SIPATEC TR.Ex Analog Transducer Instruction Manual

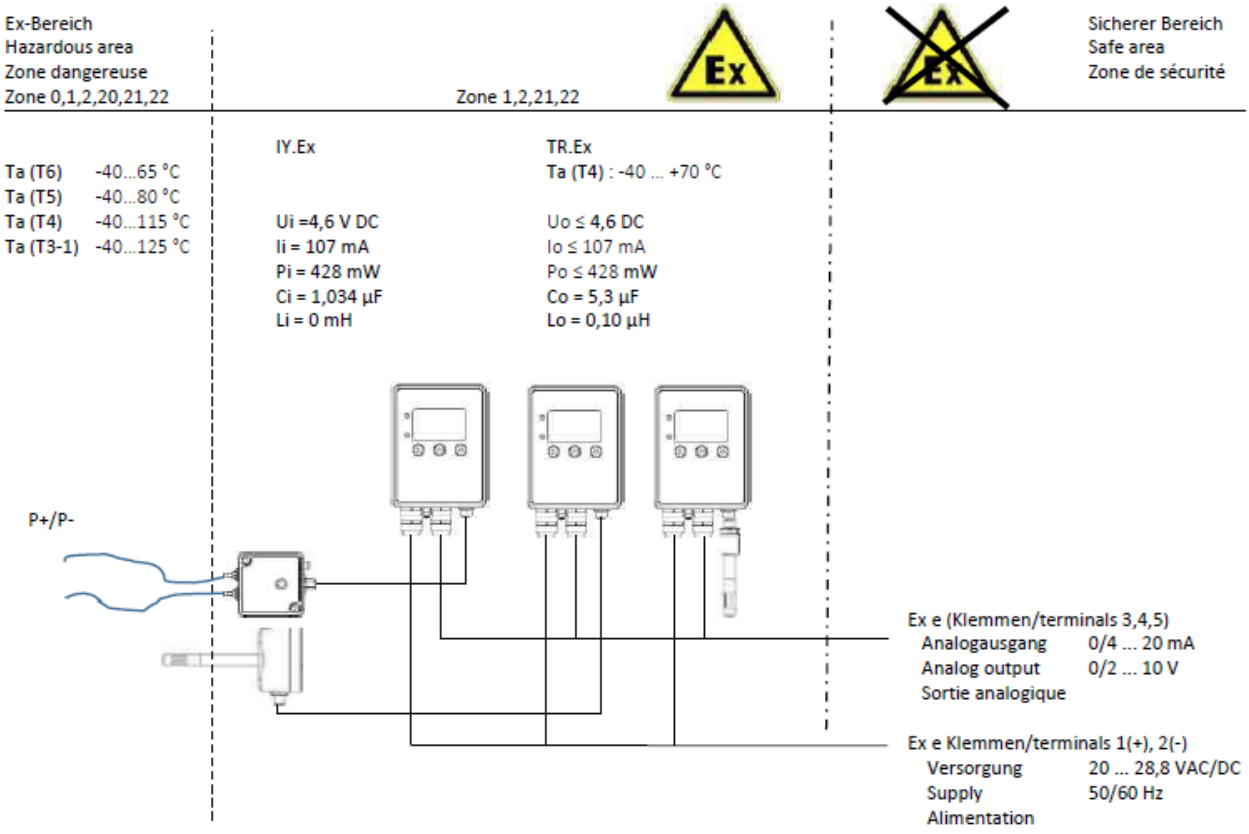
Contents

SIPATEC

SIPATEC TR.Ex Analog Transducer Instruction

- ATEX / IECEx certified for Gases and Dusts
- Measurement in Zone 0/20
- Direct power supply without zener barrier
- Easy plug-in mounting
- Quick and safe installation
- Junction box Ex e integrated
- No variants only one basic unit
- Enhanced temperature range -40 … +70 °C
- Degree of protection IP66
- Analog outputs switchable between mA and V
- Outputs calibrated and scaled
- Integrated display
- Onsite parameterization
- LED status indication
- Low power input <3 W
- Cable length from the transducer to the sensor up to 100 m
- Highly resistant against corrosion by use of high-tech polymer and stainless steel

Safety Notes



- Install in accordance with manufacturer's instructions and valid standards and rules.
- Unlocking the device or opening the terminal box is only permitted with the power off.
- When installing the unit, make sure that the housing protection type IP66 is maintained in accordance with EN 60529.
- This equipment can be used according to manufacturers' instructions in Zone 1, 21 (II 2GD) and 22. (II 3GD).
- The sensor circuit can be introduced into the zone 0 (II 1G). Corresponds to the designation II 2 (1) G.
- The device may only be used in measurement media, against which the process-contacting materials are resistant.
- The unit must be connected to the potential equalization (PA), an internal and external terminal is available.
- The unit must be protected against mechanical impact/pressure and UV light.

Technical Data

TR.Ex TRANSDUCER

SUPPLY			
Voltage	20 – 28,8		V AC/DC
Frequency	50 – 60		Hz
Power input/consumption	3 / 5		W / VA
Protection class / over voltage category / pullution degree	III / 2 / III		insulated
OUTPUTS			
Voltage / current selectable	0 – 10 / 0 – 20		V DC / mA
Accuracy	0,1		% FS
Influence of temperature	< 0,01		%/K
Effect of load	0,1/100		%/Ohm
DISPLAY / BUTTON / LED			
LCD, backlight	128 x 64		pixel
Micro push button	> 1 Mio.		cycles
LED red / green	Status indication		
HOUSING			
High Tech Polymer	halogen-, silicon-, PVC		free
Corrosion durability	On- and Offshore		With high salinity
Ingreased protection	IP66		
GENERAL			
Terminal cross-section	0,08 – 2,5	mm	without end sleeve
ATEX/IECEx Ex e	0,25 – 1,5	mm	with end sleeve
Cable connections M20x1,5 ATEX/IECEx Ex e	6 - 13		Ø mm
Dimensions H x W x D	175 x 110 x 56		mm
Weight	800		g
MATERIALS			
Housing	High Tech Polymer		electrostatically conductive
Front plate, Screws	Stainless steel		
Seals	EPDM		
Cable connection, Sensor connection M12	brass plated		
APPLICATION			
Ambient- and storage temperature	-40 ... +70		°C
Humidity, without condensation	0 ... 100		%rH
Mountion position, altitude	any, recommendation vertical, < 2000 m		

IY.Ex -P-... DIFFERENTIAL PRESSURE / VOLUME FLOW

TYPES AND MEASUREMENT RANGE			
IY.Ex-P-0100	-100 – 100		Pa
IY.Ex-P-0250	-250 – 250		Pa
IY.Ex-P-0600	-600 – 600		Pa
IY.Ex-P-1000	-1000 – 1000		Pa
IY.Ex-P-2500	-2500 – 2500		Pa
ACCURACY			
Accuracy „total" 100 / 250 / 600 / 1.000 / 2.500 Pa	2,0 / 2,0 / 1,5 / 1,0 / 1,0		% FS
Accuracy „typical"	< 0,5		% FS
Long term stability 1.000 h / 25 °C	0,5		%
MTTF (Sensor)	4.611.965		h
Sampling rate	0,1		s
SUPPLY Ex i			
Voltage Ui	4,6		V
Current Ii	0,107		A
Power Pi	0,428		W
Capacitance Ci	1,034		µF
Inductance Li	0		µH
HOUSING			
High Tech Polymer	halogen-, silicon-, PVC		free
Corrosion resistance	On- and Offshore		With high salinity
MATERIALS			
Housing	High Tech Polymer		electrostatically conductive
Front plate, Screws	Stainless steel		
Seals	EPDM		
tube connection	brass plated		
APPLICATION			
Ambient- and storage temperature	-40 ... +70		°C
Humidity, without condensation	0 ... 100		%rH
Mountion position	any, recommendation vertical		

IY.Ex -RT / RTH-... TEMPERATURE / TEMPERATURE HUMIDITY DEW POINT (Room)

TYPES AND MEASUREMENT RANGE			
IY.Ex-RT	Room Temperature feeler/probe	-40 ... +125	°C
IY.Ex-RTH	Room Temperature-humidity feeler/probe	-40 ... +125 / 0 ... 100	°C / %RH
ACCURACY			
Accuracy temperature @.0 ... 60 °C		< 0,5	°C
Accuracy temperature @.-40 ... 0, @ 60 ... 125 °C		< 0,5 °C + 0,03°C/K	°C/K
Accuracy humidity		2,0	% FS
Hysteresis		1,0	%
Long term stability 1.000 h / 25 °C		0,5	%
MTTF (Sensor)		9.312.507	h
Sampling rate		0,2	s
SUPPLY EX I			
Voltage	Ui	4,6	V
Current	Ii	0,107	A
Power	Pi	0,428	W
Capacitance	Ci	0,33	µF
Inductance	Li	0	µH
MATERIALS			
Thermowell, end cap		Stainless Steel	
Seals		EPDM	
Sensor connection M12		brass plated	
Weigth		100	g
APPLICATION			
Ambient-, storage temperature		-40 ... +125	°C
Humidity, without condensation		0 ... 100	%RH
Mounting position		Any, recommendation vertical	

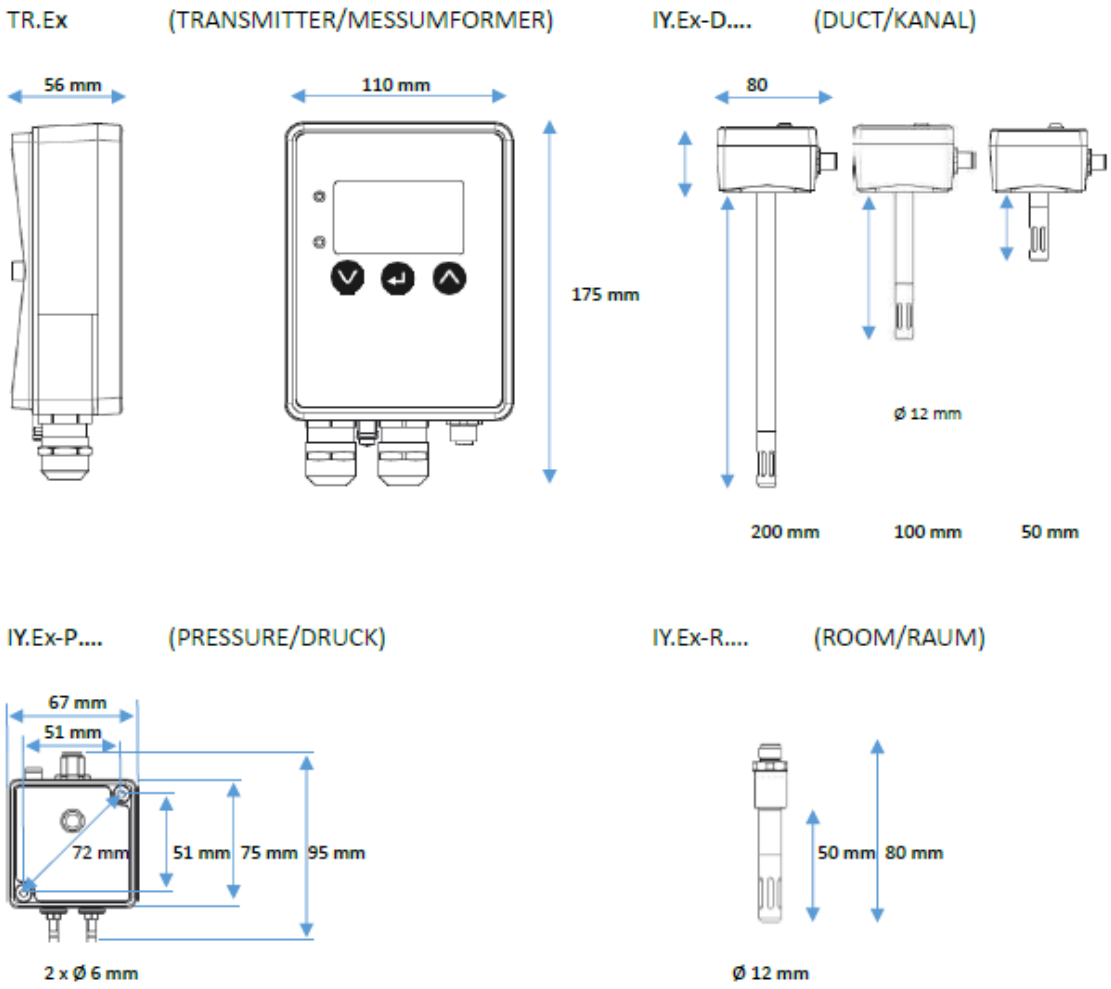
IY.Ex -DT / DTH-... TEMPERATURE / TEMPERATURE HUMIDITY DEW POINT (Duct)

TYPES AND MEASUREMENT RANGE			
IY.Ex-DT-50	Duct Temperature Probe 50 mm	-40 – 125	°C
IY.Ex-DT-100	Duct Temperature Probe 100 mm	-40 – 125	°C
IY.Ex-DT-200	Duct Temperature Probe 200 mm	-40 – 125	°C
IY.Ex-DTH-50	Duct Temperature Humidity Probe 50 mm	-40 – 125 / 0 – 100	°C / %RH
IY.Ex-DTH-100	Duct Temperature Humidity Probe 100 mm	-40 – 125 / 0 – 100	°C / %RH
IY.Ex-DTH-200	Duct Temperature Humidity Probe 200 mm	-40 – 125 / 0 – 100	°C / %RH
ACCURACY			
Accuracy temperature max.		< 0,5	°C
Accuracy temperature @.-40 ... 0, @ 60 ... 125 °C		< 0,5 °C + 0,03°C/K	°C/K
Accuracy humidity total error band		2,0	% FS
Hysteresis		1,0	%
Long term stability 1.000 h / 25 °C		0,5	%
MTTF (Sensor)		9.312.507	h
Sampling rate		0,2	s
SUPPLY Ex i			
Voltage	Ui	4,6	V
Current	Ii	0,107	A
Power	Pi	0,428	W
Capacitance	Ci	1,034	µF
Inductance	Li	0	µH
HOUSING			
High Tech Polymer		halogen-, silicon-, PVC	free
Corrosion resistance		On- and Offshore	With high salinity
MATERIALS			
Housing		High Tech Polymer	electrostatically conductive
Front plate, Screws		Stainless steel	
Seals		EPDM	
tube connection		brass plated	
Weigth		l = 50 mm / 460	g
		l = 100 mm / 500	g
		l = 200 mm / 540	g
APPLICATION			
Ambient-, storage temperature		-40 ... +125	°C
Humidity, without condensation		0 ... 100	%RH
Mounting position		any, recommendation vertical	

Certificates

TR.EX	ATEX	EPS 14 ATEX 1 789 X	II2(1)G	Ex eb mb ib [ia Ga] IIC T4 Gb	
	IECEX	IECEX EPS 14.0101X	II2(1)D	Ex tb [ia Da] IIIC T130 °C Db	
IY.Ex	ATEX	EPS 14 ATEX 1 789 X	II1/2G	Ex ia IIC T6/T5/T4	Ga/Gb
	IECEx	IECEx EPS 14.0101X	II1/2D	Ex ia IIIC T130 °C	Da/Db

Dimension



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Documents / Resources

	SIPATEC TR.Ex Analog Transducer [pdf] Instruction Manual TR.Ex, Analog Transducer, TR.Ex Analog Transducer, Transducer

References

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- pi safety components I Explosionsschutz - petz industries GmbH&Co.KG