ORION DG 3005.10 / DG 3010.10

DATA SHEET

Description

HEINZMANN designs and produces a comprehensive range of control systems for reciprocating engines, gas and steam turbines as well as generator management systems.

The economically advantageous ORION series is designed for small and medium-sized diesel and gas engines.

The optimal price-performance ratio and high efficiency are the main benefits of the systems. Furthermore, all solutions have a highly intelligent and precise feedback system and are available with rotary actuators.

The economically advantageous ORION digital governors DG 3005.10 and DG 3010.10 with protection grade IP65 are tailored for direct engine mounting without panel and can be used for small combustion engines.

This direct acting integrated actuator is working in 2Q-Operation with rotary output. It comes with a well-tried contactless position feedback and integrated return spring.

ORION DG 3005.10 and DG 3010.10 are designed for direct mounting and applicable in various fields of use (e.g. operating butterfly valves, pump rods, etc.).

Speed governor

The control unit acts as a speed governor with a speed setpoint and current measured speed by one or two pickups. Configuring and parametrising via PC program or hand held programmer allows the use in different applications, for example generators with small engines or off-road vehicles like power mowers.

Additional analogue inputs allow a boost limitation of turbocharged diesel engines, for example.

Application range

- Fuel pumps
- Throttle valves
- Mixers

Features

- Compact system setup and size envelope
- Reduced wiring, easy installation
- Low and efficient maintenance
- Enhanced emergency operation
- High reliability
- Current limitation when actuator is blocked
- Any mounting position permissible

Monitoring

All alarms result in the common alarm output.

- All analogue inputs will be supervised
- Pickups will be supervised
- Application specific alarms
- Actuator current limitation to protect it against overheating
- Difference between actuator setpoint and current value: Activated when a significant difference lasts for a given time (e.g. when linkage is blocked)
Technical data

Electrical connections

- Voltage supply: 24 VDC / 3 A; 12 V / 5 A
- Operating range: 9 ... 33 VDC
- Setpoint: 4 ... 20 mA; 0 ... 5 V; PWM
- Input resistance: 200 Ohm
- Actual position value: 0 ... 5 V
- Stop input: binary input
- Common alarm output: 300 mA
- Reference voltage: 5 V for potentiometer
- Serial communication: HEINZMANN interface up to 57600 Baud
- CAN communication: ISO11898 (optional)
  - HEINZMANN CAN baudrate up to 1 MBit/s
- Wiring: Plug TYCO 14 pole
- Communication: DcDesk, optional CAN

General data

- Pickups: up to two, one inductive, one Hall sensor
- Analogue inputs: up to three, 1 x 4 ... 20 mA or 3 x 0 ... 5 V
- PWM input: 50 ... 500 Hz
- Binary inputs: up to five
- Binary output: max. 300 mA

Technical data

- Ambient temperature: -30 ... +90 °C
- Effective rotation at output shaft: 50° (DG 3010.10), 53° (DG 3005.10)
- Max. torque (for 20 sec.): 0.60 Nm (DG 3010.10), 0.50 Nm (DG 3005.10)
- Max. torque in steady: 0.36 Nm (DG 3010.10), 0.18 Nm (DG 3005.10)
- Response time: 200 ms
- Protection grade: IP65
- Vibration: +/- 1 mm at 1 ... 20 Hz, max. 0.24 m/s at 21 ... 63 Hz, max. 9 g at 64 ... 2000 Hz
- Shock: 30 g, 1 ms half sine wave
- Humidity: Permissible humidity up to 95 % at 55 °C
- Compliances: CE, further compliances on request
- Weight: approx. 1.20 kg

Versions

- Operation directions: Clockwise or counterclockwise
- *) Length of shaft end: Ø 6 mm x 60 mm (standard); other length is possible

Certificates

- On request

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