Electronic Solutions for the 21st Century

ICM-HDIO-10P

Data Sheet

PRODUCT DESCRIPTION:

The **ICM-HDIO-10P** is designed for direct connection with any of the Divelbiss *Bear Bones*, *High Density Bear Bones*, *Boss Bear*, *Boss32*, *Universal Control Panel (UCP)* and *Universal Machine Controller (UMC)* product families.

PRODUCT FEATURES:

- Quickly Connects using ICM-HDCA Series Cables
- Optically Isolated Outputs
- Reverse polarity protection
- Small size and light weight
- Mounts on industry standard DIN rail type NS31 or NS35
- Addressable via programming jumpers
- Detatachable Input / Output blocks
- Polarized and locking data and power bus connections
- LED monitoring of I/O status
- Engineered to meet NEMA part ICS 3-304
- DC Commoned Outputs
- Fused Outputs with Spare Fuse & Fuse Tester

Proudly Made in the USA

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DIVELBISS CORPORATION
9778 MT. GILEAD RD.
FREDERICKTOWN, OH 43019
(800) 245-2327

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http://www.divelbiss.com
divelbiss@divelbiss.com

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OUTPUT SPECIFICATIONS:

# Channels:	8
Nominal Source Voltage:	24 VDC
Max Source Voltage:	30 VDC
"On" State Voltage Drop:	2.4VDC Maximum @ 1 Amp
Load Current:	
Minimum:	.5mADC*
Maximum:	1 Amp*
Turn On Time:	10 µSec Maximum
Turn Off Time:	1mSec Maximum
Surge Current:	2 Amp Maximum for 1 Second*
Isolation (Output to Logic Level)**:**	3.6KV Minimum for 1 Second
Isolation (Interchannel)**:**	3KV Minimum for 1 Second
Output Types:	Sink
Optical Isolation:	Yes
LED Status Indicators:	Yes
Fused:	Yes
"Off" State Leakage Current:	100 µADC Max. @ 30 VDC*

* @ 0-55 Degrees C.

TYPICAL OUTPUT CIRCUIT DIAGRAMS

Typical ICM-HDIO-10P Output Circuit

Sinking Output Circuit

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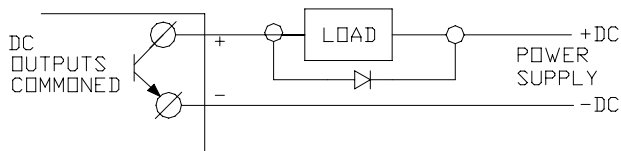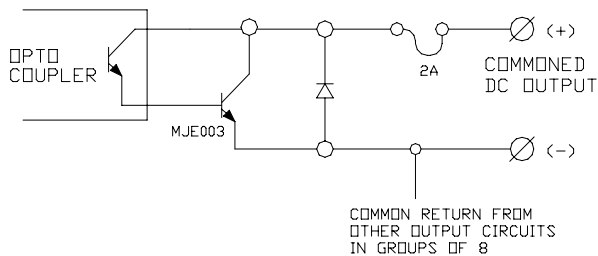
Addressing I/O Points

The I/O is addressed into "pages". Each "page" represents 16 inputs and 16 outputs. The HDIO-10P addresses a "half page". It may be addressed to any page 0 through 7. Limitations apply when connected to a *Bear Bones*, *Baby Bear Bones* or *High Density Bear Bones* CPU. When connected to these CPUs, the HDIO may **NOT** be addressed on "Page 1". "Page" selection is done via programming shunts "Address Selector(s) 1,2,4,8". See page selection to the right for more details. *Note: Some models may only use selectors 1,2,4. Page 6 cannot be address when HDIO is used with PIC-AB-01.*

Card Page Address	Card Paging Shunts (Address Selector) 8 4 2 1	U/L Selector Lower / Upper	DIN/DOUT 8 I/O Cards	DIN/DOUT 16 I/O Cards	Card Page Address	Card Paging Shunts (Address Selector) 8 4 2 1	U/L Selector Lower / Upper	DIN/DOUT 8 I/O Cards	DIN/DOUT 16 I/O Cards
0			0-7 / 8-15	0-15	8			128-135 / 136-143	128-143
1			16-23 / 24-31	16-31	9			144-151 / 152-159	144-159
2			32-39 / 40-47	32-47	10			160-167 / 168-175	160-175
3			48-55 / 56-63	48-63	11			176-183 / 184-191	176-191
4			64-71 / 72-79	64-79	12			192-199 / 200-207	192-207
5			80-87 / 88-95	80-95	13			208-215 / 216-223	208-223
6			96-103 / 104-111	96-111	14			224-231 / 232-239	224-239
7			112-119 / 120-127	112-127	15			240-247 / 248-255	240-255

Power Consumption

Power Input Standby:	+5VDC @ 2mA Maximum
Power Input Origin:	Controller/Aux Powersupply via Cable 3
I/O Point Power Consumption:	
Activated Outputs:	8mA each output point (additional)

DATA CONNECTIONS

The data is received from the controller via a ribbon cable connected to Conn6. The controller provides all the addressing, data and selection signals necessary for complete operation.
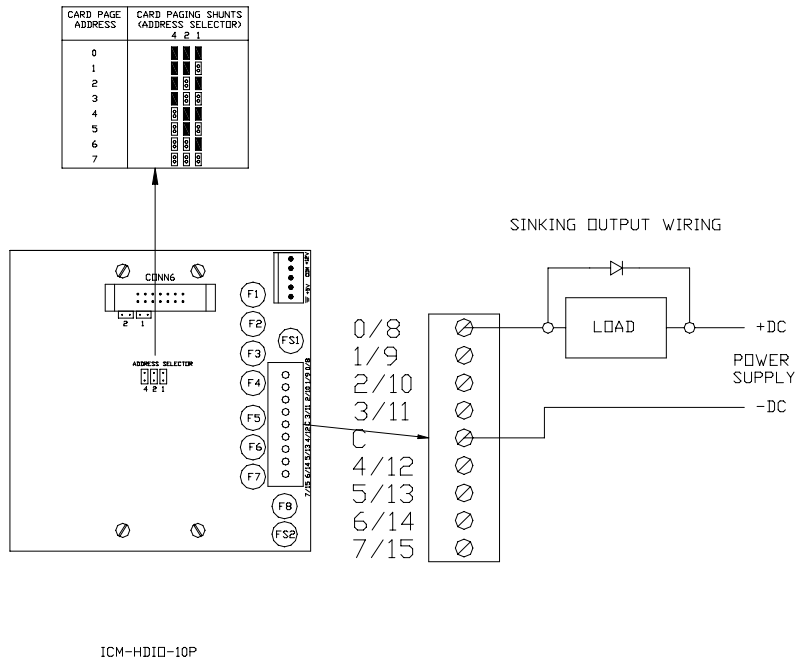
MOUNTING & DIMENSIONS

Mounting Type:	Industry Standard DIN Rail NS 31 or NS 35
Dimensions:	
Width:	4.25 Inches
Length:	4.225 Inches
Depth:	1.7 Inches (including din rail mounting feet)

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CONNECTIVITY DIAGRAMS

For additional Addressing, See Chart on Page 4.

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SINKING OUTPUT WIRING

Maximum Recommended wire size is 14 AWG.

CABLING

The ICM-HDIO-10P connects to any of the Divelbiss controllers using standard cable sets. See below for proper cable. Custom Cabling is also available.

Connect to Boss32, UCP, UMC and HDCPU.

ICM-HDCA-01	Connects 1 Expander (9")
ICM-HDCA-02	Connects 2 Expander (18")
ICM-HDCA-03	Connects 3 Expander (27")
ICM-HDCA-04	Connects 4 Expander (36")
ICM-HDCA-05	Connects 5 Expander (45")
ICM-HDCA-06	Connects 6 Expander (54")

Connect to Boss Bear, Bear Bones, and Baby Bear Bones.

ICM-HDCA-11	Connects 1 Expander (9")
ICM-HDCA-12	Connects 2 Expander (18")
ICM-HDCA-13	Connects 3 Expander (27")
ICM-HDCA-14	Connects 4 Expander (36")
ICM-HDCA-15	Connects 5 Expander (45")
ICM-HDCA-16	Connects 6 Expander (54")

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