



**24VDC Input Module**  
**HE400DIM710 / HE409DIM710**  
**Positive / Negative Logic**  
**32 Channels In**

*SmartStix*

For electronic information including the Electronic Data Sheet (ESD), see [www.SmartStix.com](http://www.SmartStix.com).  
 This product has a Programming Reference (SUP0552).  
 HE400 denotes a non-removable terminal strip; HE409 denotes a removable terminal strip.

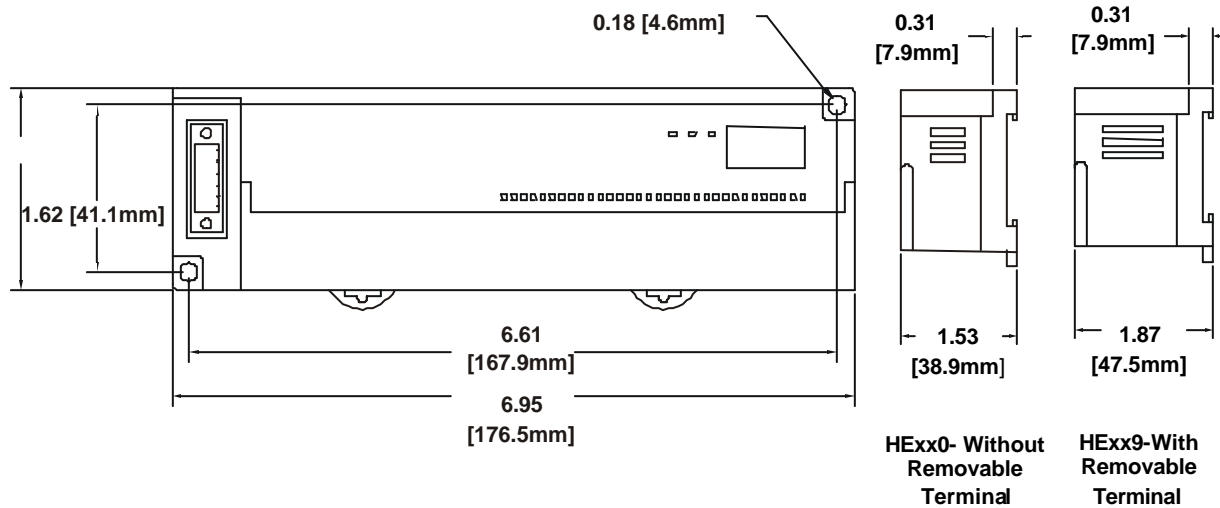
## 1 SPECIFICATIONS

<b>DIM710 INPUTS</b>			
<b>Number of input points</b>	32	<b>OFF to ON Response</b>	0 - 3ms. or less
<b>Rated Input Current</b>	7mA	<b>ON to OFF Response</b>	0 - 3ms. or less
<b>ON Voltage Level</b>	19VDC or less	<b>Common Terminal</b>	16 points / COM
<b>OFF Voltage Level</b>	6VDC or less	<b>Operating Indicator</b>	LED turns on during ON state of input
<b>Input Characteristics</b>	Bidirectional	<b>External Connections</b>	Terminal block connector (M3 x 6 screws)
<b>Isolation Method</b>	Photo Coupler	<b>Weight</b>	8.36oz. (237 g)
<b>Internal power Consumption (mA)</b>	300		
<b>General</b>			
<b>Storage Temperature</b>	-25° to 70° C	<b>Pollution degree</b>	2 or lower
<b>Operating Temperature</b>	0° to 55° C	<b>Internal power Consumption (mA)</b>	300
<b>Atmosphere</b>	Free from corrosive gases and excessive dust	<b>Cooling method</b>	Self-cooling
<b>Operating and Storage Humidity</b>	5 to 95% Non-condensing	<b>Weight</b>	8.36oz. (237 g)
<b>Vibration</b>			
<b>Occasional Vibration</b>			
<b>Frequency</b>	<b>Acceleration</b>	<b>Amplitude</b>	<b>Sweep Count</b>
10 ≤ f < 57 Hz	-	0.075 mm	10 times in each direction for X,Y,Z
57 ≤ f ≤ 150 Hz	9.8 m/s <sup>2</sup> {1G}	-	
<b>Continuous Vibration</b>			
<b>Frequency</b>	<b>Acceleration</b>	<b>Amplitude</b>	<b>Sweep Count</b>
10 ≤ f < 57 Hz	-	0.035 mm	10 times in each direction for X,Y,Z
57 ≤ f ≤ 150 Hz	4.9 m/s <sup>2</sup> {0.5G}	-	

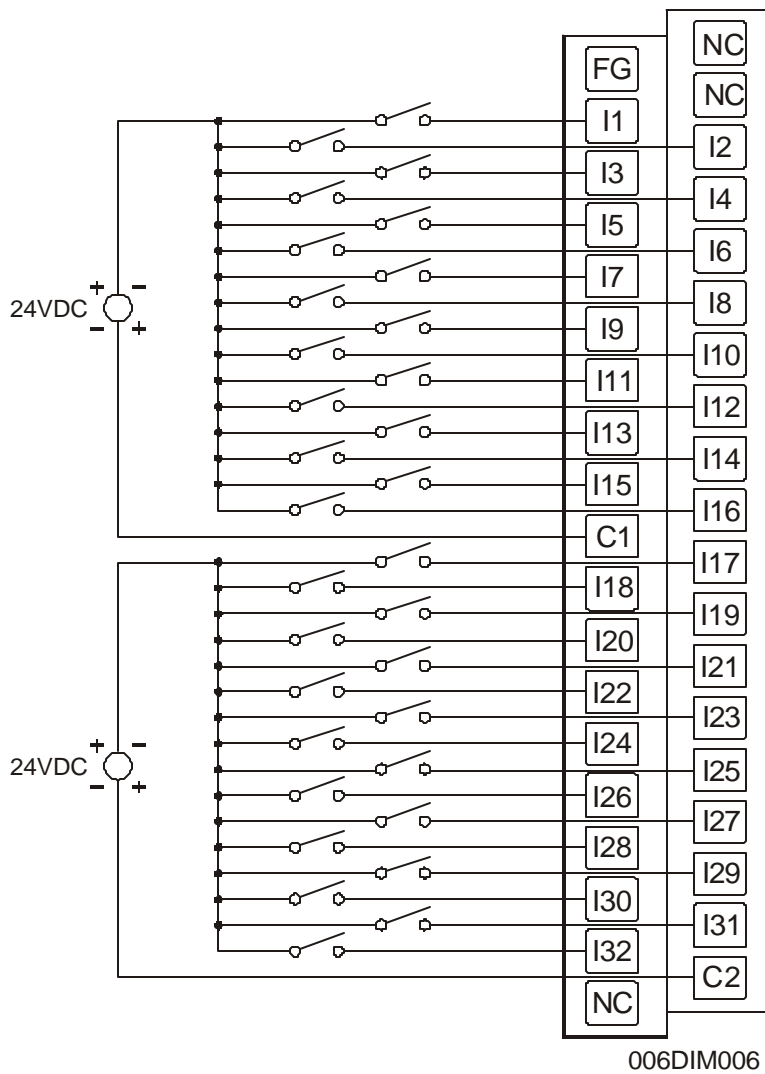
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Specifications continued				
<b>Shocks</b>				
<b>Maximum shock acceleration</b>	147 m/s <sup>2</sup> {15G}			
<b>Duration Time</b>	11 ms.			
<b>Pulse Wave</b>	Half sine wave pulse (3 times in each of X, Y, Z directions)			
<b>Noise Immunity</b>				
<b>Square wave impulse noise</b>	AC: ± 1,500VDC DC: ± 900VDC			
<b>Electrostatic Discharge</b>	Voltage: 4kV (contact discharge)			
<b>Radiated electromagnetic field</b>	27 – 500MHz, 10V/m			
<b>Fast Transient Burst Noise</b>	<b>Severity level</b>	All power modules	Digital I/Os (Ue ≥ 24V)	Digital I/Os (Ue < 24 V) Analog I/Os Communication I/Os
	<b>Voltage</b>	2 kV	1 kV	0.25 kV

## 2 DIMENSIONS



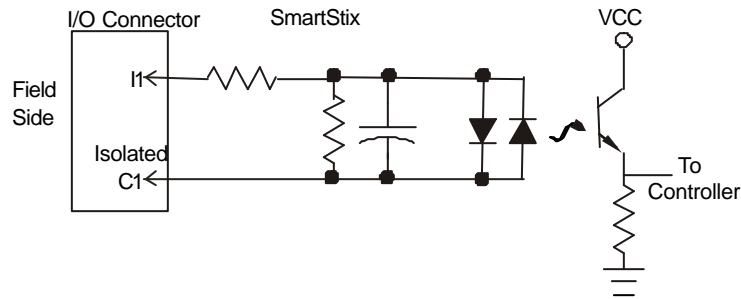
### 3 WIRING



Pin	Signal DIM710
NC*	No Connection (*Do not Connect)
FG	Frame Ground
NC*	No Connection (*Do not Connect)
I1	Input 1
I2	Input 2
I3	Input 3
I4	Input 4
I5	Input 5
I6	Input 6
I7	Input 7
I8	Input 8
I9	Input 9
I10	Input 10
I11	Input 11
I12	Input 12
I13	Input 13
I14	Input 14
I15	Input 15
I16	Input 16
I17	Input 17
C1	Isolated Common 1
I18	Input 18
I19	Input 19
I20	Input 20
I21	Input 21
I22	Input 22
I23	Input 23
I24	Input 24
I25	Input 25
I26	Input 26
I27	Input 27
I28	Input 28
I29	Input 29
I30	Input 30
I31	Input 31
I32	Input 32
C2	Isolated Common 2
NC	No Connection

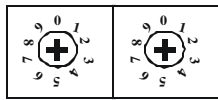
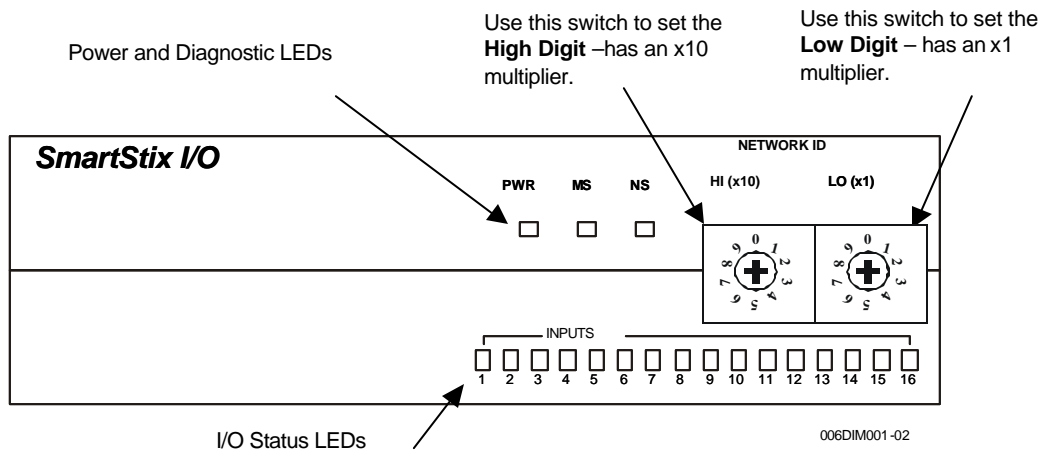
**Note:** For proper operation, C1 and C2 must be tied together.

### 4 INTERNAL WIRING



### 5 SWITCHES

DeviceNet MAC IDs are set using the decimal number system from 0 to 63. Set a unique ID by inserting a small Phillips screwdriver into the two *identical* switches.



Close-up of Switches

Decimal (Dec) to Hexadecimal (Hex) Conversion					
Dec	Hex		Dec	Hex	
	HI	LO		HI	LO
0	0	0	33	2	1
1	0	1	34	2	2
2	0	2	35	2	3
3	0	3	36	2	4
4	0	4	37	2	5
5	0	5	38	2	6
6	0	6	39	2	7
7	0	7	40	2	8
8	0	8	41	2	9
9	0	9	42	2	A
10	0	A	43	2	B
11	0	B	44	2	C
12	0	C	45	2	D
13	0	D	46	2	E
14	0	E	47	2	F
15	0	F	48	3	0
16	1	0	49	3	1
17	1	1	50	3	2
18	1	2	51	3	3
19	1	3	52	3	4
20	1	4	53	3	5
21	1	5	54	3	6
22	1	6	55	3	7
23	1	7	56	3	8
24	1	8	57	3	9
25	1	9	58	3	A
26	1	A	59	3	B
27	1	B	60	3	C
28	1	C	61	3	D
29	1	D	62	3	E
30	1	E	63	3	F
31	1	F			
32	2	0			

## 6 LEDS

The Communication LEDs display the status of the communication module.

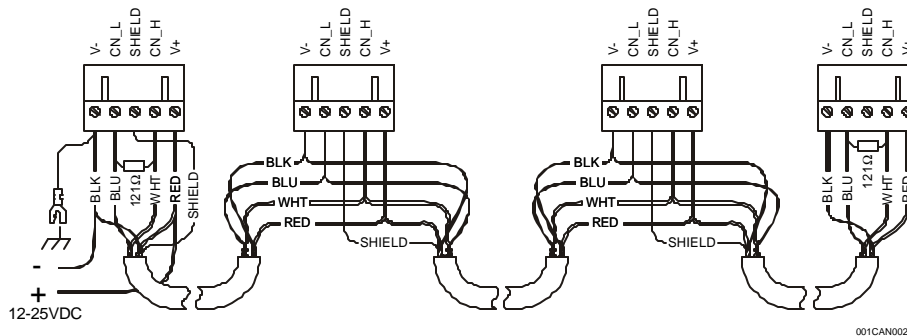
Communication LED	Meaning
PWR	Displays status of power
MS	Displays the status of interface between communication module and CPU module
NS	Displays the status of the network of communication module

## 7 NETWORK CABLE

For detailed network information, refer to [www.odva.org](http://www.odva.org).

Pin	Description
1	V+
2	CAN_H
3	Shield
4	CAN_L
5	V-

Recommended Cable	
Thick: (Max Distance = 500m)	Belden 3082A
Thin: (Max Distance = 100m)	Belden 3084A



CAN Wiring

**Note:** 12 - 24VDC must be supplied to the network.

## 8 INSTALLATION / SAFETY

- 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.
- For detailed installation information, refer to [www.odva.org](http://www.odva.org).



**Warning:** Consult user documentation.



**Warning:** Electrical Shock Hazard.

## 9 TECHNICAL ASSISTANCE

For assistance, contact Technical Support at the following locations:

**North America:**

(317) 916-4274  
[www.heapg.com](http://www.heapg.com)

**Europe:**

(+) 353-21-4321-266  
[www.horner-apg.com](http://www.horner-apg.com)