

Intrinsically Safe Isolators

D5000 Series

Intrinsically Safe Galvanic Isolators provide the most simple and cost effective means of implementing Intrinsic Safety into Hazardous Area applications.

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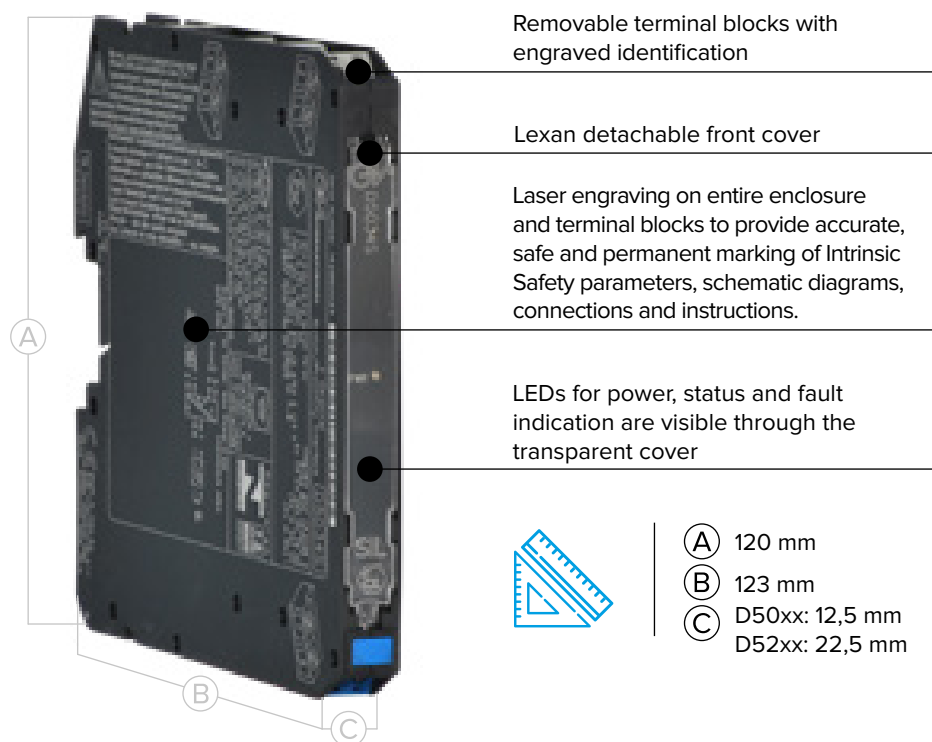


STRENGTHS

- **Reduced Foot Print:** High Density: 6 mm per Channel
- **Reduced Bulk Power Supply:** Low Power Consumption
- **Reduced Cooling Needs:** Low Heat Dissipation
- **Higher Reliability In & Outdoor:** Certified -40° to + 70° C
- **Higher Resilience to Surges:** 2.5 KV Isolation
- **Data Guaranteed by 3rd Party:** SIL 3 (2) TÜV certification
- **Current & Valid Standard:** Certified IEC 61508:2010, Ed.2
- **Harsh Environment Resistance:** G3 conformal coating
- **Lower Ownership Cost:** Certified for 20 years operation
- **Reduced Spare Inventory:** Universal Mounting (Stand Alone DIN-Rail, Power Bus System and Termination Boards)
- **Totally Independent Dual Ch.:** Dual Power Supply
- **Easier Troubleshooting:** Status led indication



Structure



ENCLOSURE CHARACTERISTICS

- High channel density resulting from innovative circuit design using advanced surface mount components
- Single, dual or quad channel models
- Plug-in screw terminal blocks to secure wires up to 2.5 mm²
- Configuration components are easily accessed by removing the side cover or via connector front panel

High Performance

GM International **D5000 series** uses state-of-the-art solutions to achieve the **highest performance** for Intrinsically Safe applications; guaranteed by over **15 certification bodies** all over the world.

Fully automated assembly line; 100% complete individual testing; Advance low dissipation circuitry; Use of high temperature class components; Absence of electrolytic capacitors; G3 conformal coating; Designed for vibration and high humidity; are just some of the factors that guarantee a product with:

- High signal transfer accuracy and repeatability
- Very low heat dissipation
- High reliability; SIL certified for 20 years useful life time



LONGER LIFETIME

Capability to withstand higher temperatures, improves the lifetime in normal conditions.

- Operating temperature certified from -40°C to +70°C
- Very high reliability in extreme environment applications
- G3 conformal coating
- Reduced cabinet dimensions, require less ventilation



WIDE FUNCTIONALITY

- More than 25 modules suitable for **SIL 2** and **SIL 3** applications according to IEC61508, IEC61511
- Three port galvanic isolation to eliminate noise, ground loop problems providing Intrinsic Safety without a high integrity safety earth connection
- Line fault alarm detects open or short circuit of field cables
- Optional power bus DIN-Rail connector
- Standard Termination Board with custom connectors for integration into customized Boards
- EMC Compatibility to EN61000-6-2, EN61000-6-4, EN61326-1, EN61326-3-1 for safety system
- Wide range DC power supply (18-30 Vdc)
- Certified for Offshore and Maritime applications

Operating temperature certified from -40°C to +70°C

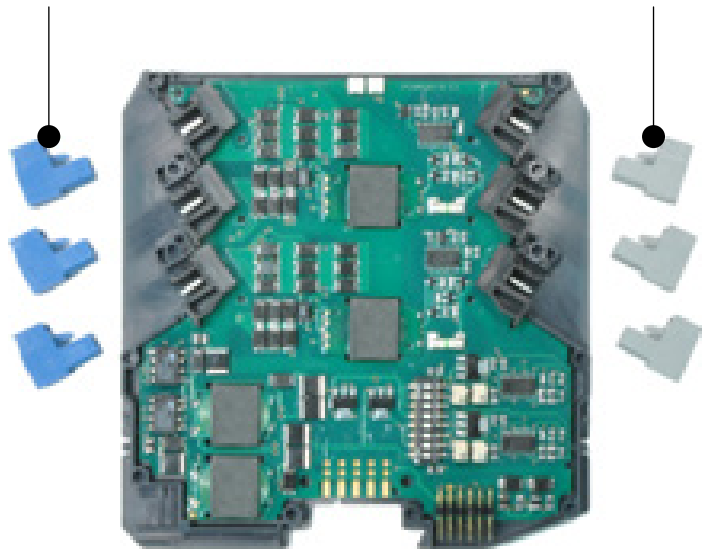
Universal Mounting Units

The **same device** can be used in **all applications** to reduce spare inventory.

- DIN-rail stand-alone devices
- Standard and customized termination boards
- Power bus using standard TS 35 DIN-rail

Blue terminal blocks
on Hazardous Area

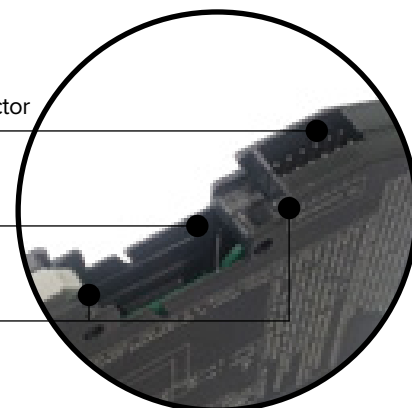
Grey terminal blocks
on Safe Area



Termination Board connector

Power Bus connector

DIN Rail mounting

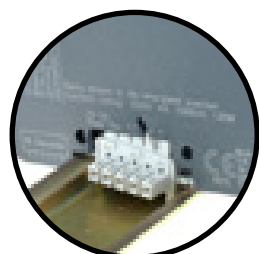


Enhanced Power Bus Mounting

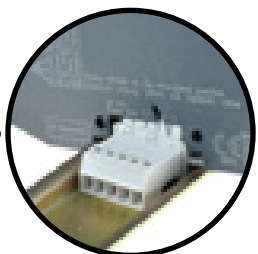
24 Vdc Power Supply Voltage **can be applied** to the module by directly connecting to the plug-in Terminal Block of each module, or **via the Power Bus System**. The system consists of standard DIN-Rail modules mounted on DIN-Rail Bus connectors. The maximum allowed powering capacity per trunk is **8 A**. It is always possible to remove modules, without disconnecting the bus connector which remains attached to the DIN-Rail. Communication bus is provided, on suitable models, to transmit via Modbus to DCS PLC logic solver. Cumulative Fault Alarm indication is provided on the Bus connection.

D5202S redundant power supply feed module provides SPST Relay contact for common and power supply faults; both supply voltages are **independently monitored**.

- Redundant 4 Amp power supply with alarm
- Remote alarm indication
- Modules can be combined for additional redundancy



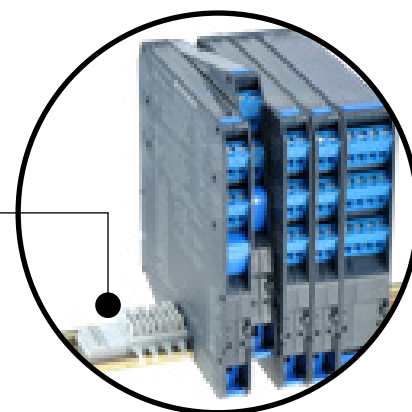
Bus plug-in connector



Bus connector terminal



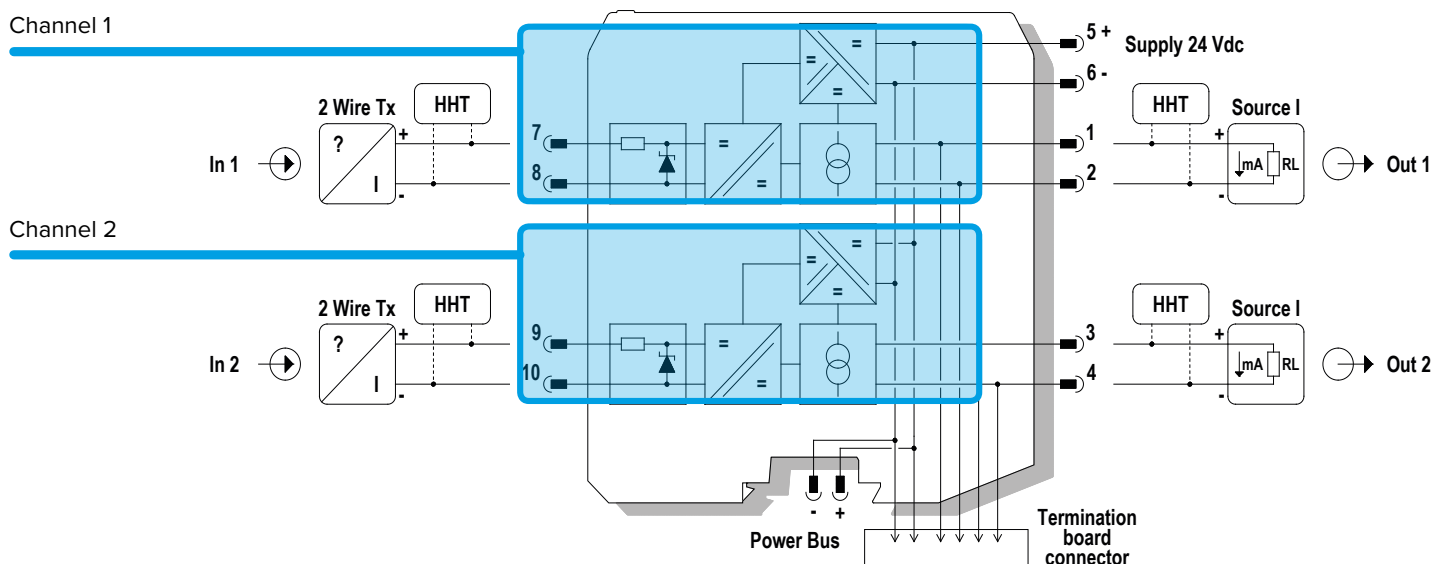
DIN Rail stopper



Special Dual Channel Feature

By using two totally independent Power Supply circuits for each dual channel module, single channel integrity is maintained while drastically reducing space and installation cost. GM International SIL 3 modules offer the independence of two single channels achieving an unprecedented 6mm per channel density.

There are no common components hence both channels are SIL 3 certified and can be used without any architectural limitation.



Configuration Tools & Software

SWC5090 software is designed to provide a PC user interface to configure suitable D5000, D5200 modules, via PPC5092 adapter.

It allows the user to easily:

- Read and write configuration parameters to the unit
- Store and restore data to and from local hard drive for backup or archive
- Load factory default configurations
- Monitor real time Input values for debug or test
- Print a report sheet containing configuration parameters and additional information

SWC5090 is freely distributed on our website: www.gminternational.com

**Easy
USB
configuration**



PPC5092 interface allows the configuration of D5000, D5200 modules via SWC5090 software.

Modules are supplied via USB and therefore do not need external power supply while being programmed.

PPC5092 comes with mini-USB cable and CD-Rom containing SWC5090 software.



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