

1.1 General Specifications

Required Power (Steady State)	<130mA @ 5V; <26mA @ 24V
Digital Inputs	8
Digital Outputs	4
Relative Humidity	5-95% non-condensing
Port Connectors	Phoenix Contact 2201780
Port Wiring	16-24 AWG / 0.2-1.5mm ²
Operating Air Temperature	-40°C (-40°F) to 60°C (140°F)
Storage Temperature	-40°C (-40°F) to 85°C (185°F)
Weight	88g (3.10 oz.)
Dimensions	76.5mm x 124.5mm x 19mm 3" x 4.9" x 0.75"

Certifications (UL/CE) North America: <https://hornerautomation.com/certifications/>
Europe: <https://www.hornerautomation.eu/support/certifications2/>

1.2 Digital DC Inputs

Inputs per Module	8	
Commons per Module	1	
Input Voltage Range	0 - 24VDC	
Absolute Maximum Voltage	32VDC	
Input Impedance	110kΩ	
Input Current	Pos. Logic	Neg. Logic
Minimum "On" Current	0.8mA	-1.6mA
Maximum "Off" Current	0.3mA	-2.1mA

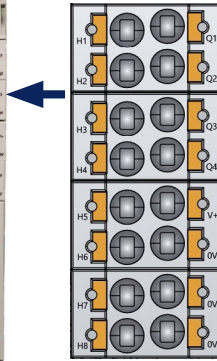
1.2 Digital DC Inputs...Continued

Input Filter	Programmable
OFF to ON Response	2ns min
ON to OFF Response	2ns min
HSC Maximum Frequency	500kHz
Galvanic Isolation	None
Logic Polarity	Selectable common for all 8 inputs
I/O Indication	Status LED per input
High Speed Counter	8

1.3 Digital DC Outputs

Outputs per Module	4	Maximum Voltage Drop at Rated Current	0.25VDC
Commons per Module	1	Minimum Load	None
Output Type	Sourcing	I/O Indication	Status LED per output
Absolute Maximum Voltage	28VDC	Galvanic Isolation	None
Output Protection	Short Circuit	OFF to ON Response	500ns min
Max. Output Current/Point	0.5A	ON to OFF Response	500ns min
Maximum Total Current	2A	Minimum PWM Pulse Width	1μs
Maximum Output Supply	30VDC	Maximum PWM Frequency	500kHz
Minimum Output Supply	5VDC	Output Characteristics	Current Sourcing (Positive Logic)

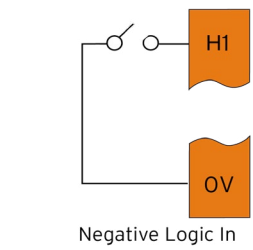
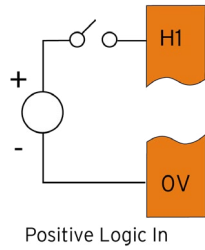
WIRING



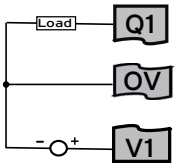
DIGITAL INPUTS		DIGITAL OUTPUTS	
Signal	Description	Signal	Description
H1	Input 1	Q1	Output 1
H2	Input 2	Q2	Output 2
H3	Input 3	Q3	Output 3
H4	Input 4	Q4	Output 4
H5	Input 5	V1	V+ Input for Outputs 1-4
H6	Input 6	OV	Common
H7	Input 7	OV	Common
H8	Input 8	OV	Common

NOTE: Wiring used for main wiring should be 300V 105°C rating or higher.

Positive Logic IN Negative Logic IN



Digital Out





WARNINGS



WARNING - If the equipment is used in a manner not specified by Horner APG, the protection provided by the equipment may be impaired.

WARNING - EXPLOSION HAZARD - Do not disconnect equipment unless power has been removed or the area is known to be non-hazardous
AVERTISSEMENT - RISQUE D'EXPLOSION - Ne débranchez pas l'équipement tant que l'alimentation n'a pas été coupée ou que la zone n'est pas dangereuse.

WARNING - EXPLOSION HAZARD - Substitution of any component may impair suitability for Class I, Division 2

AVERTISSEMENT - RISQUE D'EXPLOSION - Le remplacement de tout composant peut nuire à la compatibilité avec la classe 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.

AVERTISSEMENT - DOMMAGES POSSIBLES À L'ÉQUIPEMENT - Coupez l'alimentation de la base d'E / S et de tout équipement périphérique connecté à ce système local avant d'ajouter ou de remplacer ce module ou tout autre module.

WARNING - Outputs should be connected to the same voltage levels (all connect to 24V supply sources)

WARNING - Digital Outputs are non-isolated and considered hazardous live.

WARNING - Loads for outputs require a Class 2 or Limited Power Source from a UL Listed power supply.

SAFETY

- All applicable codes and standards should be followed in the installation of this product.
- Shielded, twisted-pair wiring should be used for best performance.
- Shields should be grounded at one end only, preferably at the end providing the best noise shunting.

TECHNICAL SUPPORT

For further details, please refer to the Datasheets on the Horner website.

For assistance, contact Technical Support at the following locations:

North America
+1 (317) 916-4274
www.hornerautomation.com
APGUSATechSupport@heapg.com

Europe
+353 (21) 4321-266
www.hornerautomation.eu
technical.support@horner-apg.com

INSTALLATION

The HE959HSC840 is compact and mounts on a DIN-rail. Each I/O module installed adds width in increments of 19mm.

NOTE: The distance between wiring duct and surrounding modules should be at least 50mm apart.

OCS-I/O modules can be added after the OCS-I/O base has been installed on the DIN-rail, but cannot be hot swapped with power applied. I/O scanning will stop until the correct modules for the system are detected in all slots.

I/O modules are physically added with the following procedure:

- Connect the bus connectors together to form a backplane that can accept up to 8 modules including the CNX116 or another base.
- Snap the bus connectors into the DIN rail. The DIN rail should be 35 mm x 7.5 mm and made to EN 60715 standards.
- Place the OCS-I/O base to the leftmost connector.
- Inset modules by latching at the top of the DIN rail first and rocking down until the latch at the bottom of the DIN rail engages.
- To remove a module, insert a flat blade screwdriver into the metal DIN rail latch at the bottom of the module. Pry down to release the latch, then rock the module up and off the DIN Rail. Modules may be removed while powered however I/O scanning on the remaining modules will stop and I/O will go to the default state until a new module is inserted and all modules in the configuration are present.



OCS-I/O

High Speed Digital Input/Digital Output Module
HE959HSC840

