LOGI-Output 8
8-Channel Relay Output Module

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1 Introduction

The LOGI-Output 8 is an 8-channel relay output module. It connects the LOGI-X system to the external safety devices or alarm indicators. With LOGI-Output 8, the alarms, detected by the evaluation unit LOGI-Command, can be forwarded to external systems.

2 Safety instructions

When installing the LOGI-Output 8, it is important to comply with the following safety instructions:

- The LOGI-Output 8 is only designed for use in the LOGI-X system.
- Do not make any changes to the LOGI-Output 8 without the prior approval of the manufacturer.
- With the exception of functional testing, all installation and maintenance work must be carried out with the power disconnected.
- The installation, operation and maintenance of the LOGI-Output 8 must be carried out by expert personnel only. Technical expertise must be acquired by attending regular training courses.
- Operators, installers and service technicians must observe all applicable safety regulations. This also applies to local safety and accident prevention regulations not specified in this technical documentation.

The safety instructions in this manual are marked as follows:

⚠️ If you do not comply with the safety instructions, there is a risk of accident, or the LOGI-X system may be damaged.

🔍 Useful instructions in this manual that should be observed are written in italics and identified by this symbol.
3 Installation

3.1 Requirements

In order to connect the LOGI-Output 8 to the LOGI-Command, a LOGI display must be available.

3.2 Mounting

The LOGI-Output 8 is designed for installation in a control cabinet.

3.3 Design and construction

The following figure shows the location of the connections, LEDs, and control elements on the LOGI-Output 8 board.

![LOGI-Output 8 design](image)

**Figure 1: LOGI-Output 8 design**

3.3.1 Device information

(1) The adhesive label showing the device number is a unique device ID. During configuration, this device number is required in order to communicate with the device.

3.3.2 Connections

(2) 24-pin screw terminal for connection to the relay contacts
(3) 3-pin screw terminal for connection to the power supply
(4) 3-pin screw terminal for connection to the communication system
3.3.3 Control elements

(5) 2-pin pin strip to activate a terminating impedance for the RS-485 interface. Generally speaking, communication in the RS-485 network should be interference free without activating terminating impedances (jumper not inserted) because the data rate is comparatively low.

(6) 4-way DIP switch, currently without function.

3.3.4 LEDs

(7) Transmit LED (red)
(8) Receive LED (red)
(9) Output LEDs (red) – one each per output
(10) Status LED (yellow)
(11) Relay LEDs (red) – one each per relay
(12) Operating voltage LED (green)

3.4 Electrical connection

For the electrical connection see the following figure:

Figure 2: Wiring diagram for connecting LOGI-Output 8 and CUPID to LOGI-Command
3.4.1 Power supply connection

The power supply (230 VAC) must be supplied using fixed wiring. The wires for the power supply are connected to the screw terminals marked with PE, N and L.

![Screw terminal for power supply](image)

Figure 3: Screw terminal for power supply

3.4.2 Connection of the relay contacts

The LOGI-Output 8 has eight relays each of which has a potential-free changeover contact. External safety devices or alarm indicators may be connected to the terminals for the 24-pin screw terminal marked relay 1 to 8 (see figure below). The LOGI-Command alarms may be assigned randomly to the relays. Whether the contact should be used as a normally open (NO) contact or as a normally closed (NC) contact depends on the relevant application and the relay mode.

![Screw terminal for relay](image)

Figure 4: Screw terminal for relay

3.4.3 Connection to the LOGI-Command

A maximum of eight LOGI-Output 8 can be connected simultaneously to the LOGI-Command. A galvanically separated RS-485 interface is used for communication between the LOGI-Display and the LOGI-Output 8. The communication cable is connected to terminals A, B and GND of the 3-pin screw terminal.

![Screw terminal for communication](image)

Figure 5: Screw terminal for communication
4 Configuration
The configuration of the LOGI-Output 8 is described in the documentation for the LOGI-Control software.

5 Fault diagnosis
The LOGI-Output 8 has several LEDs which makes it easier to diagnose problems. For the position of the LEDs, please refer to figure 1.

5.1 Transmit LED (7) / Receive LED (8)
The 2 red communication LEDs show whether data are received or transmitted by the LOGI-Output 8.

\[\text{In normal conditions, the communication LEDs should blink at regular intervals.}\]

5.2 Output LEDs (9)
The 8 red LEDs for the outputs show whether an output has been activated or deactived. Additionally these LEDs show active relay delays. The following table lists the possible statuses for the output LEDs and explains their meaning.

<table>
<thead>
<tr>
<th>Output LED</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>On</td>
<td>Output activated</td>
</tr>
<tr>
<td>Off</td>
<td>Output deactivated</td>
</tr>
<tr>
<td>Blinking slowly</td>
<td>Relay delay</td>
</tr>
</tbody>
</table>

Table 1: Output LEDs
5.3 Status LED (10)
The yellows status LED provides information regarding the status of communication between the LOGI display and the LOGI-Output 8.
The following table lists the possible statuses for the status LED and explains their meaning.

<table>
<thead>
<tr>
<th>Status LED</th>
<th>Error</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>On</td>
<td>No error</td>
<td>Correct data is being received regularly</td>
</tr>
<tr>
<td>Blinking continuously</td>
<td>No communication</td>
<td>No correct data received since last power-up</td>
</tr>
<tr>
<td>Blinks briefly 1 x</td>
<td>Interruption in communi-</td>
<td>No correct data received for more than 1 minute</td>
</tr>
<tr>
<td></td>
<td>cation</td>
<td></td>
</tr>
<tr>
<td>Blinks briefly 2 x</td>
<td>Hold time exceeded</td>
<td>No correct data received for more than the</td>
</tr>
<tr>
<td></td>
<td></td>
<td>configured hold time</td>
</tr>
</tbody>
</table>

Table 2: Status LED

⚠️ Under normal conditions the status LED should remain on constantly.

5.4 Relay LEDs (11)
The 8 red LEDs for the relays indicate whether a relay has been energised or deenergised.

⚠️ In the relay mode “standard”, the output LEDs and the relay LEDs display the same status. In the relay mode “fail-safe”, the output LEDs and the relay LEDs display opposing statuses.

5.5 Operating voltage LED (12)
The green operating voltage LED indicates whether the LOGI-Output 8 is being supplied with power. When the power supply is switched on, the operating voltage LED comes on permanently. If a LED is flickering or goes out, this indicates a problem with the power supply or the power supply unit.
6   Technical data

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Dimensions:</strong></td>
<td>H 60 x W 180 x D 130 [mm] (excluding cable glands)</td>
</tr>
<tr>
<td><strong>Casing protection:</strong></td>
<td>IP66</td>
</tr>
<tr>
<td><strong>Ambient temperature:</strong></td>
<td>0 °C ... +40 °C</td>
</tr>
<tr>
<td><strong>Power supply:</strong></td>
<td>230 VAC ±10 %, 50 - 60 Hz, ≤ 4 VA</td>
</tr>
<tr>
<td><strong>Communication:</strong></td>
<td>1 x RS-485, galvanically isolated, 3-pin screw terminal with</td>
</tr>
<tr>
<td></td>
<td>ground connection (GND) for connection to LOGI-Command</td>
</tr>
<tr>
<td><strong>Outputs:</strong></td>
<td>8 relays each with a potential-free changeover contact</td>
</tr>
<tr>
<td><strong>Load rating of the contacts:</strong></td>
<td>AC: U ≤ 250 VAC, I ≤ 3 A, P ≤ 300 VA, cos φ ≥ 0.7</td>
</tr>
<tr>
<td></td>
<td>DC: U ≤ 24 VDC, I ≤ 2 A, P ≤ 50 VA</td>
</tr>
</tbody>
</table>

Table 3: Technical data

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EU-Konformitätserklärung
EU Declaration of Conformity
Déclaration UE de Conformité

FAFNIR GmbH
Schnackenburgallee 149 c
22525 Hamburg
Deutschland / Germany / Allemagne

eklärt als Hersteller in alleiniger Verantwortung, dass das Produkt
declares as manufacturer under sole responsibility that the product
déclare sous sa seule responsabilité en qualité de fabricant que le produit

Ausgangsmodul / Output Module / Module de sortie

LOGI-Output

den Vorschriften der europäischen Richtlinien
complies with the regulations of the European directives
est conforme aux réglementations des directives européennes suivantes

| 2011/65/EU | Beschränkung der Verwendung bestimmter gefährlicher Stoffe in Elektro- und Elektronikgeräten | RoHS |
| 2011/65/EU | Restriction of the use of certain hazardous substances in electrical and electronic equipment | RoHS |
| 2011/65/UE | Limitation de l'utilisation de certaines substances dangereuses dans les équipements électriques et électroniques | RoHS |
| 2014/30/EU | Elektromagnetische Verträglichkeit | EMV |
| 2014/30/EU | Electromagnetic compatibility | EMC |
| 2014/30/UE | Compatibilité électromagnétique | CEM |
| 2014/35/EU | Bereitstellung elektrischer Betriebsmittel zur Verwendung innerhalb bestimmter Spannungsgrenzen auf dem Markt | NSRL |
| 2014/35/EU | Making available on the market of electrical equipment designed for use within certain voltage limits | LVD |
| 2014/35/UE | Mise à disposition sur le marché du matériel électrique destiné à être employé dans certaines limites de tension | DBT |

durch die Anwendung folgender harmonisierter Normen entspricht
by applying the harmonised standards
par l'application des normes

RoHS / RoHS / RoHS
EMV / EMC / CEM
NSRL / LVD / DBT
EN 50581:2012
EN 61326-1:2013
EN 61010-1:2010

Das Produkt ist bestimmt als Elektro- und Elektronikgerät der RoHS-
The product is determined as electrical and electronic equipment of RoHS
Le produit est déterminé comme des équipements électriques et électroniques de RoHS

Kategorie / Category / Catégorie

Überwachungs- und Kontrollinstrumenten in der Industrie /
Industrial Monitoring and Control Instruments /
Instruments de contrôle et de surveillance industriels

Das Produkt entspricht den EMV-Anforderungen
The product complies with the EMC requirements
Le produit est conforme aux exigences CEM

Störaussendung / Emission / Émission
Störfestigkeit / Immunity / D'Immunité

Hamburg, 09.09.2016
Ort, Datum / Place, Date / Lieu, Date

Geschäftsführer / Managing Director / Gérant: René Albrecht

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