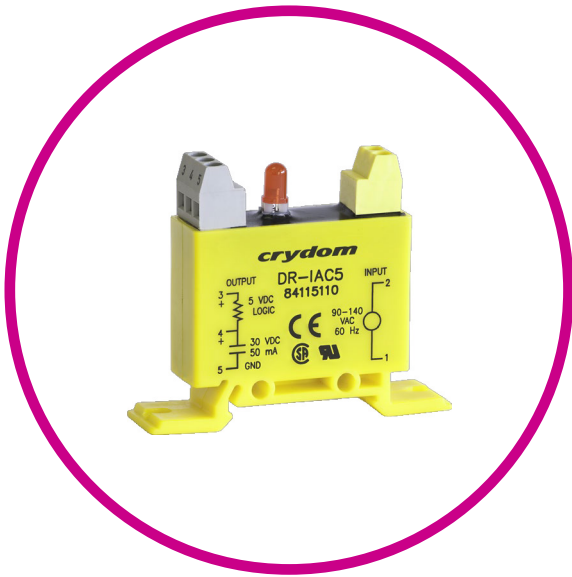


# DR SERIES | INPUT MODULES

## DIGITAL I/O MODULES



### Features

- DIN Rail Mountable Single Point Input Modules
- AC Inputs (Yellow Case)
- DC Inputs (White Case)
- kV Optical isolation
- Input and Output Barrier Strips Accept 14 to 2 AWG Wire
- Configured for Panel Mounting
- Open-Collector Output, with LED Status Indicator

## SPECIFICATIONS <sup>(1)</sup>

### Input

Part Number	DR-IAC5	DR-IAC24	DR-IAC24A
<b>Voltage Range</b>	90-140 VAC/DC	90-140 VAC/DC	180-280 VAC/DC
<b>Maximum Current [mA]</b> <sup>(4)</sup>	6	6	5
<b>Resistance [Ohms]</b> <sup>(2) (3)</sup>	28 k	28 k	75 k
<b>Drop-Out Current [mA]</b> <sup>(5)</sup>	2	2	1.5
<b>Voltage for No Output [VAC/VDC]</b> <sup>(5)</sup>	50	50	50
<b>Allowable Current [mA]</b>	2.5	2.5	2

### Output

Part Number	DR-IAC5	DR-IAC24	DR-IAC24A
<b>Maximum Voltage [VDC]</b> <sup>(9)</sup>	30	30	30
<b>Maximum Voltage Drop [VDC]</b> <sup>(12)</sup>	0.2	0.2	0.2
<b>Nominal Logic Supply Voltage [VDC]</b>	5.0	5.0	5.0
<b>Logic Supply Voltage Range [VDC]</b>	3.0 - 6.0	20 - 30	20 - 30
<b>Maximum Current [mA]</b> <sup>(10)</sup>	50	50	50
<b>Maximum Logic Supply Current [mA]</b> <sup>(7)</sup>	28	28	28
<b>Maximum Supply Leakage Current [<math>\mu</math>A]</b> <sup>(8)</sup>	10.0	10.0	10.0
<b>Maximum Leakage Current [<math>\mu</math>A]</b> <sup>(11)</sup>	10.0	10.0	10.0
<b>Maximum Turn-On Time [msec]</b> <sup>(13)</sup>	20	20	20
<b>Maximum Turn-Off Time [msec]</b> <sup>(13)</sup>	30	30	30

## Input

Part Number	DR-IDC5	DR-IDC5A	DR-IDC24	DR-IDC24A
<b>Voltage Range</b>	4-32 VAC/DC	10-48 VAC/DC	4-32 VAC/DC	10-48 VAC/DC
<b>Maximum Current [mA]</b> <sup>(4)</sup>	34	34	34	34
<b>Resistance [Ohms]</b> <sup>(2) (3)</sup>	1 k	2 k	1 k	2 k
<b>Drop-Out Current [mA]</b> <sup>(5)</sup>	1	1	1	1
<b>Voltage for No Output [VAC/VDC]</b> <sup>(5)</sup>	2	4	2	4
<b>Allowable Current [mA]</b>	1.5	1.5	1.5	1.5

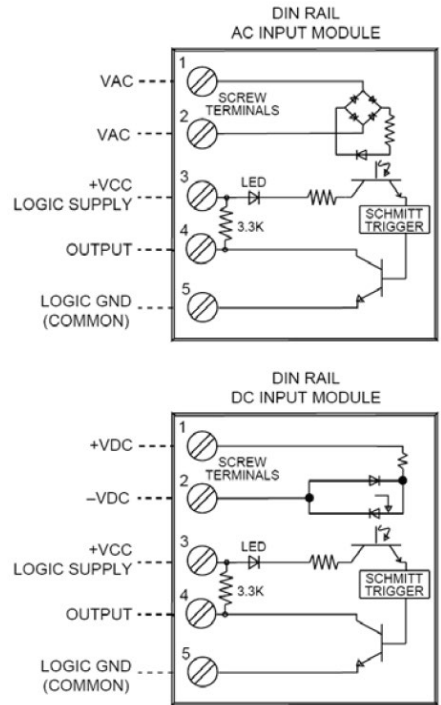
## Output

Part Number	DR-IDC5	DR-IDC5A	DR-IDC24	DR-IDC24A
<b>Maximum Voltage [VDC]</b> <sup>(9)</sup>	30	30	30	30
<b>Maximum Voltage Drop [VDC]</b> <sup>(12)</sup>	0.2	0.2	0.2	0.2
<b>Nominal Logic Supply Voltage [VDC]</b>	5.0	5.0	5.0	5.0
<b>Logic Supply Voltage Range [VDC]</b>	3.0 - 6.0	3.0 - 6.0	20 - 30	20 - 30
<b>Maximum Current [mA]</b> <sup>(10)</sup>	50	50	50	50
<b>Maximum Logic Supply Current [mA]</b> <sup>(7)</sup>	28	28	28	28
<b>Maximum Supply Leakage Current [<math>\mu</math>A]</b> <sup>(8)</sup>	10.0	10.0	10.0	10.0
<b>Maximum Leakage Current [<math>\mu</math>A]</b> <sup>(11)</sup>	10.0	10.0	10.0	10.0
<b>Maximum Turn-On Time [msec]</b> <sup>(13)</sup>	1.0	1.0	1.0	1.0
<b>Maximum Turn-Off Time [msec]</b> <sup>(13)</sup>	1.0	1.0	1.0	1.0

## General Specifications

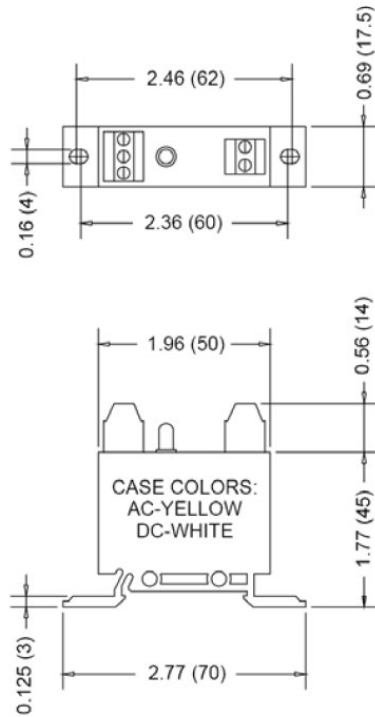
Description	Parameters
<b>Input / Output Isolation Voltage</b> <sup>(14)</sup>	4000 Vrms
<b>Input / Output Capacitance</b>	8 pF
<b>Operating Temperature Range</b>	-30 to 80°C
<b>Storage Temperature Range</b>	-40 to 100°C
<b>Line Frequency Range</b>	47 to 63 Hz
<b>Weight (typical)</b>	1.1 oz. (31.2g)

## EQUIVALENT CIRCUIT BLOCK DIAGRAMS



## MECHANICAL SPECIFICATIONS

Tolerances:  $\pm 0.02$  in / 0.5 mm  
 All dimensions are in inches [millimeters]



## GENERAL NOTES

- (1) Specifications apply to an ambient temperature of -30 to 80 °C unless otherwise noted.
- (2) Resistance values for IAC modules are effective impedance values at 25 °C.
- (3) Resistance values are ±10% at 25 °C.
- (4) Measured at maximum specified input voltage, 25°C.
- (5) Defined as the maximum current allowed through the module's input to guarantee that the output will switch from "on" to "off". Higher currents may result in the output remaining in the "on" state.
- (6) Defined as the maximum current allowed through the module's input that will not switch the module's output state from "off" to "on".
- (7) With external LED status indicator at maximum specified logic supply voltage and 25°C. 18mA without external LED.
- (8) At maximum specified logic voltage and 25°C.
- (9) Applied across open collector output transistor.
- (10) Sinking current through the open collector output transistor.
- (11) At maximum output voltage and 25°C.
- (12) At maximum output current and 25°C.
- (13) At nominal logic supply voltage, 25mA output sinking current, nominal input voltage and 25°C
- (14) At 25°C for 1 second maximum duration.

For additional information or specific questions, contact Sensata Technical Support.

## AGENCY APPROVALS & CERTIFICATIONS



- UL: EN46203
- CSA: 38595

## WARNINGS



### RISK OF MATERIAL DAMAGE AND HOT ENCLOSURE

- The product's side panels may be hot, allow the product to cool before touching
- Follow proper mounting instructions including torque values
- Do not allow liquids or foreign objects to enter this product

**Failure to follow these instructions can result in serious injury, or equipment damage.**



### HAZARD OF ELECTRIC SHOCK, EXPLOSION OR ARC FLASH

- Disconnect all power before installing or working with this equipment
- Verify all connections and replace all covers before turning on power

**Failure to follow these instructions will result in death or serious injury.**

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