

ITB-DC – Throttle with Integrated Stepper Motor Driver

P/N 30.51.100-D, P/N 30.51.105-D

Variations

- Standard diameters D of the throttle (*see drawing*) 55 mm (2.17"), 60 mm (2.36"), 68 mm (2.68")
- Possible diameters of the throttle 48 mm (1.89") to 68 mm (2.68")

Dimensions

- Length/width of mounting flange 111.7 mm (4.40")
- Hole spacing on the mounting flange 75 mm (2.95")
- Height of mounting flange 61 mm (2.40")
- Length including stepper motor and controller 296.5 mm (11.67")
- Width including stepper motor and controller 109 mm (4.29")

Connections

- Stepper motor 24-pole military style connector

Weight

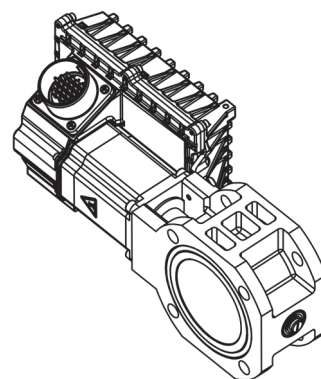
- P/N 30.51.100-055, P/N 30.51.105-055 3.0 kg (6.61 lbs)
- P/N 30.51.100-060, P/N 30.51.105-060 2.9 kg (6.39 lbs)
- P/N 30.51.100-068, P/N 30.51.105-068 2.9 kg (6.39 lbs)

Mechanical Data

- Maximum rotation angle of the throttle body 80°
- Chemical resistance Water, oil, gaseous fuels
- Maximum absolute pressure 4.5 bar (65 psi)
- Maximum temperature of media flowing through +80 °C (+176 °F)
- Permissible vibrations 5 Hz to 25 Hz: constant vibration displacement of 1.6 mm
25 Hz to 100 Hz: constant acceleration of 4 g
100 Hz to 1,000 Hz: constant acceleration of 2.8 g

Climatic Environmental Conditions

- Permissible temperature range -40 °C to +85 °C
(-40 °F to +185 °F)
- Maximum relative humidity Max. 95 % humidity without condensation up to max. 4,000 m above sea level



Electrical Data

- Power consumption
Max. 72 W
- Power supply
Nominal voltage: 24 V DC
Operating voltage:
16.8 V DC to 32 V DC
- Required current
Max. 4 A

Inputs and Outputs

- Binary input (Reset)
Max. 32 V DC; min. 5 mA
- Binary output (Error)
Max. 32 V DC; max. 50 mA
normally closed or normally open
contact (configurable)
- Analog current input
0 mA to 20 mA, configurable
- Analog current output
0 mA to 20 mA, configurable

Stepper motor

- Step width
< 0.06°
- Speed (when opening from 10% to 90%)
35 ms
- Holding torque
1.7 Nm (1.25 lb-ft)

Communication

- Interfaces
USB, CAN bus

Overview Drawings

100 series (P/N 30.51.100-D)

P/N 30.51.105-D also corresponds to the following drawing, but without the gasket (O-ring 82.14 mm x 3.53 mm [3.23" x 0.14"]) and the groove required for it.

