

StG 3010.10-PD / DK 50

DATA SHEET

Description

StG 3010.10-PD/DK50 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 4Q-operation. It comes with a well-proven contactless position feedback, while the former return spring is obsolete. The optimal price-performance ratio and durable, long-lived design are the main benefits of the systems.



Positioner

The control unit incorporates a digital positioner for different fields of application. For example generators with small engines or off-road vehicles.

The desired position is set by analogue signal input, PWM or via CAN. An analogue signal output offers feedback of actual position. Configuration and parametrisation are managed via PC program or hand held programmer.

Application range

- ➔ Gas engines
- ➔ Gas dosing
- ➔ Dual-fuel engines
- ➔ Gas mixing

Versions

- ➔ 30 mm throttle (approx. 20 - 35 kW stoichiometric)
- ➔ 42 mm throttle (approx. 35 - 75 kW stoichiometric)
- ➔ 50 mm throttle (approx. 75 – 110 kW stoichiometric)

Certificates and compliance

CE
further compliances on request

Features

Fully integrated solution

4Q-operation

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

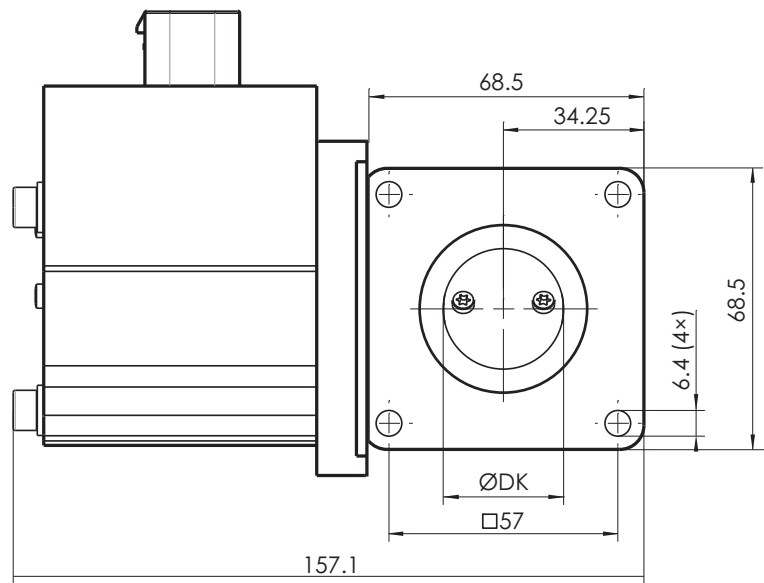
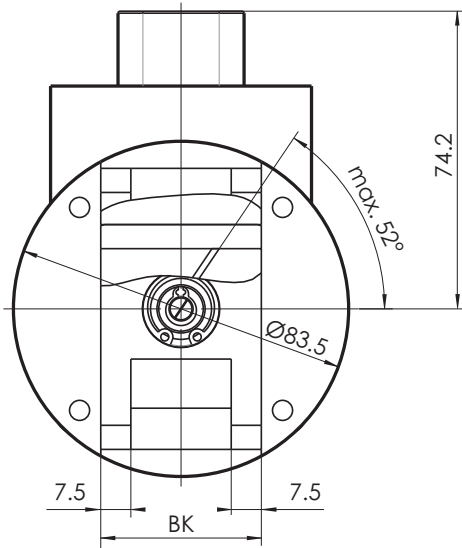
Maintenance free

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

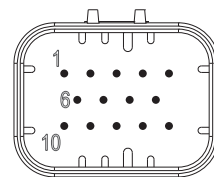


Technical data

| Technical data | |
|-------------------------------|---|
| Ambient temperature | -30 ... +90 °C |
| Throttle valve boost pressure | max. 4 bar abs. |
| Throttle valve dimensions | ØDK: 30 or 42 mm / BK: 40 mm ØDK: 50 mm / BK: 56 mm |
| Throttle valve rotation angle | 52° |
| Response time | < 100 ms |
| Degree of protection | 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 |

| I/O ports | |
|-----------|--|
| 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 |
| Port 6 | 0 ... 5 V analogue input or digital input |

| Electrical connections | |
|------------------------------|--|
| Voltage supply | 24 VDC / 3 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 |



TYCO 14 pin view on plug side

| Pin | Function |
|-----|------------------|
| 1 | Port 5 |
| 2 | CAN-Low |
| 3 | CAN-High |
| 4 | Power supply GND |
| 5 | Power supply (+) |
| 6 | Communication |
| 7 | DcDesk |
| 8 | Port 2 |
| 9 | Port 6 (pick-up) |
| 10 | 0 V - reference |
| 11 | Port 1 |
| 12 | +5 V - reference |
| 13 | Digital out |
| 14 | GND |

Subject to alterations. ©HEINZMANN GmbH & Co. KG, 2018



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