

ORION DG 3010.10 / DK50

DATA SHEET



Description

DG 3010.10/DK 50 from the ORION series is intended for use on small and medium-sized gas engines. A butterfly throttle valve controls the quantity of the air/fuel mixture and allows optimal engine control. Furthermore in special applications it can be used as a gas flow valve. The direct acting integrated actuator is working in 2Q-Operation. It comes with a well-proven contactless position feedback and integrated return spring. The optimal price-performance ratio and durable, long-lived design are the main benefits of the systems.

Speed governor

The control unit incorporates a complete digital speed governor for speed and load control that offers different fields of application. For example generators with small engines or off-road vehicles. Configuration and parametrisation are managed via PC program or hand held programmer. Additionally analogue inputs allow extended control features, e.g. boost limitation of turbocharged diesel engines.

Application range

- ➔ Gas dosing
- ➔ Gas mixing

Versions

- ➔ 30 mm throttle (approx. 20 - 35 kW stoichiometric)
- ➔ 42 mm throttle (approx. 35 - 75 kW stoichiometric)

Certificates and compliance

CE, further compliances on request

Features

Fully integrated solution

Reduced wiring, easy installation

High reliability

Any mounting position permissible

Suitable for naturally aspirated and turbo charged engines

Sealed valve shaft for draw-through or blow-through configuration

Shaft and throttle plate made of stainless steel material

Standard flange sizes for easy adaptation, also corresponding to HEINZMANN gas mixer

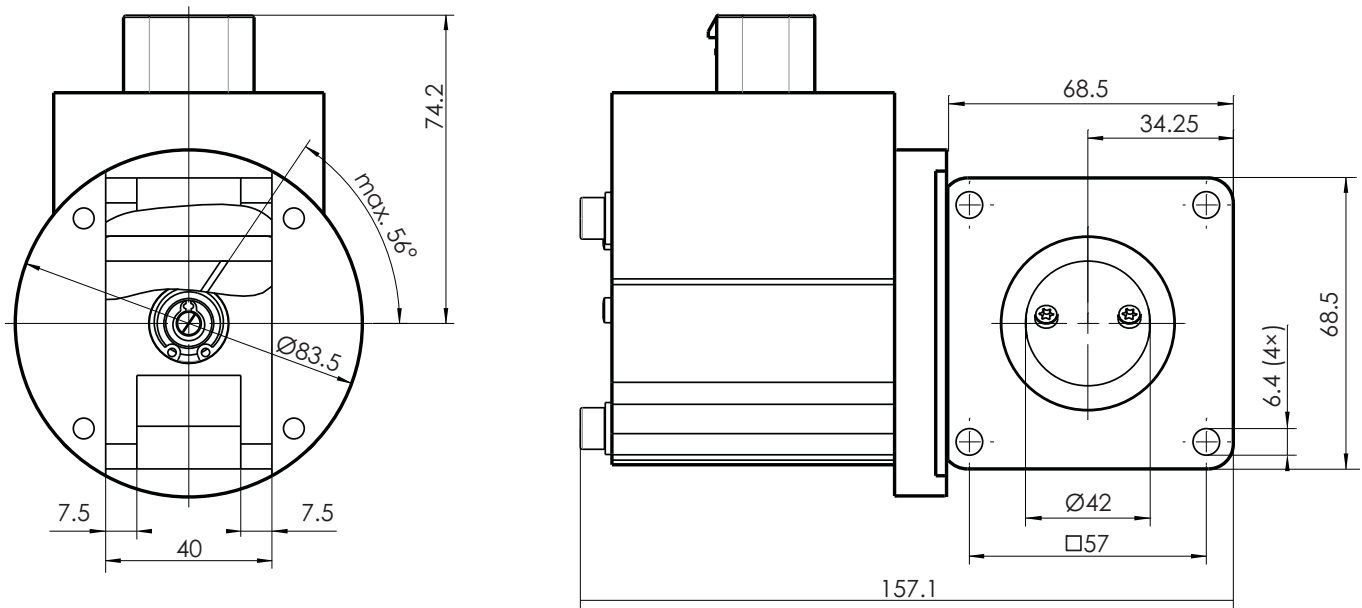
Maintenance-free

Monitoring

Common alarm output gives feedback on all detected error conditions:

- ➔ Sensor failure
- ➔ Application specific alarms
- ➔ Actuator overheating combined with current limitation
- ➔ Persistent discrepancy between positions setpoint and actual value (e.g. when shaft or throttle plate is blocked)

Dimensions



Technical data

Technical data	
Ambient temperature	-30 ... +90 °C
Throttle valve boost pressure	max. 4 bar abs.
Throttle valve rotation angle	75 °
Response time	< 100 ms
Protection grade	IP65
Vibration	± 3 mm at 10 ... 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 up to 95 % at 55 °C
Weight	approx. 1.3 kg

Electrical connections	
Voltage supply	24 VDC / 3 A; 12 V / 5 A
Setpoint	4 ... 20 mA
Actual position value output	0 ... 5 V
Common alarm output	300 mA, low-side switch
Wiring plug	TYCO 14 pole
Communication	DcDesk, HEINZMANN interface up to 57600 Baud; CAN communication optional, Interface ISO11898 e.g. SAEJ1939, HEINZMANN CAN baudrate up to 1 MBit/s

I/O ports	
Input resistance	200 Ohm
Port 1	0 ... 5 V / 4 ... 20 mA, 200 Ohm analogue input or digital input
Port 2	0 ... 5 V / 0 ... 10 V analogue input or digital input or 0 ... 5 V analogue output
Port 5	0 ... 5 V analogue or digital input or PWM input 10 ... 90 % duty cycle or temperature input PT1000, NI1000, PT200, Bosch NTC DS-S2-TF, Jumo NTC 2K3A1-25 or Pickup 2 (Hall)
Port 6	0 ... 5 V analogue input or digital input or pickup 1 (inductive)
<i>Only available in variants without CAN</i>	
Port 3	0 ... 5 V analogue input or digital input
Port 4	0 ... 5 V analogue input or digital input

Subject to alterations. ©HEINZMANN GmbH & Co. KG, 2011