

## Distributed I/O device - IBS RL 24 DO 8/8-2A-T - 2731856

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Digital output device for INTERBUS; twisted pair with 500 kbaud, 8 outputs (24 V DC, 2 A), actuator connection via 5-pos. M12 female connectors, rugged metal housing, IP67 protection



The illustration shows version IBS RL 24 DO 8/8-2A-LK-2MBD

### Product description

INTERBUS Ruggedline modules are provided for harsh ambient conditions or in the case of high requirements regarding system diagnostics. To ensure maximum availability, these modules are equipped with a zinc die-cast housing (IP67). Therefore, they can be installed in the direct vicinity of welding tongs.

Each Ruggedline module consists of a mounting plate and an electronics module. The electronics module is snapped onto the mounting plate and fixed with two screws if necessary.

I/O errors can be clearly localized by means of extended diagnostics. Short-circuits of the power supply of the sensors, for example, are reported in groups of 4 inputs. And, in the case of a short-circuit at an output, the respective output is even reported directly. This information will be made available to the controller and displayed at the module.

In the case of modules with fiber optic connection, the diagnostics capability even goes one step further. By using the latest fiber optic technology, the quality of the transmission path is permanently ascertained and optimally adjusted. This information is available to the controller and at the module.

Due to these additional features, slow deterioration of the transmission path can be detected before errors occur during transmission or transmission is interrupted.

In the case of Ruggedline modules, the bus medium can be selected. Apart from versions with fiber optic connection (polymer fiber), there are modules which are used with twisted pair cables. The bus medium can be changed from FO installation to a copper medium at any time using the corresponding plug-in adapters.

The bus is connected by means of IP67 plug-in plugs, which transport both the bus signal and the power supply to the modules. For easy preparation, the power supply cable is connected to the plug using the QUICKON fast connection method, and connection of the fiber optic cable is made using a simple cutting and assembly tool; additional polishing is not necessary.

If a fiber optic bus cable is assembled by the user, e.g. the bridge between 2 modules, it must be at least one meter long. For shorter cable bridges, please use only cable bridges from Phoenix Contact.

### Product Features

- Rugged metal housing
- Comprehensive diagnostic functions
- M12 connector for I/O devices
- Rugged Line connector for INTERBUS, either with fiber optic or twisted pair, and supply voltage



### Key commercial data

|              |      |
|--------------|------|
| Packing unit | 1 pc |
|--------------|------|

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|                                      |           |
|--------------------------------------|-----------|
| Weight per Piece (excluding packing) | 834.7 GRM |
| Custom tariff number                 | 85389091  |
| Country of origin                    | Germany   |

### Technical data

#### Note

|                         |   |
|-------------------------|---|
| Utilization restriction | EMC: class A product, see manufacturer's declaration in the download area |
|-------------------------|---|

#### Dimensions

|                    |  |
|--------------------|--|
| Width              | 179 mm                                 |
| Height             | 67 mm                                  |
| Depth              | 71 mm                                  |
| Note on dimensions | With bus connectors and mounting plate |

#### Ambient conditions

|  |  |
|--|--|
| Ambient temperature (operation)          | -20 °C ... 55 °C   |
| Ambient temperature (storage/transport)  | -25 °C ... 70 °C   |
| Permissible humidity (operation)         | 100 %  |
| Permissible humidity (storage/transport) | 95 % (non-condensing)                                    |
| Air pressure (operation)                 | 860 hPa ... 1080 hPa (up to 1500 m above mean sea level) |
| Air pressure (storage/transport)         | 660 hPa ... 1080 hPa (up to 3500 m above mean sea level) |
| Degree of protection                     | IP65/IP67  |

#### General

|                               |   |
|-------------------------------|---|
| Weight                        | 720 g   |
| Note on weight specifications | Without plug or mounting plate                                    |
| Mounting type                 | Wall mounting   |
| Note                          | Seal unused slots/connections to ensure the degree of protection. |
| Test section                  | Between bus logic and outputs 500 V AC 50 Hz 1 min                |

#### Interfaces

|                      |              |
|----------------------|--------------|
| Fieldbus system      | INTERBUS     |
| Designation          | INTERBUS     |
| Connection method    | Twisted pair |
| Transmission speed   | 500 kBit/s   |
| Transmission physics | Copper       |

#### Power supply for module electronics

|                      |  |
|----------------------|--|
| Supply voltage       | 24 V DC  |
| Supply voltage range | 18.5 V DC ... 32 V DC (including ripple)                     |
| Ripple               | Max 3.6 V <sub>SS</sub> within the permissible voltage range |
| Supply current       | typ. 120 mA  |

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### Technical data

#### Digital outputs

|                                    |   |
|------------------------------------|---|
| Output name                        | Digital outputs   |
| Connection method                  | 2, 3-wire   |
| Number of outputs                  | 8   |
| Protective circuit                 | Electronic short-circuit/overload protection for each channel |
| Output voltage                     | 24 V DC   |
| Nominal output voltage             | 24 V  |
| Maximum output current per channel | 2 A   |
| Maximum output current per module  | 8 A   |
| Nominal load, inductive            | 48 VA (1.2 H, 12 $\Omega$ )                                   |
| Nominal load, lamp                 | 48 W  |
| Nominal load, ohmic                | 48 W  |

### Classifications

#### eCl@ss

|            |          |
|------------|----------|
| eCl@ss 4.0 | 27250302 |
| eCl@ss 4.1 | 27250302 |
| eCl@ss 5.0 | 27250302 |
| eCl@ss 5.1 | 27242604 |
| eCl@ss 6.0 | 27242604 |
| eCl@ss 7.0 | 27242604 |
| eCl@ss 8.0 | 27242604 |

#### ETIM

|          |          |
|----------|----------|
| ETIM 2.0 | EC001430 |
| ETIM 3.0 | EC001599 |
| ETIM 4.0 | EC001599 |
| ETIM 5.0 | EC001599 |

#### UNSPSC

|               |          |
|---------------|----------|
| UNSPSC 6.01   | 43172015 |
| UNSPSC 7.0901 | 43201404 |
| UNSPSC 11     | 43172015 |
| UNSPSC 12.01  | 43201404 |
| UNSPSC 13.2   | 43201404 |

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## Approvals

### Approvals

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#### Approvals

UL Recognized / cUL Recognized / INTERBUS CLUB / cULus Recognized

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#### Ex Approvals


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#### Approvals submitted


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### Approval details

|  |      |
|--|------|
| UL Recognized  |      |
| Nominal current IN   | 2 A  |
| Nominal voltage UN   | 24 V |

|  |      |
|--|------|
| cUL Recognized  |      |
| Nominal current IN   | 2 A  |
| Nominal voltage UN   | 24 V |

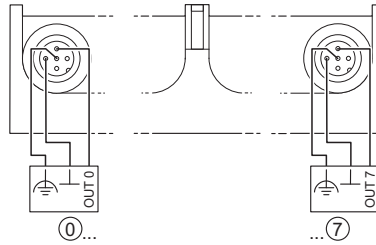
|               |
|---------------|
| INTERBUS CLUB |
|---------------|

|  |
|--|
| cULus Recognized  |
|--|

## Drawings

## Distributed I/O device - IBS RL 24 DO 8/8-2A-T - 2731856

Connection diagram



Компания «Океан Электроники» предлагает заключение долгосрочных отношений при поставках импортных электронных компонентов на взаимовыгодных условиях!

Наши преимущества:

- Поставка оригинальных импортных электронных компонентов напрямую с производств Америки, Европы и Азии, а так же с крупнейших складов мира;
- Широкая линейка поставок активных и пассивных импортных электронных компонентов (более 30 млн. наименований);
- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
- Помощь Конструкторского Отдела и консультации квалифицированных инженеров;
- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
- Поставка электронных компонентов под контролем ВП;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- При необходимости вся продукция военного и аэрокосмического назначения проходит испытания и сертификацию в лаборатории (по согласованию с заказчиком);
- Поставка специализированных компонентов военного и аэрокосмического уровня качества (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Actel, Aeroflex, Peregrine, VPT, Syfer, Eurofarad, Texas Instruments, MS Kennedy, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits, General Dynamics и др.);

Компания «Океан Электроники» является официальным дистрибьютором и эксклюзивным представителем в России одного из крупнейших производителей разъемов военного и аэрокосмического назначения «JONHON», а так же официальным дистрибьютором и эксклюзивным представителем в России производителя высокотехнологичных и надежных решений для передачи СВЧ сигналов «FORSTAR».



## JONHON

«JONHON» (основан в 1970 г.)

Разъемы специального, военного и аэрокосмического назначения:

(Применяются в военной, авиационной, аэрокосмической, морской, железнодорожной, горно- и нефтедобывающей отраслях промышленности)

«FORSTAR» (основан в 1998 г.)

ВЧ соединители, коаксиальные кабели, кабельные сборки и микроволновые компоненты:

(Применяются в телекоммуникациях гражданского и специального назначения, в средствах связи, РЛС, а так же военной, авиационной и аэрокосмической отраслях промышленности).



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