12 / 24VDC Input Module

HE800DIM310 / HE800DIM410
HE-DIM310* / HE-DIM410*
16 / 32 Channels
Positive or Negative Logic
*** HE- denotes plastic case.**

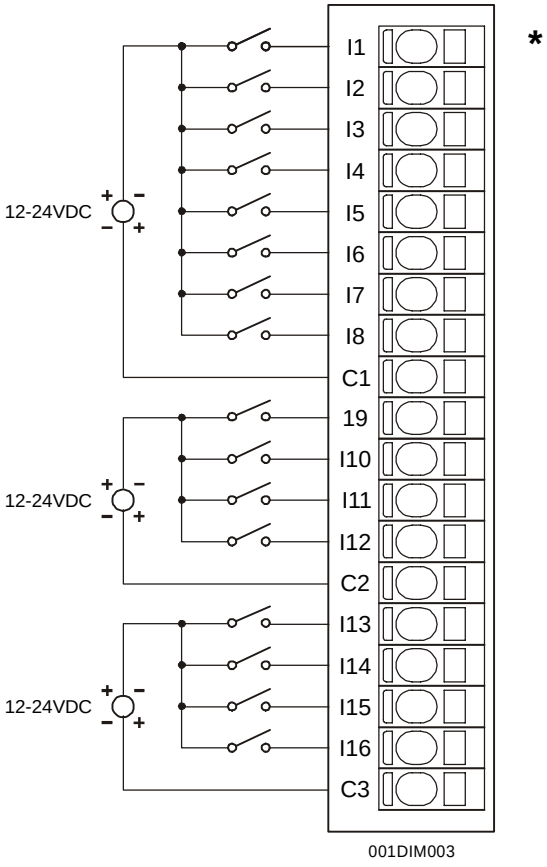
This datasheet also covers products starting with IC300.

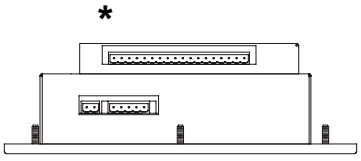
1 SPECIFICATIONS

	DIM 310	DIM 410		DIM 310	DIM 410
Inputs per Module	16	32	Minimum ON Current	1 mA.	
Commons per Module	3	6	Input Characteristics	Bi-Directional	
Input Voltage Range	12–24 VDC		Maximum OFF Current	200 µA	
Peak Voltage	35 VDC Max.		OFF to ON Response	1 ms.	
Isolation Voltage (Common to Common and Common to Channel)	500 VDC		ON to OFF Response	1 ms.	
Required Power (Steady State)	24 W (10 mA@24 VDC)		Terminal Type	Spring Clamp, Removable	
Required Power (Inrush)	Same as Steady State		Relative Humidity	5–95% Non-condensing	
ON Voltage Level	9 VDC Min.		Operating Temperature	0°–60° Celsius	
OFF Voltage Level	3 VDC Max.				
Input Impedance	10 K Ohms				
CE	See Compliance Table at http://www.heapg.com/Support/compliance.htm				
UL					

2 WIRING

2.1 DIM310 / DIM410 Wiring

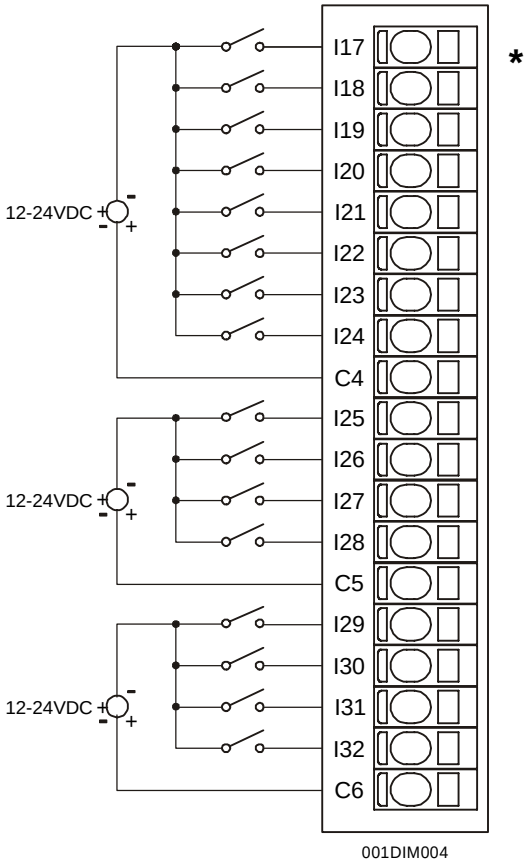


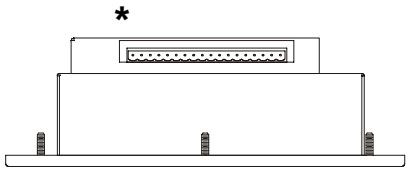


OCS Bottom View – Shows Corresponding I/O Pin

Pin	Signal
	DIM310/410 INPUT
I1	Input 1
I2	Input 2
I3	Input 3
I4	Input 4
I5	Input 5
I6	Input 6
I7	Input 7
I8	Input 8
C1	Common 1 (Isolated)
I9	Input 9
I10	Input 10
I11	Input 11
I12	Input 12
C2	Common 2 (Isolated)
I13	Input 13
I14	Input 14
I15	Input 15
I16	Input 16
C3	Common 3 (Isolated)

2.2 DIM410 Wiring

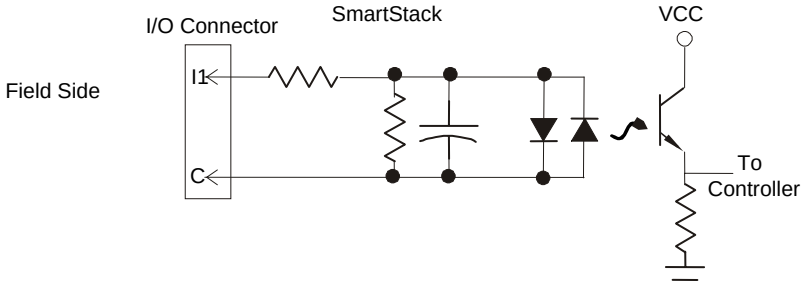




OCS Top View – Shows Corresponding I/O pin

Pin	Signal
	DIM410 INPUT
I17	Input 17
I18	Input 18
I19	Input 19
I20	Input 20
I21	Input 21
I22	Input 22
I23	Input 23
I24	Input 24
C4	Common 4 (Isolated)
I25	Input 25
I26	Input 26
I27	Input 27
I28	Input 28
C5	Common 5 (Isolated)
I29	Input 29
I30	Input 30
I31	Input 31
I32	Input 32
C6	Common 6 (Isolated)

3 INTERNAL WIRING

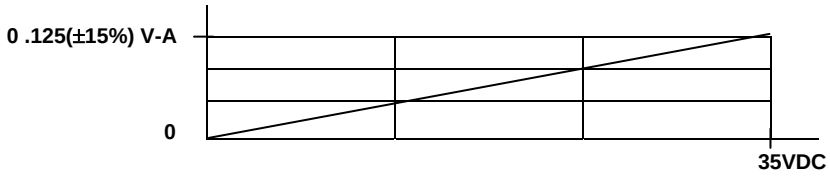


4 CONFIGURATION

Preliminary configuration procedures that apply to SmartStack™ Modules are contained in the hardware manual of the controller you are using. Refer to the Additional References section in this data sheet for a listing of hardware manuals. Although the module has no user defined parameters, the I/O Map describes which I/O registers are assigned to a specific SmartStack™ Module and where the module is located in the point map. The I/O Map is determined by the model number and location within the SmartStack™. The I/O Map is not edited by the user.

5 INPUT CHARACTERISTICS

Digital Input Chart



6 INSTALLATION / SAFETY

Warning: Remove power from the OCS controller, CAN port, and any peripheral equipment connected to this local system before adding or replacing this or any module.

Use the following wire type or equivalent:

- Belden 8917
- 16 AWG or larger

For detailed installation and a handy checklist that covers panel box layout requirements and minimum clearances, refer to the hardware manual of the controller you are using. (See the Additional References section in this document.).

When found on the product, the following symbols specify:

Warning: Consult user documentation.

Warning: Electrical Shock Hazard.

WARNING: To avoid the risk of electric shock or burns, always connect the safety (or earth) ground before making any other connections.

WARNING: To reduce the risk of fire, electrical shock, or physical injury it is strongly recommended to fuse the voltage measurement inputs. Be sure to locate fuses as close to the source as possible.

WARNING: Replace fuse with the same type and rating to provide protection against risk of fire and shock hazards.

WARNING: In the event of repeated failure, do not replace the fuse again as a repeated failure indicates a defective condition that will not clear by replacing the fuse.

WARNING: Only qualified electrical personnel familiar with the construction and operation of this equipment and the hazards involved should install, adjust, operate, or service this equipment. Read and understand this manual and other applicable manuals in their entirety before proceeding. Failure to observe this precaution could result in severe bodily injury or loss of life.

For detailed installation and a handy checklist that covers panel box layout requirements and minimum clearances, refer to the hardware manual of the controller you are using. (See the Additional References section in this document.):

- All applicable codes and standards need to be followed in the installation of this product.
- For I/O wiring (discrete), use the following wire type or equivalent: Belden 9918, 18 AWG or larger.

Adhere to the following safety precautions whenever any type of connection is made to the module.

- Connect the green safety (earth) ground first before making any other connections.
- When connecting to electric circuits or pulse-initiating equipment, open their related breakers. Do not make connections to live power lines.
- Make connections to the module first; then connect to the circuit to be monitored.
- Route power wires in a safe manner in accordance with good practice and local codes.
- Wear proper personal protective equipment including safety glasses and insulated gloves when making connections to power circuits.
- Ensure hands, shoes, and floor are dry before making any connection to a power line.
- Make sure the unit is turned OFF before making connection to terminals. Make sure all circuits are de-energized before making connections.
- Before each use, inspect all cables for breaks or cracks in the insulation. Replace immediately if defective.

7 ADDITIONAL REFERENCES

The following information serves as a *general* listing of Horner controller products and other references of interest and their corresponding manual numbers. Visit our website listed in the Technical Support section to obtain user documentation and updates.

Note: This list is not intended for users to determine which products are appropriate for their application; controller products differ in the features that they support. If assistance is required, see the **Technical Support** section in this document.	
Controller	**Manual Number**
XLE Series (e.g., HE-XExxx)	MAN0805
QX Series (e.g., HE-QXxxx)	MAN0798
NX Series (e.g., HE-NXxxx)	MAN0781
LX Series (e.g., LX-xxx; also covers RCS116)	MAN0755
Color Touch OCS (e.g., OCSxxx)	MAN0465
OCS (Operator Control Station) (e.g., OCS1xx / 2xx; Graphic OCS250)	MAN0227
Remote Control Station (e.g., RCS2x0)	
MiniOCS (e.g., HE500OCSxxx, HE500RCSxxx)	MAN0305
Other Useful References	
CAN Networks	MAN0799
Cscape Programming and Reference	MAN0313
Wiring Accessories and Spare Parts Manual	MAN0347
DeviceNet™ Implementation	SUP0326
Wiring Accessories and Spare Parts Manual	MAN0347

8 TECHNICAL SUPPORT

For assistance and manual up-dates, contact Technical Support at the following locations:

North America:+

(317) 916-4274

www.heapg.com

Europe:

(+) 353-21-4321-266

www.horner-apg.com