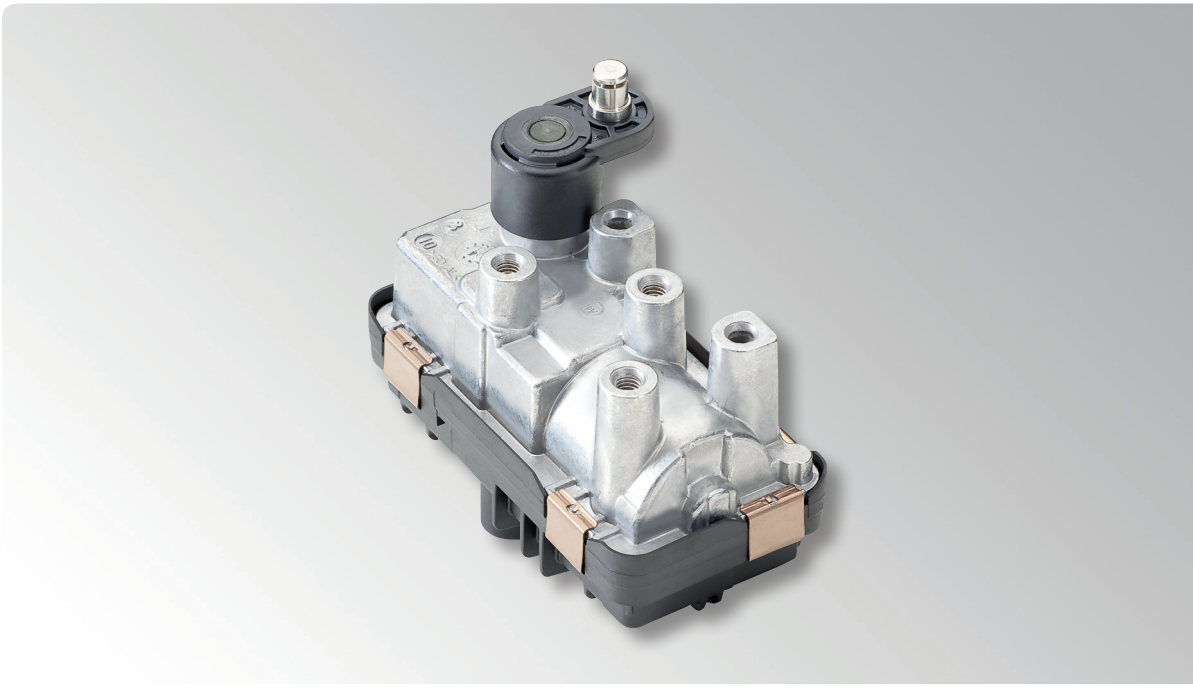


BRIEF INFORMATION

Universal Turbo Actuator (UTA)

- → 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 Universal Turbo Actuator 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 UTA.

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

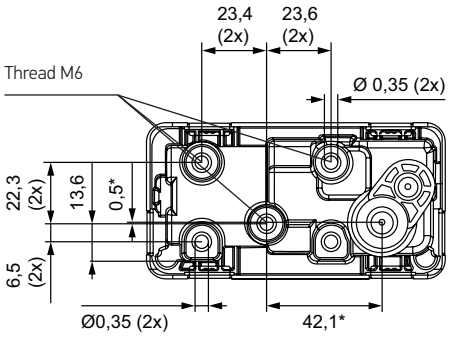
Function

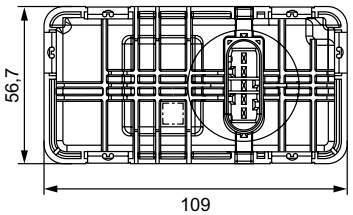
The Universal Turbo Actuator's (UTA) main function is to precisely align the shaft into the position, defined by the control unit. Thanks to the CIPOS sensor, the shaft's position is continuously calculated and actively updated in the sensor. The integrated electronics are comprised of motor control 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.

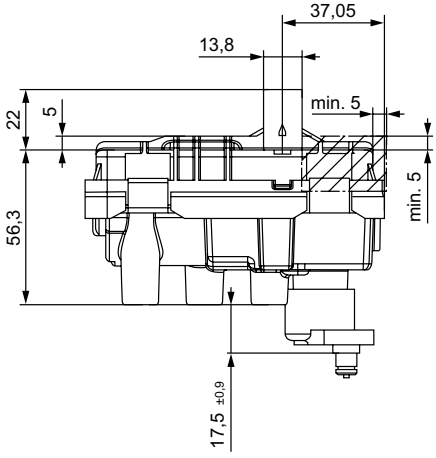
Customer Benefits

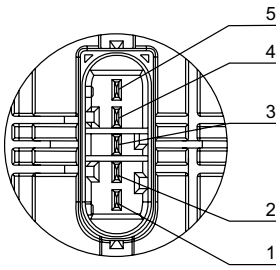
The UTA has a flexible operating angle area and carries old controlled motions up to the limit stop. The communication is possible, both, via CAN and PWM.

Technical drawing







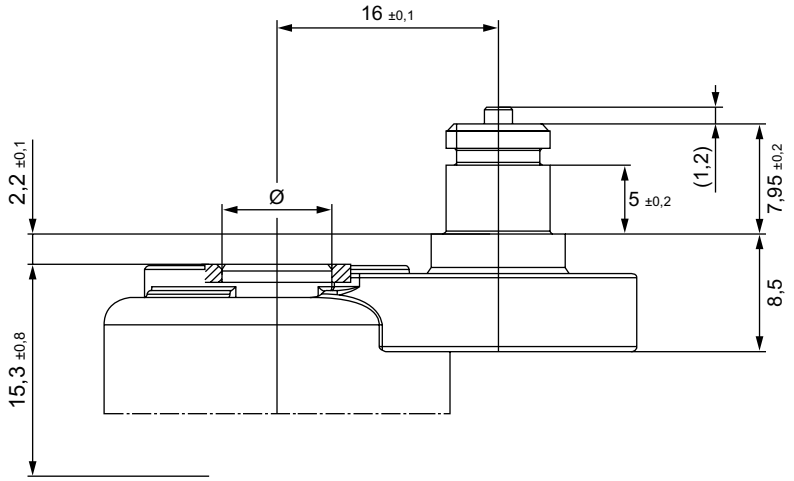


Pin assignment

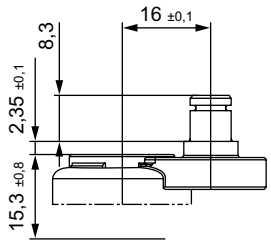
1	U_b
2	Ground
3	CAN High
4	PWM input/ PWM grounding
5	CAN Low

* Only relating to housing dome

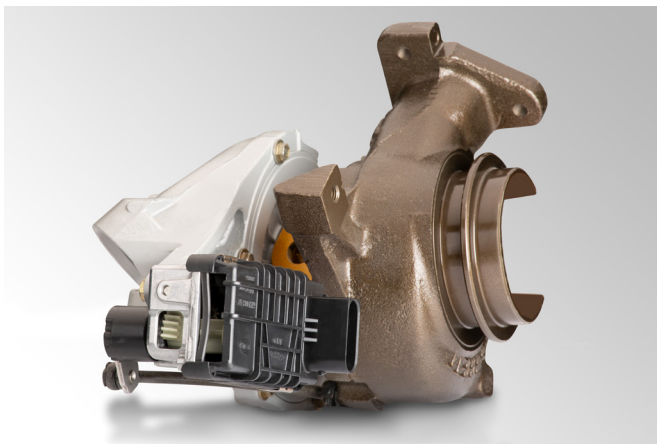
Example of a connection element

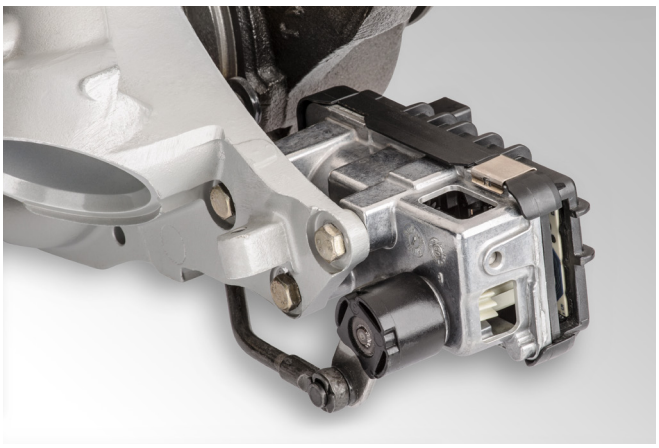


View of an alternative connection element



TURBOCHARGER MODEL





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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