

Electronic Throttle Body



The throttle body is designed to control the fresh air of spark ignition engines in combination with an electronic throttle control system. ETB applications with flex-fuel, CNG and LPG are permissible if injected in the air flow after the throttle body. A typical ETC system includes the following components: electronic throttle body, accelerator pedal module and electronic control unit. You will find the available bore diameters in the variations table.

Application

Temperature range	-40 to 140°C
	50 to 250 m/s ² at 50 Hz to 2 kHz

Technical Specifications

Mechanical Data

Available bore diameters	32 mm
	40 mm
	44 mm
	46 mm
	52 mm
	54 mm
	60 mm
	82 mm

Electrical Data

Supply voltage	6 to 16 V
Supply voltage sensor	5 ± 0.2 V

- ▶ Many bore diameters available
- ▶ Throttle position sensor is redundant
- ▶ For flex-fuel, CNG, LPG
- ▶ Idle default position

Max. allowed generator current	<10.0 A
--------------------------------	---------

Characteristic

Output signal I	0 to 5 V for 0 to 90°
Output signal II	5 to 0 V for 0 to 90°

Connectors and Wires

Various motorsport and automotive connectors are available on request.

Please specify the required wire length with your order.

Installation Notes

For correct mounting please respect the hints on the next page "Mounting position".

The ETB can be connected directly to control units with ETC functionality.

Please find further application hints in the offer drawing at our homepage.

Two redundant sensors control the up to date throttle position.

All ETBs have an idle air position.

Legal Restrictions

The sale of this product in Mexico is prohibited. Due to embargo restrictions, sale of this product in Russia, Belarus, Iran, Syria, and North Korea is prohibited.

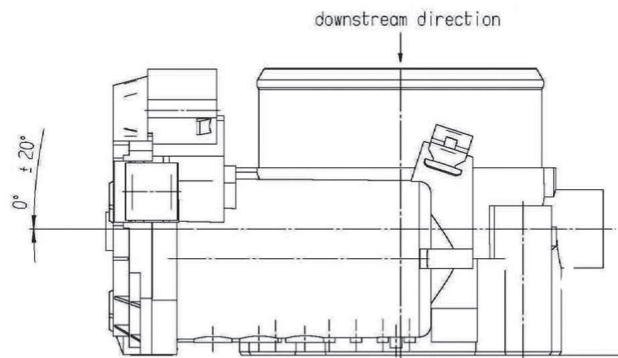
Ordering Information

Electronic Throttle Body 32 mm
Order number **0280.750.148**

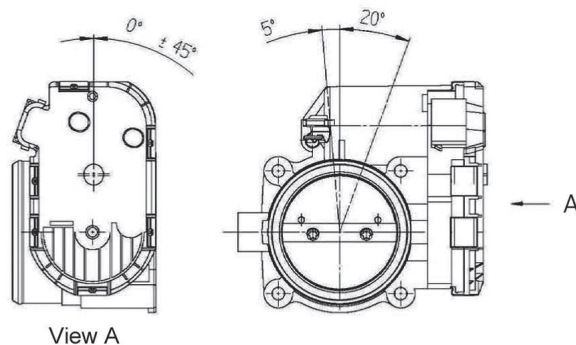
Electronic Throttle Body 40 mmOrder number **0280.750.149****Electronic Throttle Body 44 mm**Order number **0280.750.137****Electronic Throttle Body 46 mm**Order number **F02U.V01.171-01****Electronic Throttle Body 52 mm**Order number **F02U.V01.184-01****Electronic Throttle Body 54 mm**Order number **0280.750.150****Electronic Throttle Body 60 mm**Order number **0280.750.151****Electronic Throttle Body 82 mm**Order number **0280.750.101****Dimensions****Mounting Position**

Mounting position of the Throttle Actuator

- Horizontal inclination of the Throttle shaft: $\pm 20^\circ$
- Horizontal inclination of the cover: $\pm 180^\circ$
- Mounting positions which deviate from this need separate testing.
- It has to be prevented that when mounted in the vehicle, no condensed moisture can soak into the Throttle shaft bore holes (e.g. from the crankcase ventilation)



IN CASE OF MOUNTING POSITION WITH DC-MOTOR ON TOP
A COMBINATION OF THE ANGLES SHOWN BELOW IS NOT ALLOWED!



Variations

	Electronic Throttle Body 32 mm	Electronic Throttle Body 40 mm	Electronic Throttle Body 44 mm	Electronic Throttle Body 46 mm
Bore Diameter (mm)	32	40	44	46
Connector	D261.205.358-01	D261.205.358-01	D261.205.358-01	D261.205.356-01
Pin 1 A	Motor -	Motor -	Motor -	Motor -
Pin 2 B	Poti -	Poti -	Poti -	Poti -
Pin 3 C	Poti +	Poti +	Poti +	Poti +
Pin 4 D	Motor +	Motor +	Motor +	Motor +
Pin 5 E	Poti 2	Poti 2	Poti 2	Poti 2
Pin 6 F	Poti 1	Poti 1	Poti 1	Poti 1
Flange diameter (mm)	40	50	50	58
Hole circle diameter (mm)	50 x 50	50 x 50	50 x 50	53 x 53
Weight (kg)	0.9	0.9	0.9	0.95
Max. air flow rate*	394 kg/h at 85° angle	695 kg/h at 85° angle	not specified	978 kg/h at 85° angle
Opening direction**	counterclockwise	counterclockwise	counterclockwise	counterclockwise

	Electronic Throttle Body 52 mm	Electronic Throttle Body 54 mm	Electronic Throttle Body 60 mm	Electronic Throttle Body 82 mm
Bore Diameter (mm)	52	54	60	82
Connector	D261.205.356-01	D261.205.358-01	D261.205.358-01	D261.205.358-01
Pin 1 A	Poti 1	Motor -	Motor -	Motor -
Pin 2 B	Poti -	Poti -	Poti -	Poti -
Pin 3 C	Motor -	Poti +	Poti +	Poti +
Pin 4 D	Poti 2	Motor +	Motor +	Motor +
Pin 5 E	Motor +	Poti 2	Poti 2	Poti 2
Pin 6 F	Poti +	Poti 1	Poti 1	Poti 1
Flange diameter (mm)	58	70	68.5	90
Hole circle diameter (mm)	53 x 53	60 x 60	60 x 60	75 x 75
Weight (kg)	0.95	0.95	0.95	1.1
Max. air flow rate*	not specified	not specified	not specified	not specified
Opening direction**	counterclockwise	counterclockwise	counterclockwise	counterclockwise

* ambient conditions: Air pressure $p=1000$ mbar, Differential pressure $\Delta p=600$ mbar ± 25 mbar, rel. humidity $rF=40$ %, Air temperature $T=24^{\circ}\text{C}$

** Opening direction is related to view A. See drawings on bottom of chapter "Dimensions".

Represented by:

Europe:
Bosch Engineering GmbH
Motorsport
Robert-Bosch-Allee 1
74232 Abstatt
Germany
Tel.: +49 7062 911 9101
Fax: +49 7062 911 79104
motorsport@bosch.com
www.bosch-motorsport.de

North America:
Bosch Engineering North America
Motorsport
38000 Hills Tech Drive
Farmington Hills, MI 48331-3417
United States of America
Tel.: +1 248 876 2977
Fax: +1 248 876 7373
motorsport@bosch.com
www.bosch-motorsport.com

Asia-Pacific:
Bosch Engineering Japan K.K.
Motorsports Department
1-9-32 Nakagawa Chuo, Tsuzuki-ku
Yokohama City
Kanagawa Prefecture 224-8601
Japan
Tel.: +81 45 605 3032
Fax: +81 45 605 3059
www.bosch-motorsport.jp

Australia, New Zealand and South Africa:
Robert Bosch Pty. Ltd
Motorsport
1555 Centre Road
Clayton, Victoria, 3168
Australia
Tel.: +61 (3) 9541 3901
motor.sport@au.bosch.com