

# ILB BT ADIO MUX-OMNI - Wireless set



2884208

<https://www.phoenixcontact.com/us/products/2884208>

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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, incl. omnidirectional antennas with 1.5 m cable

## 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	2884208
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	DN26
Product key	DNC662
Catalog page	Page 386 (C-6-2019)
GTIN	4046356049597
Weight per piece (including packing)	914 g
Weight per piece (excluding packing)	885 g
Customs tariff number	85176200
Country of origin	DE

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## Set consists of

### ILB BT ADIO MUX - Wireless set

2702875

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



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

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

2701362

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



Omnidirectional antenna for wall mounting, frequency band: 2.4 GHz, gain: 2 dBi, degree of protection: IP65, connection: RSMA (male), incl. 1.5 m connecting cable, mounting bracket, and mounting material

## Technical data

### Notes

#### Utilization restriction

EMC note	EMC: class A product, see manufacturer's declaration in the download area
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### Product properties

Type	Block design
Product type	Wireless module
Product family	Inline
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%)
MTBF	465 Years (Telcordia standard, 25°C temperature, 21% operating cycle (5 days a week, 8 hours a day))
	140 Years (Telcordia standard, 40°C temperature, 34.25% operating cycle (5 days a week, 12 hours a day))
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

Switch-on time	≤ 3 s (Until the wireless connection is established)
Delay time	≤ 10 ms (Latency, typical)
	≤ 800 ms (Failsafe function for wireless interruption)

### Electrical properties

Maximum power dissipation for nominal condition	2.4 W
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#### 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 (Communications power at 24 V DC, 25 °C)
	25 mA (Actuator supply, +load current Digital OUT (8 A))
Protective circuit	Polarity protection, surge protection

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## 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 $\Omega$
Voltage input signal	0 V ... 10 V
Input resistance of voltage input	130 k $\Omega$
Measured value resolution	12 bits
Protective circuit	Surge voltage; Suppressor diodes in the analog inputs, current limitation via internal protective circuit

### 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
Input frequency	$\leq 10$ Hz

## Output data

### Analog

Output name	Analog outputs
Number of outputs	2
Protective circuit	Transient protection
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	$\geq 2$ 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 (Total)
Maximum output current per channel	500 mA

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Nominal output voltage	24 V DC
Output current when switched off	≤ 10 µA (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
Overcurrent shut-down	≥ 0.7 A
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 (Total)
Maximum output current per channel	500 mA
Nominal output voltage	24 V DC
Output current when switched off	≤ 10 µA (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)
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Reverse voltage resistance to short pulses	Reverse voltage proof
Behavior with overload	Auto restart
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Behavior at voltage switch-off	The output follows the power supply without delay
Overcurrent shut-down	≥ 0.7 A

## Connection data

Conductor cross section, rigid	0.2 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>
Conductor cross section, flexible	0.2 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>
Conductor cross section, flexible [AWG]	... 16
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

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Frequency range	2.402 GHz ... 2.48 GHz (ISM bandwidth)
Frequency band	2.4 GHz
Wireless standard	Bluetooth
Transmission power	5 dBm
Receiver sensitivity	-95.00 dBm

## Signaling

### Diagnostic messages

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

### Diagnostic messages

Diagnostics	Wireless connection
Message	FS LED

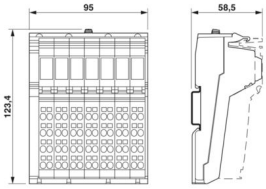
### Diagnostic messages

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

Color (Housing)	green (RAL 6021)
Material Housing	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)

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Ambient temperature (storage/transport)	-25 °C ... 85 °C
Permissible humidity (operation)	95 % (non-condensing)
Permissible humidity (storage/transport)	95 %

## Approvals

### CE

Certificate	CE-compliant
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### EAC

Identification	EAC
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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)

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Indirect discharge	± 6 kV
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
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## Criteria

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

Protection class	III
Free from substances that could impair the application of coating	in accordance with VW-AUDI-Seat central standard P-VW 3.10.7 57 65 0
Standard designation	RED directive 2014/53/EU



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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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## Classifications

### ECLASS

ECLASS-11.0	27242602
ECLASS-12.0	27242602
ECLASS-13.0	27242602

### ETIM

ETIM 9.0	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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