



Control over power

# AC Output Buffered Modules

- **Compatible with 5 & 15 Volt Logic Systems**
- **Buffered Inverting and Non-Inverting Modules**
- **Zero Voltage AC Switching**

Buffered output modules contain additional internal amplification to reduce drive requirements to a level suitable for the MOS devices used in many micro-processor systems. To further reduce the need for additional interface components, they are available with both inverting and non-inverting inputs, for 5 volt or 15 volt logic.

## INPUT SPECIFICATIONS

(All voltages referenced to pin 5)

	6411	6421	6412	6422
Nominal Input Voltage [Vdc]	5	5	5	5
Output Module Type	Non-Inverting	Inverting	Non-Inverting	Inverting
Must Turn On Voltage Range @ pin 4 [Vdc]	0.0 - 0.8	2.4 - 6.0	0.0 - 0.8	2.4 - 6.0
Must Turn Off Voltage Range @ pin 4 [Vdc]	2.4 - 6.0	0.0 - 0.8	2.4 - 6.0	0.0 - 0.8
Max. Input On-Current (Sink) @ pin 4 [µA]	75 @ 0.8V 100 @ 0.0V	Ñ Ñ	75 @ 0.8V 100 @ 0.0V	Ñ Ñ
Max. Input On-Current (Source) @ pin 4 [µA]	Ñ Ñ	75 @ 2.4V 250 @ 6.0V	Ñ Ñ	75 @ 2.4V 250 @ 6.0V
Max. Output Off-State Input Current @ pin 4 [µA] ②	10	10 10	10	10
Logic Supply Voltage Range [Vdc]	3.5 - 6.0	3.5 - 6.0	3.5 - 6.0	3.5 - 6.0
Max. Logic Supply Current @ 5Vdc (w/o LED) [mA] ①	20	20	20	20
Max. Logic Supply Current @ 5Vdc (w/ LED) [mA] ①	15	15	15	15

	6441	6451	6442	6452
Nominal Input Voltage [Vdc]	15	15	15	15
Output Module Type	Non-Inverting	Inverting	Non-Inverting	Inverting
Must Turn On Voltage Range @ pin 4 [Vdc]	0.0 - 2.0	8.0 - 18	0.0 - 2.0	8.0 - 18
Must Turn Off Voltage Range @ pin 4 [Vdc]	8.0 - 18	0.0 - 2.0	8.0 - 18	0.0 - 2.0
Max. Input On-Current (Sink) @ pin 4 [µA]	175 @ 2.0V 250 @ 0.0V	Ñ Ñ	175 @ 2.0V 250 @ 0.0V	Ñ Ñ
Max. Input On-Current (Source) @ pin 4 [µA]	Ñ Ñ	75 @ 8.0V 200 @ 18V	Ñ Ñ	75 @ 8.0V 200 @ 18V
Max. Input Current for Output Off-State @ pin 4 [µA] ②	10	10 10	10	10
Logic Supply Voltage Range [Vdc]	10 - 18	10 - 18	10 - 18	10 - 18
Max. Logic Supply Current @ 5Vdc (w/o LED) [mA] ①	25	25	25	25
Max. Logic Supply Current @ 5Vdc (w/ LED) [mA] ①	22	22	22	22

## OUTPUT SPECIFICATIONS

Load Current Range @ 45°C [A]	0.02 - 3.5	0.02 - 3.5	0.02 - 3.5	0.02 - 3.5
Load Voltage Range [Vdc]	12 - 140	12 - 140	24 - 280	24 - 280
Max. Surge Current 1 Cycle (Non-Rep) [A <sub>pk</sub> ]	80	80	80	80
Max. On-State Voltage [Vdc]	1.5	1.5	1.5	1.5
Max. Off-State Leakage [mA]	5.0	5.0	5.0	5.0
Max. Turn On Time	1/2 Cycle	1/2 Cycle	1/2 Cycle	1/2 Cycle
Max. Turn Off Time	1/2 Cycle	1/2 Cycle	1/2 Cycle	1/2 Cycle
Transient Overvoltage [V <sub>pk</sub> ]	400	400	600	600

## GENERAL NOTES

- ① LED optional. Placed in series with pin 3 for status indication.
- ② Max. allowable leakage current from driver maintain output off-state.

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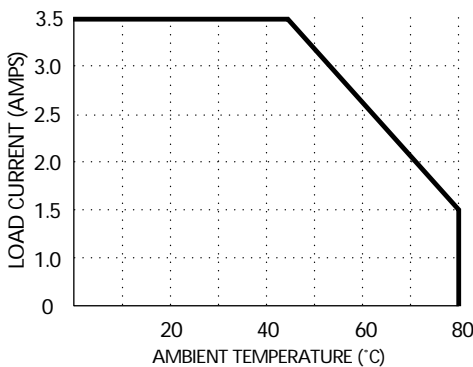


# AC Output Buffered Modules

## GENERAL SPECIFICATIONS

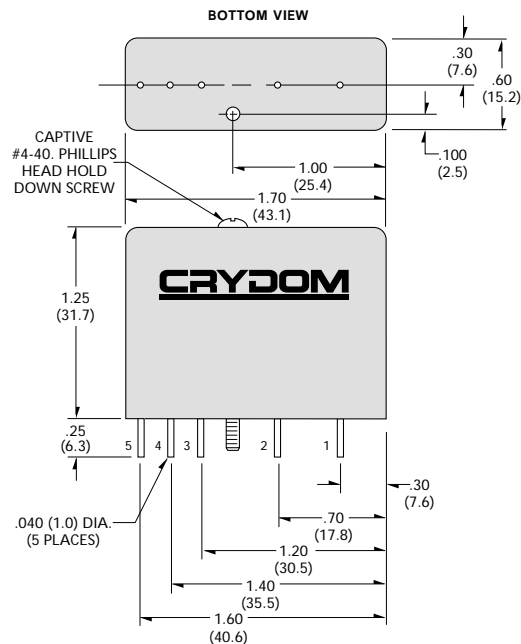
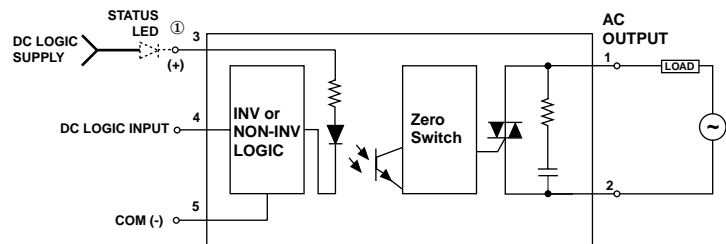
Min. Dielectric Input/Output (1 Minute)	4,000 VRMS
Min. Isolation Resistance Input/Output (@ 500V)	10 <sup>10</sup> Ohms
Capacitance input to output	8 pF
Temperature Range Ñ Operating	-40°C to 80°C
Temperature Range Ñ Storage	-40°C to 125°C

## CURRENT DERATING CURVE



Max. Load Current vs. Temp.

## WIRING & MECHANICAL DIAGRAMS



All dimensions are in inches (millimeters)

## BUFFERED OUTPUT MODULES

A buffered non-inverting module turns on when pin 4 is held in the low state (logic 0), the same as standard modules driven in the sink mode. A buffered inverting module conversely turns on when pin 4 is held high (logic 1). In the absence of an input signal and/or logic supply (open Circuit), all models will be in the off-state.

Buffered modules may be used with standard 5 pin PB or MS mounting boards. However, the 3.3K pull-up resistor will add to the logic drive current of a non-inverting module and may be removed. For an inverting module, the resistor must be removed to avoid a false ÕonÕ command, unless a Õnormally closedÕ condition is desirable for use with a ground seeking (logic 0) signal source.

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