

# StG 3-PD / StG 3<sup>+</sup>-PD

## DATA SHEET

### Description

Small and medium-sized combustion engines of any kind are the preferential application for these powerful positioners.

Two different versions are available, differing in their maximum torque and working temperature range.

Both positioners are controlled with the usual current, voltage or PWM input signals. However, they also have CAN communication.

Without gearboxes, both devices work directly on the shaft and therefore offer very quick response times.

The design of the solenoid system enables powerful and uniformly strong torques over the entire range of adjustment in both directions of rotation.

On request, the positioners are available with a return spring that works either clockwise or counter-clockwise ex works.

The armature is optimised for lowest heat build-up. Additionally, the design enhances heat transfer to the outside and so allows a wide working temperature range.

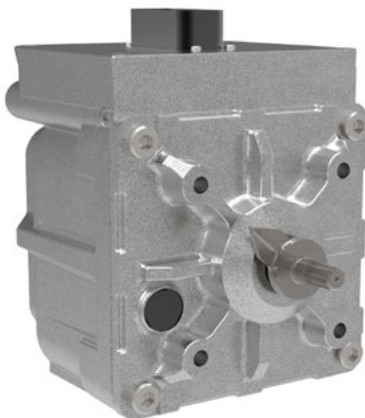
Application of special materials and long-duration lubricants assure maintenance-free operation and long service life. Mounting of the positioners is possible in any fitting position. The robust and enduring design with IP6K9K degree of protection allows operation under roughest ambient conditions.

### Application range

- Small and medium-sized diesel or gas engines
- Gas and steam turbines

### Certificates

On request: CSA, ATEX, marine approval



### Features

Direct acting without gears

Quick response time

Robust and enduring construction

Enhanced service life due to optimised bearing

Working temperature range up to 150 °C possible

Completely maintenance-free

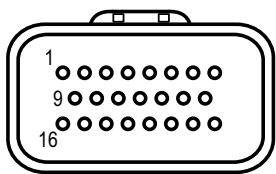
IP6K9K degree of protection

## Technical data

	StG 3-PD	StG 3+-PD
Mode of operation	4Q	4Q
Angle of rotation	72°	72°
Max. torque without return spring	approx. 3 Nm	approx. 6 Nm
Torque in steady state without return spring	approx. 1.5 Nm	approx. 3 Nm
Torque of return spring	0.50 ... 0.82 Nm	0.50 ... 0.82 Nm
No load response time (depending on controller)	< 40 ms	< 40 ms
Working voltage of armature	nom. 24 VDC 18 ... 32 VDC	nom. 24 VDC 18 ... 32 VDC *)
Max. permissible current consumption	6 A	6 A
Max. permissible current in steady state	3 A	3 A
Power supply position sensor	5 ±0.1 VDC	5 ±0.1 VDC
Position signal (0 ... 100 %)	0.5 ... 4.5 V	0.5 ... 4.5 V
Degree of protection / actuator	IP6K9K	IP6K9K
Degree of protection / plug	IP67	IP67
Weight	approx. 5.5 kg	approx. 5.5 kg
Ambient temperature	-20 ... +100 °C	-20 ... 100 °C

\*) with voltage supply < 24 VDC temperature-related derating of maximum torque

## Pin assignment

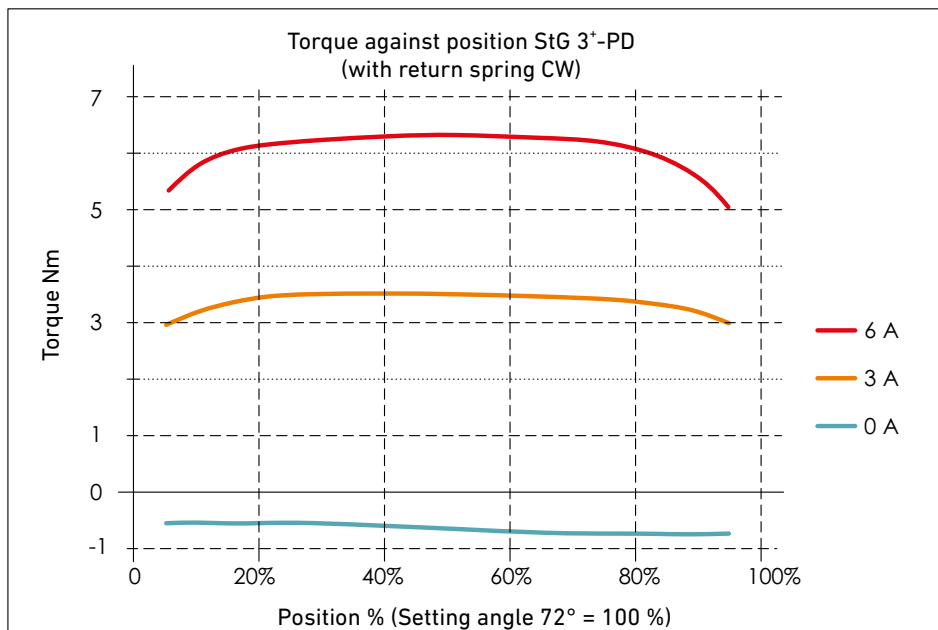
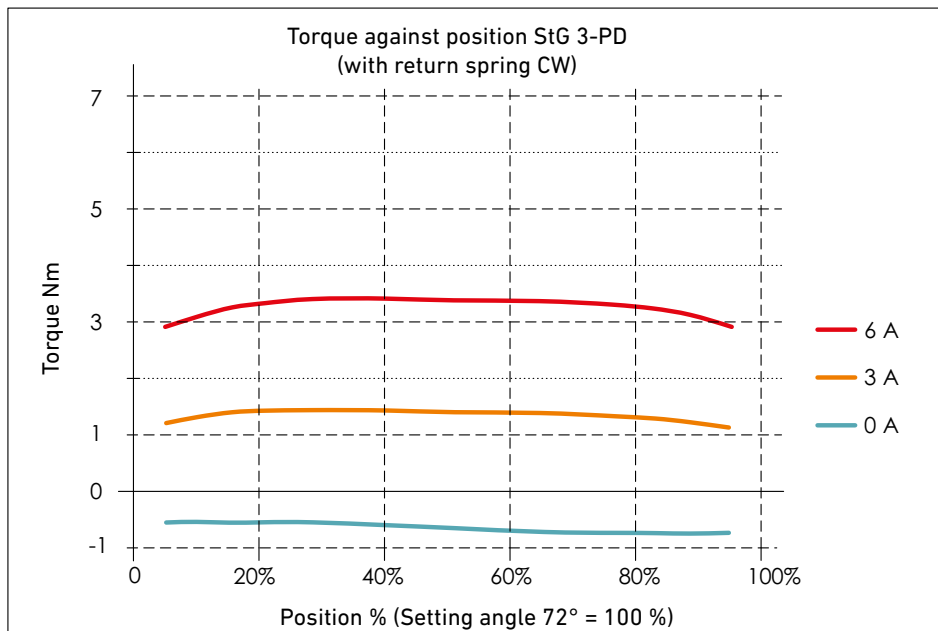
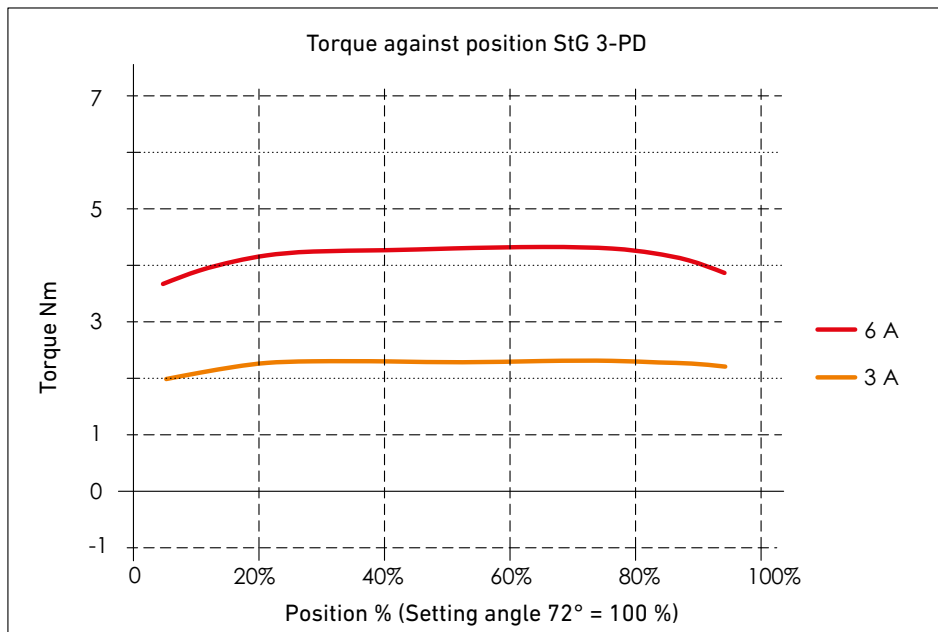


TYCO 23-pin,  
coding-1,  
view on plug side

Pin	Signal	Signal type
1	Power supply (+)	24 V
2	Auxiliary power out	24 V, max. 0.7 A
3	RS-232 TX	Communication
4	Analogue input (+) for setpoint	4 ... 20 mA or 0 ... 4.5 V Type selection via pin 19
5	Digital input 1 *)	open: run enable low side: stop (standard)
6	PWM shield	-
7	Digital input 2 *)	binary
8	Power output	5 V, max. 50 mA
9	Trottle position feedback, analogue output	0.5 ... 4.5 V
10	Digital input 4 isolated (-)	PWM or binary
11	RS-232 RX	Communication
12	GND	0 V
13	CAN high	Communication
14	CAN shield	-
15	GND	0 V
16	Power supply (-)	0 V
17	GND	0 V
18	Digital input 4 isolated (+)	PWM
19	Type selection of analog input pin 4	connected to pin 20 (GND): 4 ... 20 mA open: 0.5 ... 4.5 V
20	Analogue input 1 GND	0 V
21	CAN low	Communication
22	Digital input 3 *)	binary
23	Status output	binary

\*) Activation type configurable globally, high side or low side. Default: low side

# Characteristic curves



# Dimensions

