = 50 years
	For information on hazardous substances, refer to the manufacturer's declaration available under "Downloads"

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Accessories

Inline shield connector

Inline shield connector - IB IL SCN 6-SHIELD-TWIN - 2740245

<https://www.phoenixcontact.com/pc/products/2740245>

Inline shield connector



Inline connector

Inline connector - IB IL SCN-PWR IN-CP - 2727637

<https://www.phoenixcontact.com/pc/products/2727637>

Connector, colored, for Inline power and segment terminal blocks



Inline connector

Inline connector - IB IL SCN-8 - 2726337

<https://www.phoenixcontact.com/pc/products/2726337>

Connector, for digital 1, 2 or 8-channel Inline terminals



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Labeling field

Labeling field - IB IL FIELD 2 - 2727501

<https://www.phoenixcontact.com/pc/products/2727501>

Labeling field, width: 12.2 mm



Insert strip

Insert strip - ESL 62X10 - 0809492

<https://www.phoenixcontact.com/pc/products/0809492>

Insert strip, Sheet, white, unlabeled, can be labeled with: Office printing systems:
Laser printer, mounting type: insert, lettering field size: 62 x 10 mm, Number of
individual labels: 72



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Flat zack marker sheet

Flat zack marker sheet - ZBFM 6/WH:UNBEDRUCKT - 0803618

<https://www.phoenixcontact.com/pc/products/0803618>

Flat zack marker sheet, Sheet, white, unlabeled, can be labeled with: CMS-P1-PLOTTER, PLOTMARK, mounting type: snapped, for terminal block width: 6.2 mm, lettering field size: 5 x 5.5 mm, Number of individual labels: 100



End clamp

End clamp - CLIPFIX 35-5 - 3022276

<https://www.phoenixcontact.com/pc/products/3022276>

Quick mounting end clamp for NS 35/7,5 DIN rail or NS 35/15 DIN rail, with marking option, with parking option for FBS...5, FBS...6, KSS 5, KSS 6, width: 5.15 mm, color: gray



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Antenna

Antenna - ANT-OMNI-2459-04 - 1284780

<https://www.phoenixcontact.com/pc/products/1284780>



Compact omnidirectional antenna, 2.4 GHz/5 GHz, gain: 2 dBi/2.5 dBi, polarization: linear, opening angle: h 360°, degree of protection: IP68, connection: N (male), corresponding connecting cable for control cabinet feed-through (Item No. 2701402)

Antenna

Antenna - RAD-ISM-2400-ANT-OMNI-2-1-RSMA - 2701362

<https://www.phoenixcontact.com/pc/products/2701362>



Omnidirectional antenna, 2.4 GHz, gain: 2 dBi, polarization: linear, opening angle: h/v 360°/75°, degree of protection: IP65, connection: RSMA (male), incl. 1.5 m / 5 ft. connecting cable and mounting bracket for wall mounting

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Antenna

Antenna - RAD-ISM-2400-ANT-VAN-3-0-RSMA - 2701358

<https://www.phoenixcontact.com/pc/products/2701358>



Omnidirectional antenna with protection against vandalism, 2.4 GHz, gain: 3 dBi, polarization: linear, opening angle: h/v 360°/85°, degree of protection: IP55, connection: RSMA (male), for control cabinet mounting (optional wall mounting), incl. 1.5 m / 5 ft. connecting cable

Antenna

Antenna - RAD-ISM-2459-ANT-FOOD-6-0-N - 2702898

<https://www.phoenixcontact.com/pc/products/2702898>



Omnidirectional antenna with protection against vandalism, 2.4 GHz/5 GHz, gain: 6 dBi/8 dBi, polarization: linear, opening angle: h 360°, degree of protection: IP68, resistant to cleaning agents, connection: N (female), for control cabinet mounting

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Antenna

Antenna - ANT-OMNI-0671-02 - 1396318

<https://www.phoenixcontact.com/pc/products/1396318>



Multiband omnidirectional antenna with protection against vandalism for control cabinet mounting, frequency band: 0.6 GHz ... 7.1 GHz, gain: 2 dBi ... 4 dBi, degree of protection: IP67, shockproof: IK10, seawater-resistant, connection: N (female)

Antenna

Antenna - ANT-OMNI-0671-01 - 1396316

<https://www.phoenixcontact.com/pc/products/1396316>



Multiband omnidirectional antenna for wall or mast mounting, 0.6 GHz ... 7.1 GHz, gain: 1 dBi ... 3 dBi, degree of protection: IP67, seawater-resistant, connection: N (female), incl. mounting bracket and mast clamps

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Antenna

Antenna - RAD-ISM-2400-ANT-OMNI-6-0 - 2885919

<https://www.phoenixcontact.com/pc/products/2885919>

Omnidirectional antenna, 2.4 GHz, gain: 6 dBi, polarization: linear, opening angle: h/v 360°/30°, degree of protection: IP67, seawater-resistant, connection: N (female), incl. mounting bracket and mast clamps, ATEX and IECEx approval



Antenna

Antenna - ANT-DIR-2459-01 - 2701186

<https://www.phoenixcontact.com/pc/products/2701186>

Directional antenna, 2.4 GHz/5 GHz, gain: 9 dBi, polarization: linear, opening angle: h/v 75°/55°, degree of protection: IP67, seawater-resistant, connection: N (female), incl. mounting bracket and mast clips, ATEX and IECEx approval



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Antenna cable

Antenna cable - RAD-PIG-EF316-N-RSMA - 2701402

<https://www.phoenixcontact.com/pc/products/2701402>

Antenna cable for control cabinet feed-through, outside diameter: 3.2 mm (0.126 in.), inner conductor: stranded, attenuation: 0.6 / 0.9 / 1.4 dB at 0.9 / 2.4 / 5.8 GHz, connection: N (female) -> RSMA (male), cable length: 0.5 m (1.6 ft.)



Antenna cable

Antenna cable - RAD-PIG-RSMA/N-0.5 - 2903263

<https://www.phoenixcontact.com/pc/products/2903263>

Antenna cable, outside diameter: 5 mm (0.2 in.), inner conductor: solid, attenuation: 0.4 / 0.5 / 0.6 dB at 0.9 / 2.4 / 5.8 GHz, connection: N (male) -> RSMA (male), cable length: 0.5 m (1.6 ft.)



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Antenna cable

Antenna cable - RAD-PIG-RSMA/N-1 - 2903264

<https://www.phoenixcontact.com/pc/products/2903264>



Antenna cable, outside diameter: 5 mm (0.2 in.), inner conductor: solid, attenuation: 0.5 / 0.8 / 1.1 dB at 0.9 / 2.4 / 5.8 GHz, connection: N (male) -> RSMA (male), cable length: 1 m (3.3 ft.)

Antenna cable

Antenna cable - RAD-PIG-RSMA/N-2 - 2903265

<https://www.phoenixcontact.com/pc/products/2903265>



Antenna cable, outside diameter: 5 mm (0.2 in.), inner conductor: solid, attenuation: 0.9 / 1.3 / 2.0 dB at 0.9 / 2.4 / 5.8 GHz, connection: N (male) -> RSMA (male), cable length: 2 m (6.5 ft.)

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Antenna cable

Antenna cable - RAD-PIG-RSMA/N-3 - 2903266

<https://www.phoenixcontact.com/pc/products/2903266>



Antenna cable, outside diameter: 5 mm (0.2 in.), inner conductor: solid, attenuation: 1.2 / 2.0 / 3.0 dB at 0.9 / 2.4 / 5.8 GHz, connection: N (male) -> RSMA (male), cable length: 3 m (10 ft.)

Antenna cable

Antenna cable - RAD-PIG-RSMA/N-5 - 2702140

<https://www.phoenixcontact.com/pc/products/2702140>



Antenna cable, outside diameter: 5 mm (0.2 in.), inner conductor: solid, attenuation: 2.0 / 3.3 / 4.8 dB at 0.9 / 2.4 / 5.8 GHz, connection: N (male) -> RSMA (male), cable length: 5 m (16 ft.)

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Antenna cable

Antenna cable - RAD-CAB-EF393- 3M - 2867649

<https://www.phoenixcontact.com/pc/products/2867649>



Antenna cable, outside diameter: 10 mm (0.4 in.), inner conductor: stranded, attenuation: 1.0 / 1.8 / 3.1 dB at 0.9 / 2.4 / 5.8 GHz, connection: 2 x N (male), cable length: 3 m (10 ft.)

Antenna cable

Antenna cable - RAD-CAB-EF393- 5M - 2867652

<https://www.phoenixcontact.com/pc/products/2867652>



Antenna cable, outside diameter: 10 mm (0.4 in.), inner conductor: stranded, attenuation: 1.6 / 2.9 / 5.0 dB at 0.9 / 2.4 / 5.8 GHz, connection: 2 x N (male), cable length: 5 m (16 ft.)

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Antenna cable

Antenna cable - RAD-CAB-EF393-10M - 2867665

<https://www.phoenixcontact.com/pc/products/2867665>



Antenna cable, outside diameter: 10 mm (0.4 in.), inner conductor: stranded, attenuation: 2.9 / 5.6 / 9.9 dB at 0.9 / 2.4 / 5.8 GHz, connection: 2 x N (male), cable length: 10 m (32 ft.)

Antenna cable

Antenna cable - RAD-CAB-EF393-15M - 2885634

<https://www.phoenixcontact.com/pc/products/2885634>



Antenna cable, outside diameter: 10 mm (0.4 in.), inner conductor: stranded, attenuation: 4.3 / 8.3 / 14.8 dB at 0.9 / 2.4 / 5.8 GHz, connection: 2 x N (male), cable length: 15 m (50 ft.)

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Surge protection device

Surge protection device - CN-LAMBDA/4-5.9-BB - 2838490

<https://www.phoenixcontact.com/pc/products/2838490>



Attachment plug with Lambda/4 technology as surge protection for coaxial signal interfaces. Connection: N connectors socket-socket

Adapter

Adapter - RAD-ADP-N/F-N/F - 2867843

<https://www.phoenixcontact.com/pc/products/2867843>



Antenna adapter for control cabinet feed-through, frequency range: 0.3 GHz ... 6 GHz, degree of protection: IP65, connection: 2 x N (female)

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Adapter

Adapter - RAD-ADP-RSMA/M-RSMA/F-90 - 2904790

<https://www.phoenixcontact.com/pc/products/2904790>



Antenna adapter, frequency range: 0.3 GHz ... 6 GHz, connection: RSMA (male)
-> RSMA (female), 90° angled

Weather protection tape

Weather protection tape - RAD-TAPE-SV-19-3 - 2903182

<https://www.phoenixcontact.com/pc/products/2903182>



Vulcanizing sealing tape for external protection of adapters, cable connections,
etc. against the effects of weather, roll length: 3 m

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