

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-ried 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

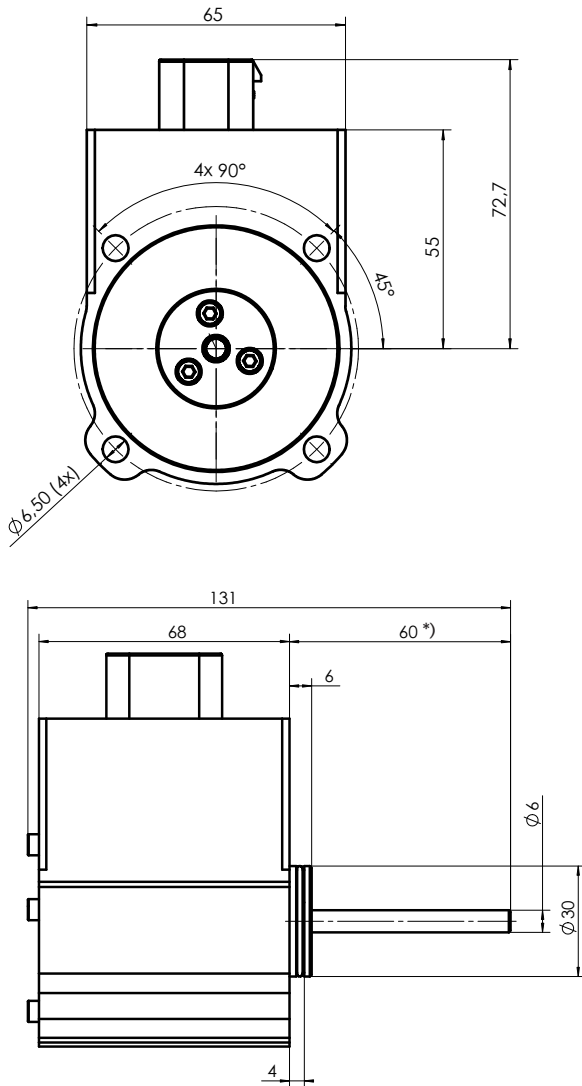
Any mounting position permissible

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)

Dimensions



Versions

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

Certificates

On request

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 Interface ISO11898 (optional)	Interface ISO11898 e.g. SAEJ1939, 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) 0.30 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, 11 ms half sine wave
Humidity	Permissible humidity up to 95 % at 55 °C
Compliances	CE, further compliances on request
Weight	approx. 1.20 kg

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