

SIGNAL CONDITIONER FOR THE XL OCS



HE-X Series Starts at \$99



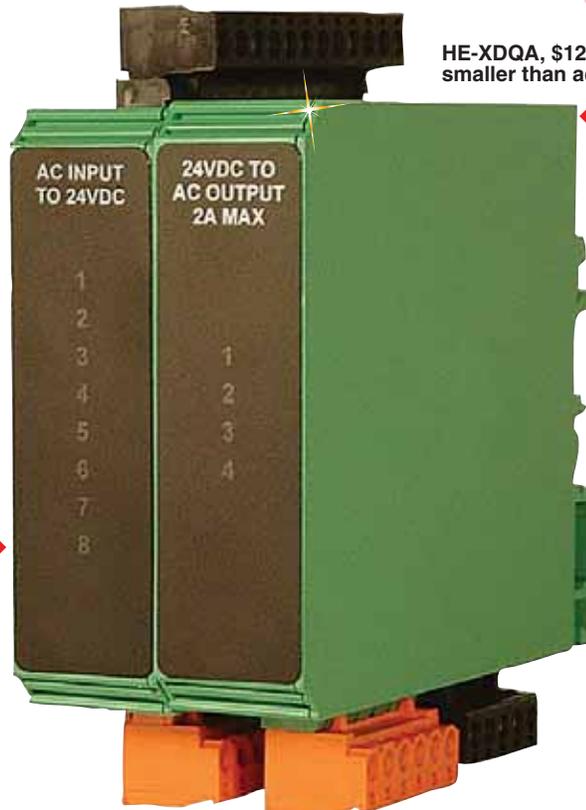
- **Designed for Use with the XL Series OCS**
- **Multi-Channel Inputs and Outputs**
- **Models Available for Digital Input, Digital Output, Relay and Pulse Width Modulation (PWM)**

Omega offers several general-purpose signal conditioning products designed to augment the XL Series OCS product line. These products allow normally incompatible signals and loads (AC inputs, AC outputs, etc.) to easily interface with the XL Series OCS. Three categories of these products are available—those which adapt digital input signals, those which drive specialized digital output loads, and those which allow analog outputs to be generated from digital, PWM outputs.

The XL Series OCS directly supports DC digital inputs only. Two signal conditioning devices allow the connection of AC inputs as well. The HE-XDIA converts 120/240 Vac digital inputs to 24 Vdc (8 points). Similarly, the HE-XDIA-24 converts lower voltage 24 Vac input signals to 24 Vdc (8 points).

Three signal conditioning devices allow the standard 24 Vdc, 0.5 A outputs of the XL Series OCS to drive specialized loads. The solid-state HE-XDQA allows a 120/250 Vac load to be driven at up to 2 A (four points). The solid state HE-XDQD will drive a 24 Vac/24 Vdc load at up to 3 A (four points). The mechanical HE-XDQR can drive up to a 10A load, supporting voltages of 120/250 Vac, and 24/30 Vdc (four points).

HE-XDIA, \$129, shown smaller than actual size.



HE-XDQA, \$129, shown smaller than actual size.



Two signal conditioning devices provide the XL Series OCS with additional analog outputs, by converting 24 Vdc PWM outputs already present on the controllers. The HE-XPC converts 24 Vdc PWM outputs to 4 to 20 mA (2 channels), while the HE-XPV converts 24 Vdc PWM outputs to 0 to 10V (two channels).

HE-XDIA SPECIFICATIONS

Channels per Module: 8
Isolated Commons: 1
Nominal Input Voltage: 120/240 Vac
Maximum Input Voltage: 275 Vac
Nominal Input Impedance: 0.01uF + 10 kΩ
Nominal AC Frequency: 60 Hz
ON Voltage Level: 60 Vac min
OFF Voltage Level: 30 Vac max
Isolation to PLC Common: 1500 Vdc
Minimum ON Current: 2.2 mA
Maximum OFF Current: 1.1 mA
ON Response Time Excluding PLC Response: 1 ms
OFF Response Time: 25 ms
Status Indication: 8 LEDs
DC Output Type: Positive logic, sourcing
Steady State Power, Inputs ON, Unit Connected to PLC: 60 mA @ 24 Vdc

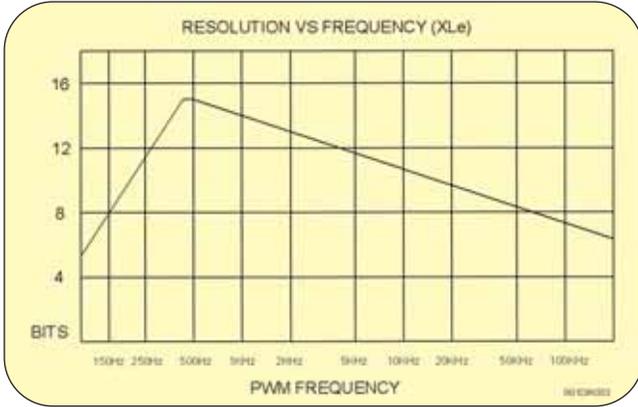
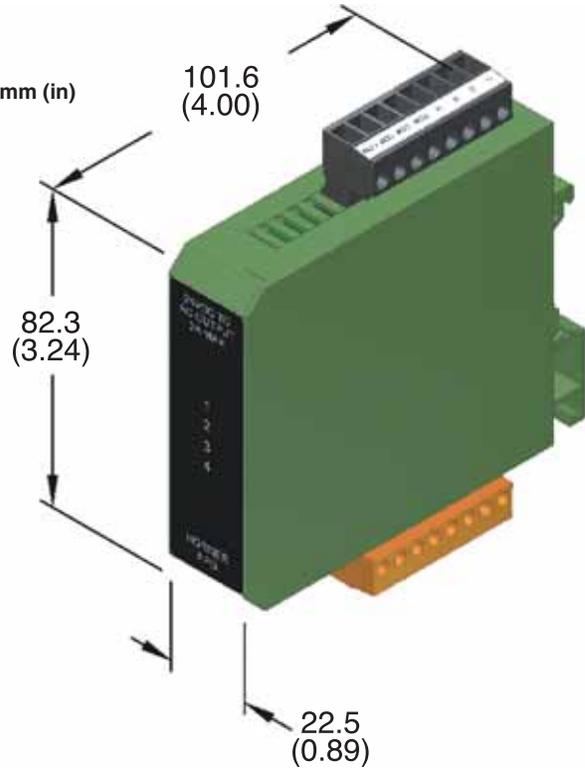
Peak Supply Current: 250 mA max
Operating Power Range: 18 to 30 Vdc
Safe Applied Power Range: -0.3 to 33 Vdc
Relative Humidity: To 95% non-condensing
Operating Temperature: 0 to 50°C (32 to 122°F)
Terminal Type: Screw type, 5 mm (0.20") removable

HE-XDQA SPECIFICATIONS

Channels per Module: 4
Isolated Commons: 1
Nominal Load Voltage: 120/240 Vac
Maximum Load Voltage: 275 Vac
Nominal DC Input Impedance: 1 kΩ
Nominal AC Frequency: 60 Hz
ON Input Level: 18 Vdc min
OFF Input Level: 6 Vdc max
Maximum DC Input Range: -0.3 to 30 Vdc
AC Isolation to PLC Common: 1500 Vdc
Maximum ON Load Current: 2 A AC
Maximum OFF Leakage Current at 120 Vac: 1.0 mA AC
ON Response Time Excluding PLC Scan Time: 9 ms max
OFF Response Time: 9 ms max
Status Indication: 4 LEDs



Dimensions: mm (in)



DC Input Type: Positive logic, sinking
Steady State Power, Inputs ON: 100 mA @ 24 Vdc
Peak Supply Current: N/A
Operating Power Range: N/A
Safe Applied Power Range: N/A
Relative Humidity: 5 to 95% non-condensing
Operating Temperature: 0 to 50°C (32 to 122°F)
Terminal Type: Screw type, 5 mm (0.20") removable

HEXPV/HEXPC SPECIFICATIONS
Channels per Module: 2
Nominal PWM Input Voltage: 24V P-P
Maximum Input Voltage Range: -0.5 to 33 Vdc
Nominal Input Impedance: 2.1 kΩ to common

Max Upper Input Threshold: 18 Vdc
Min Lower Input Threshold: 6 Vdc
Step Change Response to 50%: 12 ms
PWM Ripple Feed Through 150 Hz, 50% Duty Cycle: 0.40% of full scale, P-P
250 Hz, 50% Duty Cycle: 0.04% of full scale, P-P
500 Hz, 50% Duty Cycle: 0.0015% of full scale, P-P
Isolation: None
0 to 10V Outputs (HEXPV):
Minimum Load: 500Ω
Output Clamp: -0.5/+12 Vdc
0 to 20 mA Outputs (HEXPC):
Type: Sourcing
Maximum Load: 500Ω
Output Clamp: -0.5/+12 Vdc
FS Calibration Accuracy: 0.25%
System Linearity including XLe: 0.75% Accuracy thru 10 to 90% DC of PWM Input

HEXPV Minimum Output Voltage: 0.15V typical
HEXPC Minimum Output Current: 0.15/(100+RLoad) typical
Required Power (Steady State): 60 mA @ 24 Vdc
Required Power (Inrush): 15 A @ μS
Operating Power Range: 18 to 30 Vdc
Safe Applied Power Range: -33 to 33 Vdc
Relative Humidity: To 95% non-Condensing
Operating Temperature: 0 to 50°C (32 to 122°F)
Terminal Type: Screw type, 5 mm (0.20") removable
Weight: 85 g (3 oz)

To Order (Specify Model Number)			AVAILABLE FOR FAST DELIVERY!
MODEL NO.	PRICE	DESCRIPTION	
HE-XDIA	\$129	8 channel 120/240 Vac input to 8 channel, 24 Vdc inputs (positive logic)	
HE-XDQA	129	4 channel 120/250 Vac 2 A (positive logic) adapted from 4 channel, 24 Vdc 0.5 A (positive logic)	
HE-XDQR	129	4 channel relay output (120/250 Vac 10 A, 24/30 Vdc 10 A) adapted from 4 channel, 24 Vdc 0.5 A (positive logic)	
HE-XDQD	129	4 channel solid state output (24 Vac/Vdc, 3 A) adapted from 4 channel, 24 Vdc 0.5 A (positive logic)	
HE-XPC	99	Dual channel PWM to 20 mA analog converter	
HE-XPV	99	Dual channel PWM to 10V analog converter	

Ordering Example: HE-XDIA, 8 channel signal conditioner, \$129.



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