MVC 01-24

DATA SHEET

Description

The MVC 01-24 is a member of HEINZMANN’s DARDANOS Electronic Fuel Injection (EFI) controller series for industrial diesel, dual-fuel or gas engines or combinations of them. Additional to its primary purpose of speed control it provides features beneficial for engine performance, such as optimised fuel efficiency, increase of engine power, lower environmentally harmful emissions. Furthermore, it includes full functional redundancy capability.

MVC 01-24 EFI serves engines with up to 24 cylinders and is compatible with any solenoid based fuel injection system. It comprises precise injection control with up to seven injections per cylinder and stroke.

Continuous real-time monitoring of all measurable combustion parameters combined with deep integration into an engine control system benefits operational and maintenance costs.

For diesel common rail systems it can control the rail pressure of up to four separate high-pressure pumps. Besides that solenoids can be driven with flexible configurable voltage in a range of 24-110 VDC. Configuration of current profiles is possible supplementing.

MVC 01-24 comes with a comprehensive number of inputs and outputs. These are entirely free configurable, independent of each other and offer a wide range of opportunities for adapting the control system to individual demands.

MVC 01-24 offers up to three independent CAN bus lines with various protocols for communication. For configuration and adjustment HEINZMANNs communication software DcDesk can be applied advantageously. It offers all features required for configuration, commissioning, testing and servicing, integrated engine and sensor monitoring functions and also a solenoid click test tool for wiring check. It offers adjustment of connected device while the system is running and observation of the response directly. Additionally, it comprises a lot of graphical features and records of data.

Applications

- Electronic fuel injection at diesel engines, stationary and mobile
- Gas admission valves for gas or dual-fuel engines
- Combination of common rail and gas admission control

Features

- Up to seven injections per cylinder and stroke
- Cylinder pressure measurement and combustion control in operation
- Convenient number of freely configurable I/Os for optimal engine operation and monitoring
- Flexible voltage range of 24-110 VDC to drive solenoids, configurable via software, configuration of current profiles possible
- Actuators with digital or analogue feedback can be driven directly via 4× full bridge or 8× half bridge stage
- Full functional redundancy capability
- Integrated engine monitoring functions
- Cylinder faults and sensor monitoring functions
- Integrated barometric pressure sensor
- Proven functionality for marine, generator, locomotive & vehicle applications
- Compatible with any solenoid based fuel injection system
- Up to three independent CAN bus lines (various protocols)
Technical data

### General specification
- **Supply voltage**: 15 ... 33 VDC (nom. 24 VDC)
- **Injection boost current**: max. 30 A/hold 18 A
- **Degree of protection**: IP6K9K
- **Ambient temperature**: -40 ... 80 °C
  - -40 ... 125 °C with cooling
- **Permissible ambient humidity**: < 95 % at 55 °C
- **Vibration**: 10 ... 24 Hz < 2 mm
  - 25 ... 64 Hz < 0.24 m/s
  - 65 ... 2000 Hz < 9 g
- **Shock level**: < 30 g, 11 ms - half sine wave
- **EMC**: EN 61000-4-2/-3 /-4 /-6
- **Weight**: approx. 8.5 kg

### I/O specification

#### Signal inputs
- **5× frequency input**: frequency, inductive pick-up, Hall-type pick-up
- **2× analogue input, insulated**: 0 ... 5 V, 4 ... 20 mA configurable
- **8× PWM input, insulated**: 1 Hz ... 1 kHz
- **6× universal input**: 0 ... 5 V, PTC, NTC or binary configurable
- **24× universal input**: 0 ... 5 V, 0 ... 36 V, PTC, NTC, thermocouple J, K or binary configurable

#### Signal outputs
- **24× injector output**: max. 33 A
- **4× analogue output**: 0 ... 5 Vm 4 ... 20 mA configurable
- **4× binary output**: digital high-side outputs 2.5 A
- **4× binary output**: digital low-side outputs 0.5 A
- **4× PWM output**: high-side outputs 2.5 A
- **2× frequency output**: looping through pick-up signal
- **4× full bridge / 8× half bridge**: max. 5 A

#### Communication
- **3× CAN 2.0B (2× insulated)**
- **RS-232, RS-485, LAN interface (insulated)**

#### Configuration and calibration
- **HEINZMANN DcDesk**
- **or via XCP-protocol**

### Dimensions

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Certificates

CE, DNV GL marine certification, others on request

Dimensions

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