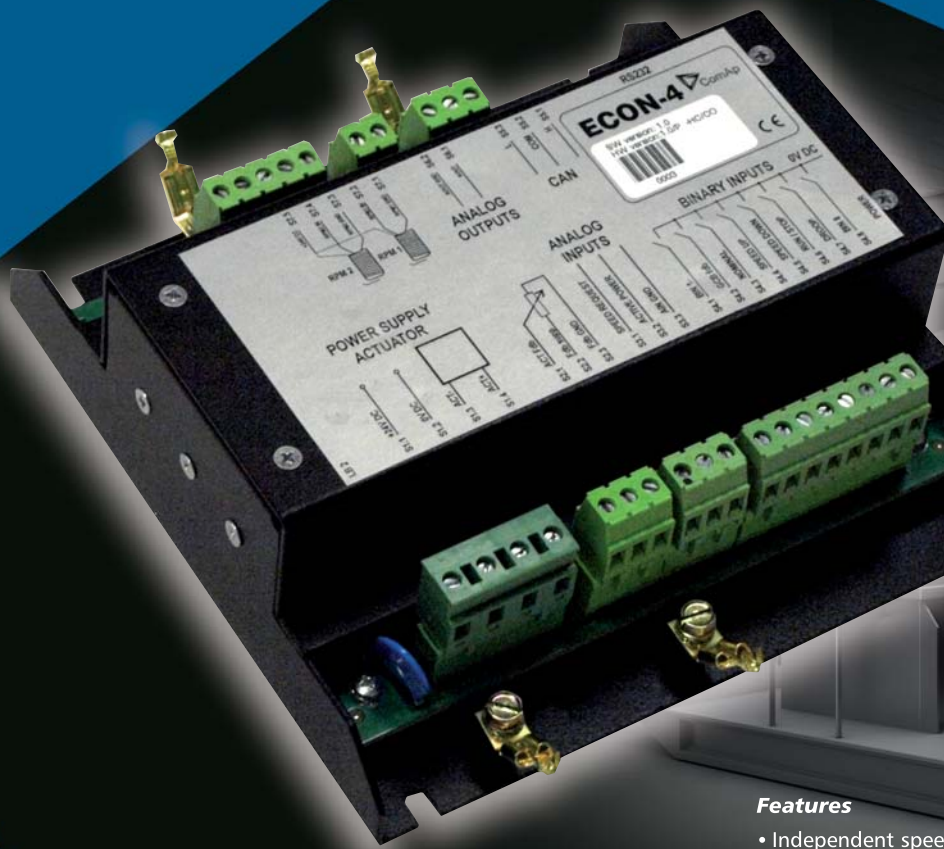


**42TECHNOLOGY**

## **ECON-4**

*Digital speed governor for gas  
and diesel engines*



**ECON-4** is a high performance digital speed governor, capable to control an actuator for diesel engines or a throttle for gas engines with up to 10 Amperes output current..

### **Features**

- Independent speed governor unit
- Wide range of supported actuators
- Precise fuel rack or throttle position due to position feedback signal evaluation
- Overspeed protection
- 3 modes of control – binary, analogue, CAN line (if ComAp controllers are used)
- Droop operation possible
- Switchable PID loop speed / load settings
- PID for individual actuator tuning
- Programmable start fuel limitation
- Programmable maximum fuel rack position
- Easy configurable with free PC tool
- Data interface with IntelliSysNT controller

# ECON-4

## Digital speed governor for gas and diesel engines

### The supported types of actuators:

- Heinzmann actuators – STG6, STG10, STG30, STG2010, STG2040 asf.
- Woodward – ITB PWM, ITB 0-200mA, F-series PWM, Dyna 8000 series actuators asf.
- GAC - ATB552t2F-24 and

Additional outputs of 0-10Vdc or 0-20mA for actuators controlled by DC signals (e.g. Woodward) and supplied directly from 24Vdc battery.

### Technical data

#### Power supply

Voltage supply	8-36V DC
Consumption	0,5 - 10A depend on supply voltage and actuators

#### Operating conditions

Operating temperature	-30..+70°C
Storage temperature	-30..+80°C
Protection	IP00
Humidity	95% without condensation
Standard conformity	
Low Voltage Directive	EN 61010-1:95 +A1:97
Electromagnetic Compatibility	EN 50081-1:94, EN 50081-2:96 EN 50082-1:99, EN 50082-2:97

Vibration	5 - 25 Hz, ±1,6mm 25 - 100 Hz, a = 4 g
Shocks	a = 200 m/s <sup>2</sup>

#### Dimensions and weight

Dimensions	155x151x57mm
Weight	600g

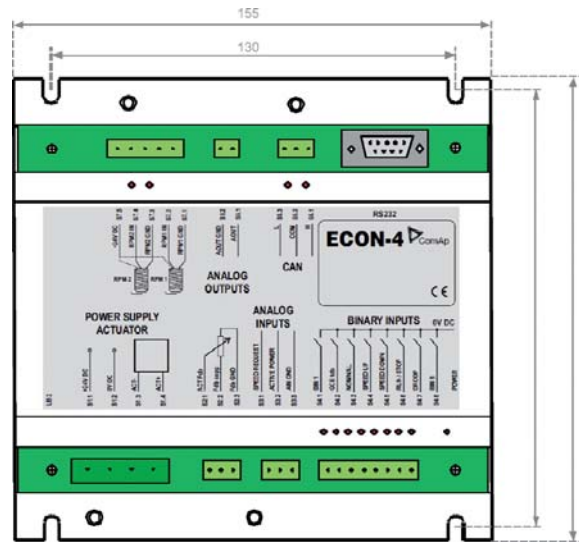
#### Binary inputs

Number of inputs	8
Input resistance	4,4kΩ
Input range	0-36VDC
Switching voltage level for close contact indication	0-2V
Max voltage level for open contact indication	8-36V

#### Analog inputs

Number of inputs	2
Not electrically separated	
Resolution	10 bits
Range	0 – 10V; Input resistance 11kΩ 0 – 20mA; Load resistor 50Ω
Analog measurement tolerance	1 %

### ECON-4 Dimensions and terminals [mm]



#### Analog outputs

Number of outputs	1
Not electrically separated	
Resolution	0 – 10000
Range	0 – 10V; Output resistance < 1Ω 0 – 20mA; Active current source

#### Actuator feedback input

Not electrically separated	
Resolution	10 bits

#### Speed pick-up inputs

Type of sensor	Active or magnetic pick-up (connection by shielded cable is strongly recommended)
Minimum input voltage	2 Vpk-pk (from 4 Hz to 4 kHz)
Maximum input voltage	50 Veff
Minimum measured frequency	4 Hz
Maximum measured frequency	10 kHz (min. input voltage 6Vpk-pk)
Frequency measurement tolerance	0.2 %

#### RS232 interface

Maximal distance	10m
Speed	19 200 bps

#### CAN bus interface

Galvanically separated	
Maximal CAN bus length	200m
Speed	250kBd
Nominal impedance	120Ω
Cable type	twisted pair (shielded)
Following dynamic cable parameters are important especially for maximal CAN bus length:	
Nominal Velocity of Propagation	min. 75% (max. 4,4 ns/m)
Wire crosscut	min. 0,25 mm <sup>2</sup>
Maximal attenuation (at 1 MHz)	2 dB / 100m

PARTNER



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Features and specification are subject to change without prior notice