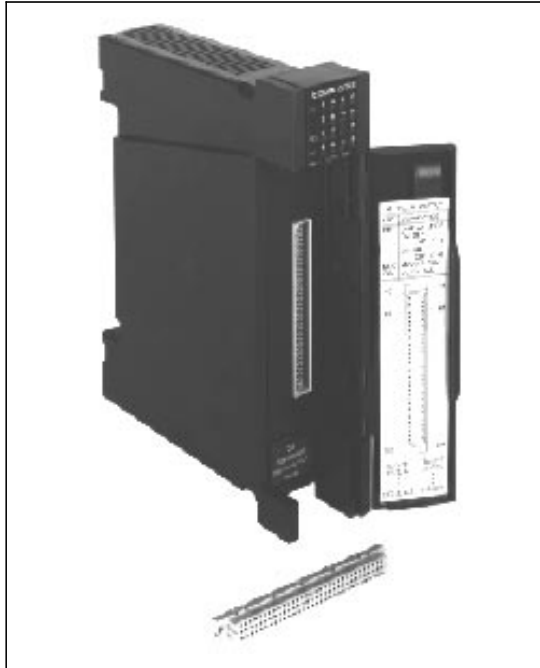


# 32dc DI Digital Input Module

for the MOSCAD RTU

## FEATURES/BENEFITS

*The 32dc Digital Input module is an accessory to the MOSCAD RTU family that permits up to 32 dc voltage status inputs from switches or relays in other on-site equipment to be connected to the RTU. Examples include site or equipment failure alarms, motor controller alarms, and equipment malfunction alarms..*



### Data Input

Under the control of the defined Application Program, the CPU module will read the current instantaneous status of one or more of the 32 inputs, and move that data from the 32dcDI module into the CPU module via the motherboard.

◆ *This data may then be used by the Application Program in the required manner to perform the desired functions.*

### Low-Speed Counter Inputs

Each of the 32 status inputs may be used as low-speed counter inputs if desired. The totalizing must be done within the CPU module under Application control. The Application must read the associated input(s) in a timely manner to assure not missing any input event.

◆ *Any number of counter inputs are easily obtained.*

### Time-Tagging

Any of the 32 status inputs may be defined to tag the time of the input event with one millisecond resolution.

◆ *This time may then be read and used in sequence-of-event actions, etc. or used later for historical reports.*

### Wire Connections

Wires may be soldered directly onto a mating connector that attaches directly to the module. A separate termination panel is available that connects between the module and the on-site devices. The termination panel provides screw-terminal connectors for 8 field inputs, surge immunity per SWC specification, and input voltage scaling (so that one 10-28 Vdc module may be connected to different input voltages). The termination panels require installation in the RackMount configuration.

◆ *The module may be used in a variety of systems from signal sources that are proximate with no surges or that are more distant and therefore more prone to surge disturbances.*

### Packaging

The module is packaged in a plastic housing that plugs, and locks, into the motherboard. Wire connections (up to 14 ga. wire) may be made to screw terminals on the termination panel accessory. No jumpers, calibration pots, etc. are located on the module (any calibration is done electronically via software from the ToolBox program.)

◆ *Modularity allows the MOSCAD RTU to be easily expanded as system wants and needs change and makes field module replacement quick and easy.*



**MOTOROLA**

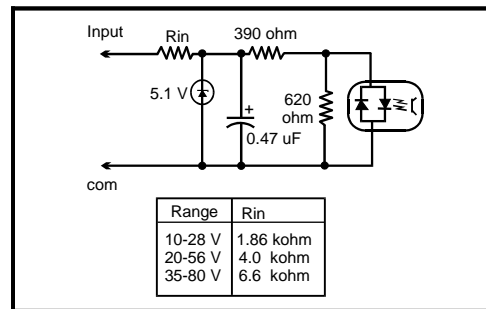
## Specifications

|                           |   |
|---------------------------|---|
| <b>Order</b>              | 10-28 Vdc Inputs: Plant installed: V355; Field installed: FLN2021<br>20-56 Vdc Inputs: Plant installed: V480; Field installed: FLN2022<br>35-80 Vdc Inputs: Plant installed: V481; Field installed: FLN2023 |
| <b>Inputs</b>             | 32; may be counters (50 Hz or less)   |
| <b>Input Signal</b>       | No input: <3.5 Vdc (10-28 Vdc module), <6 Vdc (20-56 Vdc module), <10 Vdc (35-80 Vdc module)<br>Voltage input: >8 Vdc (10-28 Vdc module), >14 Vdc (20-56 Vdc module), >28 Vdc (35-80 Vdc module)            |
| <b>Input Isolation</b>    | 2.5 kVrms Optical isolation (without termination panel)   |
| <b>Input Protection</b>   | 2.5 kV SWC per ANSI C37.90.1-1989 (with termination panel)  |
| <b>Diagnostic</b>         | 20 LEDs: 16 for inputs in 2 groups, 2 for input groups 1 or 2, 1 each for Module Fail and No Clock  |
| <b>Power</b>              | 5 Vdc: 20 ma<br>12 Vdc: 10 ma (50 ma with LEDs on)  |
| <b>Environment</b>        | Humidity: 0 to 90% @ +50°C<br>Temperature: -30 to +60°C   |
| <b>Termination Panels</b> | FLN7004: Converts the 10-28 Vdc module to 20-56 Vdc inputs<br>FLN7005: Converts the 10-28 Vdc module to 35-80 Vdc inputs<br>FLN7006: Converts the 10-28 Vdc module to 80-170 Vdc inputs                     |

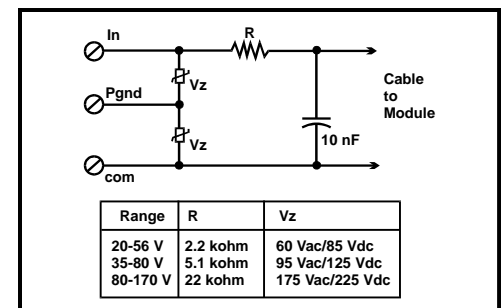
## Connections Chart

| Function | Terminals      | Function | Terminals      |
|----------|----------------|----------|----------------|
| In 1     | 1C(+), 1A(-)   | In 17    | 17C(+), 17A(-) |
| In 2     | 2C(+), 2A(-)   | In 18    | 18C(+), 18A(-) |
| In 3     | 3C(+), 3A(-)   | In 19    | 19C(+), 19A(-) |
| In 4     | 4C(+), 4A(-)   | In 20    | 20C(+), 20A(-) |
| In 5     | 5C(+), 5A(-)   | In 21    | 21C(+), 21A(-) |
| In 6     | 6C(+), 6A(-)   | In 22    | 22C(+), 22A(-) |
| In 7     | 7C(+), 7A(-)   | In 23    | 23C(+), 23A(-) |
| In 8     | 8C(+), 8A(-)   | In 24    | 24C(+), 24A(-) |
| In 9     | 9C(+), 9A(-)   | In 25    | 25C(+), 25A(-) |
| In 10    | 10C(+), 10A(-) | In 26    | 26C(+), 26A(-) |
| In 11    | 11C(+), 11A(-) | In 27    | 27C(+), 27A(-) |
| In 12    | 12C(+), 12A(-) | In 28    | 28C(+), 28A(-) |
| In 13    | 13C(+), 13A(-) | In 29    | 29C(+), 29A(-) |
| In 14    | 14C(+), 14A(-) | In 30    | 30C(+), 30A(-) |
| In 15    | 15C(+), 15A(-) | In 31    | 31C(+), 31A(-) |
| In 16    | 16C(+), 16A(-) | In 32    | 32C(+), 32A(-) |

## Typical Module Input Circuit



## Typical Termination Panel Input Circuit



### Support Services

Wherever Motorola sells, our product is backed by service. Our products are serviced throughout the world by a wide network of company or authorized independent distributor service organizations. Specifications subject to change without notice.



**MOTOROLA**

1301 E. Algonquin Road  
Schaumburg, Illinois 60196  
In the U.S. call: 1-800-247-2346  
Outside the U.S. call: (708) 576-3107

©, and Motorola are trademarks of Motorola, Inc. ■ © 1994  
Motorola, Inc. ■ Printed in U.S.A. ■ Produced  
by Customer Communications. 36 USC 380  
Motorola is an Equal Employment Opportunity/  
Affirmative Action Employer