

# EPIC-X ELECTRONIC CONTROLLER

*The EPIC-X is an Electronic Proportional Integrated Controller developed by Hyteco for a wide range of applications. It functions as a multi-channel amplifier dedicated to driving hydraulic proportional valves with a Pulse Width Modulated (PWM) voltage, relative to a varying input signal.*

*The multiple configuration options make the EPIC-X one of the most flexible, stand-alone controller in its class.*

*The absolute consistency of the EPIC-X will give your solution a competitive edge, whether you are controlling the slew speed of a crane, keeping a vehicle lifting platform level, maintaining the speed and pressure of a tugboat winch, or regulating and adjusting the output flow of a water truck.*

## Features:

- Wide operating DC voltage range
- A variety of industry-standard inputs are available, (0-10V, 4-20mA, Binary, etc)
- Current-controlled PWM outputs
- Standard M12 connectors
- Overload and short-circuit protection

The robust housing allows the EPIC-X to operate in extremely harsh environments. It is rated to IP67 and is resistant to vibrations. The unit has been designed to meet electromagnetic compatibility standards of Australia and Europe.

A status LED provides diagnostic information and fault codes. More fault finding information is provided by the tuner.

**Use the Tuner to set & forget.** The entire configuration can be performed using a hand-held tuner, EPIC-T, including:

- Minimum & Maximum output current
- Individual ramp times on increase & decrease for each channel
- Adjustable PWM frequency
- Fine tune the input range
- Monitor controller behavior and machine response



More info? Go to our website  
[www.hyteco.com.au](http://www.hyteco.com.au) to see  
 our complete range of  
 electronic controllers.

We can also design and supply custom systems for any application required.

## Advantages:

- Reduced cost
- Flexibility in response to design changes
- Fast setup and configuration
- Settings security

## Connectors:

Hyteco stock a range of M12 wireable plugs or fully moulded M12 cable adaptors to suit various valve plugs. Please consult our sales team for our full range of connectors, plugs and cables.



EPIC-XL shown with optional Tuner

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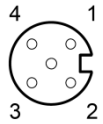
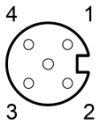

Mechanical	
Housing	Brushed Aluminium (powder coated upon request)
Dimensions (H x W x D)	120 x 200 x 60 mm
Mounting	4 x 5mm holes on flange base
Weight	1.6 kg
Connections	<b>EPIC-XL</b> 8 x 4-pin M12 connectors (inputs and outputs) <b>EPIC-XS</b> 4 x 4-pin M12 connectors (inputs and outputs) 1 x 5-pin M12 connector (Tuner) 1 x DT04-2P Deutsch connector (power)

Electrical	
Operating voltage ( $V_S$ )	9...32 V DC
Current consumption	45 mA (at 24 V DC without external load)
Fuse Protection	F1 :2A (logic, sensors and Tuner) / F2:10A (outputs)
Over-voltage protection	36 V for $t \leq 10$ sec
Under-voltage detection	if $V_S \leq 7.8$ V - shutdown if $V_S \leq 7.0$ V
Overload protection	$\leq 5$ minutes at 100% overload

Environmental	
Ingress protection	IP 67
Encapsulation	Fully potted – vibration resistant
Operating / storage temperature	-40...80° C / -40...85° C

Input Characteristics	
Input types (configurable with the Tuner)	Analog inputs 0-5V / 0-10V / Ratio-metric / 4-20mA / 0-30k $\Omega$ Binary inputs BH (positive switched) / BL (negative switched) All analog inputs can be unipolar, inverted or bipolar for either singular or bidirectional proportional control
Analog resolution	12 bits
Accuracy	$\pm 1\%$ Full Scale
Input frequency	50 Hz Max

Output Characteristics	
Output types (configurable with the Tuner)	PWM_i Current controlled output PWM Variable duty (%) output BH Digital switched output
PWM Frequency	20...250 Hz
Switching current per output	$\leq 2.5$ A
Control resolution	2 mA
Total combined output current (continuous current load)	$\leq 10$ A

<b>Input Connections</b> Input groups 2 channels per input (A & B)		Pin 1 – $V_S$ Fused 2A Pin 2 – Input channel B Pin 3 – Ground Pin 4 – Input channel A
<b>Output Connections</b> Output groups 2 channels per output (A & B)		Pin 1 – No connection Pin 2 – Output channel B Pin 3 – Ground Pin 4 – Output channel A
<b>Power Connection</b> Deutsch DT04-2P Mating connector: DT06-2S		Pin 1 – Ground Pin 2 – $V_S$ (9...32 V DC)