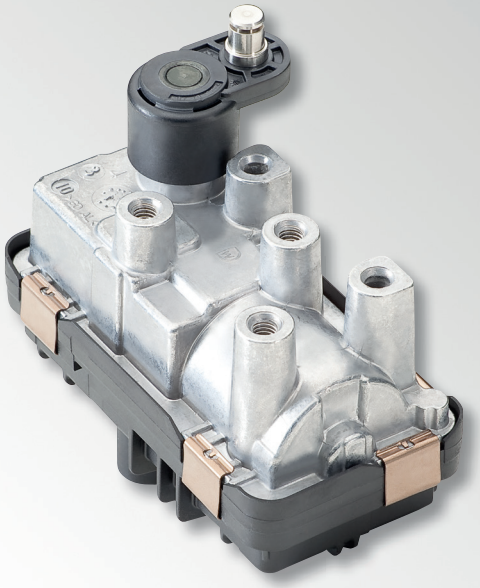


BRIEF INFORMATION

Rotatory smart actuator for high temperatures

- → Integrated electronics consisting of CIPOS® (Contactless Inductive Position Sensor) position sensor, motor control and error diagnosis
- → Fast response time
- → Self-blocking transmission and low current consumption for holding position
- → High thermal resistance for use in the engine compartment area
- → Error detection and reaction, error feedback and error storage

PRODUCT FEATURES

Application

The rotatory smart actuator for high temperatures is mostly used for VNT / VTG (Variable Nozzle Turbine / Variable Turbine Geometry)turbocharger technology, carrying out reliable and precise positions. Especially the insensitivity to magnetic fields and the high level of temperature stability are the characteristic qualities of the CIPOS® technology employed in the rotatory smart actuator for high temperatures.

Angles are measured inductively using a contact-free and wear-free method, thus guaranteeing high quality measuring precision over the entire service life.

TECHNICAL DETAILS

Technical data	
Rated voltage	14 V
Operating voltage	10.5 V – 16 V
Operating temperature	-40°C to +125°C
Short-term maximum temperature	up to 150°C
Operating angle range	100°
Angular velocity (@ 20 Ncm)	> 0.35° / ms
Max. Current consumption	< 9 A
Min. torque (14 V, 0.1°/ms)	> 55 Ncm
Sensor resolution	0.125°
Position tolerance over full angle	+/-2%
Protection class	IP 6K9K
Protocol	CAN or PWM
Mating connector	Kostal, 09 4415 82, coding B

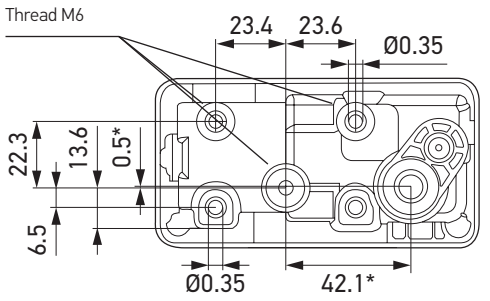
Function

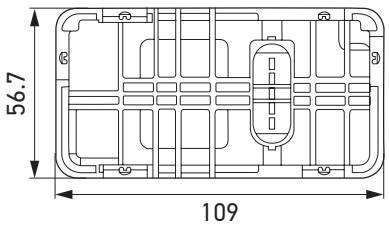
The main function of the rotatory smart actuator for high temperatures is to precisely align the shaft into the position, defined by the control unit. Thanks to the CIPOS® sensor, the shaft's position is continuously calculated and actively updated in the sensor. The integrated electronics are comprised of motor control and error diagnosis in addition to the CIPOS® sensor for precise position detection. This enables finding errors, updating and automatically deducting respective reactions from this. The errors are stored in a memory.

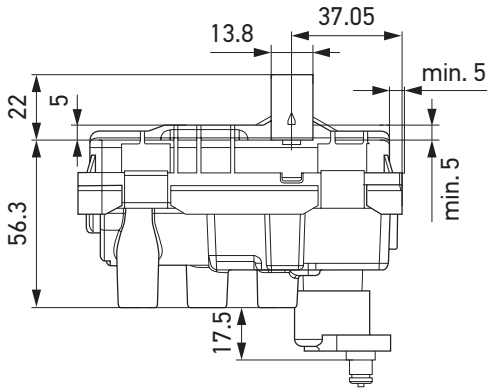
Customer Benefits

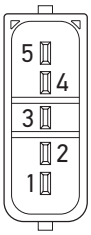
The rotatory smart actuator for high temperatures has a flexible operating angle area and carries old controlled motions up to the limit stop. The communication is possible, both, via CAN and PWM.

Technical drawing







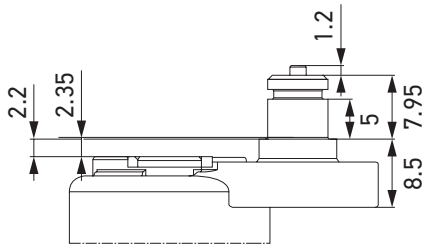


Pin assignment

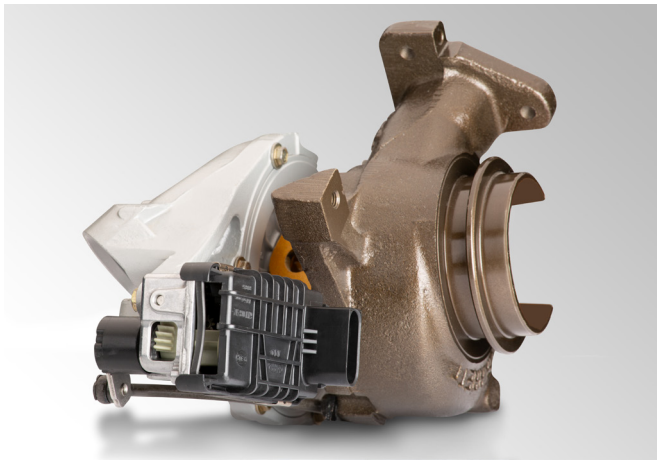
1	U_b
2	Ground
3	CAN High
4	PWM input/ PWM grounding
5	CAN Low

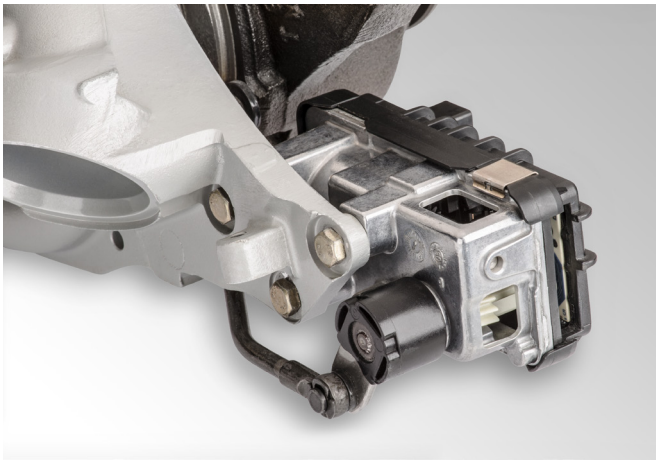
* Only relating to housing dome

Example of a connection element



TURBOCHARGER MODEL





PRODUCT OVERVIEW

Part number	Voltage range	Operating temperature	Working angle	Torque	Protection class
On request	10.5 V – 16 V	-40°C to +125°C	100°	> 55 Ncm	IP 6K9K