

# Chameleon Discrete Input Module (DIN-1)

## High-Performance Programmable Controllers for Extreme Environments



### KEY FEATURES



- Discrete Signal Data Acquisition
- Twenty-Four Auto-Detecting AC/DC Voltage Inputs
- Integrated User Interface with Programmable Indicators
- Fully Sealed Enclosure (NEMA 4X, 6, 13 Protection)
- -40°C to +65°C (-40°F to +149°F) Operating Range
- MIL-STD-901D for High Impact Shock (Pending)
- MIL-STD-167B for Vibration (Pending)
- MIL-STD-461E for Electro-Magnetic Interference (Pending)
- Powerful and easy-to-use graphical programming (*Design Pad*)
- Supports Hot Swapping

The Chameleon Discrete Input Module (DIN-1) offers 24 discrete input channels for data acquisition. The input channels are universal, with the capability to accept a broad range of AC and DC signals with no reconfiguration or rewiring required.

Powered by a 33MHz ARM processor with 1MB of onboard RAM and 1MB of flash memory, the DIN-1 provides sufficient computational power to handle the most demanding applications. The DIN-1 embedded firmware is stored in its flash memory and is upgradeable: you can rest assured that the hardware investment you make in Chameleon will not become obsolete.

Using Fairmount Automation's intuitive and easy-to-use graphical programming package (*Design Pad*) you can develop sophisticated signal processing for the DIN-1 in a matter of hours—even without any prior programming experience. Programming the device entails “drawing” a desired control scheme using a vast array of configurable function blocks. These function blocks are wired together to indicate the signal flows from device inputs to device outputs. Once complete, configuration programs are downloaded to the unit via a wireless IRDA interface.

Each DIN-1 unit also provides eight multi-colored programmable status-indication LEDs with associated tag holders that can be used to label the corresponding signals. In addition, the DIN-1 includes 24 LEDs -- each one is matched to a specific input channel and indicates if the contact is open or closed.

As with all Chameleon modules, the DIN-1 offers unequalled ruggedness. It is specifically designed for sustained operation in severe environments, including those characterized by extreme shock, vibration, electro-magnetic interference, temperature, and/or humidity. Its fully-sealed enclosure (sealing end-caps not pictured) ensures long-lasting operation in the grimmest settings. In fact, Chameleon modules can operate fully submerged.

# Chameleon Discrete Input Module (DIN-1)

## High-Performance Programmable Controllers for Extreme Environments



### ENVIRONMENTAL CHARACTERISTICS

Operating Ambient Temperature Range.....	-40°C to 65°C
Storage/Transport Ambient Temperature Range.....	-40°C to 85°C
High Impact Shock.....	MIL-STD-901D (Grade A - Pending)
Mechanical Vibration.....	MIL-STD-167B (Pending)
Electro-Magnetic Interference.....	MIL-STD-461E (Pending)
Facial/Housing Protection.....	NEMA 1,2,4,4X,5,6,12,12K,13

### AC/DC DIGITAL INPUTS

Quantity.....	24 (2 Banks of 12)
Maximum Allowable Continuous Input Voltage.....	200 VDC or 140 VAC RMS
Maximum Allowable Voltage Spike.....	1000V peak 1.2µS x 50µS pulse per MIL-STD-1399 Section 300
Logic High Voltage Range.....	5-200 VDC or 24-130 VAC RMS 55-500 Hz
Minimum Input Duration for Logic High Detection.....	4 ms
Logic Low Voltage Range.....	0-1 VDC or 0-0.5 VAC RMS 55-500 Hz
Minimum Input Duration For Logic Low Detection.....	56 ms
Minimum Input Current Required (AC and DC inputs).....	5mA RMS
Electrical Isolation: Two sets of input banks each with 12 inputs	
Bank to Bank Isolation.....	350 VRMS for 1 minute
Any input to control circuitry or chassis ground.....	1240 VRMS for 1 minute

### ELECTRICAL CHARACTERISTICS

Maximum Module Power Consumption.....	1.3W + 0.03 W/mA x (current draw from aux. Power source)
Maximum Allowable Auxiliary Output Current.....	220mA at 24VDC
Real-Time Clock Battery Life (Minimum; No power applied, 25°C).....	10 Years
Supported Cable Diameters.....	Two glands 0.35"-0.51 and six glands 0.31"-0.41"
Supported Wire Gauges.....	16-28 AWG

### OPERATOR INTERFACE

Digital Readouts.....	Eight user-programmable three-color (green/red/yellow) LED indicators with label holders
Input Port Readouts.....	24 green LED indicators (1 per port)
Status Readout.....	One three-color (green/red/yellow) LED Indicator
IrDA Wireless Interface.....	115KBPS SIR

### PHYSICAL CHARACTERISTICS

Weight.....	2.2 pounds
Front Panel Dimensions.....	4" W x 6" L
Enclosure Height.....	3" H