

Digital controls for medium-sized engines and turbines

# HELENOS DC 2-02

## DATA SHEET

### Description

The DC 2-02 is HEINZMANN's second generation of digital HELENOS controls for medium-speed engines and turbines. This highly efficient speed governor is based on a 32-bit microprocessor.

DC 2-02 control units offer a great variety of analog and digital inputs and outputs and two separate input channels for inductive speed pick-ups. In combination with HEINZMANN's small and medium range actuators or the Bosch EDC™ pump the DC 2-02 control unit provides the ideal solution for small and medium-speed engines and turbine applications.

The advanced DC 2-02 hardware is fully compatible with its predecessor. All HELENOS DC 2-01 software versions can be used without any change.

### Applicable Actuators

- StG 2010/2040/2080 for engine power 100 ... 400 kW
- StG 6/10 for engine power 600 ... 1000 kW
- StG 16/30/40 for engine power 1600 ... 4000 kW
- StG 2005 DP/2040 DP for direct mounting on fuel pump
- Bosch EDC™

### Applications

- Generator sets or power stations
- Locomotives, heavy duty vehicles
- Special vehicles, agricultural machines
- Gas, water and steam turbines
- Marine applications, including twin engine operation

### Certificates

Maritime classification societies: GL, DNV, BV

Further certificates on request



### Features

Idling and maximum speed control, velocity limitation and regulation for vehicle applications

Speed ramp functions, anti stick-slip device for locomotive applications

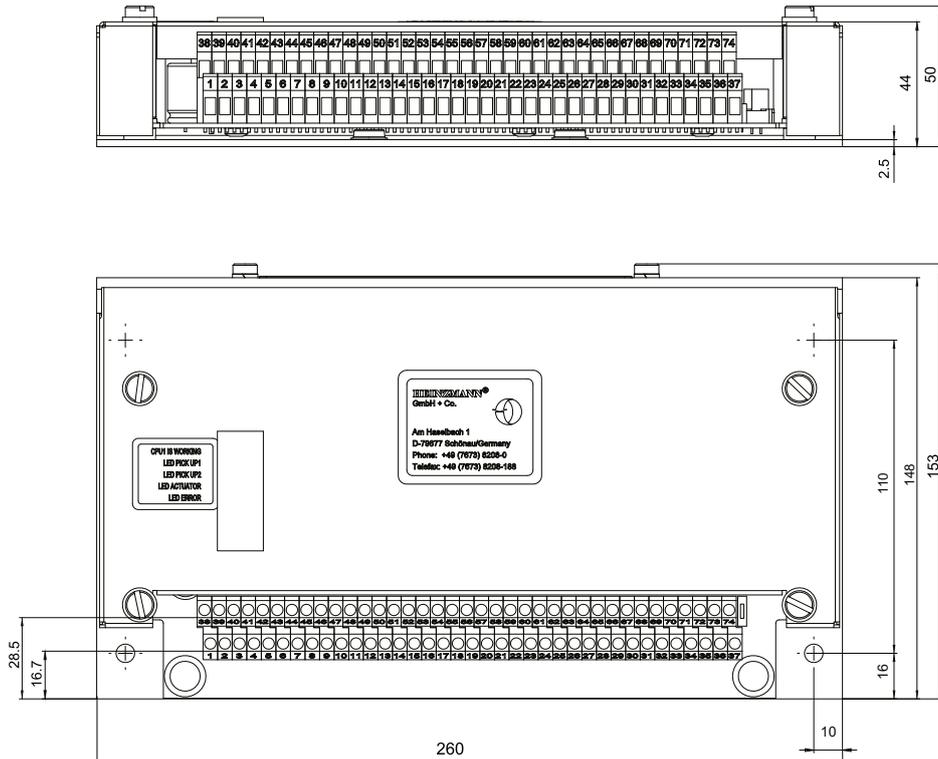
Fuel limitation depending on several parameters for optimal load factor

Reduction of start-up smoke to a minimum

Governor and sensor monitoring, speed dependent monitoring of oil pressure with or without engine stop for engine protection

Easy adaption of governors dynamic characteristic by parameterisation with HEINZMANN DcDesk communication tool

# Dimensions



# Technical data

## General specification

Supply voltage	nom. 24 VDC (12 ... 32 VDC)
Current consumption control unit	0.2 A (plus actuator current)
Degree of protection	IP00 or IP55
Operating temperature	-40 ... +70 °C
Vibration	0.7g / 2 ... 100 Hz
Permissible ambient humidity	< 95 % rel. at 55 °C
Weight	1.2 kg (IP 00) / 3.0 kg (IP 55)
Wiring	screw terminal (IP 00) / plug ITT Cannon CA-COM (IP 55)

## I/O specification

Inputs	Pickup	2	0.4 ... 100 Vpp / 25 ... 12000 Hz for inductive sensors
	Analogue	4	0 ... 5 V or 4 ... 20 mA
	Temperature	2	PT 200, PT 1000, NTC, NI 1000 (opt. 0 ... 5 V or 4 ... 20 mA)
	Digital	4	24 VDC, active high
Outputs	Analogue	2	4 ... 20 mA
		2	0 ... 5 V or 0 ... 10 V
	Digital/PWM	1	2.5 A, low side, 0 ... 100 %, short circuit protected
	Digital	2	4 A, high side, short circuit protected
Configurable I/O	Sensor supply	1	5 or 12 VDC
	Digital/PWM	4	24 VDC input or 0.4 A output low side, 0 ... 100 %, short circuit protected
Communication interface	on-board	1	HEINZMANN Service Interface
	(optional)	1	CAN 2.0B
	(optional)	1	RS-422/RS-485