

To be able to provide you with a quote or a finished sample, we will require various details from you. Because of the numerous options that our sensor can offer, we are particularly dependent on your co-operation.

The following table provides definitions for the terms used, together with an example for the parameterisation of a sensor. A dimensioned drawing is attached with all the parameters drawn in.

All measurements are given in [mm] from the seal edge.

Please enter your data on page 8, and complete the entry with your personal information and the required number of pieces per year. To receive a quote or request a sample, please fax this page to the fax number provided.

If you require any assistance with the completion of this form, please get in touch with us.

Contact:

Technical Consultant

BEDIA Motorentechnik GmbH & Co. KG
Weißenbrunner Hauptstrasse 6
D – 91227 Leinburg / Weißenbrunn
Tel.: 0049 9187 9509 36
Fax: 0049 9187 9509 54
E – Mail: Zibes@bedia.com

Office

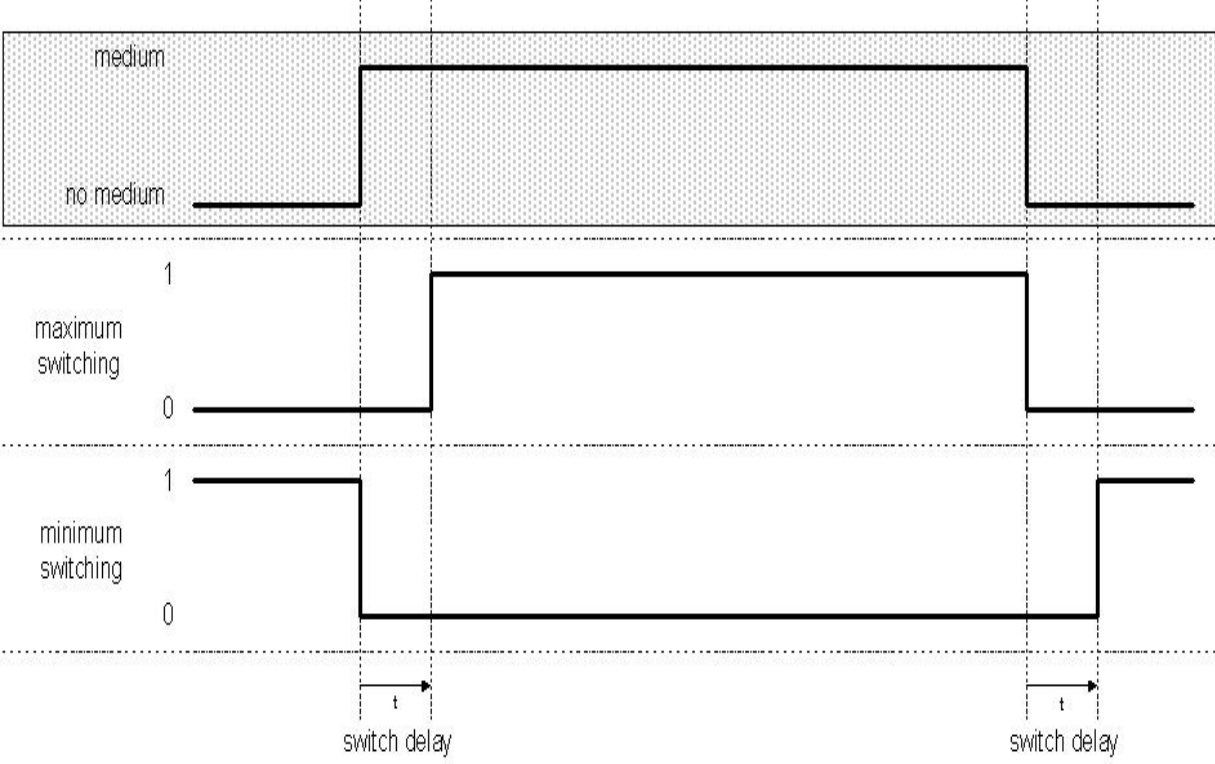
BEDIA Motorentechnik GmbH & Co. KG
Weißenbrunner Hauptstrasse 6
D – 91227 Leinburg / Weißenbrunn
Tel.: 0049 9187 9509 13
Fax: 0049 9187 9509 50
E – Mail: Vertrieb@bedia.com

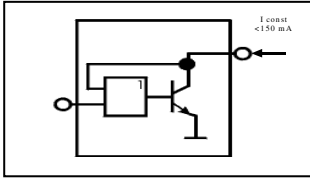
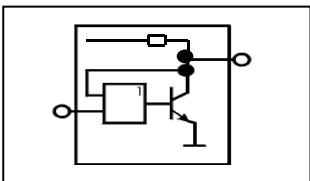
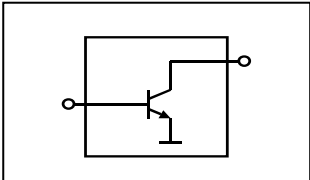
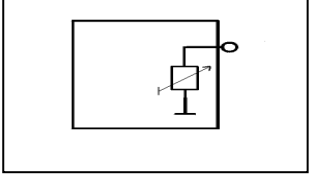
Structure of the parameter table:

Parameter No.	Parameter designation	Possible values	Note
This number can be found in the data sheet.	Designation of the parameter.	Describes the values or value ranges available for this parameter.	Important notes and additional information for this parameter.
	<i>Example for the parameterisation of a sensor for the tank and description depicted on page 7.</i>		

Parameter table:

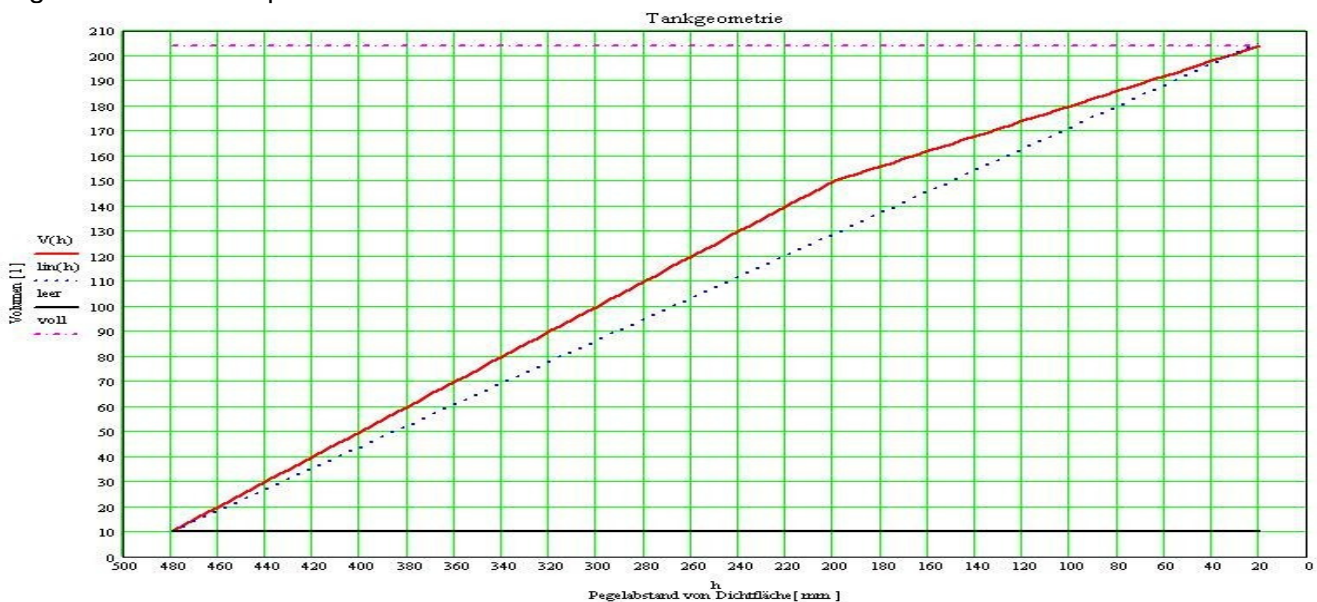
Parameter No.	Parameter designation	Possible values	Note
1.0	Mounting flange	5-hole flange (standard) , diameter of pitch circle = 54mm	The six-hole flange consists of a sensor with a 5-hole flange and an adapter plate. The sensor and adapter plate are supplied pre-mounted (see drawing).
		6-hole flange, diameter of pitch circle = 80mm	
<i>A 5-hole flange was selected for the example tank.</i>			
1.1	Sensor pipe length	Minimum length: 200mm Length in [mm]	The sensor pipe, which is open to the bottom, must not be guided and must not rest on the base of the tank so that the medium to be measured can circulate within the sensor pipe. The sensor pipe should end near the intake point. This ensures that the sensor is not standing in the condensation water.
		Maximum length: 1200mm Length in [mm]	
<i>A length of 490 mm was selected for the example tank. This length results from the position of the intake fitting. The sensor pipe ends with the intake point.</i>			
1.2	Electrical connection	Bayonet cap DIN 72585 (standard)	The electrical connection of the sensor is always implemented via a 4-wire cable, preferably with a bayonet cap DIN 72585 of protection class IP69k. Other plugs can also be used on request. In this case, please enter the reference source and reference designation.
		Cable with open end	
<i>A bayonet cap DIN 72585 was selected for the example sensor</i>			

1.3	Cable length	Minimum length: 100 mm Length in [mm]	The connection cable of the sensor is always 4-wire .
		Standard length 800 mm	
		Maximum length: 5000 mm Length in [mm]	
A length of 800 mm was selected for the example sensor			
2.0	Switching point	Switching point range See dimensioned drawing Switching point in [mm]	The sensor is equipped with one switching output . When actuated, a minus potential is switched through the output. The distance of the switching point is measured from the seal edge and is freely selectable within the switching point range (see drawing).
A switching point of 400 mm was selected for the example sensor			
2.1	Function of switching point	Function: Minimum	The switching output is optional and can be set as a minimum switch (e.g. as a low fuel warning) or as a maximum switch (e.g. to switch off a filling system).
		Function: Maximum	
A minimum switch was selected for the example sensor			
 <p>The diagram illustrates the sensor's switching behavior. It shows three signals over time: <ul style="list-style-type: none"> Medium presence: A signal that transitions from 'no medium' (low) to 'medium' (high) and back to 'no medium' (low). Maximum switching: A signal that transitions from 0 to 1 when medium is present and back to 0 when it is absent. Minimum switching: A signal that transitions from 1 to 0 when medium is present and back to 1 when it is absent. Vertical dashed lines indicate the start and end of the medium presence. Horizontal arrows labeled 't' indicate the 'switch delay' between the medium transition and the corresponding switching signal transition. </p>			

2.5	Output type	Voltage sink:		The voltage sink can be used to replace resistance sensors on digital controls/displays that measure voltage drops across resistors. To do this, the ITS-60 must be operated with a Pull Up resistor or with a constant current source on the output.
		Voltage output:		The voltage output actively outputs the level/volume applicable voltage. A Pull Up / constant current is not required. The output can be loaded with 5mA.
		PWM output:		The frequency of the PWM output must be $\leq 200\text{Hz}$. A modulation range of 20% to 80% is possible.
		Resistance emulation:		Resistance emulation is necessary for general analogue level displays from various manufacturers. Please provide a suitable instrument as a sample.
		Output selected for this example: voltage output		

2.6	Measurement range / Geometry adaptation	Position from seal edge	Output value	This parameter is used to specify the positions of the measurement range start and measurement range end . Where necessary, several geometry points can also be specified (see example). In total, 15 connection points can be defined. At least two points must be defined to specify the measurement range. If the analogue output should be proportional to the tank volume, the connection points can be given in [l]. Optionally, the required output voltage can be given in [V] or in [%] of the analogue start and analogue end values.
		Data in [mm]	Data in [V] or [l] or [%]	

Diagram for the example tank:

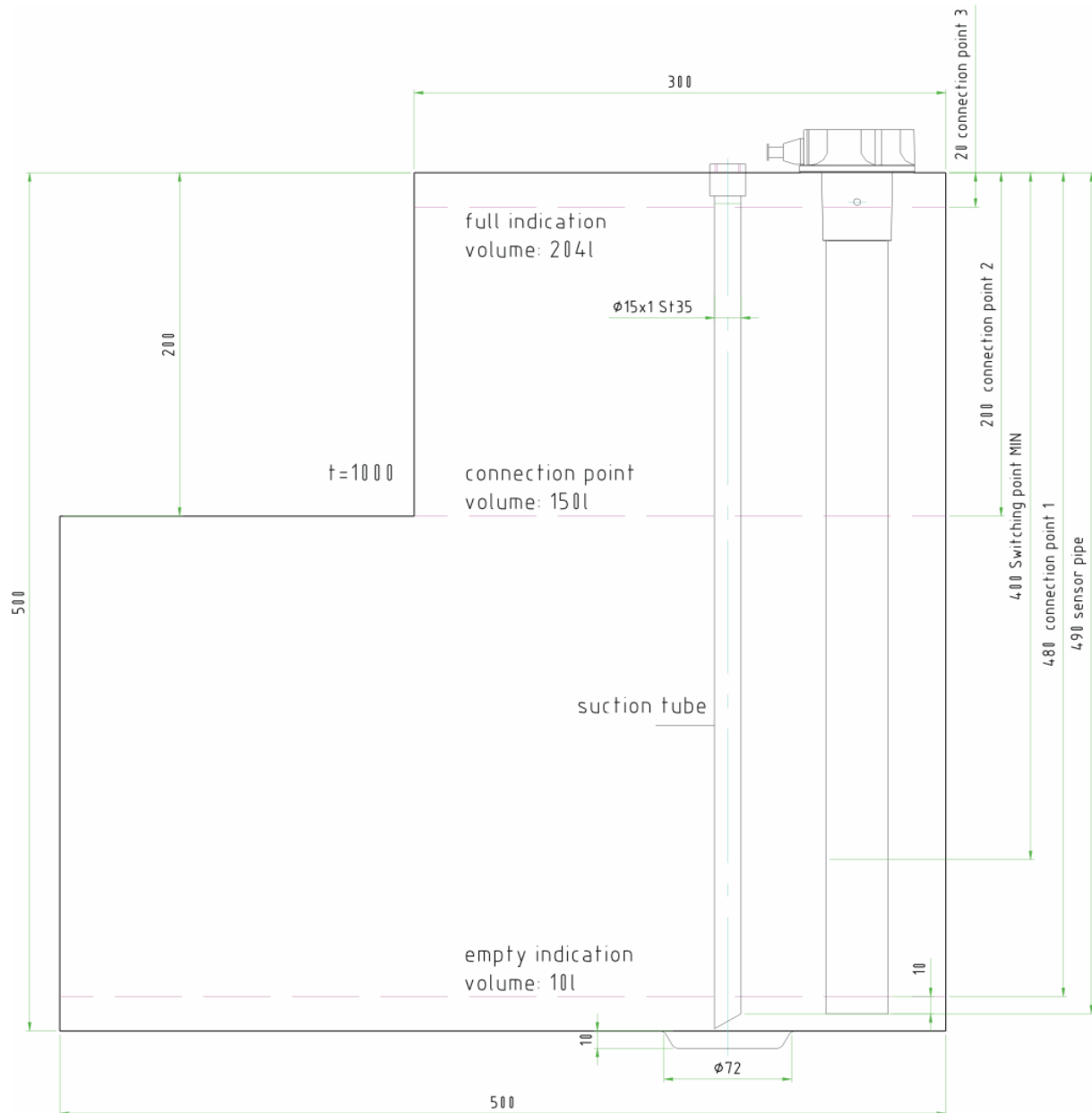


As the output signal of the example sensor is to be **proportional to the contents of the tank** the following connection points are defined:

Connection point	Position from seal edge	Output value
1	480 mm	10 l
2	200 mm	150 l
3	20 mm	204 l

The output value “analogue start” is always given with the first connection point and the “analogue end” value is always given with the last connection point. If the signal is not to be given in proportion to the level but e.g. proportional to the actual content, additional connection points must be provided. Up to 15 connection points can be given.

Example tank:



Please send the following table completed with your data to:

BEDIA Motorentchnik GmbH Fax 0049 (0) 9187 / 9509 50

No.	Designation	Customer requirements			
1.0	Mounting flange	<input type="checkbox"/> 5-hole flange Φ 54mm			
		<input type="checkbox"/> 6-hole flange Φ 80mm			
1.1	Sensor pipe length	<input type="checkbox"/> mm			
1.2	Electrical connection	<input type="checkbox"/> Bayonet DIN 72585 (standard)			
		<input type="checkbox"/> Cable open			
		<input type="checkbox"/>			
1.3	Cable length	mm			
2.0	Switching point from seal edge	mm			
2.1	Switching point function	<input type="checkbox"/> Min. function			
		<input type="checkbox"/> Max. function			
2.2	Switching delay	sec.			
2.3	Reset hysteresis	mm			
2.4	Analog start value	[V] ; [%]			
	Analog end value	[V] ; [%]			
2.5	Output type	<input type="checkbox"/> Voltage sink			
		<input type="checkbox"/> Voltage output			
		<input type="checkbox"/> PWM output			
		<input type="checkbox"/> Resistance emulation			
2.6	Geometry adaptation				
Connection point	Position from seal surface	Output value	Connection point	Position from seal surface	Output value
1			9		
2			10		
3			11		
4			12		
5			13		
6			14		
7			15		
8					

Additional data:

- With which display instrument must the sensor work with? _____
- In what equipment is the sensor to be installed in? _____
- Which sensor must be replaced? _____
- What fuel is normally used? _____
- How many sensors are required per year? _____

Your address:

Company: _____

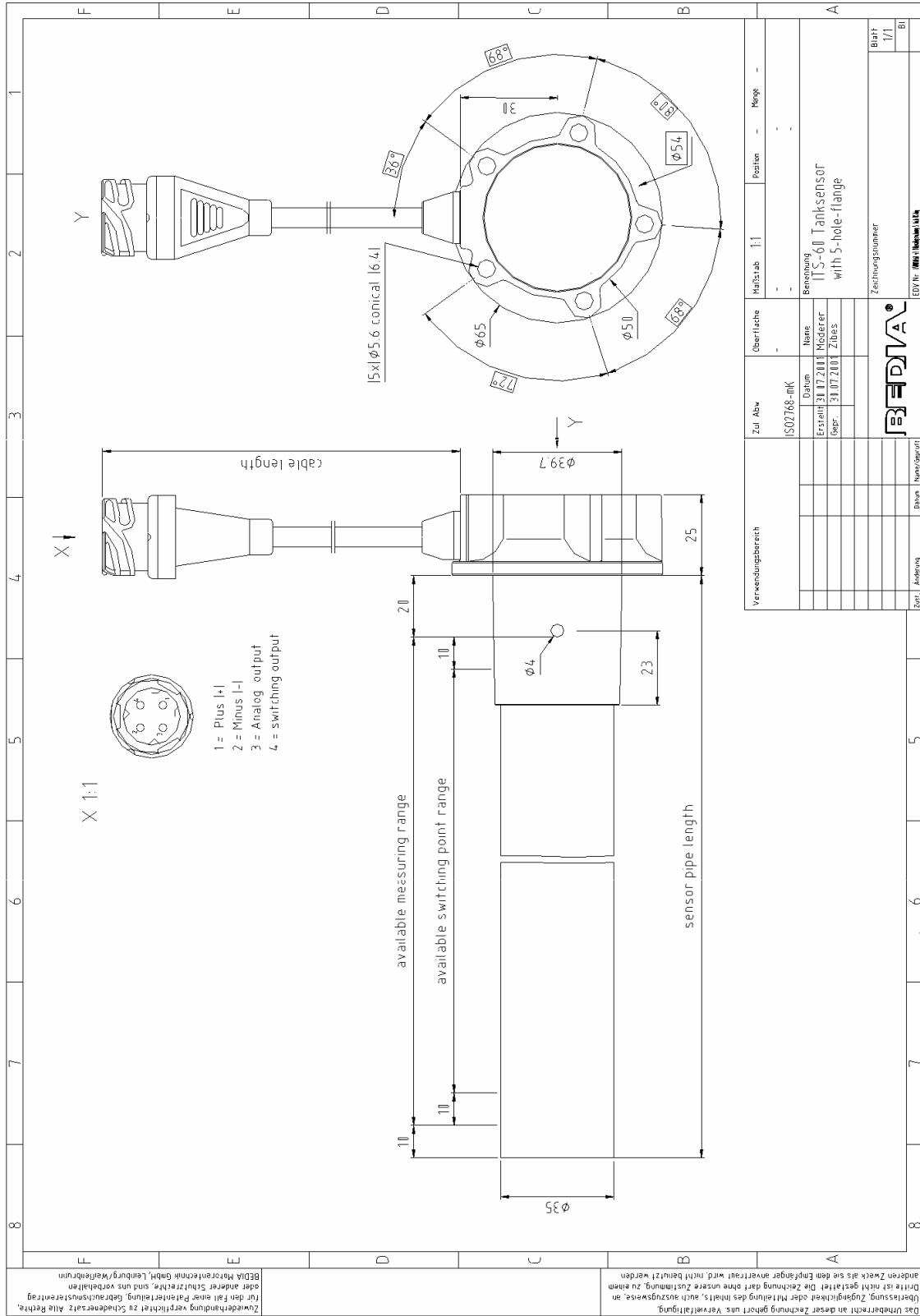
Name: _____

Telephone: _____

Fax: _____

E-mail : _____

Signature/company stamp:



Verwendungsbereich		Zul. Abw.	IS02768-mk	Oberfläche		Maßstab	1:1	Position	-	Menge	-
		Datum		Name		Benennung		Blatt		Bl1	
		Ersteinj. 31.07.2011		Mödderer		ITS-60 Tanksensör		1/1			
		Gepr. 31.07.2011		Zibies		with 5-hole-flange					
						Zeichnungsnummer					
						EDV-Nr. MKS/Motoren/144					

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BEDIA Motorentechnik GmbH, Lennburg/Wahlheimrum

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Instructions for Determining Parameters for BEDIA Intelligent TankSensor ITS60. In touch with the medium.

- No moving parts.
- Robust design for heavy applications.
- Mechanical and electrical compatible to already existing systems.
- Suitable for all fuels including bio-fuel.
- Precise indication of medium level.
- Linear output signal even with non-linear tank geometry.
- Integral MIN or MAX switching point.



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BEDIA Motorentechnik GmbH & Co. KG
Weißbrunner Hauptstraße 6
D-91227 Leinburg/Weißbrunn
Amtsgericht Nürnberg HRA 13 68 5

Telefon 09187-95090
Telefax 09187-950950
e-mail: vertrieb@bedia.com
<http://www.bedia.com>

Persönlich haftende Gesellschafterin:
BEDIA Motorentechnik Verwaltungs GmbH
Geschäftsführer: Wilfried Schultheis, Holger Schultheis
Amtsgericht Nürnberg HRB 21 390



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Motorentechnik