

CIO-DAC02

Specifications



**MEASUREMENT
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Specifications

All specifications are subject to change without notice.

Typical for 25 °C unless otherwise specified.

Specifications in *italic text* are guaranteed by design.

Analog output

Table 1. Analog input specifications

D/A converter	AD7548
<i>Resolution</i>	<i>12-bits</i>
<i>Number of channels</i>	<i>2 voltage or current output</i>
Voltage ranges (Bipolar output)	±5 V, ±10 V and user range (determined by value of external reference between -10 V and +10 V) jumper selectable
Voltage ranges (Unipolar output)	0 to 5 V, 0 to 10 V and user range (determined by the value of the external reference between -10 V and +10 V) jumper selectable
Current ranges (Current output)	4 to 20 mA (using on-board or external -5 V reference)
D/A pacing	Software paced
Offset error	Adjustable to zero
Gain error	Adjustable to zero
Differential nonlinearity	±0.5 LSB max
Integral nonlinearity	±0.5 LSB max
Relative accuracy	±0.5 LSB (0.01%) max
<i>Monotonicity</i>	<i>Guaranteed monotonic to 12 bits over temperature</i>
Gain drift (internal referece)	±25 ppm/°C max
Offset drift	±3 ppm/°C max
Slew rate	0.3 V/μs typical
<i>Current drive (voltage outputs)</i>	<i>±5 mA min</i>
Voltage compliance (current out)	8 to 36 V
<i>Output resistance (OP-07)</i>	<i>0.1 ohm max</i>
<i>Output short-circuit duration</i>	<i>40 mA min continuous</i>
Miscellaneous	<ul style="list-style-type: none">▪ Double buffered output latches▪ 7 kOhm min reference input resistance

Power consumption

Table 2. Power consumption specifications

Parameter	Conditions	Specification
Supply current	+5 V supply	135 mA typ, 300 mA max
	+12 V supply	15 mA typ, 25 mA max
	-12 V supply	25 mA typ, 35 mA max

Environmental

Table 3. Environmental specifications

<i>Operating temperature range</i>	<i>0 to 70 °C</i>
<i>Storage temperature range</i>	<i>-55 to 125 °C</i>
<i>Humidity</i>	<i>0 to 90% non-condensing</i>

Main connector and pin out

Table 4. Connector specifications

Connector type	25-pin "D" connector
Compatible cables	C25FM-x DMCON-25 (D-connector, D-shell, and termination pins to construct your own cable)
Compatible accessory product with the C25FM-x cable	CIO-MINI25

Table 5. Connector pin out

Pin	Signal Name	Pin	Signal Name
1	GND	14	-10V REF OUT
2	LLGND	15	-5V REF OUT
3	LLGND	16	D/A1 VREF Input
4	LLGND	17	D/A1 Bipolar
5	LLGND	18	D/A1 Unipolar
6	LLGND	19	D/A1 4-20 mA
7	LLGND	20	-10V REF OUT
8	LLGND	21	-5V REF OUT
9	LLGND	22	D/A0 VREF Input
10	LLGND	23	D/A0 Bipolar
11	LLGND	24	D/A0 Unipolar
12	LLGND	25	D/A0 4-20 mA
13	+5V PC		

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