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SECTION 6 COMPONENT DATA

N7

GLOSSARY

QUAD AC/DC INPUT Catalog No. NL-301L

DESCRIPTION

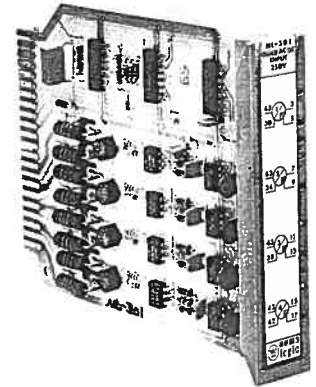
Converts 250V AC/DC, 50/60 Hz, to TTL logic levels through an optically coupled converter. Includes TRUE and NOT outputs with LEDs on TRUE outputs. Four circuits.

PICTORIAL LENS. Standard lens (English logic) shown. Blank lens available for custom marking by user.

TEST POINTS. All TRUE outputs are accessible at front faceplate to facilitate signal tracing.

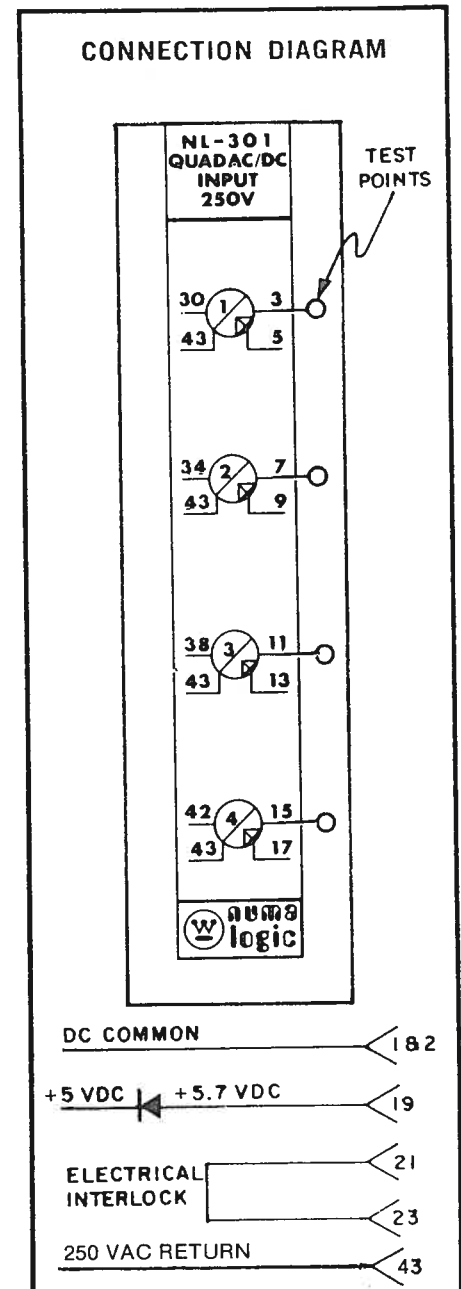
TERMINATION. Nickel gold-plated edge pins are used for all input-output connections.

KEY SLOTS. Prevent incorrect module replacement.

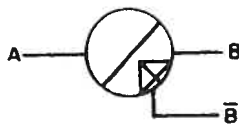


SPECIFICATIONS

Number of circuits	4
Logic type	TTL
AC/DC Input	160-250V AC/DC, 50/60 Hz 0-71V AC/DC, 50/60 Hz
Logic 1	
Logic 0	
Input Impedance	36K ohms
Fan-out (per TRUE or NOT output)	10 unit loads (16 mA, sink) 10 unit loads (400 microamps, source)
Logic 1	
Logic 0	
Logic Levels	0.0 to 0.8 VDC (nominal) 2.4 to 5.0 VDC (nominal)
Logic 1	
Logic 0	
Propagation delay	8-16 ms (nominal)
Power requirement	+5.7 ± 0.25 VDC
All inputs off	91 mA
All inputs on	157 mA
Temperature rating	0° to 85° C
Noise energy rejection	8 x 10 ⁻³ watt seconds
Mechanical keying	Between pins 1 & 3 and 23 & 25
Electrical interlock	Pin 21 to pin 23



ENGLISH LOGIC SYMBOL



TRUTH TABLE

	INPUTS		OUTPUTS	
	AC	DC	B	\bar{B}
Power AC or DC	A	B	B	\bar{B}
160-250V	1	1	0	
0-71V	0	0	0	1

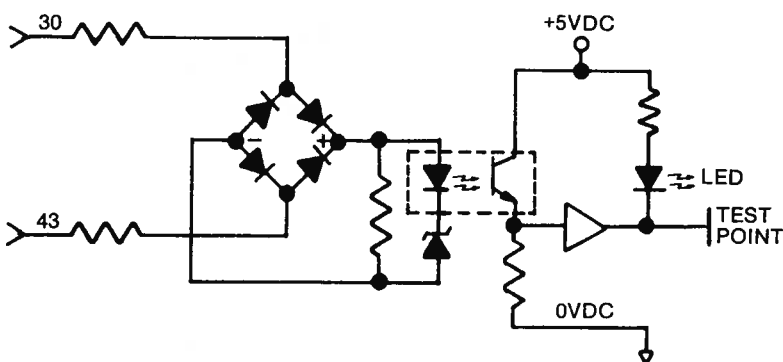
QUAD AC/DC INPUT

APPLICATION NOTES

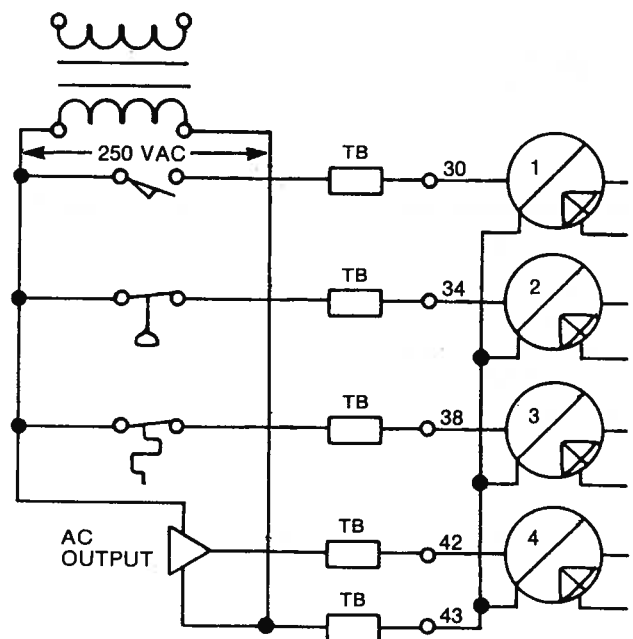
1. Contains power-on reset delay circuit (15 ms, nominal). **CAUTION:** Electrician's continuity tester may turn on or trigger input.
2. The LEDs and test points are on the logic side of the input converter.
3. Do not use this module in a rack slot where pins 43 and 44 are bussed together for 120 VAC hot or where pin 41 is wired to 120 VAC common.
4. The wires connecting pins 30, 34, 38, 42 and 43 with their respective terminal blocks carry 250 VAC. To avoid accidental shorting of these pins to other pins operating at lower voltages, do not connect any wires to pins 25, 26, 27, 28, 29, 31, 32, 33, 35, 36, 37, 39, 40, 41, or 44. Be sure that the 250 VAC power is properly connected before activating the supply.

APPLICATION EXAMPLES

1. Simplified input circuit (circuit no. 1 shown)



2. Simplified wiring diagram for 250 VAC inputs

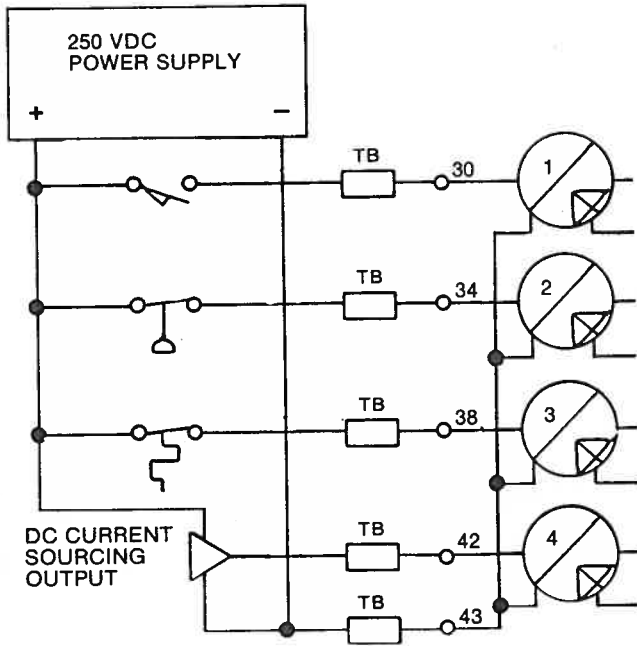


NOTE: Pin 43 is common to all 4 converters and is typically wired to the ground or neutral side of the transformer.

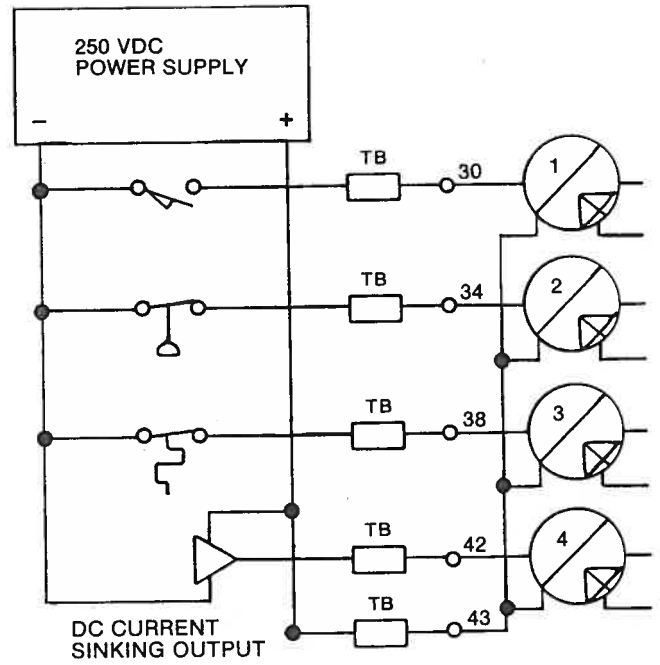
QUAD AC/DC INPUT

3. Simplified wiring diagrams for 250 VDC inputs

DC current sourcing application



DC current sinking application

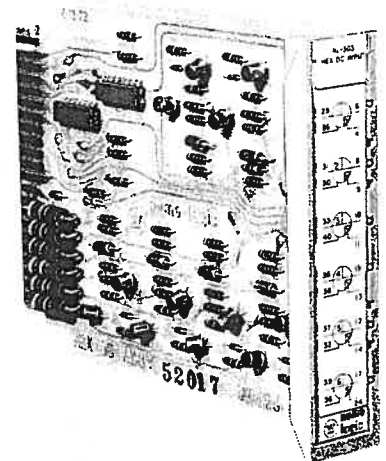


HEX AC INPUT

Catalog No. NL-302L

DESCRIPTION

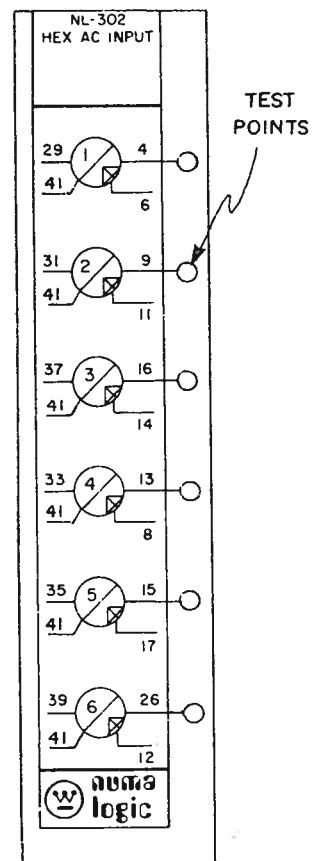
Converts 120 VAC, 50/60 Hz to TTL logic levels with TRUE and NOT outputs. Includes LEDs. Six circuits.
 PICTORIAL LENS. Standard lens (English logic) shown. Blank lens available for custom marking by user.
 TEST POINTS. All TRUE outputs are accessible at front faceplate to facilitate signal tracing.
 TERMINATION. Nickel gold-plated edge pins are used for all input-output connections.
 KEY SLOTS. Prevent incorrect module replacement.



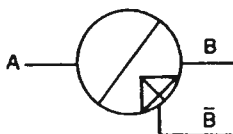
SPECIFICATIONS

Number of circuits	6
Logic type	TTL
AC input	70 to 135 VAC, 50/60 Hz 0 to 40 VAC, 50/60 Hz
Input Impedance	33K ohms
Fan-out (per TRUE or NOT output)	10 unit loads (16 mA, sink) 10 unit loads (400 microamps, source)
Logic levels	0.0 to 0.8 VDC (nominal) 2.4 to 5.0 VDC (nominal)
Propagation delay	8 to 12ms (nominal)
Power requirement	+5.7 ±0.25 VDC 65 mA 220 mA
Temperature rating	0° to 85° C
Noise energy rejection	8 x 10 ⁻³ watt seconds
Mechanical keying	Between pins 1 & 3 and pins 25 & 27
Electrical interlock	Pin 21 to pin 23

CONNECTION DIAGRAM



ENGLISH LOGIC SYMBOL



TRUTH TABLE

Power	Inputs-AC		Outputs-DC	
	A	B	B	B̄
70-135V	1	1	0	
0-40V	0	0	1	

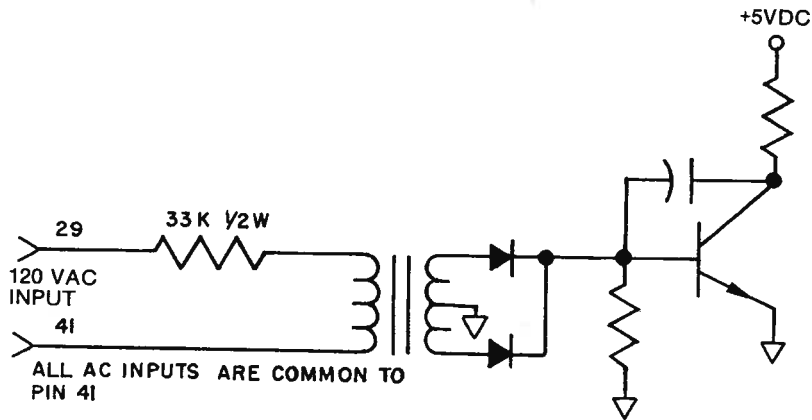
APPLICATION NOTES

- Contains power-on reset delay circuit (15 ms nominal).
 CAUTION: Electrician's continuity tester may turn on or trigger input.
- The LEDs and test points are on the logic side of the input converter.

HEX AC INPUT

APPLICATION EXAMPLES

1. Simplified input circuit (circuit no. 1 shown)



2. Simplified wiring diagram for AC inputs

