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Find the *Galil Motion Control ICM-2900* at our website: *Click HERE*

Application Note #1424

Description of the ICM-2900

The ICM-2900 interconnect module provides easy connections between the Optima Series controllers and other system elements, such as amplifiers, encoders, and external switches. The ICM- 2900 accepts the 100-pin main cable and provides terminal blocks for connections. Each terminal is labeled for quick connection of system elements. The ICM-2900 provides access to the signals for up to 4 axes; two are required for 5 or more axes.

BLOCK (4 PIN)	LABEL	I/O	DESCRIPTION
1	MOCMDZ	O	Z axis motor command to amp input (w / respect to ground)
1	SIGNZ	O	Z axis sign output for input to stepper motor amp
1	PWMZ	O	Z axis pulse output for input to stepper motor amp
1	GND	O	Signal Ground
2	MOCMDW	O	W axis motor command to amp input (w / respect to ground)
2	SIGNW	O	W axis sign output for input to stepper motor amp
2	PWMW	O	W axis pulse output for input to stepper motor amp
2	GND	O	Signal Ground
3	MOCMDX	O	X axis motor command to amp input (w / respect to ground)
3	SIGNX	O	X axis sign output for input to stepper motor amp
3	PWMX	O	X axis pulse output for input to stepper motor amp
3	GND	O	Signal Ground
4	MOCMDY	O	Y axis motor command to amp input (w / respect to ground)

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4	SIGNY	O	Y axis sign output for input to stepper motor amp
4	PWMY	O	Y axis pulse output for input to stepper motor amp
4	GND	O	Signal Ground
5	OUT PWR	I	Isolated Power In for Opto-Isolation Option
5	ERROR	O	Error output
5	CMP	O	Circular Compare Output
5	OUT GND	O	Isolated Ground for Opto-Isolation Option
6	AMPENW	O	W axis amplifier enable
6	AMPENZ	O	Z axis amplifier enable
6	AMPENY	O	Y axis amplifier enable
6	AMPENX	O	X axis amplifier enable
7	OUT5	O	General Output 5
7	OUT6	O	General Output 6
7	OUT7	O	General Output 7
7	OUT8	O	General Output 8
8	OUT1	O	General Output 1
8	OUT2	O	General Output 2
8	OUT3	O	General Output 3
8	OUT4	O	General Output 4
9	+5V	O	+ 5 Volts
9	HOMEZ	I	Z axis home input
9	RLSZ	I	Z axis reverse limit switch input
9	FLSZ	I	Z axis forward limit switch input
10	LSCOM	I	Limit Switch Common Input
10	HOMEW	I	W axis home input
10	RLSW	I	W axis reverse limit switch input
10	FLSW	I	W axis forward limit switch input
11	HOMEX	I	X axis home input
11	RLSX	I	X axis reverse limit switch input
11	FLSX	I	X axis forward limit switch input
11	GND	O	Signal Ground

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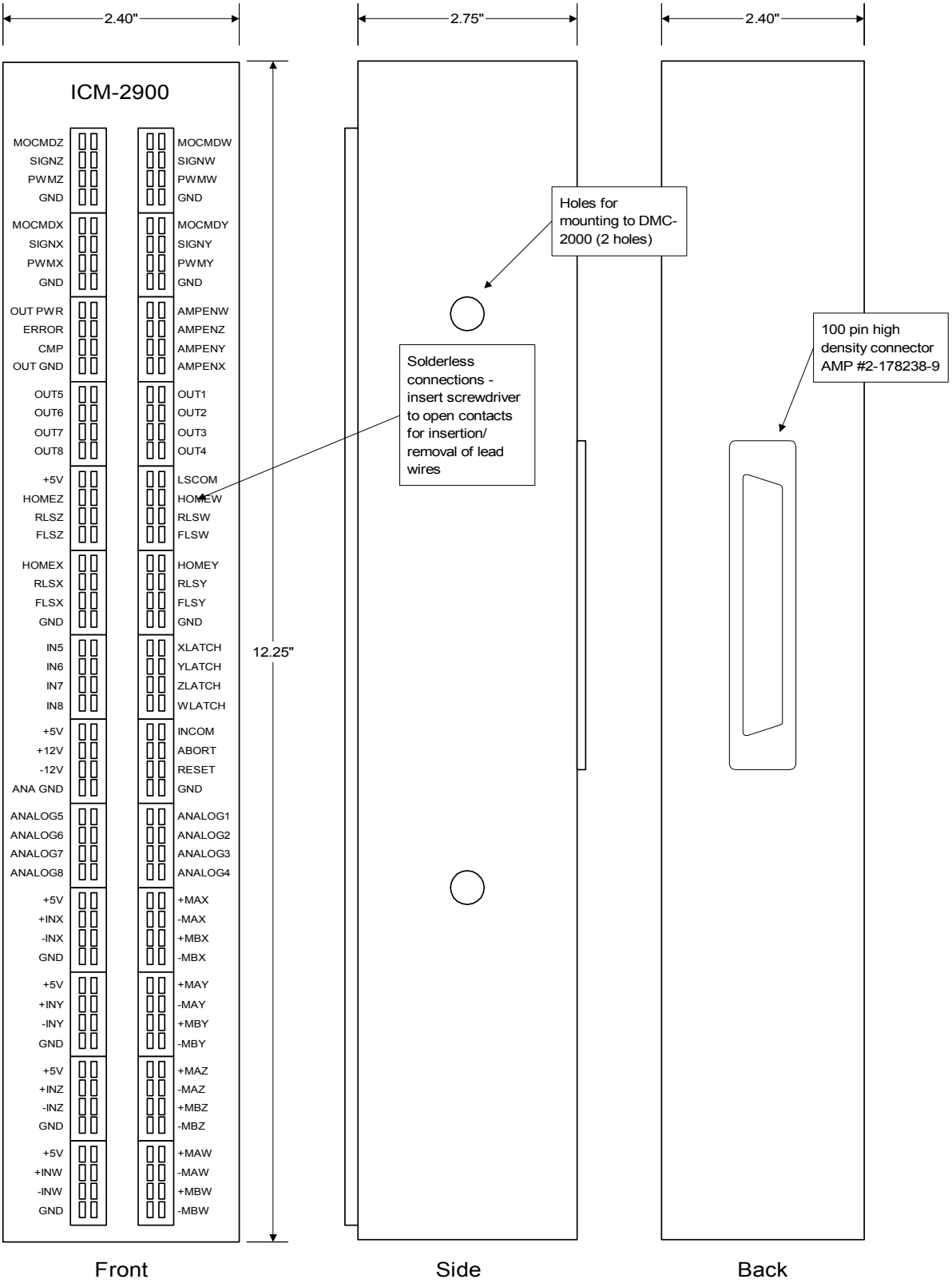
12	HOMEY	I	Y axis home input
12	RLSY	I	Y axis reverse limit switch input
12	FLSY	I	Y axis forward limit switch input
12	GND	O	Signal Ground
13	IN5	I	Input 5
13	IN6	I	Input 6
13	IN7	I	Input 7
13	IN8	I	Input 8
14	XLATCH	I	Input 1 (Used for X axis latch input)
14	YLATCH	I	Input 2 (Used for Y axis latch input)
14	ZLATCH	I	Input 3 (Used for Z axis latch input)
14	WLATCH	I	Input 4 (Used for W axis latch input)
15	+5V	O	+ 5 Volts
15	+12V	O	+12 Volts
15	-12V	O	-12 Volts
15	ANA GND	O	Isolated Analog Ground for Use with Analog Inputs
16	INCOM	I	Input Common For General Use Inputs
16	ABORT	I	Abort Input
16	RESET	I	Reset Input
16	GND	O	Signal Ground
17	ANALOG5	I	Analog Input 5
17	ANALOG6	I	Analog Input 6
17	ANALOG7	I	Analog Input 7
17	ANALOG8	I	Analog Input 8
18	ANALOG1	I	Analog Input 1
18	ANALOG2	I	Analog Input 2
18	ANALOG3	I	Analog Input 3
18	ANALOG4	I	Analog Input 4
19	+5V	O	+ 5Volts
19	+INX	I	X Main encoder Index +
19	-INX	I	X Main encoder Index -
19	GND	O	Signal Ground
20	+MAX	I	X Main encoder A+

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20	-MAX	I	X Main encoder A-
20	+MBX	I	X Main encoder B+
20	-MBX	I	X Main encoder B-
21	+5V	O	+ 5Volts
21	+INY	I	Y Main encoder Index +
21	-INY	I	Y Main encoder Index -
21	GND	O	Signal Ground
22	+MAY	I	Y Main encoder A+
22	-MAY	I	Y Main encoder A-
22	+MBY	I	Y Main encoder B+
22	-MBY	I	Y Main encoder B-
23	+5V	O	+ 5Volts
23	+INZ	I	Z Main encoder Index +
23	-INZ	I	Z Main encoder Index -
23	GND	O	Signal Ground
24	+MAZ	I	Z Main encoder A+
24	-MAZ	I	Z Main encoder A-
24	+MBZ	I	Z Main encoder B+
24	-MBZ	I	Z Main encoder B-
25	+5V	O	+ 5Volts
25	+INW	I	W Main encoder Index +
25	-INW	I	W Main encoder Index -
25	GND	O	Signal Ground
26	+MAW	I	W Main encoder A+
26	-MAW	I	W Main encoder A-
26	+MBW	I	W Main encoder B+
26	-MBW	I	W Main encoder B-

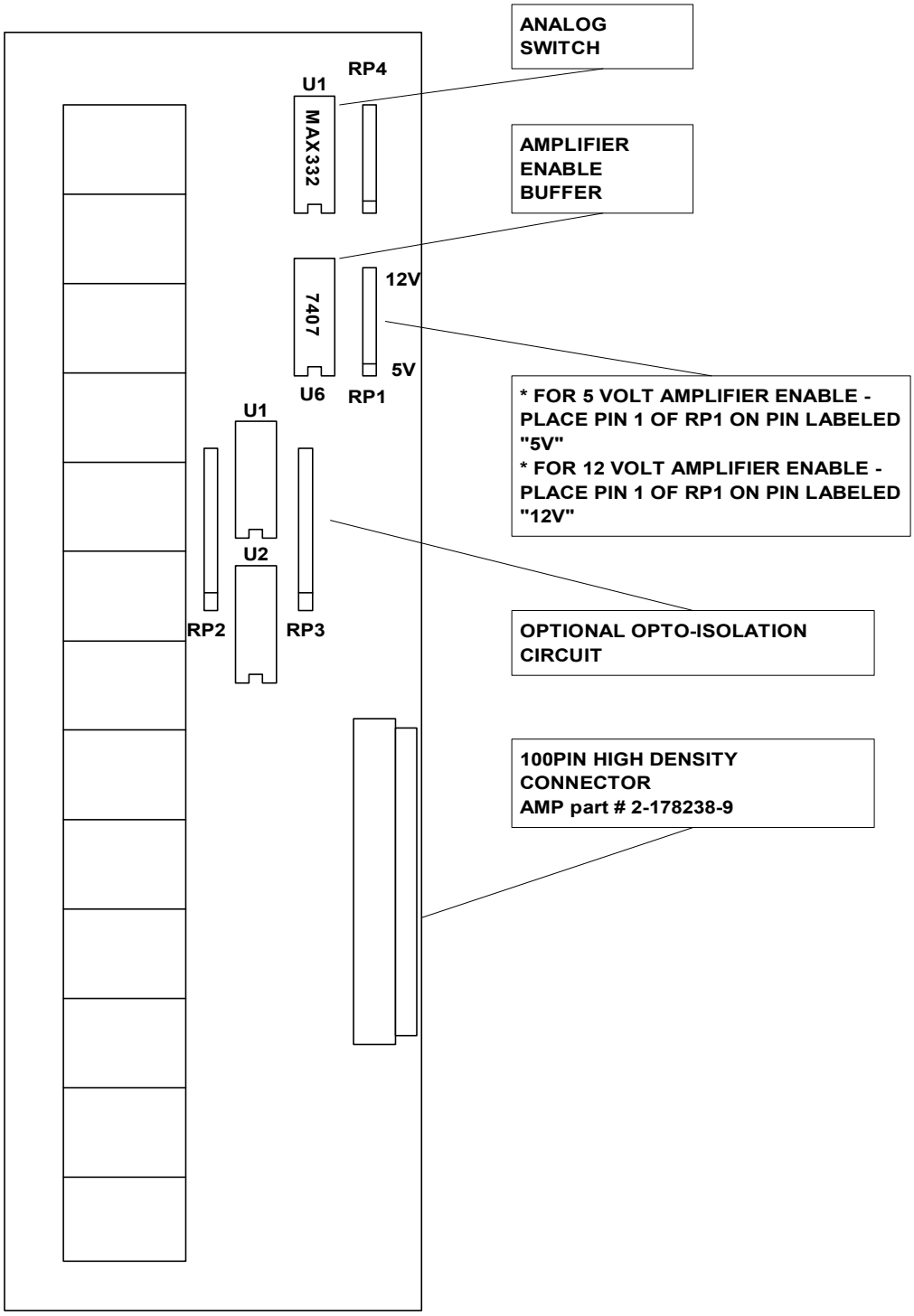
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ICM-2900 Drawing:



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PCB Layout of the ICM-2900:



ICM-2900 BOARD LAYOUT

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