

# ActuCOM 14

## Engine Throttle Actuator

### Electrical actuator for rotational movements

#### General Description

ActuCOM 14 is an electrical actuator for rotational movements. The actuator consists of a brushless 3-phase motor and on-board electronics. The rotation is bidirectional, the rotary output range can be configured and is not limited in stroke. The engine throttle can be driven directly or via a linkage. One or two mechanical stops with automatic detection are supplied. The signal for a desired rotary position can be passed via CAN-Bus, 0-20mA or 4-20mA analog signal. The actual rotor position is provided by a 4-20mA analog output signal or by CAN communication, which is also used for providing diagnostics. All parameters can be adjusted via GUI over RS232 service interface.

Mounting of the ActuCOM14 can be done in several positions by using sliding T-blocks, see installation on next page.

#### Key Parameters

##### General Actuator Data

|                                    |  |
|------------------------------------|--|
| Supply Voltage .....               | 24VDC ±25%                                 |
| Stroke .....                       | 0°-360°<br>arbitrary number of revolutions |
| Steady state torque.....           | 14Nm                                       |
| Peak torque .....                  | 25Nm                                       |
| Steady state power consumption ... | 100W                                       |
| Peak power consumption .....       | 370W                                       |

##### I/O Data

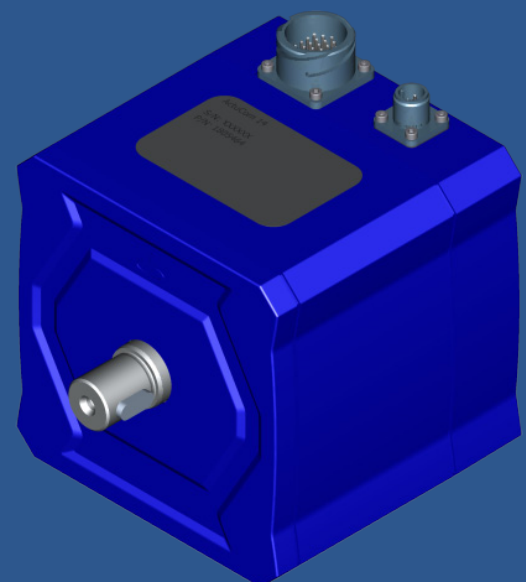
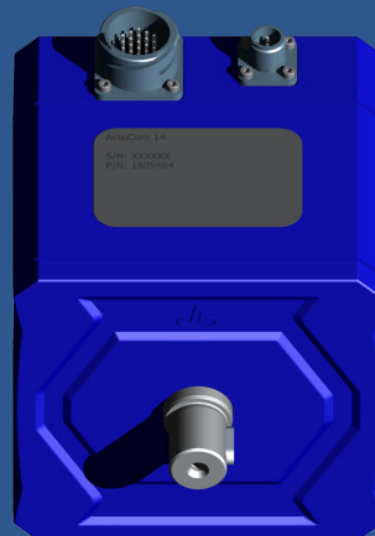
|                         |                                       |
|-------------------------|---------------------------------------|
| Analog input .....      | 0-20mA or 4-20mA,<br>Burden 330R      |
| Analog output .....     | 0-20mA or 4-20mA max.,<br>Burden 500R |
| Digital input.....      | 24V, 5k internal pull-up              |
| Digital output.....     | 24V, 5k internal pull up              |
| CAN .....               | 1Mbaud, 120R terminated               |
| Service interface ..... | RS232                                 |

##### Performance Specification

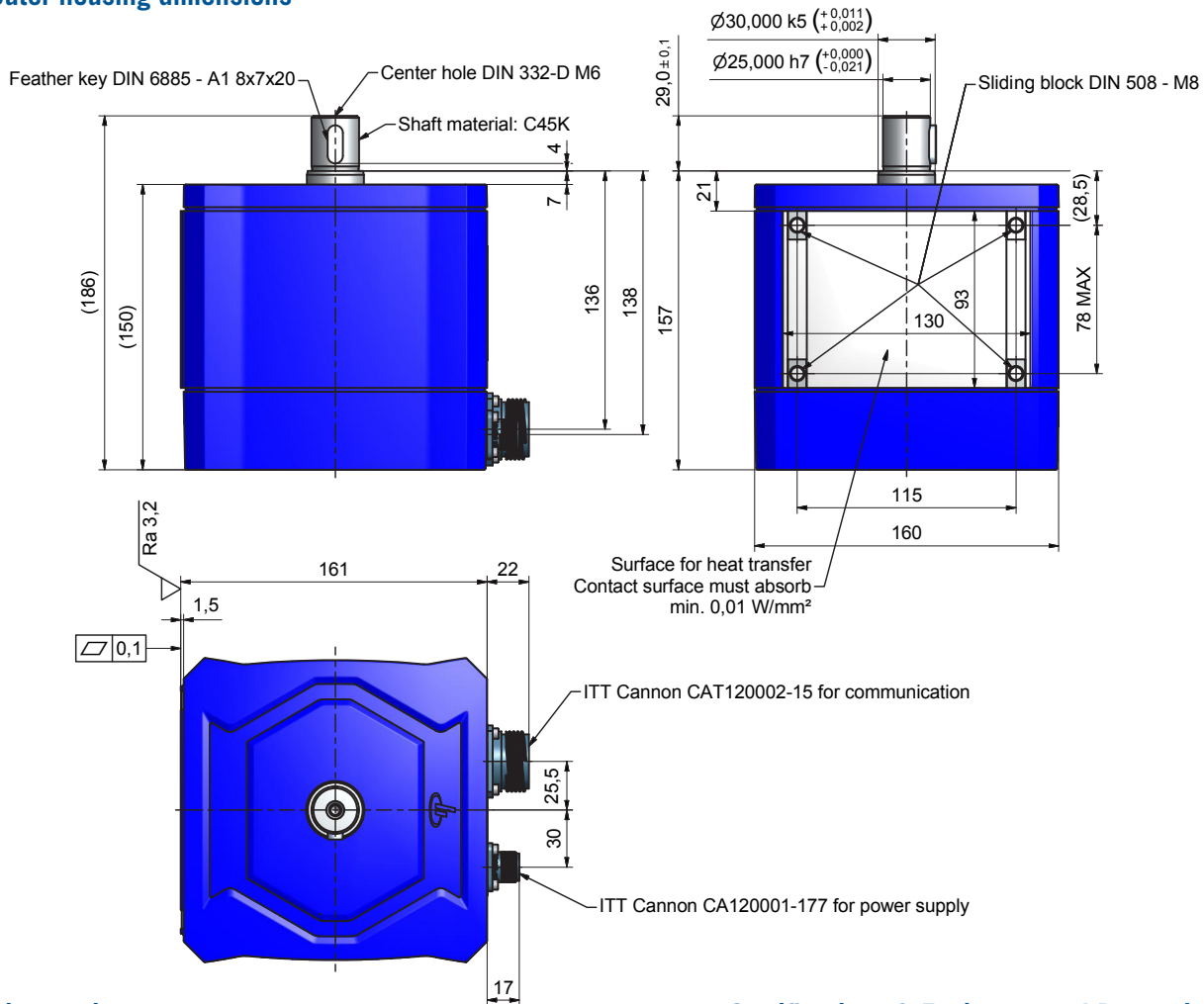
|                                  |   |
|----------------------------------|---|
| Closing time 10-90° .....        | 80ms  |
| Accuracy position feedback ..... | resolution 12bit,<br>transducer resolution with<br>el. balance ~ 0.4° |

##### Environmental Specification

|                           |               |
|---------------------------|---------------|
| Protection class.....     | equals IP 54  |
| Ambient temperature ..... | -10°C to 90°C |



## Outer housing dimensions



## Diagnostics

### Diagnostic features will be implemented such as:

- Self-Calibration via reference run after start up to determine automatically the end positions of the throttle and therefore the available stroke, also automatic differentiation into fully open or closed position
- Warning in case of not reaching the desired position
- Error message in case of failure of position sensor
- Power up diagnosis
- Temperature diagnosis of on board electronics
- CAN address claim error
- CAN demand missing
- CAN demand out of range

## Certifications & Environmental Protection

- Enclosure according to IP54 per IEC 60529
- EC Declaration of Conformity according to EC Directive 2004/108/EG
  - EN 61000-6-2: Immunity for Industrial Environment
  - EN 61000-6-4: Emissions for Industrial Environment
- Ambient Temperature Range: -10°C to +90°C
- Shock: 40g, 11mS saw-tooth 3/axis
- Vibration:
  - Sine: (10Hz-97.5Hz) 0.4mm; (97.5Hz-2000Hz) 15g, Sweep rate: 1oct/min; Number of sweeps: 100; Total time: 12.45hrs
  - Random: Frequency: 10Hz-2000Hz; Acceleration: 13.0grms; Total time: 8.0hrs
- AEx of Basis NEC 505: AEx nA IIC T4/T3 pending
- IECEx Ex nA IIC T4/T3 Gc pending

## Software

Optional the configuration software can be customized with respect to specific requirements, integration into customer's engine management system for configuration and parameterization therefore possible.

**altronic**

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