

V305

24-channel Isolated Digital Input

The V305 is a single-width, C-size, register-based, VXIbus module that provides 24 individually isolated, contact sense circuits and a global change-of-state indication.



Provides ground-isolated digital monitoring of voltage signals

APPLICATIONS

Test cells

Isolated monitoring of relay contacts, "on-off" voltage signals and switches

FEATURES

- 12, 24, and 48 V dc or 120 V ac input isolated and TTL non-isolated options
- 24-channel voltage sense option
- Change-of-state indications
- Optical isolation
- 100 ms input filter

GENERAL DESCRIPTION

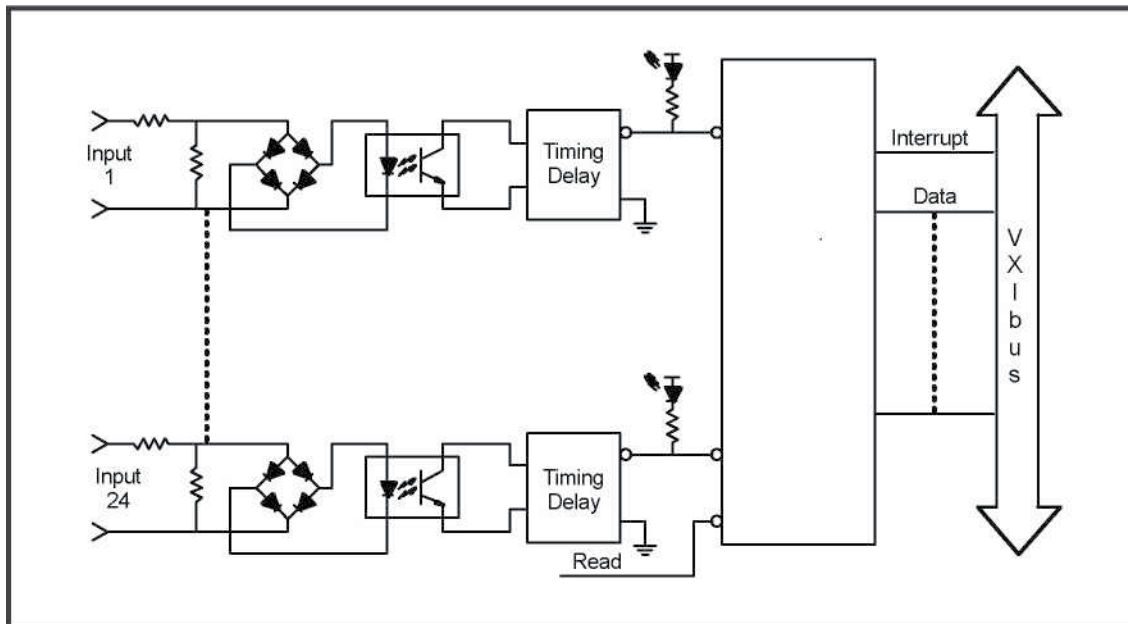
The V305 is a single-width, C-size, register-based, VXIbus module that provides 24 individually isolated, contact sense circuits and a global change-of-state indication. Each sense circuit detects the presence or absence of voltage at its terminals and is suitable for sensing such remote process contact closures as limit switches, machine tool relay contacts, pressure switches, manual switches, and mercury-wetted contacts. Five voltage options are available (TTL, 12 V dc, 24 V dc, 48 V dc, and 120 V ac) as well as a contact input option.

Input isolation is achieved by using LED/photo-transistor optical isolators. Each circuit (except the TTL version) is a floating, two-wire circuit with common-mode voltage isolation greater than 500 V. Each option has 24 circuits with identical input voltage ratings, and the switching threshold is approximately one half of the rated input voltage. Each input circuit draws more than 5 mA but less than 10 mA. The logic convention is such that a contact closure (input voltage present) is interpreted as a logical "1." Each input is conditioned by filtering after the optical isolator. The filter time constant is 100 ms. Other time constants are available by special order.

The V305 contains a 24-bit memory register and a 24-bit comparator. If one or more of the inputs has changed state (1-to-0 or 0-to-1) since the last time the memory register was updated, a common interrupt source is set. This can produce an Interrupt Request directing the computer to read the current state of the inputs.

The V305 supports both static and dynamic configuration. Access to the data is through memory locations indicated by the Offset Register within the VXIbus Configuration Register set, using A24/A16, D16 data transfers.

Item	Specification
Inputs	24 two-wire, floating inputs (except TTL and contact-input options)
Number of inputs	
Input signal options	12 V dc, 24 V dc or 48 V dc; 120 V ac; TTL; or Contact input
Input switching threshold	30% to 70% of nominal voltage
Input isolation	500 V (isolated options)
Input current	greater than 5 mA, less than 10 mA at nominal voltage
Input Filtering	
Time constant	100 ms
Input Connector type	50P "D"
Mating Connector	KineticSystems Model 5934-Z1A
Power Requirements:	
+5V	1.7 A, typical
Environmental and Mechanical	
Temperature range	
Operational	0°C to +50°C
Storage	-25°C to +75°C
Relative humidity	0 to 85%, non-condensing to +40°C
Cooling requirements	10 CFM
Dimensions	340 mm X 233.35 mm X 30.48 mm (C-sized VXIbus)
Front-panel potential	Chassis ground





RELATED PRODUCTS

Model 5851-Bxyz Cable—50S "D" to Unterminated
Model 5851-Dxyz Cable—50S "D" to 50S "D"
Model 5851-Exyz Cable—50P "D" to 50S "D"
Model 5934-Z1A Connector—50S "D"

ORDERING INFORMATION

MODEL	DESCRIPTION
V305-EA11	24-channel Isolated Digital Input; 120 V ac
V305-EB11	24-channel Isolated Digital Input; 48 V dc
V305-EC11	24-channel Isolated Digital Input; 24 V dc
V305-ED11	24-channel Isolated Digital Input; 12 V dc
V305-EE11	24-channel Isolated Digital Input; Contact Input
V305-EF11	24-channel Isolated Digital Input; 5 V dc (TTL level)

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