



SmartRail

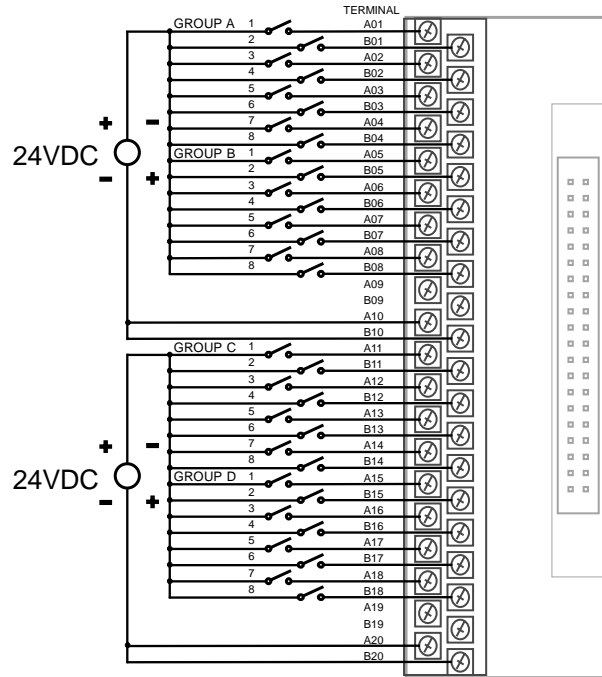
24VDC Input Modules

HE599DIM510 (8pt), HE599DIM610 (16pt), HE599DIM710 (32pt)

Positive/Negative Logic

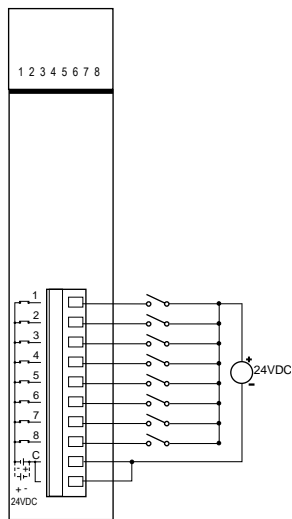
1 Specifications

Specifications			
	DIM510	DIM610	DIM710
Number of Inputs	8	16	32
Commons per Module	1		
Input Voltage Range	24 VDC (20.4 – 28.8 VDC)		
Rated Input Current	About 4mA		
Input Resistance	Approx. 5.6kΩ		
Isolation	500VDC or greater		
ON Voltage (Current) Level	>19VDC (>3mA)		
OFF Voltage (Current) Level	<6VDC (<1mA)		
Response Time	Configurable for 1/3/5/10/20/70/100mS (3mS default)		
LED indication	Labeled 1-8 for each input group		
Backplane Power Consumed @5V (all inputs on)	30mA	40mA	50mA
Terminal Type	M2 Screw Type, Removable		M3 Fixed
Optional Spring-Clamp Terminal Strip	HE599 TRM010	HE599 TRM010 + HE599 TRM008	None
Number of Terminals	10posn	8posn + 10 posn	40-pins
Terminal Torque Rating	0.22 to 0.25 N-m 1.95 to 2.21 in-lb		1.2 N-m 10.6 in-lb
Accepted Wire Size	16-28AWG (copper)		
Wire Stripping Length	7mm		
General Specifications			
	DIM510	DIM610	DIM710
Storage Temp.	-25° to 70° Celsius		
Operating Temp.	-0° to 55° Celsius		
Relative Humidity	5 to 95% Non-condensing		
Dimensions WxHxD	20mm x 90mm x 60mm 0.79" x 3.54" x 2.36"		
Weight	40g (1.4oz.)	52g (1.8oz.)	60g (2.1oz.)
CE & UL Compliance	CE, UL & C-UL Class I, Div 2 Groups A, B, C & D		

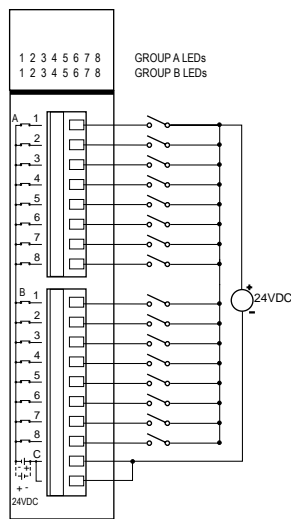


DIM710 Wiring (SmartLink Terminal Strip)

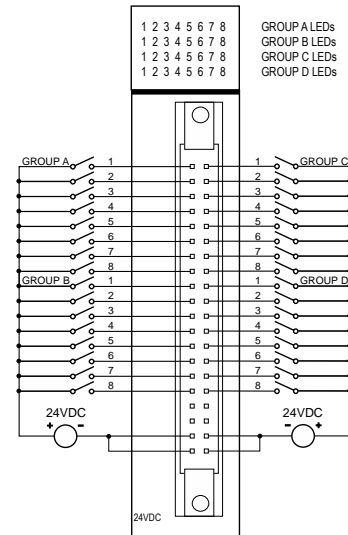
2 Wiring – I/O



DIM510 Wiring



DIM610 Wiring



DIM710 Wiring
40-pin IDE Header cannot be directly wired. SmartLink Terminal Strip recommended

2.1 Input Wiring Terminals

Group	Input	DIM510 Terminal	DIM610 Terminal	DIM710 Pin
A	1	10posn – Terminal 1	8posn – Terminal 1	B20
	2	10posn – Terminal 2	8posn – Terminal 2	B19
	3	10posn – Terminal 3	8posn – Terminal 3	B18
	4	10posn – Terminal 4	8posn – Terminal 4	B17
	5	10posn – Terminal 5	8posn – Terminal 5	B16
	6	10posn – Terminal 6	8posn – Terminal 6	B15
	7	10posn – Terminal 7	8posn – Terminal 7	B14
	8	10posn – Terminal 8	8posn – Terminal 8	B13
Commons		10posn – Terminal 9	10posn – Terminal 9	B02
		10posn – Terminal 10	10posn – Terminal 10	B01
B	1	N/A	10posn – Terminal 1	B12
	2		10posn – Terminal 2	B11
	3		10posn – Terminal 3	B10
	4		10posn – Terminal 4	B09
	5		10posn – Terminal 5	B08
	6		10posn – Terminal 6	B07
	7		10posn – Terminal 7	B06
	8		10posn – Terminal 8	B05
C	1	N/A	N/A	A20
	2			A19
	3			A18
	4			A17
	5			A16
	6			A15
	7			A14
	8			A13
D	1	N/A	N/A	A12
	2			A11
	3			A10
	4			A09
	5			A08
	6			A07
	7			A06
	8			A05
Commons		N/A	N/A	A02
No Connect		N/A	N/A	A01
				B04
				B03
				A03

Note: Groups A, B, C & D are share the same common

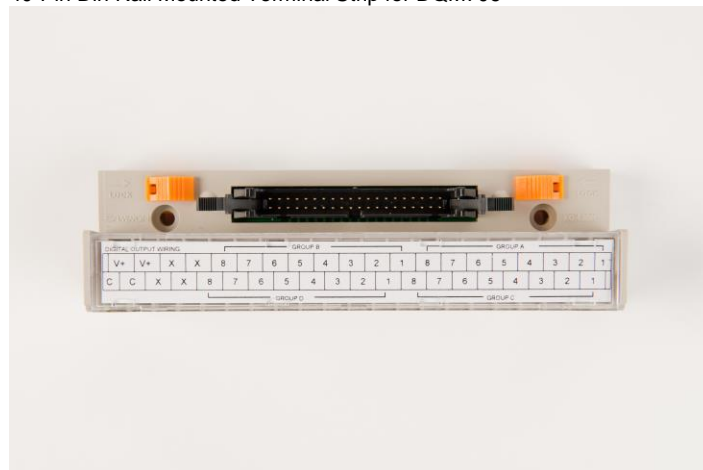
2.2 SmartLink Wiring Accessories

Note: The TRM040 abd RLY037 accessories utilize different cables. They are high-density cables, and the pin out on the accessory side of the unit is different..

SmartLink Wiring Accessories	
Description	Part Number
40pin DIN-rail mounted Terminal Strip	HE599TRM040
40pin Cable, 0.5m	HE599CBL040
40pin Cable, 2.0m	HE599CBL240
32-point Relay block	HE599RLY037
Relay Adapter Cable, 0.5m	HE599CBL037
Relay Adapter Cable, 2.0m	HE599CBL237

HE599TRM040

40-Pin Din Rail Mounted Terminal Strip for DQM706



General Specifications	
Rated Voltage	AC, DC 125V
Rated Current	1A
Withstanding voltage	600V
Applicable cable	1.25mm/max
T/B screw	M3 x 10L
Screw torque	1.2N / m (12Kgf / cm)
Ambient temperature rating	-10°C to 50°C (non-condensing)
Dimensions (L x W x D)	149mm x 40mm x 36.8mm

HE599CBL040 (Shown)

.5m Cable for Relay block RLY037 to DQM706 module

HE599CBL240

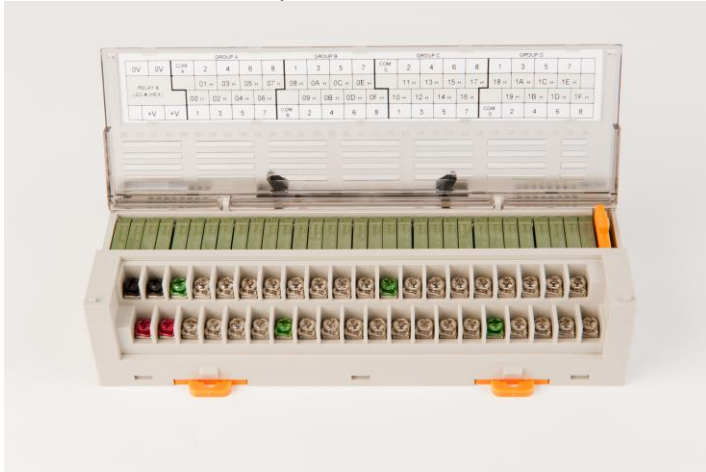
2.0m Cable for Relay block RLY037 to DQM706 module



Note: Connector with ~80° angle connector must be inserted into the Relay block. Straight connector must be inserted into Module

HE599RLY037

32-Point Din Rail Mount Relay Block for DQM 706



3 Configuration DATA

The SmartRail digital input modules feature a configurable input filter, set in Cscape (9.1 or later):

Cscape Configuration Data – Selectable per Module	
Parameter	Selections
Input Response	1ms
	3ms
	5ms
	10ms
	20ms
	100ms

4 Installation / safety

This equipment is suitable for use in Class I, Division 2, Groups A, B, C and D or Non-hazardous locations only

WARNING - EXPLOSION HAZARD -

Do not disconnect equipment unless power has been removed or the area is known to be non-hazardous

WARNING - EXPLOSION HAZARD -

Substitution of any component may impair suitability for Class I, Division 2

WARNING – POSSIBLE EQUIPMENT DAMAGE

Remove power from the I/O Base and any peripheral equipment connected to this local system before adding or replacing this or any module.

- a. All applicable codes and standards should be followed in the installation of this product.

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.

When found on the product, the following symbols specify:



5 Technical Support

Technical Support at the following locations:

North America:
 Tel: 317 916-4274
 Fax: 317 639-4279
 Web: <http://www.heapg.com>
 Email: techspt@heapg.com

Europe:
 Tel: +353-21-4321266
 Fax: +353-21-4321826
 Web: <http://www.horner-apg.com>
 Email: tech.support@horner-apg.com

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General Specifications		
Contact	Arrangement	1a
	Resistive Load	5A 250V AC
	Max Switching Current	5A
	Max switching voltage	250V AC
Coil	Nominal Voltage	24V DC
	Pick-up voltage	16.8V DC
	Drop-out voltage	1.2V DC
	Coil Resistance	3200 ohms
	Nominal Operating Power	180mW
	Surge Voltage between contact and Coil	4000V
	Initial Breakdown Voltage between Contact and Coil	2000V rms
Installed Relay		Matsushita PA1a-24v
I/O Count		32-point (1 A)
Coil Voltage Rating		24V DC
Coil Side Interface		Mil-C 83503 40 pin
Contact Side Interface		Screw terminal block
Dimensions (L x W x D)		174mm x 70mm x 39.5 mm ; din rail
Terminal Screw		M3 x 8L
Terminal Screw Torque		1.2N / m (12kgf / cm)
Ambient Temperature Rating		-10°C to 50°C (non-condnsing)

HE599CBL037 (Shown)

.5m Cable for Relay block RLY037 to DQM706 module

HE599CBL237

2.0m Cable for Relay block RLY037 to DQM706 module



Note: Connector with ~80° angle connector must be inserted into the Relay block. Straight connector must be inserted into Module