We recognize not only the "black sheeps" ...



ISO 9001 ATEX

IDENTIX IDR-11xxP / IDD-11xxP

Sensors with TEACH-IN function and adjustable sensitivity

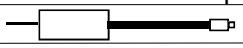
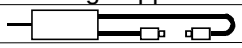
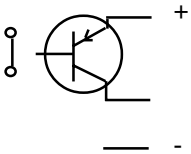
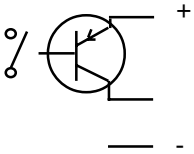
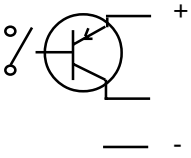
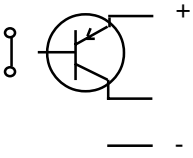
IDD-11..P **Housing M30** **IDR-11..P**

CE 0158

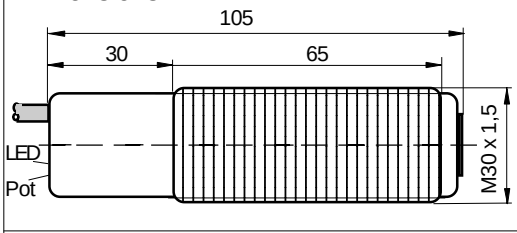
Ex EEx d IIC T6

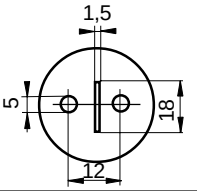
II 2 G

- Adjustment by "Teach-In"
- Holding of reference data by EEPROM
- Different light sources, infrared, red or yellow
- Adjustable sensitivity
- Series IDD-.. for application in Ex zones 1 and 2

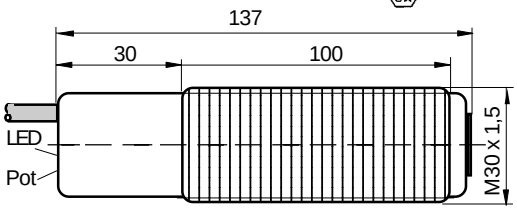
Types Standard / Types EEx d IIC T6 / Technical Data		IDR-1130P / IDD-1130P (Ex)	IDR-1131P / IDD-1131P (Ex)	IDR-1150/51P / IDD-1150/51P (Ex)	IDR-1190P / IDD-1190P (Ex)
Light source		880nm, infrared	880nm, infrared	650nm, red	590nm, yellow
Type of ex protection, only types IDD		EEx d IIC T6			
Range on white paper 30cmx20cm		appr 10 - 400mm	appr. 400 - 1000mm	appr 10 - 400mm	
Response time		7.5ms			
Supply voltage		20 -28 VDC			
Current consumption		60mA			
Power dissipation		1.7W			
Output		PNP, maximum 100mA, short circuit protected			
Housing		M30, yellow brass, nickel plated			
Protection rating at EN 60529		IDD: IP 67 / IDR:IP 65			
Operating temperature T_A		$-20°C < T_A < +50°C$			
Cable, types IDR		4 + PE x 0.5mm² + shield / L=3m			
Cable, types IDD		4 + PE x 0.5mm² + shield / L=10m			
Accessories		2 nuts M30 or 1 clamp M30 optional			
Options		shorter response time on request			
IDR/IDD-1151P		same specs as 1150P, but output not served during TEACH-IN			
IDR/IDD-1132P/1152P/1191P		same specs as base types, but reduced emitter power for short range applications			
Fibre optics connections		 or 			
Function and LED display	**LED**	**At TEACH-IN**		**At measurement**	
	shows red	no valid reference data detected. Optimize the set-up. see chapter set-up optimizing		measured value not inside the range given by reference value and adjusted tolerance range by the potentiometer	
	shows green	valid reference measure value picked up and memorized		measured value inside the valid range	
Output function and LED indication at measurement:		LED = GREEN		LED = RED	
Function at standard connection of the supply voltage: 1 + 2 - 3 Output		 PNP=ON		 PNP=0FF	
Function at reversing connection of the supply voltage: 1 - 2 + 3 Output		 PNP=OFF		 PNP=ON	

Dimensions: IDR-11..P

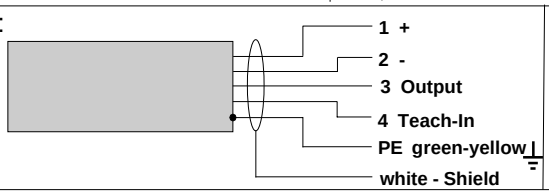




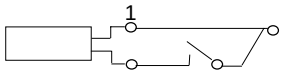
IDD-11..P



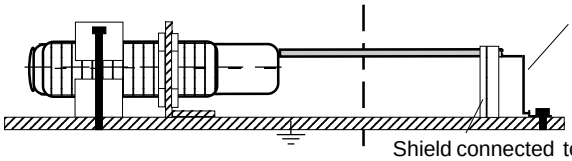
Connection diagram:



Connection "Teach-In"



Equipotential Bonding at Ex Devices:



The end of the cable must be connected outside the hazardous locations.
Reliable, noncorrosive holding of the protection earth connection.

Shield connected to PE in a wide area

ATEX related designations, series IDD:

CE 0158
Device type
Certification number:
TA: -20° < TA < 50°
Date of construction: Numeral 4 and 5 of the serial number

Manufacturer with address
II 2 G
DMT 99 ATEX E 056
Electrical data according to the chart

Operating Manual / EC - Declaration of Conformity:

Ex Protection:

It is necessary to take into consideration the valid international and national rules and regulations. The local equipotential bonding have to be done. The protective earth (PE) is solid connected with the housing. The cable have to be protected against damages. To connect cables inside hazardous locations only use certificated Ex e housings. All cable terminals must be connected outside hazardous locations. Use only original manufactured fibre optics and additional optical lenses, other additional optical lenses are not allowed in hazardous locations. The series IDD-... is applicable in Ex Zones 1 and 2.

General mounting prescriptions:

Do not exceed the maximum ratings. The electrical connections must be exactly as shown in the connection diagram. The cable shield must be connected short. The cable shield should be connected to PE or 0V(-) of the supply voltage. Connection cables must not be installed parallel to high voltage cables.

TEACH-IN

Because the IDENTIX sensor compares a memorized reference value wit a actual measure value, first a reference value must be memorized. The reference value will be picked-up by the TEACH-IN function and memorized in an EEPROM. (Data holding >= 5 years). TECH-IN is activated by a +24VDC pulse. If a deviation from the reference value is detected the will be activated. With the potentiometer the tolerance range for the permitted deviation can be adjusted. (Left turn = small tolerance; right turn = great tolerance). The potentiometer has no influence to the range of the sensor.

Running TEACH-IN:

Turn the potentiometer to the right side (great tolerance). Place the measuring object in front to the sensor and activate TEACH-IN.

LED shows green: Valid measure value picked-up and memorized.

LED shows red: No valid reference value picked-up. Optimize the measure set-up.

Optimizing of the measure set-up:

Change the distance from the sensor to the measure object or select an other fibre optic and repeat TEACH-IN.

At measurement:

LED green: Actual measure value equal to the reference value with adjusted tolerance
Output = ON.

LED red: Actual measure value is out of the permitted range. (The permissible tolerance range can be adjusted by the potentiometer) .
Output = OFF.

If the sensor not recognize the difference between the reference value to the actual measure value turn the potentiometer to the left side or optimize the measure set-up. By reversal connection of the supply voltage, the output function can be inverted. The LED doesn't change the function.

Adjustment of sensitivity

Position and measure the reference and actual object. Narrow the measuring range by tuning the potentiometer to the left until the optimal measurement accuracy has been achieved.

Maintenance

Protect the sensor and the optional fibre optics against pollution. The adjustment of the Teach-In must be repeated at regular intervals, depending on use, after several days or at the latest approximative six months. If the fibre optics or the sensor lenses are contaminated, clean with alcohol. Do not use aggressive solvents. Optical fibres can be destroyed by strong solvents. Equipment must only be repaired or serviced by the manufacturer.

Safety Informations

The sensors types IDR/IDD-.. must not be used for Accident-Prevention! When installing and operating with the sensor, it is necessary to take into consideration the relevant international and other national regulations. ATEX 118a, ElexV, TRbF, TRD, UVV, EX-RL, BetrSichV.

Standards met:

- EN 50014, EN 50018
  EN 50081-1/-2, EN 50082-1/-2,
- Ex protection: 94/9/EG (ATEX 100a)
- Machine directive: 98/37/EG
- Low voltage directive: 73/23/EWG, 93/68/EWG
- EMC 89/336/EWG, 91/263/EWG, 92/31/EWG, 93/68/EWG

General Notes

We reserve the right to modify our equipment. Our equipment is designed such way, that it has the least possible adverse effect on the environment. It neither emit or contain any damaging or siliconized substances and use a minimum of energy and resources. No longer usable or irreparable units must be disposed of in accordance with local waste disposal regulations.

Approvals: DMT 99 ATEX E 056

The conformity of the devices with the EC standards and directives and the EC-type examination certificate and the observation of the Quality Safety System ISO 9001 with the ATEX module "Production", declares:

Hans Bracher, Matrix Elektronik AG

ID11xxP_g_e6/MAY.05,03/HB

Matrix Elektronik AG (Manufacturer)
Kirchweg 24 CH-5422 Oberehrendingen
Tel.:+41 (0) 56/2220-757 Fax -563

Tippkemper - Matrix GmbH
Meegener Str. 43 D-51491 Overath
Tel.:+49 (0) 2206/9566-0 Fax -19

ISO 9001:2000 / ATEX

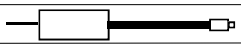
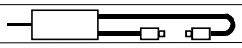
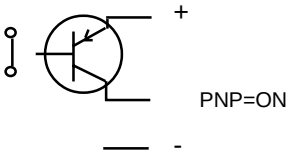
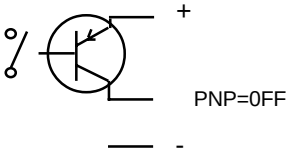
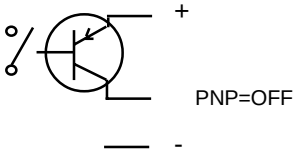
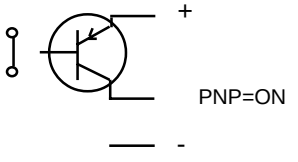
IDENTIX IDR-1140/1141/1142/1145 - IDD-1140/1141/1142/1145
Sensors with TEACH-IN function
Housing M30

IDD-114. **IDR-114.**

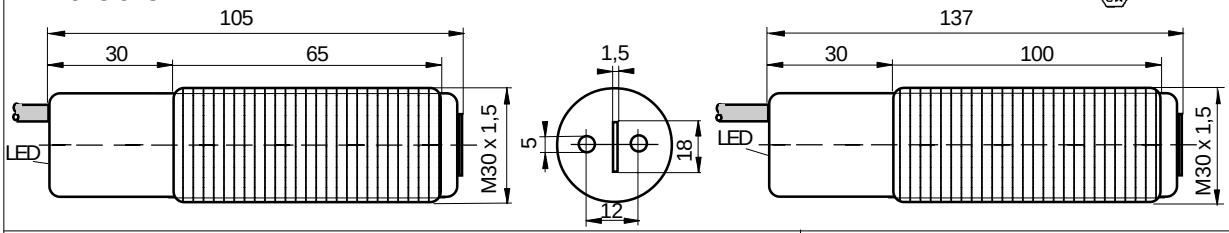
CE 0158

Ex EEx d IIC T6
II 2 G
II 1/2 D IP67 T90°C

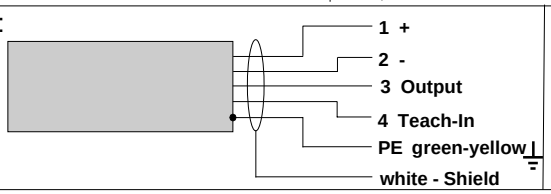
- Adjustment by "Teach-In"
- Holding of reference data by EEPROM
- Visible light sources, red
- Series IDD-.. for application in Ex zones 1, 2 and 20/21, 22

Types Standard / Types EEx d IIC T6 / Technical Data		IDR-1140 / IDD-1140 Ex	IDR-1141 / IDD-1141 Ex	IDR-1142 / IDD-1142 Ex	IDR-1145 / IDD-1145 Ex
Light source		650nm, visible red			
Type of ex protection, only types IDD		EEx d IIC T6			
Range, on white paper 30cmx20cm		appr. 10 - 400mm			
Measurement tolerance		30Bit	6Bit	32Bit	2Bit
Response time		22.5ms	7.5ms	0.5ms	5.0ms
Supply voltage		20 -28 VDC			
Current consumption		60mA			
Power dissipation		1.7W			
Output		PNP, maximum 100mA, short circuit protected			
Housing		M30, yellow brass, nickel plated			
Protection rating at EN 60529		IDD: IP 67 / IDR:IP 65			
Operating temperature T_A		$-20°C < T_A < +50°C$			
Cable, types IDR		4 + PE x 0.5mm² + shield / L=3m			
Cable, types IDD		4 + PE x 0.5mm² + shield / L=10m			
Accessories		2 nuts M30 or 1 clamp M30, optional			
Options, on request		- special functions - other response time - output not served during TEACH-IN - reduced emitter power for short range applications			
Fibre optics connections		 or 			
Function and LED display	**LED**	**At TEACH-IN**	**At measurement**		
	shows red	no valid reference data detected. Optimize the set-up. see chapter set-up optimizing	measured value not inside the range given by reference value and adjusted tolerance range by the potentiometer		
	shows green	valid reference measure value picked up and memorized	measured value inside the valid range		
Output function and LED indication at measurement:		LED = GREEN	LED = RED		
Function at standard connection of the supply voltage: 1 + 2 - 3 Output					
Function at reversing connection of the supply voltage: 1 - 2 + 3 Output					

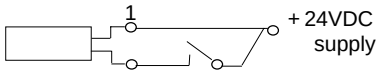
Dimensions: IDR-114. IDD-114. ⟨Ex⟩



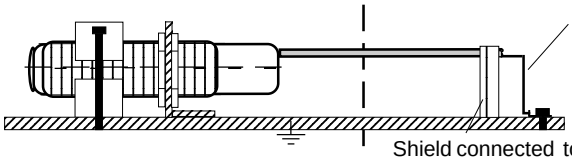
Connection diagram:



Connection "Teach-In"



Equipotential Bonding at Ex Devices:



The end of the cable must be connected outside the hazardous locations.
Reliable, noncorrosive holding of the protection earth connection.
Shield connected to PE in a wide area

ATEX related designations, series IDD:

CE 0158	Manufacturer with address
Device type	⟨Ex⟩ II 2 G, II 1/2 D IP67 T90°C
Certification number:	DMT 99 ATEX E 056/N1
TA: -20° < TA < 50°	Electrical data according to the chart
Date of construction: Numeral 4 and 5 of the serial number	

Operating Manual / EC - Declaration of Conformity:

Ex Protection:

It is necessary to take into consideration the valid international and national rules and regulations. The local equipotential bonding have to be done. The protective earth (PE) is solid connected with the housing. The cable have to be protected against damages. To connect cables inside hazardous locations only use certificated Ex e housings. All cable terminals must be connected outside hazardous locations. Use only original manufactured fibre optics and additional optical lenses, other additional optical lenses are not allowed in hazardous locations.

The series IDD-... is also applicable in Ex Zones 1 and 20/21. For the zones 20/21 only the front part (optical lens) can be mounted inside the zone 20. The rear part with the cable must be in the zone 21.

General mounting prescriptions:

Do not exceed the maximum ratings. The electrical connections must be exactly as shown in the connection diagram. The cable shield must be connected short. The cable shield should be connected to PE or 0V(-) of the supply voltage. Connection cables must not be installed parallel to high voltage cables.

TEACH-IN

Because the IDENTIX sensor compares a memorized reference value wit a actual measure value, first a reference value must be memorized. The reference value will be picked-up by the TEACH-IN function and memorized in an EEPROM. (Data holding >= 5 years). TECH-IN is activated by a +24VDC pulse. If a deviation from the reference value is detected the will be activated. The permitted deviation is dependent on the tolerance range. The tolerance range has no influence to the range of the sensor.

Running TEACH-IN:

Place the measuring object in front to the sensor and activate TEACH-IN.

LED shows green:	Valid measure value picked-up and memorized.
LED shows red:	No valid reference value picked-up. Optimize the measure set-up.

Optimizing of the measure set-up:

Change the distance from the sensor to the measure object or select an other fibre optic and repeat TEACH-IN.

At measurement:

LED green:	Actual measure value is equal or inside the deviation tolerance. **Output = ON**
LED red:	Actual measure value is out of the permitted range. **Output = OFF**

If no variance can be detected, choose a sensor with a smaller deviation resolution or change the measurement set-up.

By reversal connection of the supply voltage, the output function can be inverted. The LED doesn't change the function.

Choosing the optimal sensor.

Devices with a small deviation resolution recognizes areally small variance, but the measurement set-up is more difficult. Devices with a large resolution variance are insensitive to the measurements set-up, but they recognizes only bigger differences.

Maintenance

Protect the sensor and the optional fibre optics against pollution. The adjustment of the Teach-In must be repeated at regular intervals, depending on use, after several days or at the latest approximative six months. If the fibre optics or the sensor lenses are contaminated, clean with alcohol. Do not use aggressive solvents. Optical fibres can be destroyed by strong solvents. Equipment must only be repaired or serviced by the manufacturer.

Safety Informations

The sensors types IDR/IDD-.. must not be used for Accident-Prevention! When installing and operating with the sensor, it is necessary to take into consideration the relevant international and other national regulations. ATEX 118a, ElexV, TRbF, TRD, UVV, EX-RL(BGR104), BetrSichV(ATEX137).

Standards met:

- EN 50014, EN 50018
  EN 50081-1/-2, EN 50082-1/-2,
- Ex protection: 94/9/EG (ATEX 100a)
- Machine directive: 98/37/EG
- Low voltage directive: 73/23/EWG, 93/68/EWG
- EMC 89/336/EWG, 91/263/EWG, 92/31/EWG, 93/68/EWG

General Notes

We reserve the right to modify our equipment. Our equipment is designed such way, that it has the least possible adverse effect on the environment. It neither emit or contain any damaging or siliconized substances and use a minimum of energy and resources. No longer usable or irreparable units must be disposed of in accordance with local waste disposal regulations.

Approvals: DMT 99 ATEX E 056/N1

The conformity of the devices with the EC standards and directives and the EC-type examination certificate and the observation of the Quality Safety System ISO 9001 with the ATEX module "Production", declares:

Hans Bracher, Matrix Elektronik AG

ID1140_e3/OCT.22,03/HB

Matrix Elektronik AG (Manufacturer)
Kirchweg 24 CH-5422 Oberehrendingen
Tel.:+41 (0) 56/2220-757 Fax -563

Tippkemper - Matrix GmbH
Meegener Str. 43 D-51491 Overath
Tel.:+49 (0) 2206/9566-0 Fax -19

ISO 9001:2000 / ATEX

IDENTIX IDR-1153P / IDD-1153P

Sensors with TEACH-IN function and adjustable sensitivity

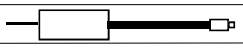
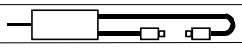
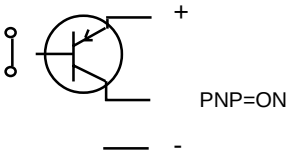
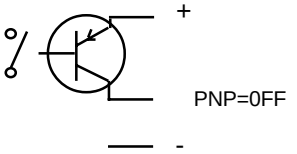
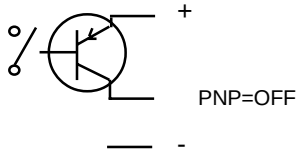
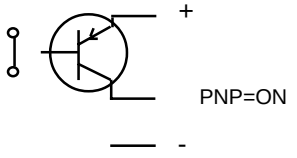
IDD-1153P Housing M30 IDR-1153P

CE 0158

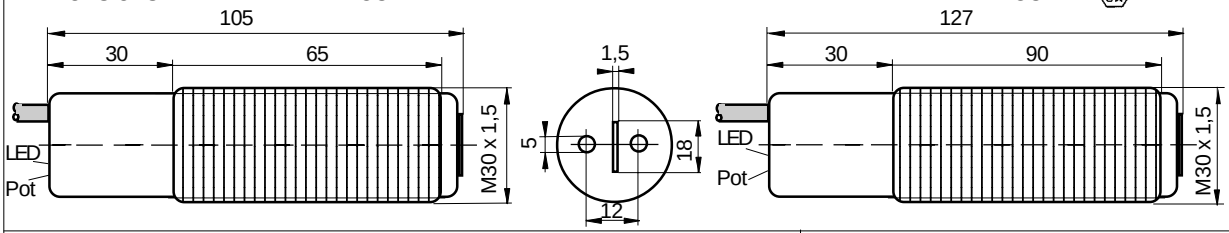
Ex EEx d IIC T6

II 2 G

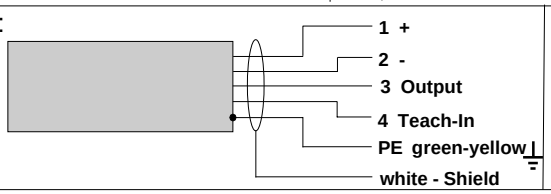
- Adjustment by "Teach-In"
- Holding of reference data by EEPROM
- Visible red light source
- Adjustable sensitivity
- Series IDD-.. for application in Ex zones 1 and 2

Technical Data \ Types		IDR-1153P	IDD-1153P
Type of ex protection		none	EEx d IIC T6
Applicable in ex zones		none	Zones 1 and 2
Category		--	II 2 G
Light source		650nm, red	
Range, on white paper 30cmx20cm		appr. 10 - 150mm	
Response time		3ms	
Supply voltage		20 -28 VDC	
Current consumption		65mA	
Power dissipation		1.82W	
Output		PNP, maximum 100mA, short circuit protected	
Input TEACH-IN		PNP compatible, Ri=10kΩ, max. 28VDC	
Housing		M30, yellow brass, nickel plated	
Protection rating at EN 60529		IP 65	IP 67
Operating temperature		-20°C < T_A < +60°C	-20°C < T_A < +50°C
Cable,		4 + PE x 0.5mm² + shield	
Cable length		3m	10m
Accessories		2 nuts M30 or 1 clamp M30 optional	
Options		shorter response time, on request output served during TEACH-IN, on request	
Fibre optics connections		 or 	
LED indication	**LED**	**At TEACH-IN**	**At measurement**
	shows red	no valid reference data detected. Optimize the set-up. see chapter set-up optimizing	measured value not inside the range given by reference value and adjusted tolerance range by the potentiometer
	shows green	valid reference measure value picked up and memorized	measured value inside the valid range
Output function and LED indication at measurement:		LED = GREEN	LED = RED
Function at standard connection of the supply voltage: 1 + 2 - 3 Output			
Function at reversing connection of the supply voltage: 1 - 2 + 3 Output			

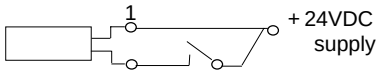
Dimensions: IDR-1153P IDD-1153P



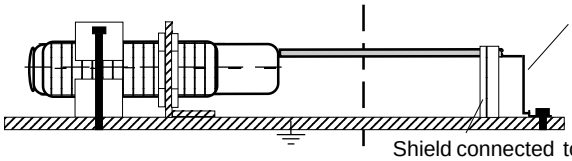
Connection diagram:



Connection "Teach-In"



Equipotential Bonding at Ex Devices:



The end of the cable must be connected outside the hazardous locations.
Reliable, noncorrosive holding of the protection earth connection.

Shield connected to PE in a wide area

ATEX related designations, series IDD:

CE 0158 Manufacturer with address
Device type ⟨Ex⟩ II 2 G
Certification number: DMT 99 ATEX E 056
TA: -20° < TA < 50° Electrical data according to the chart
Date of construction: Numeral 4 and 5 of the serial number

Operating Manual / EC - Declaration of Conformity:

Ex Protection:

It is necessary to take into consideration the valid international and national rules and regulations. The local equipotential bonding have to be done. The protective earth (PE) is solid connected with the housing. The cable have to be protected against damages. To connect cables inside hazardous locations only use certificated Ex e housings. All cable terminals must be connected outside hazardous locations. Use only original manufactured fibre optics and additional optical lenses, other additional optical lenses are not allowed in hazardous locations. The series IDD-... is applicable in Ex Zones 1 and 2.

TEACH-IN

Because the IDENTIX sensor compares a memorized reference value wit a actual measure value, first a reference value must be memorized. The reference value will be picked-up by the TEACH-IN function and memorized in an EEPROM. (Data holding >= 5 years). TEACH-IN is activated by a +24VDC pulse. If a deviation from the reference value is detected the will be activated. With the potentiometer the tolerance range for the permitted deviation can be adjusted. (Left turn = small tolerance; right turn = great tolerance). The potentiometer has no influence to the range of the sensor. The Output is not served during TEACH-IN.

Running TEACH-IN:

Turn the potentiometer to the right side (great tolerance). Place the measuring object in front to the sensor and activate TEACH-IN.

LED shows green: Valid measure value picked-up and memorized.
LED shows red: No valid reference value picked-up. Optimize the measure set-up.

Optimizing of the measure set-up:

Change the distance from the sensor to the measure object or select an other fibre optic and repeat TEACH-IN.

At measurement:

LED green: Actual measure value equal to the reference value with adjusted tolerance
Output = ON.

LED red: Actual measure value is out of the permitted range. (The permissible tolerance range can be adjusted by the potentiometer) .
Output = OFF.

If the sensor not recognize the difference between the reference value to the actual measure value turn the potentiometer to the left side or optimize the measure set-up. By reversal connection of the supply voltage, the output function can be inverted. The LED doesn't change the function.

Adjustment of sensitivity

Position and measure the reference and actual object. Narrow the measuring range by tuning the potentiometer to the left until the optimal measurement accuracy has been achieved.

General mounting prescriptions:

Do not exceed the maximum ratings. The electrical connections must be exactly as shown in the connection diagram. The cable shield must be connected short. The cable shield should be connected to PE or 0V(-) of the supply voltage. Connection cables must not be installed parallel to high voltage cables.

Maintenance

Protect the sensor and the optional fibre optics against pollution. The adjustment of the Teach-In must be repeated at regular intervals, depending on use, after several days or at the latest approximative six months. If the fibre optics or the sensor lenses are contaminated, clean with alcohol. Do not use aggressive solvents. Optical fibres can be destroyed by strong solvents. Equipment must only be repaired or serviced by the manufacturer.

Safety Informations

The sensors types IDR/IDD-.. must not be used for Accident-Prevention! When installing and operating with the sensor, it is necessary to take into consideration the relevant international and other national regulations. ATEX 118a, ElexV, TRbF, TRD, UVV, EX-RL(BGR104), BetrSichV(ATEX137).

Standards met:

- EN 50014, EN 50018;
  EN 61000-6-1/-2, EN 61000-6-3/4, EN 60529
- Ex protection: 94/9/EG (ATEX 100a)
- Machine directive: 98/37/EG
- Low voltage directive: 73/23/EWG, 93/68/EWG
- EMC 89/336/EWG, 91/263/EWG, 92/31/EWG, 93/68/EWG

General Notes

We reserve the right to modify our equipment. Our equipment is designed such way, that it has the least possible adverse effect on the environment. It neither emit or contain any damaging or siliconized substances and use a minimum of energy and resources. No longer usable or irreparable units must be disposed of in accordance with local waste disposal regulations.

Approvals: DMT 99 ATEX E 056

The conformity of the devices with the EC standards and directives and the EC-type examination certificate and the observation of the Quality Safety System ISO 9001 with the ATEX module "Production", declares:

Hans Bracher, Matrix Elektronik AG

ID1153P_e1/OCT.22.03/HB

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