HEINZMANN®

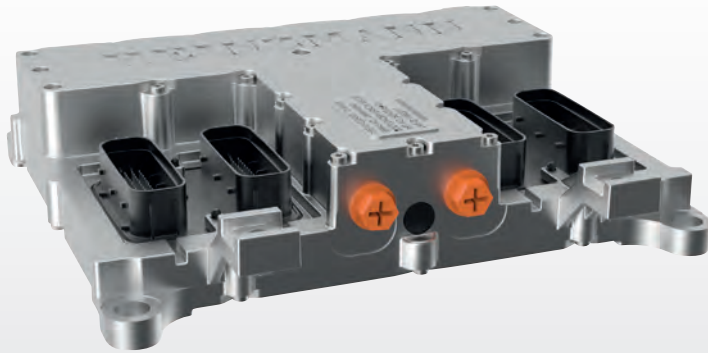## MVC 03 - 8 New Generation

✔ **For diesel, gas and dual fuel engines up to 8 cylinders**

✔ **Precise injection control**

✔ **Optimised fuel efficiency**

✔ **Application-tailored configurability**

✔ **Multifunctional I/Os**

✔ **Up to 3 speed inputs, 16.000 Hz**

Description

The MVC 03-8 new generation electronic fuel injection control is designed as universal speed controller for engines with electronically controlled injection systems. New design equipped with the latest digital technology comprises a progressive solution for any control task working on equipment working with solenoids.

MVC 03-8 new generation serves as core element of HEINZMANNs scope of system solutions. These EFI controllers operate as a part of Common Rail or E-PPN injection systems for diesel engines. For gas injection, they are used in conjunction with electrically actuated gas admission valves or gas injectors. Dual fuel engines can be controlled using a combination of both diesel and gas injection components. This offers a choice between several solutions for almost any kind of demand to our customers.

In addition to the primary purpose of controlling speed, this controller provides additional features that offer other benefits for your diesel or gas engines, such as optimized fuel efficiency, engine emission management and enhancing engine work life.

Basic speed control functions

➡ Speed governing, speed ramps, speed droop

➡ Start fuel quantity adjustment

➡ Adaption of PID parameters

➡ Integrated engine monitoring functions

➡ Sensor monitoring functions

➡ Proven functionality for diesel, gas & dual fuel engines

Application specific functions

➡ Cylinder balancing depending on exhaust temperature

➡ Fuel injection control

➡ Map-controlled start of injection and rail pressure regulation

➡ Multiple injection up to 5

➡ Control & monitoring of up to 2 CR metering units

➡ Start of injection adaptation to environmental conditions

➡ Single cylinder injection begin and period correction

➡ Adaption of rail pressure to environmental conditions

➡ Solenoid valve timing detection

➡ Fault monitoring

➡ Solenoid click test (tool for wiring check)

Communication

➡ Remote communication and access via various channels

➡ Two independent CAN bus lines (various protocols)

➡ Communication software DcDesk 2000 for monitoring & adjustment

➡ Diagnose & monitoring interface

General

Control of:

➡ EGR

➡ Wastegate & bypass

➡ VVT & VTG

Applications

➡ On- & off-road vehicles

➡ Construction machines

➡ Genset

➡ Diesel engines

➡ Gas engines

➡ Dual fuel applications

Software

The software for MVC 03-8 new generation has a modular structure comprising three implementation levels:

➡ Basic level for general and hardware system functions

➡ Safety level for safety, monitoring and diagnostic functions

➡ Application level for user functions

Specifications

Operating voltage	18 … 33 VDC
Output voltage for solenoids, configurable via software	48 or 58 VDC
Current consumption	1.5 A / cylinder
Permissible ambient temperature	-40 … 80 °C -40 … 120 °C with cooling
Vibration level	max. 2 mm at 10 … 24 Hz max. 0.24 m/s at 25 …64 Hz max. 9 g at 65 … 2000 Hz
Shock level	30 g, 11 ms-half sine
Degree of protection	IP6K9K (with plug)
Weight	approx. 7 kg
Speed inputs	3 × Hall type, up to 16 kHz
Temperature inputs	14
Analogue inputs	26 24 × voltage 2 × voltage or current, configurable
Digital inputs	6
Digital outputs	15 4 × up to 2 A 1 × up to 12 A
Full H-bridge output	4
Frequency output	1 × up to 10 kHz
Control magnet drivers	8, current controlled holding current < 14 A boost current < 28 A

Contamination-resistant to substances typically present in engine environment

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