INTERFACE TECHNOLOGY
TERMINATION BOARD SOLUTIONS

H-SYSTEM FOR HONEYWELL
EXPERION SERIES C GI/IO
Pepperl+Fuchs – Unbeatable for quality, selection, and performance

We have been setting global standards for process automation equipment for over sixty years, and we are the market leader for electronic interface modules, intrinsic safety barriers and hazardous location protection technology.

PROTECTING YOUR PROCESS
The Process Automation division invests in the future so our customers benefit from the latest breakthroughs in signal transfer and intrinsic safety protection, fieldbus, remote I/O, HMI, level control, corrosion monitoring, purge/pressurization, and system & solutions. We are the recognized experts in our technologies — Pepperl+Fuchs has earned a strong reputation by supplying the world’s largest process industry companies with the broadest line of proven components and solutions for a diverse range of applications.

SENSING YOUR NEEDS
As a global leader, the Factory Automation division offers one of the largest ranges of industrial sensors that provide comprehensive coverage for virtually every application in machine and system construction. Our product line includes an extensive range of inductive identification systems, barcode scanners, AS-Interface, and a line of rotary encoders that will perform in virtually every industry equipment.
We’re There When You Need Us

A global presence enables Pepperl+Fuchs to offer the best of both worlds: extremely high engineering standards combined with efficient, low-cost manufacturing facilities.

A worldwide presence means we have exactly what you need to make your process efficient and reliable. It means the most advanced technical expertise in the business is standard with every Pepperl+Fuchs product.

It means we have the largest and most ingenious staff of seasoned and skilled engineers and field representatives in the industry. It means we’re there when you need us – anywhere in the world.

Pepperl+Fuchs offers proven industry expertise through market-based, customer-focused products that provide answers to the toughest application problems. Our target industries are involved with chemicals, pharmaceuticals, oil & gas, petrochemicals, and other areas including wastewater treatment and power technology. In all industrial areas, Pepperl+Fuchs is both a supplier and partner for end users, control systems manufacturers, system integrators and engineering contractors. We set the standard by offering the best product, service and support in the world. From our expert application analysis and global key account management, to our on-site engineering of new systems and technical support after the sale, we stand solidly behind every product we build.
Intrinsic Safety

Intrinsic safety (IS) is a protection technique used within various hardware packages that limits the energy within an electronic circuit to a point that is safe to operate within a hazardous (explosive) location.

Surge Protection

Surge protection comes in a wide variety of configurations to protect electronic equipment from damage and provides long-term system operation reliability. It also diverts harmful voltage transients and current spikes to ground.

HART Interface Solutions

HART (Highway Addressable Remote Transducer) is a popular digital, fieldbus protocol that solves a wide range of applications. It is used to communicate with field devices, configure and monitor the status of the system, and indicate process variables.

Signal Conditioning

Signal conditioning is an important part of any automation system where electrical isolation, electronic signal conversion, and measurement accuracy are critical characteristics of the control loop architecture.
Termination Board Solutions for Honeywell Experion Series C GI/IO
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System Description

Introduction
The H-System offers the ideal Termination Board solution for Experion Series C GI/IO and Safety Manager hazardous location applications. The design of an H-System project is optimized with HART Communication Boards and a complete range of accessories. The H-System includes a wide range of plug-in, isolated barriers that are mounted on Termination Boards. The H-System is easy to specify, integrate and expand and has become synonymous with safety and reliability.

HiD module housing
Used for high channel density
- Compact 18 mm housing
- High channel density
- As low as 4.5 mm per channel

Figure 3 18 mm housing (HiD module)

Termination Boards
- For HiC and HiD isolated barrier modules
- 8- or 16-position Termination Boards
- Redundant and fused powered
- Diagnostic and fault monitoring

Figure 4 16-position Termination Board

Accessories

HART Communication Board
The HART Communication Board can interface with HART enabled H-System Termination Boards. It contains one slot to mount the 32-channel HART multiplexer type HiD Mux2700.
Pre-assembled cables provide easy connection between the H-System Termination Boards, the HART Communication Board and the Honeywell Safety Manager System.
It offers redundantly fused, power supply connections with LED indication. Redundant RS 485 terminals are also available and can be wired in a daisy chain configuration.

Figure 5 HART Communication Board

CH 1
STATUS
HiC 2871
1 ch
Solenoid/Alarm Driver

Figure 1 H-System Termination Board for Safety Manager with isolated barriers

Modules and Termination Boards
Depending on the functionality and application, the H-System barriers have two housing widths, the 12.5 mm HiC modules and the 18 mm HiD modules, all with the features and interoperability of the H-System. The board can be coded in combination with the modules to ensure the safety relevant data is maintained for the connected field devices.

HiC module housing
Used for high signal integrity
- Small housing, only 12.5 mm wide
- Highest packing density in single loop integrity

Figure 2 12.5 mm housing (HiC module)
**Label carrier**

The label carrier set type HiALC-HI*TF-SET-*** provides much space for tagging. In addition the side plates of the label carrier enlarge the distance between IS terminals and non-IS terminals. Therefor further measures to ensure the required tight string length of ≥ 50 mm omit.

**Topology**

This figure illustrates a typical H-System solution. It contains a Termination Board and a HART Communication Board.

**Mounting**

The Termination Boards are mounted on a 35 mm DIN rail. The DIN rail is centered under the Termination Board. The H-System Termination Boards have been designed for protection category IP20 with isolated barriers installed (IP00 without modules) according to EN 60529; therefore, the boards must be appropriately protected against splashing water and contamination.

**Mounting the Termination Board**

- Place the Termination Board onto the DIN rail (Figure 7).
- Tighten the fastening screws (Figure 8).

The Termination Board is now properly mounted and secured.

**Mounting the module on the Termination Board**

- Ensure that the red Quick Lok Bar (1) is in the upper position.
- Observe the plug orientation of the device. Insert the coding pins (2) of the module in the corresponding coding holes on the board. Now center the adjustment pins (3) to the adjustment holes on the Termination Board.
- Carefully press the device into the contacts and adjustment holes.
- For the mechanical adjustment of the module press the red Quick Lok Bar (1) down on either side of the device (see Figure 9).

This completes the mounting of a module.
System Description

Terminal designation

Field side

Control side

Safety Manager
System connector SiCC-0001

HART interface connector
recommended cable: HiACA-UNI-FLK34-FLK34-*M*

potential free error output

Experion PKS, Series C
System connector: Sub-D, 37-pin

HART interface connector
recommended cable: HiACA-UNI-FLK34-FLK34-*M*

potential free error output

System cables

The Honeywell IOTAs and IS boards are connected with H-System Termination Boards via plug-n-play system cables. These system cables reducing risks and reconnection time during site installations.

Just one type of system cable serves all Series C Termination Boards and one type serves all Safety Manager Termination Boards.

Typical cabinet layout

Pepperl+Fuchs Termination Boards enable concurrent assembly of system cabinets and marshalling cabinets shortening the project life cycle.

IS Termination Boards can be located close to the field terminals.
Model number description

Modules

| Hi | 2 |

Type of signal

- **0** Analog modules
  - 2010 to 2020 Converters
  - 2020 to 2030 Transmitter Power Supplies
  - 2031 to 2040 Current Drivers
  - 2060 to 2090 Temperature Converter

- **8** Digital modules
  - 2820 to 2860 Switch Amplifiers
  - 2870 to 2880 Solenoid

Housing

- **C** 12.5 mm modules
- **D** 18 mm modules

Termination Boards

| C | G | P | F |

Intrinsic safety connection

- **P F** Pluggable screw terminals with flange

Signal information

- **S** Safety connection SIL2/3
  - **A O** Analog output
  - **A I** Analog input
  - **D O** Digital output
  - **D I** Digital input
  - **A I O** Analog input and output
  - **U N I** Analog input and output, digital input and output

Module information

- **G** Galvanic isolation
  - **P** Manufacturer Pepperl+Fuchs
    - **C** for HiC modules
    - **D** for HiD modules
- **S** 1-channel module
- **D** 2-channel module
- **Q** 4-channel module

Termination Board type

- **F** Safety Systems (Safety Manager, FSC)
- **S** Series C300
- **C** Devices in according to ISA G3

Unused options may be left out.
System Description

Solutions for Honeywell Experion Series C GI/IO

Example: Honeywell FC-GPCS-DO08-PF

F C – G P C S – S D O 0 8 – P F

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<th>Pluggable screw terminals with flange</th>
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<td>Safety connection SIL2/3</td>
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<tr>
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<td>Digital output</td>
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<td>0 8</td>
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</tbody>
</table>

Module information

G Galvanic isolation
P Manufacturer Pepperl+Fuchs
C for HiC modules
S 1-channel module

Termination Board type

F Safety Systems (Safety Manager, FSC)
C Devices in according to ISA G3

Unused options may be left out.

Example: Honeywell SC-GPCS-UNI16-PF

S C – G P C S – U N I 1 6 – P F

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<tr>
<th>Intrinsic safety connection</th>
<th>Pluggable screw terminals with flange</th>
</tr>
</thead>
<tbody>
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<td>Analog input and output, digital input and output</td>
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<tr>
<td>1 6</td>
<td>16-channel Board</td>
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</table>

Module information

G Galvanic isolation
P Manufacturer Pepperl+Fuchs
C for HiC modules
S 1-channel module

Termination Board type

S Series C300
C Devices in according to ISA G3

Unused options may be left out.
**Safety information**

The corresponding data sheets, the Declaration of Conformity, the EC-Type Examination Certificate and applicable certificates (see data sheet) are an integral part of this document.

**Intended use**

Laws and regulations applicable to the usage or planned purpose of usage must be observed. Devices are only approved for proper usage in accordance with intended use. Improper handling will result in voiding of any warrantee or manufacturer’s responsibility.

These devices are used in C&I technology for the galvanic isolation of C&I signals, such as 20 mA and 10 V unit signals, and also for the adaptation and/or standardization of signals. Devices which have intrinsically safe control circuits are used to operate field devices within hazardous areas.

The devices are not suitable for the isolation of signals in power engineering, unless this is specifically referred to in the respective data sheet.

Protection of operating personnel and the system is not ensured if the product is not used in accordance with its intended use.

Intrinsic safety circuits that were operated with circuits of other types of protection may not be used as intrinsically safe circuits afterwards.

**Installation and commissioning**

Commissioning and installation must be carried out by specially trained and qualified personnel only.

**Installation of the interface devices in the safe area**

The devices are constructed to satisfy the IP20 protection classification and must be protected from adverse environmental conditions such as water spray or dirt exceeding the pollution degree 2. The devices must be installed outside the hazardous area.

Depending on the level of protection, the intrinsically safe circuits of the devices (light blue identification on the device) can be located in the hazardous area. It is especially important to ensure that the intrinsically safe circuits are safely separated from all non-intrinsically safe circuits.

The installation of the intrinsically safe circuits is to be conducted in accordance with the relevant installation regulations.

The respective peak values of the field device and the associated device with regard to explosion protection should be considered when connecting intrinsically safe field devices with the intrinsically safe circuits of H-System devices (demonstration of intrinsic safety). EN 60079-14/IEC 60079-14 or NEC and CEC electrical codes for US and Canada respectively must be observed (where appropriate). If available, also the product certification control drawing must be observed.

If more channels of one device are to be connected in parallel, it must be ensured that the parallel connection is made directly at the terminals. For the demonstration of intrinsic safety, the maximum values of the parallel connection are to be regarded.

The EC-Type Examination Certificates or standard certificates/approvals should be observed. It is especially important to observe the "special conditions" if these are included in the certificates.

**Installation and commissioning of the interface devices within Zone 2/Div. 2 of the hazardous area**

Only devices with the corresponding manufacturer's Declaration of Conformity or separate certificate of conformity can be installed in Zone 2/Div. 2.

The individual data sheets indicate whether these conditions are met.

For US and Canada installations, in Zone 2/Div. 2 follow the NEC and CEC wiring methods. The enclosure must be able to accept Zone 2/Div. 2 wiring methods. The referenced product certification control drawing must be observed.

For all other applications, the devices should be installed in a switch or junction box that:

- meets at least IP54 in accordance to EN 60529.
- meets to the requirements of resistance to light and resistance to impact according to EN 60079-0/IEC 60079-0.
- meets to the requirements of thermal endurance according to EN 60079-15/IEC 60079-15.
- must not cause ignition danger by electrostatic charge during intended use, maintenance and cleaning.

Depending on the level of protection, the intrinsically safe circuits of the devices (light blue identification on the device) can be located in the hazardous area. It is especially important to ensure that the intrinsically safe circuits are safely separated from all non-intrinsically safe circuits.

The installation of the intrinsically safe circuits is to be conducted in accordance with the relevant installation regulations.
System Description

The respective peak values of the field device and the associated device with regard to explosion protection should be considered when connecting intrinsically safe field devices with the intrinsically safe circuits of H-System devices (demonstration of intrinsic safety). EN 60079-14/IEC 60079-14 or NEC and CEC electrical codes for US and Canada respectively must be observed (where appropriate). If available, also the product certification control drawing must be observed.

If more channels of one device are to be connected in parallel, it must be ensured that the parallel connection is made directly at the terminals. For the demonstration of intrinsic safety, the maximum values of the parallel connection are to be regarded.

The EC-Type Examination Certificates, standard certificates/approvals or the manufacturer's Declaration of Conformity should be observed. It is especially important to observe the "special conditions" if these are included in the certificates.

Repair and maintenance

The transfer characteristics of the devices remain stable over long periods of time. This eliminates the need for regular adjustment. Maintenance is not required.

Fault elimination

No changes can be made to devices which are operated in hazardous areas. Repairs on the device are not allowed.

Isolation coordinates for devices with Ex-certificate according to EN 50020 and EN 60079-11

The devices are assessed for pollution degree 2 and overvoltage category II according to EN 50178.

Isolation coordinates for installations for galvanic isolation according to EN 50178 and EN 61140

The devices of the H-System are electronic equipment for use in secluded electrical operating sites where only skilled personnel or electrically instructed personnel will have admission or access.

Technical data

Electrical data

Power supply (modules)

24 V DC -15 %, +25 %, (20.4 V DC to 30 V DC)

Each module is protected internally. The Termination Boards have redundant power supply connections with fuses that can be replaced by the customer.

Mechanical data

Location

Mounting outside hazardous areas possible as well as in Zone 2/Div. 2 where a manufacturer's Declaration of Conformity exists.

Protection degree

- Termination Boards: IP20 with modules plugged in (IP00 without modules)
- Modules: IP20

Mass

Termination Boards:
- Board for 8 HiC modules approx. 450 g
- Board for 16 HiC modules approx. 900 g
- Board for 8 HiD modules approx. 500 g
- Board for 16 HiD modules approx. 1000 g

Modules:
- HiC module approx. 100 g
- HiD module approx. 140 g

Material

Modules: Polycarbonate
Termination Boards: Polycarbonate, fiber glass reinforced

Dimensions (L x W x H)

Termination Boards (height inclusive module assembly):
- Board for 8 HiC modules: 159 x 155 x 153 mm
- Board for 16 HiC modules: 273 x 155 x 153 mm
- Board for 8 HiD modules: 201 x 155 x 153 mm
- Board for 16 HiD modules: 357 x 155 x 153 mm

Modules:
- HiC module: 12.5 x 106 x 130 mm
- HiD module: 18 x 106 x 130 mm

Housing drawings please refer to the appendix.
Labeling
A plastic label holder is available on the front of the module:
- HiC modules, HiD modules: 35 x 10.5 mm
A large label carrier kit H/ALC-… for the Termination Boards is available.

Fire protection class
Housing: V2 according to UL 94 standard. (Unless stated otherwise all details relate to the reference conditions.)

Ambient conditions

Ambient temperature:
-20 °C to 60 °C, (273 K to 333 K)

Storage temperature:
-40 °C to 70 °C, (253 K to 343 K)

Relative humidity:
max. 95 % no moisture condensation

Reference conditions
- temperature: 23 °C (296 K)
- relative humidity: 50 %
- supply voltage: 24 V DC
- working resistance, where applicable: 250 Ω
- full scale value: 20 mA

Conformity with standards and directives

General
- Isolator modules with and without explosion protection, mostly with Ex ia IIC/Class I Div. 1, international approvals
- EMC acc. to NAMUR NE21 and EN 61326
- LEDs acc. to NAMUR NE44
- Software acc. to NAMUR NE53

Digital inputs/outputs according to NAMUR
The standards references for this interface have changed many times:
German standard (old): DIN 19234: Electrical distance sensors – DC interface for distance sensors and switch amplifiers; 1990-06
European standard (old): EN 50227: Low voltage switch gear and control gear – control devices and switching elements – proximity switches, DC interface for proximity sensors and switch amplifiers (NAMUR), 1996-10
German version (old): DIN EN 50227: Low voltage switch gear – control devices and switching elements – proximity switches, DC interface for proximity sensors and switch amplifiers (NAMUR), 1997, German nomenclature VDE 0660, part 212
Current designation: DIN EN 60947-5-6: Low voltage switch gear – control devices and switching elements – proximity switches, DC interface for proximity sensors and switch amplifiers (NAMUR), 2000, German nomenclature. VDE 0660 part 212
## Termination Boards for Experion PKS, Series C

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* Set the module DIP switches in current sink mode.
** 2 pcs. are required for 32 channels.
*** Only the first channel is usable.
### Digital Inputs

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<td>HIC2083</td>
<td>I</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td>28</td>
</tr>
</tbody>
</table>
## Solutions for Honeywell Experion Series C GI/IO

### Selection Tables

#### Analog Outputs

<table>
<thead>
<tr>
<th>Model Number</th>
<th>Housing</th>
<th>Channels</th>
<th>Input (Control System)</th>
<th>Output (Field)</th>
<th>Supply</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIC2031</td>
<td></td>
<td>1</td>
<td>0/4 mA ... 20 mA</td>
<td>0/4 mA ... 20 mA</td>
<td>24 V DC</td>
<td>29</td>
</tr>
<tr>
<td>HID2032</td>
<td></td>
<td>2</td>
<td>1.5 mA ... 50 mA</td>
<td>1.5 mA ... 50 mA</td>
<td>24 V DC</td>
<td>30</td>
</tr>
</tbody>
</table>

#### Accessories

**HART Multiplexers**

<table>
<thead>
<tr>
<th>Model Number</th>
<th>Channels</th>
<th>RS 485 Connection</th>
<th>Redundant Power Supply</th>
<th>Supply 24 V DC</th>
<th>Zone 2/Division 2 Mounting</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIC Mux2700</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>32</td>
</tr>
</tbody>
</table>

#### Termination Boards

<table>
<thead>
<tr>
<th>Model Number</th>
<th>Channels</th>
<th>RS 485 Connection</th>
<th>Redundant Power Supply</th>
<th>Supply 24 V DC</th>
<th>Zone 2/Division 2 Mounting</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIALT01-HART-2X16</td>
<td>2 x 16 Channels</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>33</td>
</tr>
<tr>
<td>HIALT01-HART-4X8</td>
<td>2 x 8 Channels</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>34</td>
</tr>
</tbody>
</table>

#### Additional Accessories

<table>
<thead>
<tr>
<th>Model Number</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIALC-HICTF-SET-114</td>
<td>Label Carrier Set</td>
<td>35</td>
</tr>
<tr>
<td>HIALC-HICTF-SET-228</td>
<td>Label Carrier Set</td>
<td>35</td>
</tr>
<tr>
<td>HIALC-HIDTF-SET-156</td>
<td>Label Carrier Set</td>
<td>35</td>
</tr>
<tr>
<td>HIALC-HIDTF-SET-312</td>
<td>Label Carrier Set</td>
<td>35</td>
</tr>
<tr>
<td>HID2000 Empty</td>
<td>Place Holder Barrier</td>
<td>35</td>
</tr>
<tr>
<td>CA-HWC300-AIO-DIO-*M</td>
<td>H-System Custom Cable</td>
<td>36</td>
</tr>
</tbody>
</table>
Termination Board for Honeywell Experion Series C GI/IO

Features

- System Board for Honeywell Experion PKS, Series C
- For 16-/32-channel cards CC-TDIL01/11, CC-TDOB01/11, CC-TAIX01/11 and CC-TAOX01/11
- 16 plug-in positions
- Recommended modules: HiC2821 (DI), HiC2871 (DO), HiC2025 (AI), HiC2031 (AO)
- Recommended system cable: CA-HW32-F-D37-...
- 24 V DC supply voltage
- Hazardous area: pluggable screw terminals, blue
- Safe area: Sub-D connector (male), 37-pin

Technical data

<table>
<thead>
<tr>
<th>Supply</th>
<th>Connection</th>
<th>terminal block TB3 (1-, 2+; 3-, 4+)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rated voltage</td>
<td>24 V DC, in consideration of rated voltage of used isolated barriers</td>
<td></td>
</tr>
<tr>
<td>Voltage drop</td>
<td>0.9 V, voltage drop across the series diode on the Termination Board must be considered</td>
<td></td>
</tr>
<tr>
<td>Ripple</td>
<td>≤ 10 %</td>
<td></td>
</tr>
<tr>
<td>Fusing</td>
<td>4 A</td>
<td></td>
</tr>
<tr>
<td>Power loss</td>
<td>≤ 500 mW, without module</td>
<td></td>
</tr>
<tr>
<td>Reverse polarity protection</td>
<td>yes</td>
<td></td>
</tr>
<tr>
<td>Redundancy</td>
<td>Redundancy available. The supply for the modules is decoupled, monitored and fused.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Output</th>
<th>Connection</th>
<th>terminal block TB4 (1, 2), error message output, NO contact</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fault signal</td>
<td>max. 40 V, 2 A</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Indicators/settings</th>
<th>Display elements</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>LEDs PWR ON (power supply)</td>
</tr>
<tr>
<td></td>
<td>- LED power supply I, green LED</td>
</tr>
<tr>
<td></td>
<td>- LED power supply II, green LED</td>
</tr>
<tr>
<td></td>
<td>LED Fault (fault indication), red LED</td>
</tr>
</tbody>
</table>

Conformity

- Electromagnetic compatibility: NE 21
- Protection degree: IEC 60529
- Ambient temperature: -20 ... 60 °C (253 ... 333 K)

Mechanical specifications

- Connection hazard area (field side): pluggable screw terminals, blue
- Connection safe area (process side): Sub-D connector (male), 37-pin
- Mass: approx. 900 g
- Dimensions: 273 x 155 x 153 mm (L x W x H), height including module assembly
- Mounting: 35 mm DIN rail

Accessories

- Designation: optional accessories: Label Carrier HiALC-HI*TF-SET-***

Function

The Termination Board has 16 plug-in slots.

The function of the Termination Board as well as the connector pin assignment exactly fit the requirement of Honeywell systems.

Information about missing supply voltage of the interface modules is available for the system as potential free relay contact. Wiring errors from field will be reported if the interface module supports this function.

The Termination Boards are supplied with a robust glass fibre reinforced plastic housing as standard. This design permits the fast and reliable installation in the switch cabinet.

Diagrams

[Diagram of Termination Board with connections and labels]
### Features

- **System Board for Honeywell Experion PKS, Series C**
- For 32-channel card CC-TDIL01/11
- 16 plug-in positions
- Recommended module: HIC2822
- Recommended system cable: CA-HW32-F-D37-...
- 24 V DC supply voltage
- Hazardous area: pluggable screw terminals, blue
- Safe area: Sub-D connector (male), 37-pin

### Function

The Termination Board has 16 plug-in slots.

The function of the Termination Board as well as the connector pin assignment exactly fit the requirement of Honeywell systems.

Information about missing supply voltage of the interface modules is available for the system as potential free relay contact. Wiring errors from field will be reported if the interface module supports this function.

The Termination Boards are supplied with a robust glass fibre reinforced plastic housing as standard. This design permits the fast and reliable installation in the switch cabinet.

### Technical data

**Supply**
- Connection: terminal block TB3 (1-, 2+; 3-, 4+)
- Rated voltage: 24 V DC, in consideration of rated voltage of used isolated barriers
- Voltage drop: 0.9 V; voltage drop across the series diode on the Termination Board must be considered
- Ripple: ≤ 10 %
- Fusing: 4 A
- Power loss: ≤ 500 mW, without module
- Reverse polarity protection: yes

**Redundancy**
- Supply: Redundancy available. The supply for the modules is decoupled, monitored and fused.

**Output**
- Connection: terminal block TB4 (1, 2), error message output, NO contact
- Fault signal: max. 40 V, 2 A

**Indicators/settings**
- Display elements: LEDs PWR ON (power supply)
  - LED power supply I, green LED
  - LED power supply II, green LED
  - LED Fault (fault indication), red LED

**Conformity**
- Electromagnetic compatibility: NE 21
- Protection degree: IEC 60529
- Ambient conditions:
  - Ambient temperature: -20 ... 60 °C (253 ... 333 K)
  - Protection degree: IP20

**Mechanical specifications**
- Connection:
  - connection hazardous area (field side): pluggable screw terminals, blue
  - connection safe area (process side): Sub-D connector (male), 37-pin
- Mass: approx. 900 g
- Dimensions: 273 x 155 x 153 mm (L x W x H), height including module assembly
- Mounting: 35 mm DIN rail

**Accessories**
- Designation: optional accessories:
  - Label Carrier HIALC-HI*TF-SET-***

### Diagrams

- [Termination Board diagram](#)
- [Termination Board diagram](#)
Features

- System Board for Honeywell Experion PKS, Series C
- For 32-channel card CC-TDOB01/11
- 16 plug-in positions
- Recommended module: HiD2874
- Recommended system cable: CA-HW32-F-D37-...
- 24 V DC supply voltage
- Hazardous area: pluggable screw terminals, blue
- Safe area: Sub-D connector (male), 37-pin

Function

The Termination Board has 16 plug-in slots.
The function of the Termination Board as well as the connector pin assignment exactly fit the requirement of Honeywell systems.

Information about missing supply voltage of the interface modules is available for the system as potential free relay contact. Wiring errors from field will be reported if the interface module supports this function.
The Termination Boards are supplied with a robust glass fibre reinforced plastic housing as standard. This design permits the fast and reliable installation in the switch cabinet.

Technical data

<table>
<thead>
<tr>
<th>Supply</th>
</tr>
</thead>
<tbody>
<tr>
<td>Connection</td>
</tr>
<tr>
<td>Rated voltage</td>
</tr>
<tr>
<td>Voltage drop</td>
</tr>
<tr>
<td>Ripple</td>
</tr>
<tr>
<td>Fusing</td>
</tr>
<tr>
<td>Power loss</td>
</tr>
<tr>
<td>Reverse polarity protection</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Redundancy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supply</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Output</th>
</tr>
</thead>
<tbody>
<tr>
<td>Connection</td>
</tr>
<tr>
<td>Fault signal</td>
</tr>
</tbody>
</table>

Indicators/settings

- LEDs PWR ON (power supply)
- LED power supply I, green LED
- LED power supply II, green LED
- LED Fault (fault indication), red LED

Conformity

- Electromagnetic compatibility: NE 21
- Protection degree: IEC 60529
- Ambient temperature: -20 ... 60 °C (253 ... 333 K)

Mechanical specifications

- Protection degree: IP20
- Connection: connection hazardous area (field side): pluggable screw terminals, blue connection safe area (process side): Sub-D connector (male), 37-pin
- Mass: approx. 1000 g
- Dimensions: 357 x 155 x 153 mm (L x W x H), height including module assembly
- Mounting: 35 mm DIN rail
- Accessories: optional accessories: Label Carrier HiALC-HI*TF-SET-***

Diagrams

- Zone 0, 1, 2 Div. 1, 2
- Zone 2 Div. 2
- 24 V DC (I), 24 V DC (II)
- ERR
- TDOB01/11
Termination Board for Honeywell Experion Series C GI/O
SC-GPDD-AIO16-PF

Features
- System Board for Honeywell Experion PKS, Series C
- For 16-channel cards CC-TAIX01/11 (AI) and CC-TAOX01/11 (AO)
- 8 plug-in positions
- Recommended modules: HID2030SK (AI), HID2082 (Temp.), HID2032 (AO)
- Recommended system cable: CA-HW32-F-D37....
- 24 V DC supply voltage
- Hazardous area: pluggable screw terminals, blue
- Safe area: Sub-D connector (male), 37-pin

Function
Termination Boards are made to carry isolated barriers and provide terminal connection for wiring. The termination board and the isolated barriers build the connection between field and system level.

System connectors are syntonized to the requirements of the I/O cards used in the particular automation system. They ensure fast and fail-safe connection.

Information about missing supply voltage of the interface modules is available for the system as potential free relay contact. Wiring errors from field will be reported if the interface module supports this function.

The Termination Boards are supplied with a robust glass fibre reinforced plastic housing as standard. This design permits the fast and reliable installation in the switch cabinet.

Technical data

Supply
Connection terminal block TB3 (1-, 2+; 3-, 4+)
Rated voltage 24 V DC, in consideration of rated voltage of used isolated barriers
Voltage drop 0.9 V, voltage drop across the series diode on the Termination Board must be considered
Ripple ≤ 10 %
Fusing 2 A
Power loss ≤ 500 mW, without module
Reverse polarity protection yes
Redundancy Supply Redundancy available. The supply for the modules is decoupled, monitored and fused.

Output
Connection terminal block TB4 (1, 2), error message output, NO contact
Fault signal max. 40 V, 2 A

Indicators/settings
Display elements LEDs PWR ON (power supply)
- LED power supply I, green LED
- LED power supply II, green LED
- LED Fault (fault indication), red LED

Conformity
Electromagnetic compatibility NE 21
Protection degree IEC 60529

Ambient conditions
Ambient temperature -20 ... 60 °C (253 ... 333 K)

Mechanical specifications
Protection degree IP20
Connection connection hazardous area (field side): pluggable screw terminals, blue
cconnection safe area (process side): Sub-D connector (male), 37-pin
Mass approx. 500 g
Dimensions 201 x 155 x 153 mm (L x W x H), height including module assembly
Mounting 35 mm DIN rail

Accessories
Designation optional accessories:
Label Carrier HIALC-H*I'TF-SET-***

Diagrams

[Diagram of Termination Board and connections]
HiC2821

Features

- 1-channel isolated barrier
- 24 V DC supply (bus powered)
- Dry contact or NAMUR inputs
- Relay contact output
- Fault relay contact output
- Line fault detection (LFD)
- Up to SIL2 acc. to IEC 61508

Function

This isolated barrier is used for intrinsic safety applications. It transfers digital signals (NAMUR sensors/mechanical contacts) from a hazardous area to a safe area.

The proximity sensor or switch controls a form A normally open relay contact for the safe area load. The module output changes state when the input signal changes state. The normal output state can be reversed with the selector switches on the side of the unit.

One additional relay is available for the fault output. Line fault detection (LFD) can be selected or disabled via a selector switch.

During an error condition, the relay reverts to its de-energized state and the LEDs indicate the fault. A separate output bus is available. The fault conditions can be monitored via a Fault Indication Board.

This module mounts on a HiC Termination Board.

Technical data

<table>
<thead>
<tr>
<th>Supply</th>
<th>Rated voltage</th>
<th>19 ... 30 V DC via Termination Board</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Power loss</td>
<td>≤ 500 mW</td>
</tr>
<tr>
<td></td>
<td>Power consumption</td>
<td>≤ 500 mW</td>
</tr>
<tr>
<td>Input</td>
<td>Rated values</td>
<td>acc. to EN 60947-5-8 (NAMUR)</td>
</tr>
<tr>
<td></td>
<td>Open circuit voltage/short-circuit current</td>
<td>approx. 10 V DC/approx. 8 mA</td>
</tr>
<tr>
<td></td>
<td>Switching point-switching hysteresis</td>
<td>1.2 ... 2.1 mA/approx. 0.2 mA</td>
</tr>
<tr>
<td></td>
<td>Line fault detection</td>
<td>breakage I ≤ 0.1 mA, short-circuit I ≥ 6.5 mA</td>
</tr>
<tr>
<td></td>
<td>Pulse/Pause ratio</td>
<td>≥ 20 ms/≤ 20 ms</td>
</tr>
<tr>
<td></td>
<td>Output I</td>
<td>signal: relay</td>
</tr>
<tr>
<td></td>
<td>Output II</td>
<td>signal or error message: relay</td>
</tr>
<tr>
<td></td>
<td>Contact loading</td>
<td>50 V DC/0.5 A</td>
</tr>
<tr>
<td></td>
<td>Minimum switch current</td>
<td>2 mA/24 V DC</td>
</tr>
<tr>
<td></td>
<td>Energized/de-energized delay</td>
<td>≤ 20 ms/≤ 20 ms</td>
</tr>
<tr>
<td></td>
<td>Mechanical life</td>
<td>10^7 switching cycles</td>
</tr>
<tr>
<td></td>
<td>Switching frequency</td>
<td>≤ 10 Hz</td>
</tr>
</tbody>
</table>

Ambient conditions

Ambient temperature: -20 ... 60 °C (253 ... 333 K)

Mechanical specifications

Protection degree: IP20

Mass: approx. 100 g

Dimensions: 12.5 x 128 x 106 mm (0.5 x 5.1 x 4.2 in)

Data for application in conjunction with hazardous areas

see page 31 for entity parameters

EC-Type Examination Certificate

BASEEEA 06 ATEX 0093 X

Group, category, type of protection:

II (1)GD [Ex ia] IIC; [Ex ia D] [circuit(s) in zone 0/1/2/20/21/22]
I (M1) [Ex ia] I

FM control drawing

16-534FM-12 (cFMus)

Termination Boards

Digital Inputs

Digital Outputs

Analogue Inputs

Analogue Outputs

Diagrams

Front view

LED green: Power supply

LED yellow/red: Status output/Fault channel 1

Place for labeling

Switch 1 ... 4

HIC2821

Zone 0, 1, 2
Div. 1, 2

Zone 2
Div. 2
HiC2822

### Technical data

**Supply**
- Rated voltage: 19 ... 30 V DC via Termination Board
- Power loss: ≤ 500 mW
- Power consumption: ≤ 600 mW

**Input**
- Rated values: acc. to EN 60947-5-6 (NAMUR)
- Open circuit voltage/short-circuit current: approx. 10 V DC/approx. 8 mA
- Switching point switching hysteresis: 1.2 ... 2.1 mA/approx. 0.2 mA
- Line fault detection: breakage I ≤ 0.1 mA, short-circuit I ≥ 6.5 mA
- Pulse/Pause ratio: ≥ 20 ms/≥ 20 ms

**Output**
- Output I: signal; relay
- Output II: signal; relay
- Contact loading: 50 V DC/0.5 A
- Minimum switch current: 2 mA/24 V DC
- Energized/DE-energized delay: ≤ 20 ms/≤ 20 ms
- Mechanical life: 10^7 switching cycles

**Transfer characteristics**
- Switching frequency: ≤ 10 Hz

**Ambient conditions**
- Ambient temperature: -20 ... 60 °C (253 ... 333 K)

**Mechanical specifications**
- Protection degree: IP20
- Mass: approx. 100 g
- Dimensions: 12.5 x 128 x 106 mm (0.5 x 5.1 x 4.2 in)

**Data for application in conjunction with hazardous areas**
- EC-Type Examination Certificate: BASEFA 06 ATEX 0093 X
- Group, category, type of protection:
  - II (1)GD [Ex ia] IIC; [Ex ia D]
  - [circuit(s) in zone 0/1/2/20/21/22]
  - I (M1) [Ex ia] I
- Statement of conformity Pepperl+Fuchs
- Group, category, type of protection, temperature classification:
  - II 3G Ex nA nC IIC T4 X
- FM control drawing: 16-534FM-12 (cFMus)

### Features

- 2-channel isolated barrier
- 24 V DC supply (bus powered)
- Dry contact or NAMUR inputs
- 2 relay contact outputs
- Line fault detection (LFD)
- Up to SIL2 acc. to IEC 61508

### Function

This isolated barrier is used for intrinsic safety applications. It transfers digital signals (NAMUR sensors/mechanical contacts) from a hazardous area to a safe area.

The proximity sensor or switch controls a form A normally open relay output for the safe area load. The module output changes state when the input signal changes state. The normal output state can be reversed with the selector switches on the side of the unit.

Line fault detection (LFD) can be selected or disabled via a selector switch.

During an error condition, the relay reverts to its de-energized state and the LEDs indicate the fault. A separate fault output bus is available. The fault conditions can be monitored via a Fault Indication Board.

This module mounts on a HiC Termination Board.

### Diagrams

**Front view**
- LED green: Power supply
- LED yellow/red: Status output
- Fault channel 1
- LED yellow/red: Status output
- Fault channel 2
- Place for labeling
HiC2871

Solenoid Driver

Features

- 1-channel isolated barrier
- 24 V DC supply (loop powered)
- Output 40 mA at 12 V DC, 60 mA current limit
- Logic input, non-polarized
- Low current output for LEDs
- Up to SIL3 acc. to IEC 61508

Function

This isolated barrier is used for intrinsic safety applications. It supplies power to solenoids, LEDs, and audible alarms located in a hazardous area.

At full load, 12 V at 40 mA (with 60 mA current limit) is available for the hazardous area application.

This module mounts on a HiC Termination Board.

Technical data

**Supply**
- Power loss: < 1 W

**Input**
- Rated voltage $U_i$: 19 ... 30 V loop powered
- Current $I_{iC}$ at 19 V input voltage, load = 265 Ω
- 50 mA at 30 V input voltage, load = 265 Ω

**Output**
- Internal resistor: ≤ 238 Ω
- Current limit: $I_{E}$: ≥ 45 mA
- Voltage limit: $U_{E}$: ≥ 12 V

**Open circuit voltage**
- ≥ 22.7 V

**Output characteristics**
- 40 mA at 12 V DC, 60 mA current limit

**Output rated operating current**
- 45 mA

**Output signal**
- These values are valid for the rated operational voltage 19 ... 30 V DC.

**Ambient conditions**
- Ambient temperature: -20 ... 60 °C (253 ... 333 K)

**Mechanical specifications**
- Protection degree: IP20

**Dimensions**
- Mass: approx. 100 g
- 12.5 x 140 x 106 mm (0.5 x 5.5 x 4.2 in)

**Data for application in conjunction with hazardous areas**
- See page 31 for entity parameters

**EC-Type Examination Certificate**
- BASEEFA 06 ATEX 0171X
- Group, category, type of protection:
  - II (1)GD [Ex ia] IIC (-20 °C ≤ $T_{amb}$ ≤ 60 °C) [circuit(s) in zone 0/1/2]

**Statement of conformity**
- Pepperl+Fuchs
- Group, category, type of protection, temperature classification:
  - II 3G Ex nA II T4 X

**FM control drawing**
- 16-534FM-12 (cFMus)

Diagrams

**Front view**

LED yellow:
Status output

Place for labeling

**X-1**

Zone 0, 1, 2
Div. 1, 2

Zone 2
Div. 2
HiD2874

Technical data

Supply
Rated voltage 20.4 ... 30 V via Termination Board
Power loss 1.1 W at 24 V, 300 Ω load (per channel)

Input
Control input external switch (dry contact or open collector) non isolated or logic level input fully floating
Operating mode output on with contact close or transistor on or logic level > 4 V output off with contact open or transistor off or logic level < 1.5 V

Output
Output characteristics 40 mA at 12 V DC, 52 mA current limit
Load 0.1 ... 5 kΩ
Switching frequency f max. 250 Hz
Response time turn-on time 1 ms, turn-off time 2 ms, at 300 Ω load
Fault level lead short-circuit detection at < 25 Ω lead breakage detection at > 100 kΩ typical
Fault current 4 mA typical
Error output Output type open collector transistor (common to both channels)

Ambient conditions
Ambient temperature -20 ... 60 °C (253 ... 333 K)

Protection degree IP20
Mass approx. 140 g
Dimensions 18 x 106 x 128 mm (0.7 x 4.2 x 5 in)

Data for application in conjunction with hazardous areas
EC-Type Examination Certificate CESI 02 ATEX 086
Group, category, type of protection II (1)G [EEx ia] IIC [circuit(s) in zone 0/1/2]
CSA control drawing 366-005CS-12B (cCSAus)

Features
- 2-channel isolated barrier
- 24 V DC supply (bus powered)
- Output 40 mA at 12 V DC, 52 mA current limit
- Contact or logic control input
- Line fault detection (LFD)

Function
This isolated barrier is used for intrinsic safety applications. It supplies power to solenoids, LEDs, and audible alarms located in a hazardous area. It is controlled with a switch contact, transistor, or logic-level signal. At full load, 12 V at 40 mA (with 52 mA current limit) is available for the hazardous area application. Line fault detection of the field circuit is indicated by a red LED and an output on the fault bus. The fault conditions are monitored via a Fault Indication Board. This module mounts on a HiD Termination Board.

Diagrams

Front view
LEDs red: Fault channel 1 ... 2
LEDs green: Power supply
LEDs yellow: Status output channel 1 ... 2
Switch 1 ... 3

HiD2874

Zone 0, 1, 2
Div. 1, 2
HiC2025
SMART Transmitter Power Supply

Features

- 1-channel isolated barrier
- 24 V DC supply (bus powered)
- 2-wire transmitters or current sources
- 4 mA ... 20 mA or 1 V ... 5 V output
- Low power dissipation
- Up to SIL2 acc. to IEC 61508

Function

This isolated barrier is used for intrinsic safety applications. It provides 2-wire SMART transmitters with power in the hazardous area and transfers the analog values to the safe area. It is also used with 2-wire SMART current sources. Bi-directional communication is supported for SMART transmitters that use current modulation to transmit data and voltage modulation to receive data. The output is selected as a current source, current sink, or voltage source via DIP switches on the side of the unit. This module mounts on a HiC Termination Board.

Technical data

Supply
- Rated voltage: 19 ... 30 V DC via Termination Board
- Power loss: ≤ 800 mW
- Power consumption: ≤ 1.1 W

Input
- Input signal: 4 ... 20 mA limited to approx. 30 mA
- Voltage drop U_d: approx. 5 V on SL2: 5a (+), 1b (-)
- Available voltage: > 15 V at 20 mA on SL2: 5a (+), 5b (-)

Output
- Load: 0 ... 300 Ω (source mode)
- Output signal: 4 ... 20 mA or 1 ... 5 V (on 250 Ω, 0.1 % internal shunt)
- Ripple: 20 mVrms

Transfer characteristics
- Deviation: at 20 °C (293 K), 4 ... 20 mA  
  ± 0.1 % incl. non-linearity and hysteresis (source mode)
- Influence of ambient temperature: < 2 μA/°C (0 ... -60 °C); < 4 μA/°C (-20 ... 0 °C)

Frequency range
- Hazardous area to safe area: bandwidth with 0.5 Vpp signal 0 ... 3 kHz (-3 dB)
- Safe area to hazardous area: bandwidth with 0.5 Vpp signal 0 ... 3 kHz (-3 dB)

Rise time: 10 to 90 % ≤ 20 ms

Ambient conditions
- Ambient temperature: -20 ... 60 °C (253 ... 333 K)

Mechanical specifications
- Protection degree: IP20
- Mass: approx. 100 g
- Dimensions: 12.5 x 128 x 106 mm (0.5 x 5.1 x 4.2 in)
- Data for application in conjunction with hazardous areas: see page 31 for entity parameters

EC-Type Examination Certificate
- Group, category, type of protection: II (1)GD [Ex ia IIC, [Ex ia D] [circuit(s) in zone 0/1/2/20/21/22]
- Statement of conformity: Pepperl+Fuchs
- Group, category, type of protection, temperature classification: II 3G Ex nA II T4 X
- FM control drawing: 16-534FM-12 (cFMus)

Data for application in conjunction with hazardous areas

- LED green: Power supply
- Place for labeling

Diagrams

Front view
HiD2030SK

**Technical data**

**Supply**
- Rated voltage: 20.4 ... 30 V via Termination Board
- Power loss: 1.05 W at 20 mA and 24 V external from DCS or PLC (per channel)

**Input**
- Input current: 4 ... 20 mA, current limit 26 mA
- Input resistance: 40 Ω for current source
- Ripple: 10 mVrms
- Voltage: min. 15.5 V at 20 mA

**Communication**
- pass-through of HART signal to safe area
- The current sink terminals 4, 7 and 5, 6 do not pass the HART signal to safe area.

**Output**
- Output: sink mode from external supply
- Output signal: 4 ... 20 mA, current limit 24 mA
- Voltage: working voltage 7 ... 30 V

**Response time**
- 70 ms, 10 ... 90 % step change

**Signal level**
- no fault: 1 mA ... 23.5 mA input current
- fault detection: < 0.2 mA or > 24 mA input current

**Transfer characteristics**
- Calibrated accuracy: < ± 0.1 % of full-scale value
- Influence of temperature: < ± 0.01 % K
- Frequency range: communication channel: 0.5 ... 40 kHz within 3 db, (-6 db at 100 kHz), Tx to output and output to Tx, suitable for use with SMART transmitters using HART or similar protocol

**Linearity**
- < ± 0.05 % of full-scale value

**Ambient conditions**
- Ambient temperature: -20 ... 60 °C (253 ... 333 K)

**Mechanical specifications**
- Protection degree: IP20
- Mass: approx. 140 g
- Dimensions: 18 x 106 x 128 mm (0.7 x 4.2 x 5 in)

**Data for application in conjunction with hazardous areas**
- see page 31 for entity parameters

**EC-Type Examination Certificate**
- CESI 02 ATEX 086

**Group, category, type of protection**
- II (1)G [Ex ia] IIC [circuit(s) in zone 0/1/2]

**CSA control drawing**
- 366-005CS-12B (cCSAus)

**Features**
- 2-channel isolated barrier
- 24 V DC supply (bus powered)
- 2-wire SMART transmitters or current sources
- Output 4 mA ... 20 mA, current sink
- Usable as signal splitter
- Line fault detection (LFD)
- Up to SIL2 acc. to IEC 61508

**Function**

This isolated barrier is used for intrinsic safety applications. It provides a fully floating supply to power 2-wire SMART transmitters in the hazardous area, and repeats the current to drive a safe area load. It is also used with 2-wire SMART current sources. It is designed to provide a sink mode output on the safe area terminals.

Digital signals may be superimposed on the analog values in the hazardous or safe area, which are transferred bidirectionally.

A separate fault output on the bus is signaled if the input signal is outside the range 0.2 mA ... 24 mA. The fault conditions can be monitored via a Fault Indication Board.

This module mounts on a HiD Termination Board.
HiD2082

Temperature Converter

Features
- 2-channel isolated barrier
- 24 V DC supply (bus powered)
- Thermocouple, RTD or potentiometer
- Linearized output 4 mA ... 20 mA, sink/source or 1 V ... 5 V
- Sensor burnout detection
- Configurable by PACTware™
- Line fault detection (LFD)

Function
This isolated barrier is used for intrinsic safety applications. It is a universal temperature converter that accepts thermocouples (TC), millivolts, potentiometers, or resistance temperature detectors (RTD) from a hazardous area and converts them to an isolated, linearized analog output in the safe area.

The outputs can be selected as a current source, current sink, or voltage source with DIP switches on the side panel. Line fault detection of the field circuit is indicated by a red LED and an output on the fault bus. The fault conditions are monitored via a Fault Indication Board. This unit is easily programmeed by the use of a DIP switches on the side of the unit or with the PACTware™ configuration software. This module mounts on a HiD Termination Board.

Technical data

<table>
<thead>
<tr>
<th>Supply</th>
<th>20.4 ... 30 V via Termination Board</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current</td>
<td>60 mA</td>
</tr>
<tr>
<td>Input</td>
<td></td>
</tr>
<tr>
<td>RTD</td>
<td>type Cu10, Cu50, Cu100, Pt10, Pt50, Pt100, Pt500, Pt1000, N100 (EN 60751: 1996) type Pt10GOST, Pt50GOST, Pt100GOST, Pt500GOST, Pt1000GOST (P5035S-92)</td>
</tr>
<tr>
<td>Measuring current</td>
<td>approx. 200 μA with RTD</td>
</tr>
<tr>
<td>Types of measuring</td>
<td>2-, 3-, 4-wire connection</td>
</tr>
<tr>
<td>Line resistance</td>
<td>≤ 50 Ω per lead</td>
</tr>
<tr>
<td>Measuring circuit monitoring</td>
<td>sensor burnout, sensor short-circuit</td>
</tr>
<tr>
<td>Cold junction compensation</td>
<td>external at field terminals</td>
</tr>
<tr>
<td>Measuring circuit monitoring</td>
<td>sensor burnout</td>
</tr>
<tr>
<td>Voltage selectible</td>
<td>within the range -100 ... 100 mV</td>
</tr>
<tr>
<td>Potentiometer</td>
<td>0.1 ... 20 kΩ</td>
</tr>
<tr>
<td>Types of measuring</td>
<td>3-wire connection</td>
</tr>
<tr>
<td>Input resistance</td>
<td>≥ 1 MΩ (-100 ... 100 mV)</td>
</tr>
<tr>
<td>Output</td>
<td></td>
</tr>
<tr>
<td>Output I, II</td>
<td>analogue, current or voltage output</td>
</tr>
<tr>
<td>Current range</td>
<td>0/4 ... 20 mA</td>
</tr>
<tr>
<td>Fault signal</td>
<td>downscale 0 or 2 mA, upscale 21.5 mA (acc. NAMUR NE43)</td>
</tr>
<tr>
<td>Source</td>
<td>load 0 ... 550 kΩ open circuit voltage ≤ 18 V</td>
</tr>
<tr>
<td>Sink</td>
<td>0/4 ... 20 mA (sink mode), working voltage 7 ... 30 V</td>
</tr>
<tr>
<td>Voltage range</td>
<td>0 ... 5 V or 1 ... 5 V (on 250 Ω 0.1 % internal shunt)</td>
</tr>
<tr>
<td>Ambient conditions</td>
<td></td>
</tr>
<tr>
<td>Ambient temperature</td>
<td>-20 ... 60 °C (253 ... 333 K)</td>
</tr>
<tr>
<td>Mechanical specifications</td>
<td></td>
</tr>
<tr>
<td>Protection degree</td>
<td>IP20</td>
</tr>
<tr>
<td>Mass</td>
<td>approx. 140 g</td>
</tr>
<tr>
<td>Dimensions</td>
<td>18 x 106 x 128 mm (0.7 x 4.2 x 5 in)</td>
</tr>
<tr>
<td>Data for application in conjunction with hazardous areas</td>
<td>see page 51 for entity parameters</td>
</tr>
<tr>
<td>EC-Type Examination Certificate</td>
<td>CESI 02 ATEX 086</td>
</tr>
<tr>
<td>Group, category, type of protection</td>
<td>Ⅱ (1)GD [Ex ia] IIC [circuit(s) in zone 0/1/2]</td>
</tr>
<tr>
<td>CSA control drawing</td>
<td>366-005CS-12B (cCSAus)</td>
</tr>
</tbody>
</table>

Termination Boards

Digital Inputs

Digital Outputs

Analog Inputs

Analog Outputs

Diagrams

Front view

LED red: Fault channel 2
LED red: Fault channel 1
LED green: Power supply
Programming isolat

Zone 0, 1, 2
Div. 1, 2

HD2082

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**HiC2031**

### Technical data

**Supply**
- Rated voltage: 19 ... 30 V DC via Termination Board
- Power loss: \( \leq 600 \text{ mW} \)
- Power consumption: \( \leq 700 \text{ mW} \)

**Input**
- Input signal: 4 ... 20 mA limited to approx. 30 mA
- Voltage drop \( U_d \): approx. 6 V or internal resistance 300 \( \Omega \) at 20 mA
- Input resistance: \( > 100 \text{ k} \Omega \text{ at max. 23 V, with field wiring open} \)

**Output**
- Current: 4 ... 20 mA
- Load: 0 ... 650 \( \Omega \)
- Ripple: 20 mVrms

**Transfer characteristics**
- Deviation: at 20 °C (293 K), 4 ... 20 mA \( \leq 0.1 \% \) incl. non-linearity and hysteresis
- Influence of ambient temperature: \(< 2 \mu \text{A}/\text{°C} (0 ... +60 \degree \text{C}); < 4 \mu \text{A}/\text{°C} (-20 ... 0 \degree \text{C})\)

**Frequency range**
- Hazardous area to safe area: bandwidth with 0.5 \( V_{ref} \) signal 0 ... 3 kHz (-3 dB)
- Safe area to hazardous area: bandwidth with 0.5 \( V_{ref} \) signal 0 ... 3 kHz (-3 dB)

**Rise time**
- 10 to 90 % \( \leq 100 \text{ ms} \)

**Ambient conditions**
- Ambient temperature: -20 ... 60 °C (253 ... 333 K)

**Mechanical specifications**
- Protection degree: IP20
- Mass: approx. 100 g
- Dimensions: 12.5 x 128 x 106 mm (0.5 x 5.1 x 4.2 in)

**Data for application in conjunction with hazardous areas**
- EC-Type Examination Certificate: CESI 06 ATEX 017
- Group, category, type of protection: II [1]GD [EEx ia] IIC, [Ex ia D] [circuit(s) in zone 0/1/2/20/21/22]
- Statement of conformity: Pepperl+Fuchs
- Group, category, type of protection, temperature classification: II 3G Ex nA II T4 X
- FM control drawing: 16-534FM-12 (cFMus)

### Diagrams

**Front view**
- LED green: Power supply
- Place for labeling

### Features
- 1-channel isolated barrier
- 24 V DC supply (bus powered)
- Current output up to 650 \( \Omega \) load
- Low power dissipation
- Up to SIL2 acc. to IEC 61508

### Function

This isolated barrier is used for intrinsic safety applications. It repeats a 4 mA ... 20 mA input signal from a control system to drive HART I/P converters, valve actuators, and displays located in a hazardous area.

Digital signals may be superimposed on the analog values in the hazardous or safe area, which are transferred bidirectionally.

An open field circuit presents a high impedance to the control side to allow alarm conditions to be monitored by control systems.

This module mounts on a HiC Termination Board.
HiD2032

Current Driver

Features
- 2-channel isolated barrier
- 24 V DC supply (bus powered)
- Current output up to 750 Ω load
- Low power dissipation

Function
This isolated barrier is used for intrinsic safety applications. It repeats a 4 mA ... 20 mA input signal from a control system to drive I/P converters, valve actuators, and displays located in a hazardous area.

An open field circuit presents a high impedance to the control side to allow alarm conditions to be monitored by control systems.

This module mounts on a HiD Termination Board.

Technical data

<table>
<thead>
<tr>
<th>Supply</th>
<th>20.4 ... 30 V via Termination Board</th>
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</thead>
<tbody>
<tr>
<td>Power loss</td>
<td>0.75 W at 24 V (per channel)</td>
</tr>
<tr>
<td>Input</td>
<td></td>
</tr>
<tr>
<td>Input current</td>
<td>4 ... 20 mA, protected against reverse polarity</td>
</tr>
<tr>
<td>Signal level</td>
<td>Input voltage drop &lt; 4 V with field wiring intact</td>
</tr>
<tr>
<td></td>
<td>Input current &lt; 1.2 mA with field wiring open</td>
</tr>
<tr>
<td>Output</td>
<td></td>
</tr>
<tr>
<td>Rated current</td>
<td>4 ... 20 mA on a load of max. 750 Ω</td>
</tr>
<tr>
<td>Load</td>
<td>0 ... 750 Ω</td>
</tr>
<tr>
<td>Output signal</td>
<td>4 ... 20 mA</td>
</tr>
<tr>
<td>Ripple</td>
<td>15 mV&lt;sub&gt;rms&lt;/sub&gt;</td>
</tr>
<tr>
<td>Response time</td>
<td>50 ms, 10 ... 90 % step change</td>
</tr>
</tbody>
</table>

Transfer characteristics
- Calibrated accuracy: < ± 0.1 % of full-scale value
- Influence of temperature: < ± 0.01 %/K
- Influence of load: < ± 0.1 % of full-scale value from 0 ... 750 Ω
- Linearity: < ± 0.1 % of full-scale value

Ambient conditions
- Ambient temperature: -20 ... 60 °C (253 ... 333 K)

Mechanical specifications
- Protection degree: IP20
- Mass: approx. 140 g
- Dimensions: 18 x 106 x 128 mm (0.7 x 4.2 x 5 in)

Data for application in conjunction with hazardous areas
see page 31 for entity parameters

EC-Type Examination Certificate CESI 02 ATEX 086, for additional certificates see www.pepperl-fuchs.com

Group, category, type of protection
II (1)G [EEx ia] IIC [circuit(s) in zone 0/1/2]

CSA control drawing 366-005CS-12B (cCSAus)

Diagrams

Front view

LED green: Power supply

Zone 0, 1, 2
Div. 1, 2

HiD2032
### ATEX Entity Parameters

<table>
<thead>
<tr>
<th>Model Number</th>
<th>Terminals</th>
<th>$U_0$ (V)</th>
<th>$I_0$ (mA)</th>
<th>$P_0$ (mW)</th>
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</thead>
<tbody>
<tr>
<td>HiC2025</td>
<td>5a, 5b</td>
<td>25.2</td>
<td>100</td>
<td>630</td>
</tr>
<tr>
<td></td>
<td>1a, 1b</td>
<td>7.2</td>
<td>100</td>
<td>25</td>
</tr>
<tr>
<td>HiC2031</td>
<td>5a, 5b</td>
<td>25.2</td>
<td>100</td>
<td>630</td>
</tr>
<tr>
<td>HiC2821</td>
<td>5a, 5b</td>
<td>10.5</td>
<td>17.1</td>
<td>45</td>
</tr>
<tr>
<td>HiC2822</td>
<td>5a, 5b; 1a, 1b</td>
<td>10.5</td>
<td>17.1</td>
<td>45</td>
</tr>
<tr>
<td>HiC2871</td>
<td>5a, 5b</td>
<td>25.2</td>
<td>110</td>
<td>693</td>
</tr>
<tr>
<td>HiID2030SK</td>
<td>1, 4, 2, 5</td>
<td>26</td>
<td>93</td>
<td>605</td>
</tr>
<tr>
<td></td>
<td>4, 7, 5, 6</td>
<td>1.2</td>
<td>50</td>
<td>15</td>
</tr>
<tr>
<td>HiID2032</td>
<td>1, 4, 2, 5</td>
<td>26</td>
<td>93</td>
<td>605</td>
</tr>
<tr>
<td>HiID2082</td>
<td>1, 4, 2, 3, 6, 7, 8</td>
<td>10</td>
<td>15</td>
<td>38</td>
</tr>
<tr>
<td>HiID2874</td>
<td>1, 4, 2, 5</td>
<td>26</td>
<td>110</td>
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</table>

### CSA Entity Parameters

<table>
<thead>
<tr>
<th>Model Number</th>
<th>Terminals</th>
<th>$V_{oc}$ (V)</th>
<th>$I_{sc}$ (mA)</th>
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</thead>
<tbody>
<tr>
<td>HiID2030SK</td>
<td>1, 4, 2, 5</td>
<td>26</td>
<td>93</td>
</tr>
<tr>
<td></td>
<td>4, 7, 5, 6</td>
<td>1.2</td>
<td>50</td>
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<tr>
<td></td>
<td>1, 4, 7, 2, 5, 6</td>
<td>27.2</td>
<td>143</td>
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<tr>
<td>HiID2032</td>
<td>1, 4, 2, 5</td>
<td>26</td>
<td>93</td>
</tr>
<tr>
<td>HiID2082</td>
<td>1, 4, 2, 3, 6, 8</td>
<td>10</td>
<td>15</td>
</tr>
<tr>
<td>HiID2874</td>
<td>1, 4, 2, 5</td>
<td>26</td>
<td>110</td>
</tr>
</tbody>
</table>

### FM Entity Parameters

<table>
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<th>Model Number</th>
<th>Terminals</th>
<th>$V_{oc}$ (V)</th>
<th>$I_{sc}$ (mA)</th>
<th>$V_{t}$ (V)</th>
<th>$I_{t}$ (mA)</th>
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</thead>
<tbody>
<tr>
<td>HiC2025</td>
<td>5a, 5b</td>
<td>25.2</td>
<td>100</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td></td>
<td>1a, 1b</td>
<td>7.2</td>
<td>100</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>HiC2031</td>
<td>5a, 5b</td>
<td>25.2</td>
<td>100</td>
<td>–</td>
<td>–</td>
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<tr>
<td>HiC2821</td>
<td>5a, 5b</td>
<td>10.5</td>
<td>17.1</td>
<td>–</td>
<td>–</td>
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<tr>
<td>HiC2822</td>
<td>5a, 5b; 1a, 1b</td>
<td>10.5</td>
<td>17.1</td>
<td>–</td>
<td></td>
</tr>
<tr>
<td>HiC2871</td>
<td>5a, 5b</td>
<td>25.2</td>
<td>110</td>
<td>–</td>
<td>–</td>
</tr>
</tbody>
</table>
HiD Mux2700
HART Multiplexer Master

Features
- 32-channel
- 24 V DC supply
- HART field device inputs
- RS 485 interface
- Up to SIL3 acc. to IEC 61508

Function
The HART Multiplexer Master provides 32 signal channels for connection to SMART transmitters or control devices supporting digital communication according to the HART standard.

- Full three-port isolation is included and each input channel has dual capacitor isolation for freedom of loop connection.
- Each HART Multiplexer Master is networked simply by connecting the high-speed RS 485 output in a multidrop configuration.
- The device interrogates each field device, under the supervision of the workstation, retrieving information for storage in its internal database, which is then easily accessed.
- This module is intended to mount on an HiD Termination Board or HART Communication Board. Also special boards for DCS integration are available.
- For additional information, refer to the manual and www.pepperl-fuchs.com.

Technical data

<table>
<thead>
<tr>
<th>Supply</th>
<th>Rated voltage 20.4 ... 30 V DC via Termination Board</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Power loss 0.7 W at 24 V</td>
</tr>
<tr>
<td>HART signal channels</td>
<td>Number of channels 32</td>
</tr>
<tr>
<td></td>
<td>Signal range 0.12 ( V_{pp} ) &lt; signal &lt; 1.5 ( V_{pp} )</td>
</tr>
<tr>
<td></td>
<td>Leakage current &lt; 3 ( \mu A ) at -20 ... 85 °C (253 ... 358 K)</td>
</tr>
<tr>
<td></td>
<td>Terminating resistor external 230 ... 500 ( \Omega ) (up to 1000 ( \Omega ) possible)</td>
</tr>
<tr>
<td></td>
<td>Output voltage ( &gt; 400 \text{ mV}_{pp} ) (with the terminator resistance specified above)</td>
</tr>
<tr>
<td></td>
<td>Output resistance 100 ( \Omega ) or smaller, capacitive coupling</td>
</tr>
<tr>
<td></td>
<td>DC isolation dual capacitor each channel</td>
</tr>
<tr>
<td></td>
<td>Common mode voltage up to 30 V</td>
</tr>
<tr>
<td></td>
<td>Input impedance &gt; 5 ( \text{k} \Omega ) according to HART specification</td>
</tr>
<tr>
<td></td>
<td>Input voltage range 0.12 ... 1.5 ( V_{pp} )</td>
</tr>
<tr>
<td></td>
<td>Common mode voltage ( \leq 30 \text{ V} )</td>
</tr>
<tr>
<td></td>
<td>Differential mode clamping ( \leq 5.2 \text{ V} ), for transient or AC signals</td>
</tr>
<tr>
<td></td>
<td>Common mode clamping ( \leq 10 \text{ V} ), for transient or AC signals</td>
</tr>
<tr>
<td></td>
<td>Device type DC isolated bus device</td>
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<tr>
<td></td>
<td>Impedance high impedance</td>
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<tr>
<td></td>
<td>Data link type HART primary and secondary</td>
</tr>
<tr>
<td></td>
<td>Field multi point support option available upon request</td>
</tr>
<tr>
<td>Interface</td>
<td>Transfer rate 9600 MBit/s, 19200 MBit/s or 38400 MBit/s, selectable via switch</td>
</tr>
<tr>
<td></td>
<td>Address 1 ... 31, adjustable via DIP switch</td>
</tr>
<tr>
<td></td>
<td>Type RS 485, differential pair and grounding</td>
</tr>
<tr>
<td></td>
<td>Topology multi point, master/slave connection</td>
</tr>
<tr>
<td>Ambient conditions</td>
<td>Ambient temperature 0 ... 60 °C (273 ... 333 K)</td>
</tr>
<tr>
<td>Mechanical specifications</td>
<td>Protection degree IP20</td>
</tr>
<tr>
<td></td>
<td>Mass approx. 140 g</td>
</tr>
<tr>
<td></td>
<td>Dimensions 18 x 106 x 128 mm (0.7 x 4.2 x 5 in)</td>
</tr>
<tr>
<td></td>
<td>Data for application in conjunction with hazardous areas Pepperl+Fuchs</td>
</tr>
<tr>
<td></td>
<td>Declaration of conformity II 3G Ex nA II T4</td>
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<td>CSA approval 1256050</td>
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<tr>
<td>Approved for</td>
<td>Class I, Division 2, Groups A, B, C, D; Class I, Zone 2, IIC</td>
</tr>
</tbody>
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Diagrams

Front view
- LED green: Power supply
- LED red: Fault
- LED yellow: HART transmission
- Switch 1 ... 8

RS 485
- Zone 2
- Div. 2
**Technical data**

<table>
<thead>
<tr>
<th>Feature</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supply</td>
<td>24 V DC, in consideration of rated voltage of used isolated barriers</td>
</tr>
<tr>
<td>Voltage drop</td>
<td>0.9 V, voltage drop across the series diode on the Termination Board must be considered</td>
</tr>
<tr>
<td>Ripple</td>
<td>≤ 10 %</td>
</tr>
<tr>
<td>Power loss</td>
<td>≤ 500 mW, without module</td>
</tr>
<tr>
<td>Reverse polarity protection</td>
<td>yes</td>
</tr>
<tr>
<td>Redundancy</td>
<td>Redundancy available. Each supply is decoupled and fused (500 mA).</td>
</tr>
<tr>
<td>Indicators/settings</td>
<td>- green LED H1 - power supply I</td>
</tr>
<tr>
<td></td>
<td>- green LED H2 - power supply II</td>
</tr>
<tr>
<td>Ambient conditions</td>
<td>-20 ... 60 °C (253 ... 333 K)</td>
</tr>
<tr>
<td></td>
<td>-40 ... 70 °C (233 ... 343 K)</td>
</tr>
<tr>
<td>Mechanical specifications</td>
<td>IP20</td>
</tr>
<tr>
<td>Connection</td>
<td>Screw terminal for max. 2.5 mm², fixed</td>
</tr>
<tr>
<td>Material</td>
<td>Housing: polycarbonate, 30 % fibre-glass reinforced</td>
</tr>
<tr>
<td>Mass</td>
<td>approx. 150 g</td>
</tr>
<tr>
<td>Dimensions</td>
<td>50 x 200 x 163 mm (1.97 x 7.9 x 6.42 in), height including module assembly</td>
</tr>
<tr>
<td>Mounting</td>
<td>DIN rail mounting</td>
</tr>
<tr>
<td>Accessories</td>
<td>HART Multiplexer Master HiD Mux2700</td>
</tr>
<tr>
<td>Designation</td>
<td>Optional accessories: HART connection cable HiACA-...</td>
</tr>
</tbody>
</table>

**Features**

- 2 x 16-channel
- 24 V DC supply
- Suitable for HART communication
- Dual RS 485 connections
- Used with HiD/HIC Termination Boards
- LED indicator for supply status

**Function**

This HART Communication Board can interface with two, 16-channel H-System Termination Boards. It contains one slot to mount the 32-channel HART Multiplexer Master type HiD Mux2700. HART interface cables provide easy connection between the HiD/HiC Termination Boards and the HART Communication Board. It offers fused redundant power supply connections with LED indication. RS 485 terminals are redundant and can be daisy chained.

**Diagrams**

![Diagram of the HART Communication Board](image)
HiATB01-HART-4X8

HART Communication Board

Features

- 4 x 8-channel
- 24 V DC supply
- Suitable for HART communication
- Dual RS 485 connections
- Used with HiD/HiC Termination Boards
- LED for supply status

Function

This HART Communication Board can interface with four, 8-channel H-System Termination Boards. It contains one slot to mount the 32-channel HART Multiplexer type HiD Mux2700.

The HART interface cable provides easy connection between the HiD/HiC Termination Boards and the HART Communication Board.

It offers fused redundant power supply connections with LED indication. RS 485 terminals are redundant and can be daisy chained.

Technical data

Supply

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rated voltage</td>
<td>24 V DC, in consideration of rated voltage of used isolated barriers</td>
</tr>
<tr>
<td>Voltage drop</td>
<td>0.9 V, voltage drop across the series diode on the Termination Board must be considered</td>
</tr>
<tr>
<td>Ripple</td>
<td>≤10 %</td>
</tr>
<tr>
<td>Power loss</td>
<td>≤500 mW, without module</td>
</tr>
</tbody>
</table>

Redundancy

- Redundancy available. Each supply is decoupled and fused (500 mA).

Indicators/Settings

- green LED H1 - power supply I
- green LED H2 - power supply II

Ambient conditions

- Ambient temperature: -20 ... 60 °C (253 ... 333 K)
- Storage temperature: -40 ... 70 °C (233 ... 343 K)

Mechanical specifications

- Protection degree: IP20
- Connection: screw terminal for max. 2.5 mm², fixed
- Material: housing: polycarbonate, 30 % fibre-glass reinforced
- Mass: approx. 150 g
- Dimensions: 50 x 200 x 163 mm (1.97 x 7.9 x 6.42 in), height including module assembly
- Mounting: DIN rail mounting

Accessories

- Designation: optional accessories:
  - HART Multiplexer Master HiD Mux2700
  - HART connection cable HiACA-

Diagrams

[Diagram showing connections and layout of the HART Communication Board]
H-System Accessories

**Label Carrier Sets**

**Features**

- **HiALC-HICTF-SET-114**
  - For HiC Termination Boards
  - 1 piece for 8-position Termination Board
  - 2 pieces for 16-position Termination Board

- **HiALC-HICTF-SET-228**
  - For HiC Termination Boards
  - 1 piece for 16-position Termination Board

- **HiALC-HIDTF-SET-156**
  - For HiD Termination Boards
  - 1 piece for 8-position Termination Board
  - 2 pieces for 16-position Termination Board

- **HiALC-HIDTF-SET-312**
  - For HiD Termination Boards
  - 1 piece for 16-position Termination Board

**Function**

The Label Carrier Set is assembled on each Termination Board.

**Technical data**

<table>
<thead>
<tr>
<th>Ambient conditions</th>
<th>Ambient temperature</th>
<th>Storage temperature</th>
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</thead>
<tbody>
<tr>
<td>-20 ... 60 °C (253 ... 333 K)</td>
<td>-40 ... 70 °C (233 ... 343 K)</td>
<td></td>
</tr>
</tbody>
</table>

**Mechanical specifications**

- **Mass**
  - HiALC-HICTF-SET-114: approx. 50 g
  - HiALC-HICTF-SET-228: approx. 100 g
  - HiALC-HIDTF-SET-156: approx. 70 g
  - HiALC-HIDTF-SET-312: approx. 140 g

- **Dimensions**
  - HiALC-HICTF-SET-114: 43.5 x 45 x 114 mm (1.71 x 1.77 x 4.48 in)
  - HiALC-HICTF-SET-228: 43.5 x 45 x 228 mm (1.71 x 1.77 x 9 in)
  - HiALC-HIDTF-SET-156: 43.5 x 45 x 156 mm (1.71 x 1.77 x 6.14 in)
  - HiALC-HIDTF-SET-312: 43.5 x 45 x 156 mm (1.71 x 1.77 x 12.3 in)

**Note**

Recommended size of labeling strip:

- HiALC-HICTF-SET-114: 108 x 28 mm (4.25 x 1.1 in)
- HiALC-HICTF-SET-228: 222 x 28 mm (8.7 x 1.1 in)
- HiALC-HIDTF-SET-156: 150 x 28 mm (5.9 x 1.1 in)
- HiALC-HIDTF-SET-312: 306 x 28 mm (12 x 1.1 in)

**Place Holder Barrier**

**HID2000 Empty**

**Features**

- **H-System place holder module**
- **Housing width 18 mm**
- **Empty housing, non-functional**

**Function**

This barrier is a non functioning HID module designed to be a place holder for system expansions. This barrier mounts on a HiD termination board.

**Technical data**

<table>
<thead>
<tr>
<th>Ambient conditions</th>
<th>Ambient temperature</th>
</tr>
</thead>
<tbody>
<tr>
<td>-20 ... 60 °C (253 ... 333 K)</td>
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</tbody>
</table>

**Mechanical specifications**

- **Protection degree** IP20
- **Material** Polycarbonate
- **Mass** approx. 140 g
- **Dimensions** 18 x 106 x 128 mm (0.7 x 4.2 x 5 in)
H-System Custom Cable
CA-HWC300-AIO-DIO-*M

Features

- Honeywell specific system cable for Honeywell Experion Series C GI/IO to Pepperl+Fuchs H-System Termination Boards
- Connects terminal plug on Honeywell Series C GI/IO TA to a single 37-pin Sub-D connector on H-system Termination Boards
- Preconfigured lengths

Technical data

<table>
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<th>Electrical specifications</th>
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<td>300 V AC/DC</td>
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<tr>
<td>Ambient conditions</td>
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<tr>
<td>Ambient temperature</td>
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<td>Mechanical specifications</td>
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<tr>
<td>Connection</td>
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<td>Material</td>
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<td>Connector</td>
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<td>Cable</td>
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Type code/model number

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<td>1 m</td>
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<td>CA-HWC300-AIO-DIO-4M</td>
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<td>CA-HWC300-AIO-DIO-30M</td>
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## Model Number Index

### Solutions for Honeywell Experion Series C GI/IO

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<tbody>
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<td>36</td>
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For over a half century, Pepperl+Fuchs has been continually providing new concepts for the world of process automation. Our company sets standards in quality and innovative technology. We develop, produce and distribute electronic interface modules, Human-Machine Interfaces and hazardous location protection equipment on a global scale, meeting the most demanding needs of industry. Resulting from our world-wide presence and our high flexibility in production and customer service, we are able to individually offer complete solutions – wherever and whenever you need us. We are the recognized experts in our technologies – Pepperl+Fuchs has earned a strong reputation by supplying the world’s largest process industry companies with the broadest line of proven components for a diverse range of applications.