

Relay output LB6101H

- 2-channel
- Simulation mode for service operations (forcing)
- Mounting in Zone 2, Class I/Div.2 or in the safe area
- Permanently self-monitoring
- Output with watchdog
- Module can be exchanged under voltage





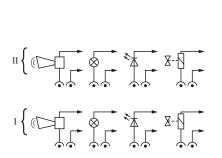
Function

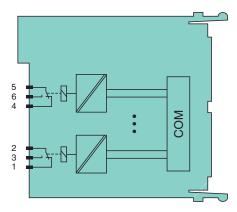
The device features 2 independent channels.

The device can be used to switch solenoids, sounders, or lamps.

The device can perform general switching operations, such as switching auxiliary power circuits. The outputs are galvanically isolated from the bus and the power supply.

Connection





Zone 2

Technical Data

| Slots | | |
|-------------------|---------|---|
| Occupied slots | | 1 |
| Supply | | |
| Connection | | backplane bus |
| Rated voltage | U_{r} | 12 V DC , only in connection with the power supplies LB9*** |
| Power dissipation | | 0.65 W |
| Power consumption | | 0.65 W |
| Internal bus | | |
| Connection | | backplane bus |
| Interface | | manufacturer-specific bus to standard com unit |
| Output | | |
| Connection | | channel I: 1-2 NC, 3; channel II: 4-5 NC, 6 |

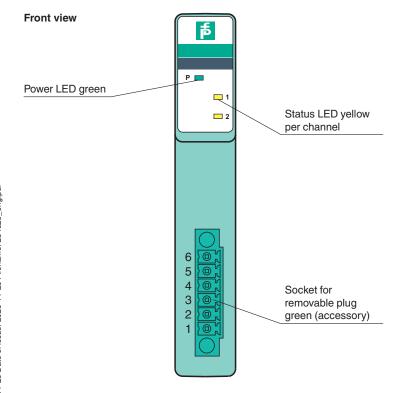
Release date: 2023-11-28 Date of issue: 2023-11-28 Filename: 254825_eng.pdf

| Number of channels 2 | Technical Data | |
|--|---------------------------|--|
| Relay Switching voltage DC: 30 V, AC: 230 V, 60 V (UL) Switching current 1 A DC / AC resistive load Switching current 30 VA / 30 W / 230 VA, 60 W (UL) Slechrical life 0.5 Mio. cycles Response time 20 ms (depending on bus cycle time) Contact Matorial Watchdog within 0.5 s the device goes in safe state, e.g. after loss of communication Digital output Number of channels 2 Field device interface Connection Relay Switching voltage DC: 30 V, AC: 230 V, 60 V (UL) Switching current 30 VA / 30 W / 230 VA Switching voltage DC: 30 V, AC: 230 V, 60 V (UL) Switching current 30 VA / 30 W / 230 VA Switching current 30 VA / 30 W / 230 VA Minimum load 1 V I mA Electrical life 0.5 Mio. cycles Contact Material AgPd gold plated Response time 20 ms (depending on bus cycle time) Watchdog within 0.5 s the device goes in safe state, e.g. after loss of communication Indicators/settings LED indication Power LED (P) green: supply Status LED (I. 2, lysilow: Signal (per channel) Coding Directive conformity Electromagnetic compatibility Directive conformity Electromagnetic compatibility Directive 214/430/EU EN 6103-278 LED voltage Directive conformity Electromagnetic compatibility Directive and Minimum lets Electromagnetic compatibility Directive and Minimum lets Electromagnetic compatibility Directive and Minimum lets Electromagnetic compatibility Electromagnetic | Minimum load | 1 V , 1 mA |
| Switching voltage DC: 30 V, AC: 230 V, 60 V (UL) Switching current 1 A DC / AC resistive load Switching current 30 VA; 30 W (230 VA; 60 W (UL) Electrical life 0.5 Mic. cycles 0.5 Mic. cycles 10 Michael Material AgPd gold plated within 0.5 s the device goes in safe state, e.g. after loss of communication Digital output Value of Connection Relay output Connection Relay output Connection Relay output Connection Relay output Octameli: 1-2 NC; 3; channel II: 4-5 NC; 6 Relay Switching voltage DC: 30 V, AC: 230 V, 60 V (UL) Switching voltage DC: 30 V, AC: 230 V, 60 V (UL) Switching current 30 VA; 30 W (230 VA Switching current 30 VA; 30 VA | | , |
| Switching power 30 VA / 30 W / 20 VA , 60 W (UL) Electrical life 0.5 Mio. cycles Response time 20 ms (depending on bus cycle time) Contact Material AgPd gold plated Watchdog within 0.5 s the device goes in safe state, e.g. after loss of communication Digital output Watchdog within 0.5 s the device goes in safe state, e.g. after loss of communication Digital output Number of channels 2 Field device interface Connection Relay output Connection Channels 1-12 NC, 3; channel II: 4-5 NC, 6 Relay Switching voltage DC: 30 V, AC: 230 V, 60 V (UL) Switching current 30 VA / 30 W / 230 VA Switching current 30 VA / 30 W / 230 VA Minimum load 1 V 1 mA Electrical life 0.5 Mio. cycles Contact Material AgPd gold plated Response time 20 ms (depending on bus cycle time) Watchdog within 0.5 s the device goes in safe state, e.g. after loss of communication Indicators/settings LED indication Status LED if J. yellow: signal (per channel) Directive conformity Electromagnetic compatibility Directive 2014/30/EU EN 61326-1:2013 Low voltage Directive 2014/30/EU EN 61326-1:2013 Environmental test Environm | • | DC: 30 V , AC: 230 V , 60 V (UL) |
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| Electrical life 0.5 Mio. cycles Response time 20 ms (depending on bus cycle time) Contact Material ApPd gold plated Watchdog within 0.5 s the device goes in safe state, e.g. after loss of communication Digital output Number of channels 2 Field device interface Connection Relay output Connection Pales 2 Switching voltage DC; 30 V, AC; 230 V, 60 V (UL) Switching outrent 30 VA; 30 W; 230 VA Switching current 30 VA; 30 W; 230 VA Minimum load 1 V I mA Electrical life 0,5 Mio. cycles Contact Material ApPd gold plated Response time 20 ms (depending on bus cycle time) Watchdog within 0.5 s the device goes in safe state, e.g. after loss of communication indicators/settings LED indication Power LED (P) green: supply Status LED (1.3) yellow: signal (per channel) Optical to conformity Electromagnetic compatibility Directive 2014/30/EU EN 61326-1:2013 Low voltage Drective 2014/33/EU EN 61008-2-14 Shock resistance EN 6008-2-12 Relative humidity EN 6008-2-12 Relative humidity EN 6008-2-12 Relative humidity EN 6008-2-12 Relative humidity 95 % non-condensing Ambient temperature 4-0 60 °C (-40 140 °F), 70 °C (non-Ex) Healthing and Shock are sistance Shock resistance In 6008-2-12 Relative humidity 95 % non-condensing Antibude max. 2000 in Brown Shock resistance Shock resistance In 6008-2-12 Relative humidity 95 % non-condensing Antibude max. 2000 in Shock resistance In 600000000000000000000000000000000000 | • | 30 VA / 30 W / 230 VA , 60 W (UL) |
| Response time 20 ms (depending on bus cycle time) Contact Material APP dold plated within 0.5 s the device goes in safe state, e.g. after loss of communication Digital output Number of channels 2 Field device interface Connection Relay output Connection channel I: 1-2 NC, 3: channel II: 4-5 NC, 6 Relay Switching voltage DC: 30 V , AC: 230 V , 60 V (UL) Switching urrent 30 VA / 30 W / 230 VA Switch power 30 VA / 30 W / 230 VA Switch power 30 VA / 30 W / 230 VA Electrical III 0.5 Mio. cycles Contact Material ApP good plated Response time 20 ms (depending on bus cycle time) Watchdog within 0.5 s the device goes in safe state, e.g. after loss of communication Indicators/settings LED indication Power LED (P) green: supply Status LED (1, 2) yellow: signal (per channel) Ording opinional mechanical coding via front socket Directive 2014/35/EU EN 61326-1:2013 Low voltage Directive 2014/35/EU EN 61326-1:2013 Low voltage Directive 2014/35/EU EN 61010-1 Conformity Electromagnetic compatibility NE 21 Electromagnetic compatibility NE | • . | |
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| Watchdog within 0.5 s the device goes in safe state, e.g. after loss of communication Digital output | Contact Material | |
| Number of channels 2 | Watchdog | |
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| Connection Connection channel I: 1-2 NC, 3; channel II: 4-5 NC, 6 Relay Switching voltage DC: 30 V, AC: 230 V, 60 V (UL) Switching current 30 VA / 30 W / 230 VA Switch power 30 VA / 30 W / 230 VA Minimum load 1 V 1 mA Electrical life 0.5 Mio. cycles Contact Material AgPd gold plated Response time 20 ms (depending on bus cycle time) Watchdog within 0.5 s the device goes in safe state, e.g. after loss of communication indicators/settings LED indication Power LED (P) green: supply Status LED (1, 2) yellow: signal (per channel) Ocding optional mechanical coding via front socket Directive conformity Electromagnetic compatibility Directive 2014/30/EU EN 61326-1:2013 Low voltage Directive 2014/35/EU EN 61010-1 Conformity Electromagnetic compatibility NE 21 Electromagnetic compatibility NE 21 Electromagnetic compatibility NE 21 Electromagnetic compatibility Shock resistance EN 60068-2-7 Vibration resistance EN 60068-2-7 Wibration resistance EN 60068-2-7 Wibration resistance EN 60068-2-7 Ambient temperature 40 60° C (-40 140°F) , 70°C (non-Ex) Ablant conditions Armbient temperature 40 65° C (-40 185°F) Relative humidity 95 % non-condensing max. 2000 m shock keepstance in equipment of shocks 18 frequency range 5 100 Hz; transition frequency: 57.56 Hz, amplitude/acceleration ± mr/m/7; 99 minutes at each resonance in environmental conditions acc. to ISA-S71,04-1985, severity Mechanical specifications | Number of channels | 2 |
| Connection channel i: 1-2 NC, 3; channel ii: 4-5 NC, 6 Relay | Field device interface | |
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| Switching voltage DC: 30 V , AC: 230 V , 60 V (UL) Switching current 30 VA / 30 W / 230 VA Minimum load 11 V 1 mA Electrical life 0.5 Mio. cycles Contact Material AgPd gold plated Response time 20 ms (depending on bus cycle time) Watchdog within 0.5 s the device goes in safe state, e.g. after loss of communication Indicators/settings LED indication Power LED (P) green: supply Status LED (1, 2) yellow: signal (per channel) Coding optional mechanical coding via front socket Directive conformity Electromagnetic compatibility Directive 2014/30/EU EN 61326-1:2013 Low voltage Directive 2014/35/EU EN 61010-1 Conformity Electromagnetic compatibility NE 21 Degree of protection IEC 60529 Environmental test EN 60068-2-14 Shock resistance EN 60068-2-17 Normaning gas EN 60068-2-42 Relative humidity EN 60068-2-78 Ambient conditions Ambient rengreture 40 60 °C (~40 140 °F), 70 °C (non-Ex) Storage temperature 40 85 °C (~40 185 °F) Belative humidity Shock resistance frequency: 57.56 Hz, amplitude/acceleration ± 0.0075 mm/1 g; 10 cycles frequency: 75.95 Hz, amplitude/acceleration ± 0.0075 mm/1 g; 10 cycles frequency: 13.2 Hz amplitude/acceleration ± 0.0075 mm/1 g; 90 minutes at each resonance Damaging gas designed for operation in environmental conditions acc. to ISA-S71.04-1985, severity level G3 Mechanical specifications | Connection | channel I: 1-2 NC, 3; channel II: 4-5 NC, 6 |
| Switching current 30 VA/30 W/230 VA Switch power 30 VA/30 W/230 VA Minimum load 1 V 1 mA Electrical life 0.5 Mio. cycles Contact Material AgPd gold plated Response time 20 ms (depending on bus cycle time) Watchdog within 0.5 s the device goes in safe state, e.g. after loss of communication Indicators/settings LED indication Power LED (P) green: supply Status LED (1, 2) yellow: signal (per channel) Coding optional mechanical coding via front socket Directive conformity Electromagnetic compatibility Directive 2014/30/EU EN 61326-1:2013 Low voltage Directive 2014/35/EU EN 61010-1 Conformity Electromagnetic compatibility NE 21 Degree of protection IEC 60529 Environmental test EN 60068-2-14 Shock resistance EN 60068-2-27 Vibration resistance EN 60068-2-42 Relative humidity EN 60068-2-42 Relative humidity EN 60068-2-78 Ambient compilities Ambient compilities Stock resistance Shock registance Shock duration 11 ms, shock amplitude 15 g, number of shocks 18 Frequency range 10 150 Hz, transition frequency: 57.56 Hz, amplitude/acceleration ± 0.0075 mm/1 g; 10 cycles frequency range 5 100 Hz, transition frequency: 57.56 Hz, amplitude/acceleration ± 0.0075 mm/1 g; 90 minutes at each resonance designed for operation in environmental conditions acc. to ISA-S71.04-1985, severity level G3 Mechanical specifications | Relay | |
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| Switch power 30 VA / 30 W / 230 VA Minimum load 1 1 1 1 mA 1 mA 1 1 1 mA 1 1 mA 1 1 mA 1 m | Switching current | 30 VA / 30 W / 230 VA |
| Electrical life 0.5 Mio. cycles Contact Material AgPd gold plated Response time 20 ms (depending on bus cycle time) Watchdog within 0.5 s the device goes in safe state, e.g. after loss of communication Indicators/settings LED indication Power LED (P) green: supply Status LED (1, 2) yellow: signal (per channel) Coding optional mechanical coding via front socket Directive conformity Electromagnetic compatibility Directive 2014/30/EU EN 61326-1:2013 Low voltage Directive 2014/35/EU EN 61010-1 Conformity Electromagnetic compatibility Degree of protection EC 60529 Environmental test EN 60068-2-14 Shock resistance EN 60068-2-27 Vibration resistance EN 60068-2-42 Relative humidity EN 60068-2-78 Ambient conditions Ambient temperature 40 60 °C (~40 140 °F) , 70 °C (non-Ex) Storage temperature 40 65 °C (~40 145 °F) Altitude max. 2000 m Shock resistance shock typic in shock amplitude 15 g, number of shocks 18 Frequency range 6 s 100 Hz; transition frequency: 57.56 Hz, amplitude/acceleration ± mm/7 g; 30 minutes at each resonance Damaging gas designed for operation in environmental conditions acc. to ISA-S71.04-1985, severity level G3 | Switch power | 30 VA / 30 W / 230 VA |
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| Response time 20 ms (depending on bus cycle time) Watchdog within 0.5 s the device goes in safe state, e.g. after loss of communication indicators/settings LED indication Power LED (P) green: supply Status LED (1, 2) yellow: signal (per channel) Coding optional mechanical coding via front socket Directive conformity Electromagnetic compatibility Directive 2014/30/EU EN 61326-1:2013 Low voltage Directive 2014/35/EU EN 61010-1 Conformity Electromagnetic compatibility NE 21 Degree of protection IEC 60529 Environmental test EN 60068-2-14 Shock resistance EN 60068-2-27 Vibration resistance EN 60068-2-6 Damaging gas EN 60068-2-78 Ambient temperature 40 66 °C (-40 140 °F) , 70 °C (non-Ex) Shock resistance Shock resistance Shock duration 11 ms, shock amplitude 15 g, number of shocks 18 Vibration resistance Shock under the frequency: 67.56 Hz, amplitude/acceleration ± 0.075 mm/1 g; 10 cycles frequency range 5 100 Hz, transition frequency: 13.2 Hz amplitude/acceleration ± mm/0.7 g; 90 minutes at each resonance Damaging gas designed for operation in environmental conditions acc. to ISA-S71.04-1985, severity level 36 Mechanical specifications | Electrical life | 0.5 Mio. cycles |
| Watchdog within 0.5 s the device goes in safe state, e.g. after loss of communication Indicators/settings LED indication Power LED (P) green: supply Status LED (1, 2) yellow: signal (per channel) Coding optional mechanical coding via front socket Directive conformity Electromagnetic compatibility Directive 2014/30/EU EN 61326-1:2013 Low voltage Directive 2014/35/EU EN 61010-1 Conformity Electromagnetic compatibility Degree of protection IEC 60529 Environmental test EN 60068-2-14 Shock resistance EN 60068-2-27 Vibration resistance EN 60068-2-27 Vibration resistance EN 60068-2-42 Relative humidity EN 60068-2-42 Relative humidity EN 60068-2-78 Ambient conditions Ambient temperature -40 60 °C (-40 140 °F) , 70 °C (non-Ex) Storage temperature -40 65 °C (-40 185 °F) Relative humidity 95 % non-condensing Altitude max. 2000 m Shock resistance frequency range 10 150 Hz; transition frequency: 57.56 Hz, amplitude/acceleration ± 0.075 mm/1 g; 10 cycles frequency range 3 100 Hz; transition frequency: 57.56 Hz, amplitude/acceleration ± 0.075 mm/1 g; 10 cycles frequency range 3 100 Hz; transition frequency: 13.2 Hz amplitude/acceleration ± 0.075 mm/1 g; 10 cycles frequency range 3 100 Hz; transition frequency: 13.2 Hz amplitude/acceleration ± 0.075 mm/1 g; 10 cycles frequency and stack resonance designed for operation in environmental conditions acc. to ISA-S71.04-1985, severity level G3 Mechanical specifications | Contact Material | AgPd gold plated |
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| LED indication Power LED (P) green: supply Status LED (1, 2) yellow: signal (per channel) Coding optional mechanical coding via front socket Directive conformity Electromagnetic compatibility Directive 2014/30/EU EN 61326-1:2013 Low voltage Directive 2014/35/EU EN 61010-1 Conformity Electromagnetic compatibility NE 21 Degree of protection IEC 60529 Environmental test EN 60068-2-14 Shock resistance EN 60068-2-27 Vibration resistance EN 60068-2-6 Damaging gas EN 60068-2-42 Relative humidity EN 60068-2-78 Ambient conditions Ambient temperature 40 60 °C (-40 140 °F) , 70 °C (non-Ex) Storage temperature 40 85 °C (-40 185 °F) Relative humidity 95 % non-condensing Altitude max. 2000 m Shock resistance frequency range 10 150 Hz; transition frequency: 57.56 Hz, amplitude/acceleration ± mm/0.7 g; 90 minutes at each resonance designed for operation in environmental conditions acc. to ISA-S71.04-1985, severity level G3 Mechanical specifications | Watchdog | within 0.5 s the device goes in safe state, e.g. after loss of communication |
| Status LED (1, 2) yellow: signal (per channel) Directive conformity Electromagnetic compatibility Directive 2014/30/EU EN 61326-1:2013 Low voltage Directive 2014/35/EU EN 61010-1 Conformity Electromagnetic compatibility Degree of protection IEC 60529 Environmental test EN 60068-2-14 Shock resistance EN 60068-2-27 Vibration resistance EN 60068-2-42 Relative humidity EN 60068-2-42 Relative humidity EN 60068-2-78 Ambient conditions Ambient temperature -40 85 °C (-40 140 °F) , 70 °C (non-Ex) Storage temperature -40 85 °C (-40 185 °F) Relative humidity max. 2000 m Altitude max. 2000 m Shock resistance Shock type I, shock duration 11 ms, shock amplitude 15 g, number of shocks 18 frequency range 10 150 Hz; transition frequency: 57.56 Hz, amplitude/acceleration ± mm/0.7 g; 90 minutes at each resonance Mechanical specifications | Indicators/settings | |
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| Damaging gas designed for operation in environmental conditions acc. to ISA-S71.04-1985, severity level G3 Mechanical specifications | | frequency range 10 150 Hz; transition frequency: 57.56 Hz, amplitude/acceleration ± 0.075 mm/1 g; 10 cycles frequency range 5 100 Hz; transition frequency: 13.2 Hz amplitude/acceleration ± 1 |
| | Damaging gas | designed for operation in environmental conditions acc. to ISA-S71.04-1985, severity |
| Degree of protection IP20 when mounted on backplane | Mechanical specifications | |
| | Degree of protection | IP20 when mounted on backplane |

Technical Data

| Connection | removable front connector with screw flange (accessory) wiring connection via spring terminals (0.14 1.5 mm²) or screw terminals (0.08 1.5 mm²) |
|---|---|
| Mass | approx. 90 g |
| Dimensions | 16 x 100 x 102 mm (0.63 x 3.9 x 4 inch) |
| Data for application in connection with hazar | rdous areas |
| Certificate | PF 08 CERT 1234 X |
| Marking | |
| Galvanic isolation | |
| Output/power supply, internal bus | safe electrical isolation acc. to EN 61010-1 |
| Directive conformity | |
| Directive 2014/34/EU | EN IEC 60079-0:2018+AC:2020 EN 60079-15:2010 |
| International approvals | |
| ATEX approval | PF 08 CERT 1234 X |
| UL approval | E106378 |
| IECEx approval | |
| IECEx certificate | IECEx BVS 09.0037X |
| IECEx marking | Ex nA nC IIC T4 Gc |
| General information | |
| System information | The module has to be mounted in appropriate backplanes (LB9***) in Zone 2 or outside hazardous areas. Here, observe the corresponding declaration of conformity. For use in hazardous areas (e. g. Zone 2 or Zone 22) the module must be installed in an appropriate enclosure. |
| Supplementary information | EC-Type Examination Certificate, Statement of Conformity, Declaration of Conformity, Attestation of Conformity and instructions have to be observed where applicable. For information see www.pepperl-fuchs.com. |

Assembly



LB6101H