

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 It comes with a well-proven contactless position feedback, while the former return spring is obsolete.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

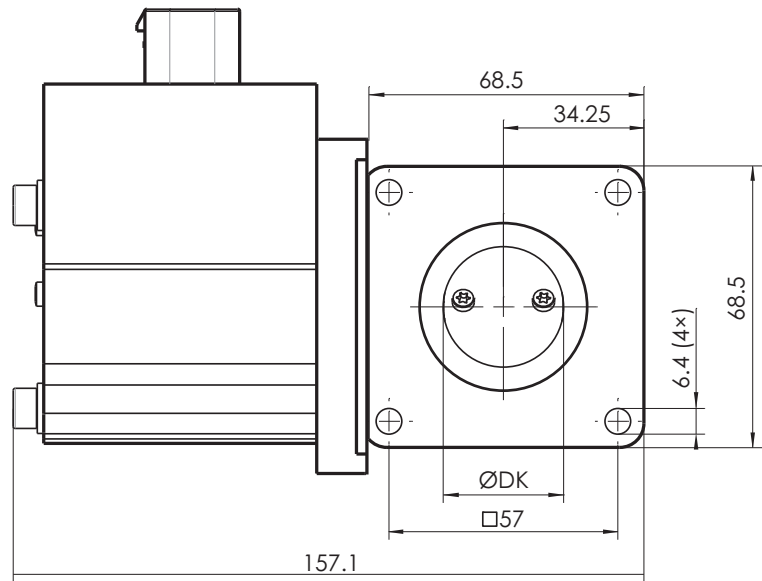
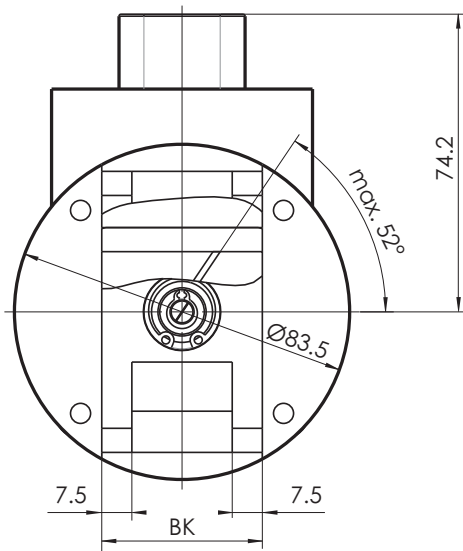
Maintenance free

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

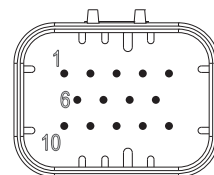


Technical data

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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

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