

MANUFACTURER DOCUMENT PACKAGE

Manufacturer's Manual

Reference package for procurement and maintenance review

ICS TRIPLEX

T3401

DC DIGITAL INPUT MODULE

Used with the applicable Regent T3401 DC Input configuration.

REFERENCE PACKAGE

OFFICIAL DOCUMENT

Selected official manufacturer pages follow this cover.

Source: Regent T3401 DC Input applicable documentation; full suffix and installed execution require matching



ICS Regent®

PD-6011

DC Digital Input Modules

24 VDC, 48 VDC and 120 VDC
(T3401, T3402 and T3408)

Issue 1, March, 06

DC digital input modules provide input sensing for 16 field input switches. Three types of modules are available for interfacing to inputs powered from 24, 48, or 120 VDC field power supplies. Each module's triplicated I/O Safetybus interface ensures that no failure in the module can affect the operation of the Regent system or other I/O modules in the system. Extensive fault detection and annunciation of critical redundant circuits help prevent the controllers from receiving erroneous data from a faulty input module.

Features

- Sixteen input circuits, configured as two isolated groups of eight circuits each.
- Fault tolerant operation when connected in parallel with redundant modules of the same type.
- Hot-replaceable.
- Automatic self-testing of triplicated I/O Safetybus circuits and many simplex logic circuits.
- Individual front panel indicators on each module show active and fault status and logic-side input on/off status.
- 2500 volt minimum electrical isolation between field and logic circuits.
- TÜV certified, Risk Class 5.

Three DC digital input modules can be connected in parallel to obtain fault tolerant input sensing. In this triple module configuration, a failed module can be removed and replaced without interrupting the input signals.



Industrial Control Services



Specifications

Safetybus Power	1.15 load units		
Number of Inputs	16 circuits divided into two groups of eight		
	T3401	T3402	T3408
Voltage Range	14 to 30 VDC	38 to 58 VDC	95 to 150 VDC
Turn-On Voltage	12 VDC, min	36 VDC, min	88 VDC, min
Turn-Off Voltage	4.7 VDC, max	11 VDC, max	28 VDC, max
Input Current	8.7 mA	4.4 mA	4.4 mA
Turn-On Delay			
minimum	0.2 msec	0.1 msec	0.05 msec
maximum	1.8 msec	1.0 msec	0.4 msec
Turn-Off Delay			
minimum	0.5 msec	0.15 msec	0.05 msec
maximum	2.6 msec	1.0 msec	0.5 msec
Over Voltage Protection			
continuous:	50 VAC	140 VAC	400 VAC
burst:	80 VAC, for 5 sec	220 VAC, for 5 sec	880 VAC, for 5 sec
Heat Dissipation	10 Watts, 34 BTUs/hour	9.5 Watts, 32 BTUs/hour	18 Watts, 60 BTUs/hour
Fusing	None, fuse external if required		
Isolation	2500 volts minimum (field wiring to control logic) 2500 volts minimum (input group 1-8 to input group 9-16)		
Operating Temperature	0° to 60° C (32° to 140° F)		
Storage Temperature	-40° to 85° C (-40° to 185° F)		



DC Digital Input Modules (T3401, 02, and 08)

Operating Humidity	0 to 95% relative humidity, non-condensing
Vibration 10 to 55 Hz:	±0.15mm
Shock Operating:	15 g, ½ sine wave, 11 msec
Electromagnetic Interference	
• IEC 801 Part 2 - Electrostatic Discharges	Level 3: Contact discharge of 6 kV
• IEC 801 Part 3 - Radiated Electromagnetic Fields	Level 3: 10 V/M, 27 MHz - 500 MHz
• ANSI/IEEE C37.90 - Surge Withstand Capability	2.5 kV damped 1 MHz sine wave 4 kV bi-directional impulse, 10 nsec rise time, fast transient (T3402, T3408 only)
Safety	Certified to DIN V VDE 0801 for Risk Class 5. Also designed to meet UL 508 and CSA 22.2, No. 142-M1981
Dimensions	
Height:	12.6" (320 mm)
Width:	1.27" (32 mm)
Depth:	10.12" (257 mm)
Weight	3.0 lbs (1.4 kg)