

Model 3471-A1D
24-bit Isolated Input Gate
INSTRUCTION MANUAL

February, 1987

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24-bit Isolated Input Gate

Provides optical isolation with 12 V dc to 120 V ac options

3471

Features

- 24-bit voltage sense
- Optical isolation
- 120 VAC input
- 12, 24, and 48 VDC input available
- 100 millisecond filter
- Versatile multipurpose input

Typical Applications

- Contact sense
- Data input
- Level detectors
- Alarms
- Manual switch entry
- Pressure switches
- Auxiliary contacts

General Description *(Product specifications and descriptions in this document subject to change without notice.)*

The 3471 is a single-width CAMAC module providing 24 individually isolated contact sense circuits. The 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. Four voltage options are available: 12 VDC, 24 VDC, 48 VDC, and 120 VAC.

Input isolation is achieved by using LED/phototransistor optical isolators. Each circuit is a floating two-wire circuit with common-mode voltage isolation greater than 500 volts. Each option has 24 circuits with identical input voltage ratings, and the switching threshold is approximately one half the rated input voltage. Each input circuit draws between five and ten milliamperes.

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 milliseconds. Other time constant options are available by special order.

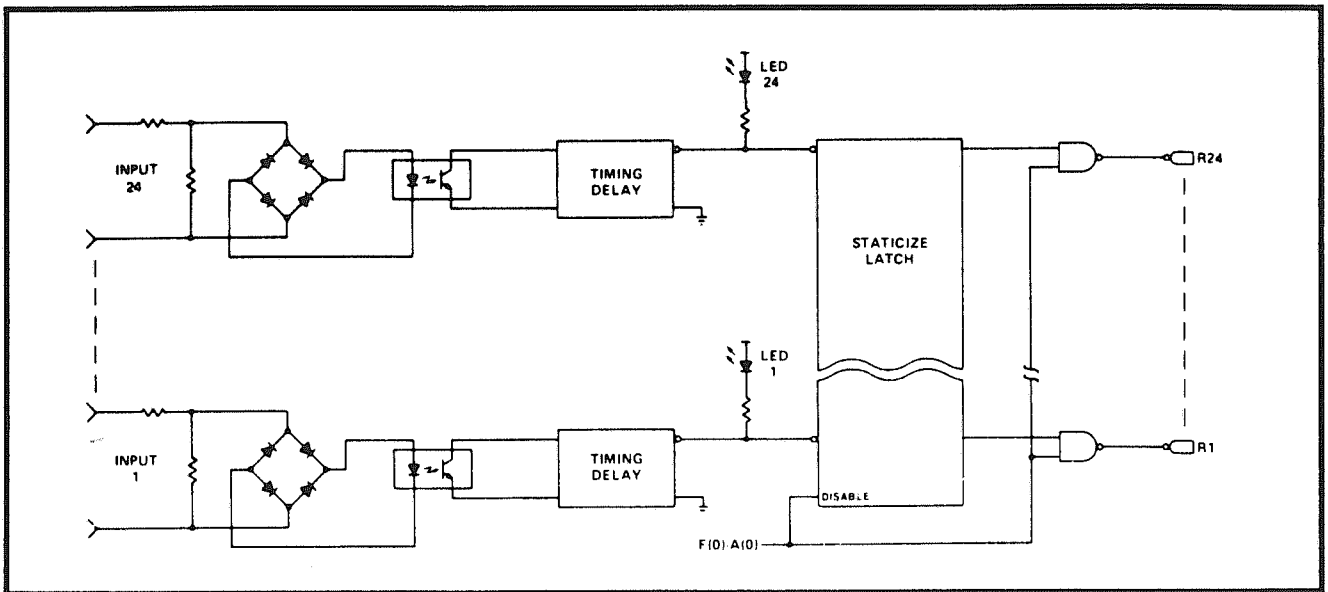
Function Codes

Command	Q	Action
F(0):A(0) RD1	1	Reads the current state of the inputs.
F(1):A(15) RD2	1	Reads the module identifying number (3471 = 6617 ₈).

Note: X = 1 for all valid addressed commands.



Simplified Block Diagram



Power Requirements

+6 volts: 450 mA

Ordering Information

- Model 3471-A1A** Isolated Input Gate, 120 Vac, 24 bits, 50S Amphenol Ribbon connector
- Model 3471-A1B** Isolated Input Gate, 48 Vdc, 24 bits, 50S Amphenol Ribbon connector
- Model 3471-A1C** Isolated Input Gate, 24 Vdc, 24 bits, 50S Amphenol Ribbon connector
- Model 3471-A1D** Isolated Input Gate, 12 Vdc, 24 bits, 50S Amphenol Ribbon connector
- Model 3471-A1E** Isolated Input Gate, contact input, 24 bits, 50S Amphenol Ribbon connector

Related Products

- Model 5950-Z1A Mating Connector
- Model 1850-A1D Rack Termination Panel

*** SPECIAL OPTION ***

Model 3471-S004

July 1981

Model 3471-S004

*** SPECIAL OPTON ***

MODEL 3471-S004

The Model 3471 is a 3471-A1D with no input filter.

**** SPECIAL OPTION ****

MODEL 3471-S008

24-BIT ISOLATED INPUT GATE

DECEMBER 1984

Model 3471-S008

**** SPECIAL OPTION ****

Model 3471-S008

This module operates as described in this manual with the following exceptions:

All features are the same as the Model 3471-A1D, except inputs are modified for TTL inputs with optical isolation.

Schematic Drawing No. 02228-D-4281

*****Special Option*****

Model 3471-S011

24-bit Isolated Input Gate

January, 1990

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*****Special Option*****

Model 3471-S011

The Model 3471-S011 is the same as the Model 3471-A1D except that there is no filtering on the input signal, and it accepts transistor-transistor-logic input levels.

January, 1990
MLH:rem(WP-3000)

*****Special Option*****

Model 3471-S013

24-bit Isolated Input Gate

November, 1990

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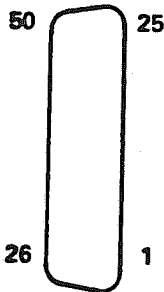
Model 3471-S013

*****Special Option*****

Model 3471-S013

The Model 3471-S013 is the same as the Model 3471-A1D except it has been modified with a 5 millisecond time filter.

November, 1990
NPD:rem(WP)



FACE VIEW

Socket/Wire List

50 SOCKET RIBBON CONN.

SOCKET NO.

50	
49	Input Signal 24B
48	23B
47	22B
46	21B
45	20B
44	19B
43	18B
42	17B
41	16B
40	15B
39	14B
38	13B
37	12B
36	11B
35	10B
34	9B
33	8B
32	7B
31	6B
30	5B
29	4B
28	3B
27	2B
26	1B

SOCKET NO.

25	
24	Input Signal 24A
23	23A
22	22A
21	21A
20	20A
19	19A
18	18A
17	17A
16	16A
15	15A
14	14A
13	13A
12	12A
11	11A
10	10A
9	9A
8	8A
7	7A
6	6A
5	5A
4	4A
3	3A
2	2A
1	1A

50 CONDUCTOR

(26 Pair)

EXTERNAL CABLE COLOR CODE

Conn. No.	Pair	Color
26	1	W-BI
1		BI-W
27	2	W-O
2		O-W
28	3	W-G
3		G-W
29	4	W-Br
4		Br-W
30	5	W-SI
5		SI-W
31	6	R-BI
6		BI-R
32	7	R-O
7		O-R
33	8	R-G
8		G-R
34	9	R-Br
9		Br-R
35	10	R-SI
10		SI-R
36	11	Bk-BI
11		BI-Bk
37	12	Bk-O
12		O-Bk

38	13	Bk-G
13		G-Bk
39	14	Bk-Br
14		Br-Bk
40	15	Bk-SI
15		SI-Bk
41	16	Y-BI
16		BI-Y
42	17	Y-O
17		O-Y
43	18	Y-G
18		G-Y
44	19	Y-Br
19		Br-Y
45	20	Y-SI
20		SI-Y
46	21	V-BI
21		BI-V
47	22	V-O
22		O-V
48	23	V-G
23		G-V
49	24	V-Br
24		Br-V
50	25	V-SI
25		SI-V

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2. Obtain a Return Authorization (RA) Number.
3. Initiate a purchase order for the estimated repair charge if the product is out of warranty.
4. Include a description of the problem and your technical contact person with the product.
5. Ship the product prepaid with the RA Number marked on the outside of the package to:

KineticSystems Company, LLC
Repair Service Center
900 North State Street
Lockport, IL 60441

Telephone: (815) 838-0005
Facsimile: (815) 838-4424
Email: tech-serv@kscorp.com