

G.M. International Intrinsically Safe Isolators

**D5040D****D5232Q**

Overview

G.M. International's D5000 series uses state-of-the-art solutions to achieve the highest performance for Intrinsically Safe applications and is recognized by more than 15 certification bodies all over the world.

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

Features

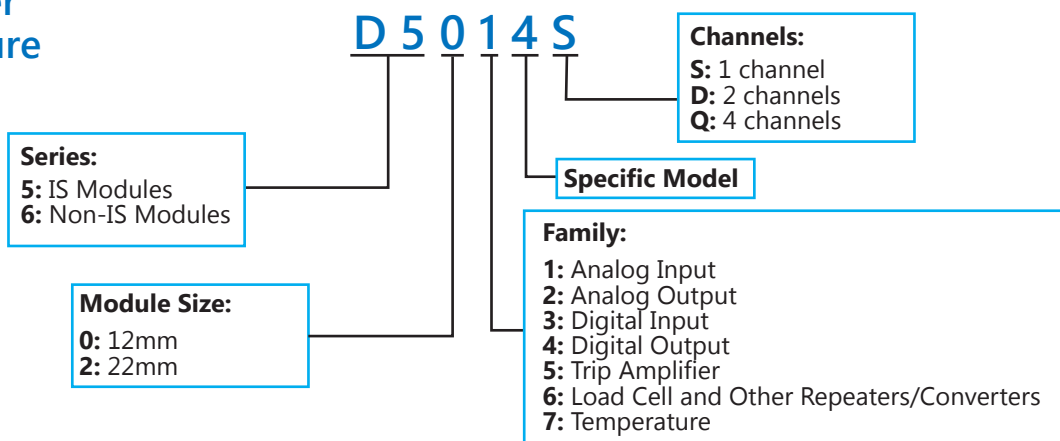
- Reduced foot print: high density, 6mm per channel
- Low power consumption
- Reduced cooling needs: low heat dissipation
- Suitable for indoor and outdoor use: certified -40 to +70 °C
- Resilience to surges: 2.5 kV isolation
- Resistant to harsh environments
- Lower ownership cost: certified for 20 years of operation

G.M. International Intrinsically Safe Isolators Selection Guide

Part Number	Price	Isolator Type	Field Device	Channels	Controller Side (PLC/DCS)	Drawing
Analog Input (From Hazardous Area)						
D5014D	\$484.00	Analog input repeater/splitter	(2) 4–20 mA HART	2 in / 2 out	(2) 4–20 mA HART	PDF
Analog Output (To Hazardous Area)						
D5020D	\$561.00	Analog output repeater/splitter	(2) 4–20 mA HART	2 in / 2 out	(2) 4–20 mA HART	PDF
Digital (Discrete) Input (From Hazardous Area)						
D5030D	\$291.00	Digital input repeater/splitter	(2) NAMUR* sensors (2) dry contacts	2 in / 2 out	(2) Configurable contacts	PDF
D5232Q	\$415.00	Digital input repeater/splitter	(4) NAMUR sensors (4) dry contacts	4 in / 4 out	(4) Configurable contacts	PDF
Digital (Discrete) Output (To Hazardous Area)						
D5040D	\$369.00	Digital output repeater/splitter	Up to 60 mA at 18.2 VDC	2 in / 2 out	(2) 18–30 VDC	PDF
Temperature Transmitter (From Hazardous Area)						
D5072D-096	\$701.00	Temperature repeater/splitter	(2) Thermocouple	2 in / 2 out	(2) Equal to input	PDF
Load Cell Strain Gauge Transmitter (From Hazardous Area)						
D5263S	\$749.00	Load cell strain gauge repeater	(4) 350Ω or (5) 450Ω or (10) 1000Ω in parallel	1 in / 1 out	(1) Resistance equal to input	PDF

* A NAMUR sensor is an intrinsically safe 2-wire sensor which supplies one of two signal levels depending on sensor state.

Part Number Nomenclature



G.M. International Intrinsically Safe Isolators



G.M. International Intrinsically Safe Isolators Specifications

		<i>Analog Input</i>	<i>Analog Output</i>
		<i>D5014D</i>	<i>D5020D</i>
Isolator Type		Analog input repeater/splitter	Analog output repeater/splitter
Explosion Protection	Installation Location (per NEC 500)	Zone 2 / Div 2	Zone 2 / Div 2
	Ex Interface (per NEC 500)	Zone 0 / Div 1	Zone 0 / Div 1
	Agency Approvals	UL, ATEX, FM, IECEx, SIL (TÜV), Maritime (DNV)	
Safety Data	Max Voltage (U_o)	25.9V	25.9V
	Max Current (I_o)	92 mA	93 mA
	Max Power (P_o)	594 mW	595 mW
Functional Safety	Safety Integrity Level (SIL) Systematic Capability (SC)	SIL 3 / SC3	SIL 2 / SC3
Electrical Data	Number of Channels	2 in / 2 out OR 1 in / 2 out	2 in / 2 out OR 1 in / 2 out
	Auxiliary Power Range	18–30 VDC	18–30 VDC
	Nominal Current	90 mA @ 24 VDC with 20 mA output	70 mA @ 24 VDC with 20 mA output on 500Ω load
	Max Power Dissipation	1.35W @ 24 VDC with 20 mA output	1.3W @ 24 VDC with 20 mA output on 500Ω load
	Operation Indication	(2) Power LEDs	(2) Power LEDs (2) Fault LEDs
	Input Type	(2) 4–20 mA HART	(2) 4–20 mA HART
	Output (Channel A)	(2) 4–20 mA HART	(2) 4–20 mA HART
	Output Load Resistance Max (R_L)	550Ω	700Ω
	HART Compatible	Yes Transparent to HART	Yes Transparent to HART
	Supply Voltage for Transmitter	15V @ 20 mA in Source mode	24V
Ambient Conditions	Operating Temperature	-40 to +70 °C [-40 to 158 °F]	-40 to +70 °C [-40 to 158 °F]
	Storage Temperature	-45 to +85 °C [-49 to +185 °F]	-45 to +85 °C [-49 to +185 °F]
Mechanical Data	Width	12.5mm [0.5in]	12.5mm [0.5in]
	Weight	155g [5.47 oz]	145g [5.11 oz]
	Wire Gauge Range	Up to 13 AWG	Up to 13 AWG
	Mounting	DIN rail with or without power bus	DIN rail with or without power bus

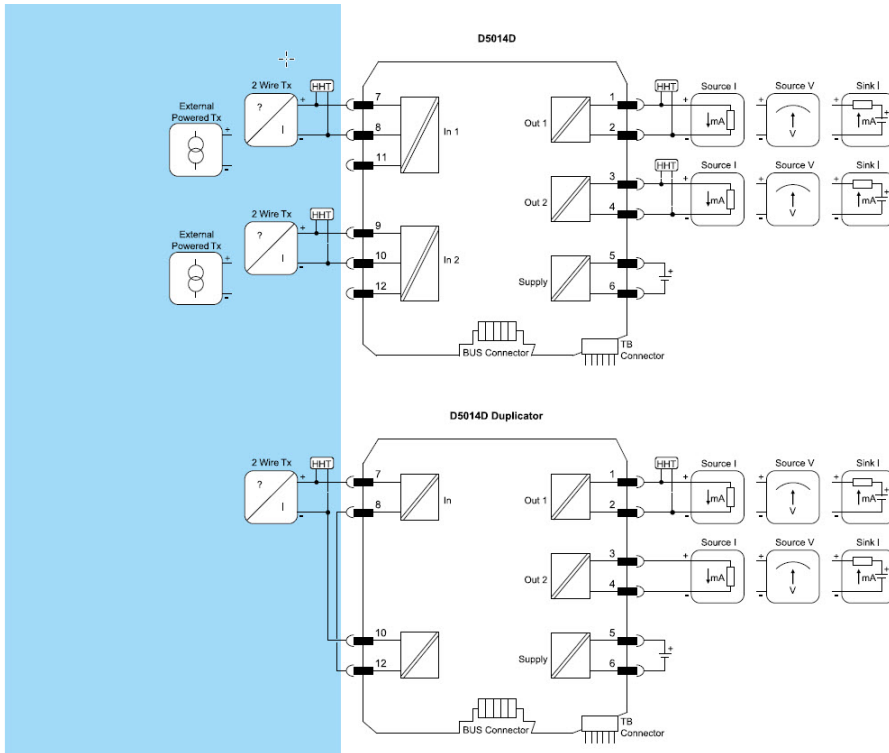
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Connection Diagrams (D5014D) – Analog Input

Hazardous Area

Safe Area / Zone 2 / Div. 2



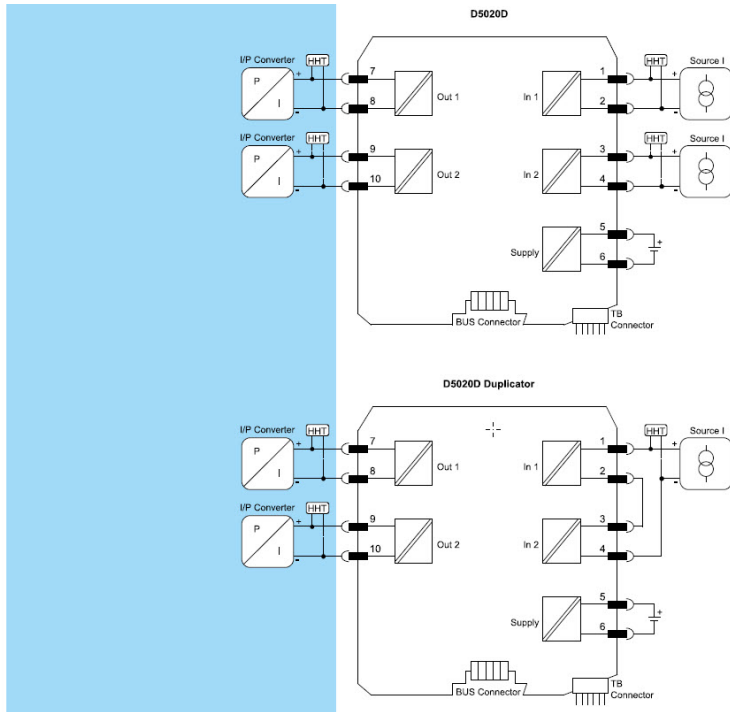
NOTE:

The D5014D intrinsically safe isolator is configurable using DIP switches located under a removable panel on the side of the unit. For details on how to configure these DIP switches, please consult the product manual.

Connection Diagrams (D5020D) – Analog Output

Hazardous Area

Safe Area / Zone 2 / Div. 2



NOTE:

The D5020D intrinsically safe isolator is configurable using DIP switches located under a removable panel on the side of the unit. For details on how to configure these DIP switches, please consult the product manual.

- Quick, easy wiring
- Can be installed on standard DIN rail without tools by simply snapping into place
- Can be expanded at any time with additional power bus units
- Suitable for industrial environments subject to vibration

G.M. International Intrinsically Safe Isolators Accessories				
Part Number	Price	Description	For Use With	Drawing
JDFT049	\$22.50	Power bus connector	D5000 12mm isolators	PDF
JDFT050	\$28.00	Power bus connector	D5000 22mm isolators	PDF
OPT5096	\$37.00	Mounting brackets and end terminal set	D5000 isolators	PDF



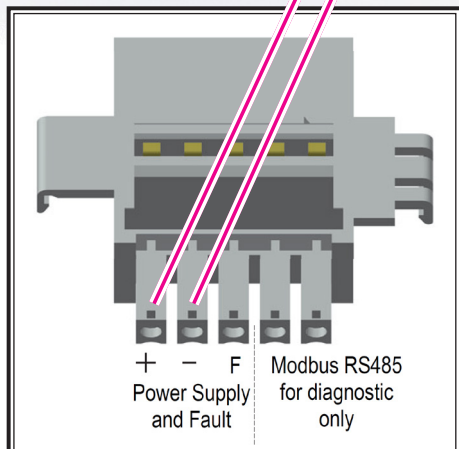
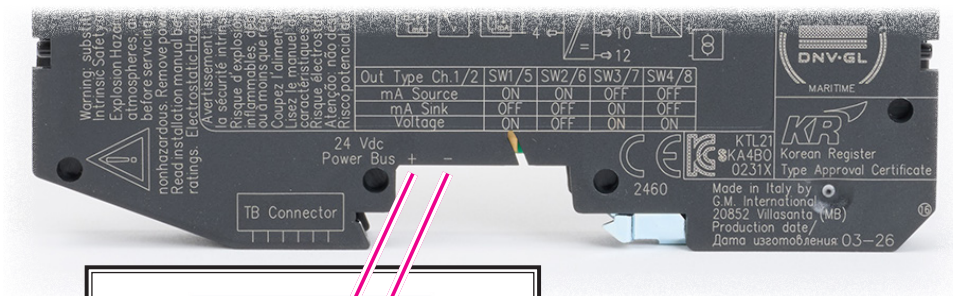
JDFT049



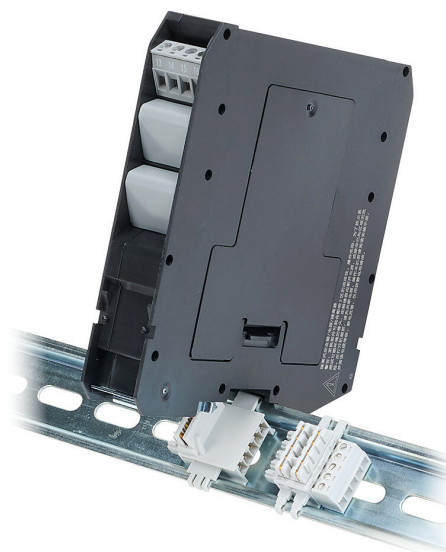
JDFT050

**OPT5096**

Installation Detail For Power Bus Connectors



Several of these modules (including the [D5014D](#), shown here as an example) provide access to signals via the power bus. The signals that are available for each module are printed on the side of the unit.



Safety Products



Warning: Safety products sold by AutomationDirect are Safety components only. The purchaser/installer is solely responsible for the application of these components and ensuring all necessary steps have been taken to assure each application and use meets all performance and applicable safety requirements and/or local, national and/or international safety codes as required by the application. AutomationDirect cannot certify that our products, used solely or in conjunction with other AutomationDirect or other vendors' products, will assure safety for any application. Any person using or applying any products sold by AutomationDirect is responsible for learning the safety requirements for their individual application and applying them, and therefore assumes all risks, and accepts full and complete responsibility, for the selection and suitability of the product for their respective application.

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