

EU Declaration of Conformity for Analog Sensors and Armatures

We Hamilton Bonaduz AG, CH-7402 Bonaduz/Switzerland confirm that the following products

Product Families	Analog pH Sensors Dissolved Oxygen Sensors Conductivity Sensors Armatures and Fittings	with SN 4000 and higher with SN 4000 and higher with SN 4000 and higher with SN 4000 and higher
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meets the following EU directives (including all applicable amendments):



RoHS 2 Directive	2011/65/EU+2015/863/EU
ATEX Directive	2014/34/EU
EC type approval	TÜV 03 ATEX 7005 X including Supplement 1 to 11

Applied company quality management systems ISO 9001: 2015 IEC 80079-34: 2018	Certification Body #0035 TÜV Rheinland Industrie Service GmbH Am Grauen Stein 29 D-51105 Köln-Poll, Germany
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Applied standards	
ATEX Directive	EN IEC 60079-0: 2018 EN IEC 60079-11: 2012 EN IEC 60079-26: 2015
RoHS 2 Directive	EN IEC 63000: 2018

Additional Information:
all products listed in this document are covered by the IECEx Certificate of Conformity **IECEx TUR 14.0001 X** (issue 3). Applied standards for the IECEx approval: IEC 60079-0:2017, IEC 60079-11:2011, IEC 60079-26:2014

Concerning China RoHS ("Restricted Use of Hazardous Substances in Electronic and Electrical Products"), the sensors listed here are marked with . For the Hazardous Substances Table, see www.hamiltoncompany.com

Authorize department for
technical documents:

HAMILTON Process Analytics

Hamilton Bonaduz AG

Dr. Philipp Arquint
Vice President Process Analytics

2024-11-28 17:00 PhA
Bonaduz,

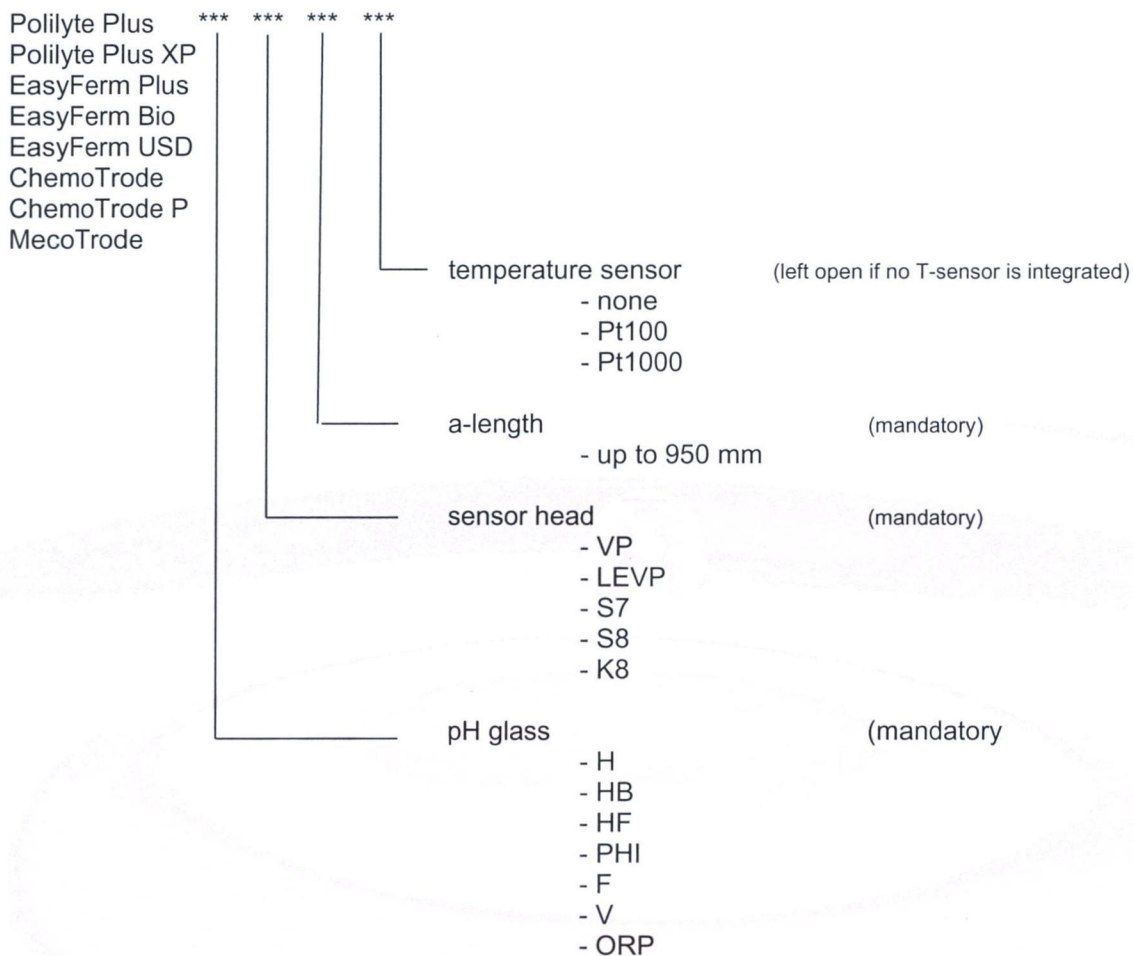
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pH sensors

Gas: II 1/2 G Ex ia IIC T4/T5/T6 Ga/Gb resp. II 1/2 G Ex ia IIB T4/T5/T6 Ga/Gb

Dust: II 1/2 D Ex ia IIIC T x °C Da/Db

The EC type examination certificate TÜV 03 ATEX 7005 X applies to all analog Hamilton pH sensors where the product name is in agreement with the following generic product name definition:



The temperature sensor which is integrated in the pH sensor defines the „sensor type“. The sensor type defines the maximum electrical values to be applied to the sensor (for details see initial issue of TÜV 03 ATEX 7005 X):

Integrated temperature sensor	“sensor type” according to TÜV 03 ATEX 7005 X
Pt100	1
Pt1000	2
none	7

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In addition to the generic product name stated above, the pH sensors listed in Table 1 are also covered by the EC type examination certificate TÜV 03 ATEX 7005 X:

Table 1: analog pH sensors

REF	sensor	ATEX / IECEx marking	sensor type (1 – 7)	TÜV 03 ATEX 7005 X (I: initial; S: suppl.)
238411	Polilyte PRO 120	G: IIC; D: IIIC	7	TÜV I
238417	Polilyte PRO VP 120	G: IIC; D: IIIC	2	TÜV I
238433	Polilyte RX 120	G: IIC; D: IIIC	7	TÜV I
several	Polilyte Plus *** **	G: IIC; D: IIIC	1,2,7	TÜV S8
several	Polilyte Plus XP *** **	G: IIC; D: IIIC	1,2,7	TÜV S8
242415	Polilyte Plus XP VP 120 Pt1000	G: IIC; D: IIIC	2	TÜV S5
238408	Polyplast PRO 120	G: IIB; D: IIIC	7	TÜV I
238409	Polyplast PRO RX 120	G: IIB; D: IIIC	7	TÜV I
several	EasyFerm Plus *** **	G: IIC; D: IIIC	1,2,7	TÜV S8
several	EasyFerm Bio *** **	G: IIC; D: IIIC	1,2,7	TÜV S8
several	ChemoTrode *** **	G: IIC; D: IIIC	1,2,7	TÜV S8
238760	ChemoTrode 120	G: IIC; D: IIIC	7	TÜV I
238762	ChemoTrode 150	G: IIC; D: IIIC	7	TÜV I
238764	ChemoTrode 200	G: IIC; D: IIIC	7	TÜV I
238766	ChemoTrode 250	G: IIC; D: IIIC	7	TÜV I
238775	ChemoTrode 550	G: IIC; D: IIIC	7	TÜV I
238740	ChemoTrode ORP 120	G: IIC; D: IIIC	7	TÜV S3
238742	ChemoTrode ORP 150	G: IIC; D: IIIC	7	TÜV S3
242700	ChemoTrode VP 120	G: IIC; D: IIIC	2	TÜV S3
242701	ChemoTrode VP 150	G: IIC; D: IIIC	2	TÜV S3
242703	ChemoTrode VP 250	G: IIC; D: IIIC	2	TÜV S3
several	ChemoTrode P *** **	G: IIC; D: IIIC	1,2,7	TÜV S9
238761	ChemoTrode P PHI 120	G: IIC; D: IIIC	7	TÜV S3
238763	ChemoTrode P PHI 150	G: IIC; D: IIIC	7	TÜV S3
238767	ChemoTrode P PHI 250	G: IIC; D: IIIC	7	TÜV S3
238480	FermoTrode 120	G: IIC; D: IIIC	7	TÜV I
238482	FermoTrode 150	G: IIC; D: IIIC	7	TÜV I

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REF	sensor	ATEX / IECEx marking	sensor type (1 – 7)	TÜV 03 ATEX 7005 X (I: initial; S: suppl.)
238484	FermoTrode 200	G: IIC; D: IIIC	7	TÜV I
238486	FermoTrode 250	G: IIC; D: IIIC	7	TÜV I
238515	Liq-Glass PG	G: IIC; D: IIIC	7	TÜV S3
several	MecoTrode *** **	G: IIC; D: IIIC	1,2,7	TÜV S9
238801	MecoTrode 120	G: IIC; D: IIIC	7	TÜV I
238819	MecoTrode Flat LEVP 225	G: IIC; D: IIIC	1	TÜV S2
238437	MecoTrode VP 120	G: IIC; D: IIIC	1	TÜV I
242841	NovoTrode LEVP 120	G: IIC; D: IIIC	2	TÜV S5
242842	NovoTrode LEVP 225 (Pt1000)	G: IIC; D: IIIC	2	TÜV S5
242846	NovoTrode LEVP 225 (Pt100)	G: IIC; D: IIIC	1	TÜV S6
238810	OxyTrode Platinum	G: IIC; D: IIIC	7	TÜV I
238346	InchTrode N75F	G: IIB; D: IIIC	6	TÜV S2
238342	InchTrode N75P	G: IIB; D: IIIC	6	TÜV S2
238364	InchTrode N75FC10	G: IIB; D: IIIC	3	TÜV S5
238359	InchTrode N75PC10	G: IIB; D: IIIC	3	TÜV S5
several	EasyFerm USD *** **	G: IIC; D: IIIC	1,2,7	TÜV S11

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Dissolved oxygen sensors

Gas : II 1/2 G Ex ia IIC T4/T5/T6 Ga/Gb resp. II 1/2 G Ex ia IIB T4/T5/T6 Ga/Gb

Dust: II 1/2 D Ex ia IIIC T x °C Da/Db

The EC type examination certificate TÜV 03 ATEX 7005 X applies to all analog Hamilton DO sensors where the product name is in agreement with the following generic product name definition:

OxyFerm	***	***	***		
OxyFerm XL					
				a-length	(mandatory)
				- 50 to 950 mm	
				sensor head	(if left open: T82)
				- VP	
				gas permeable membrane	(if left open: standard REF 237123)
				- FDA	
				- CIP	

The integration of the DO sensor in its specific process adaption or housing defines the „sensor type“, as given in the initial issue of TÜV 03 ATEX 7005 X:

Process adaption (housing)	“sensor type” according to TÜV 03 ATEX 7005 X
Mounted without specific housing	4
Mounted with specific housing (e.g. FlexiFit, RetractoFit, ...)	5

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In addition to the generic product name stated above, the DO sensors listed in Table 2 are also covered by the EC type examination certificate TÜV 03 ATEX 7005 X:

Table 2: analog DO sensors

Ref	sensor	ATEX / IECEx marking	sensor type (1 – 7)	TÜV 03 ATEX 7005 X (I: initial; S: suppl.)
237150	Oxysens	G: IIC; D: IIIC	4	TÜV I
several	OxyFerm *** **	G: IIC; D: IIIC	4,5	TÜV S8
237400	OxyFerm VP 120	G: IIC; D: IIIC	5	TÜV I
237401	OxyFerm VP 225	G: IIC; D: IIIC	5	TÜV I
237402	OxyFerm VP 325	G: IIC; D: IIIC	4	TÜV I
several	OxyFerm XL *** **	G: IIC; D: IIIC	4	TÜV S8
237175-OP	OxyFerm XL	G: IIC; D: IIIC	4	TÜV S5
237170	OxyFerm XL 150	G: IIC; D: IIIC	4	TÜV I
237174	OxyFerm XL 300	G: IIC; D: IIIC	4	TÜV I
237180	OxyGold B 120	G: IIC; D: IIIC	5	TÜV I
237185	OxyGold B 225	G: IIC; D: IIIC	5	TÜV I
237395	OxyGold G 120	G: IIC; D: IIIC	5	TÜV I
237396	OxyGold G 225	G: IIC; D: IIIC	5	TÜV I

EU Declaration of Conformity for Analog Sensors and Actuators

Conductivity sensors

Gas : II 1/2 G Ex ia IIC T4/T5/T6 Ga/Gb resp. II 1/2 G Ex ia IIB T4/T5/T6 Ga/Gb

Dust: II 1/2 D Ex ia IIIC T x °C Da/Db

The EC type examination certificate TÜV 03 ATEX 7005 X applies to all analog Hamilton conductivity sensors where the product name is in agreement with the following generic product name definition:

Conducell 4US *** ** / ***

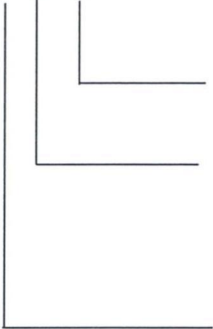
	O-ring position [mm] - 10 to 100 mm	(optional)
	a-length [mm] - 40 to 130	(mandatory)
	process connection - Gxxx - Txxx	(mandatory) pipe thread xxx [centi-inch] Triclamp with xxx diameter [mm]

Conducell 4U*F ** ***

	a-length [mm] - 1 to 900 mm	(mandatory)
	sensor head - VP - VP TC 1.5 - VP VV - VP VV N - VP VV F - VP BC - VP BCI - VP NPT ¾ - VP NPT 1	(mandatory)
	electrode material - S - H - T - Pt	(mandatory) stainless steel Hastelloy titanium platinum

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Conducell UP* ** ***



a-length [mm] (mandatory)
- 50 to 900 mm

process connection (mandatory)
- PG
- TC
- VV

electrode material (mandatory)
- W stainless steel
- H Hastelloy
- T titanium

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In addition to the generic product name stated above, the conductivity sensors listed in Table 3 are also covered by the EC type examination certificate TÜV 03 ATEX 7005 X:

Table 3: analog conductivity sensors

REF	sensor	ATEX / IECEx marking	sensor type (1 – 7)	TÜV 03 ATEX 7005 X (I: initial; S: suppl.)
several	Conducell 4US *** ** / ***	G: IIB; D: IIIC	6	TÜV S9
237700-OP	Conducell 4US G125	G: IIB; D: IIIC	6	TÜV S6
237750	Conducell 4US T150 50	G: IIB; D: IIIC	6	TÜV S6
237760	Conducell 4US T150 100	G: IIB; D: IIIC	6	TÜV S6
several	Conducell 4U*F ** ***	G: IIB or IIC; D: IIIC	6	TÜV S11
several	Conducell UP* ** ***	G: IIB or IIC; D: IIIC	6	TÜV S10
243640	Conducell UPW PG 120	G: IIC; D: IIIC	6	TÜV S10

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Armatures, housings and fittings

Table 4: armatures, housings, fittings

RREF	armature / fitting	ATEX / IECEx marking	Certificate TÜV 03 ATEX 7005 X (I: initial; S: suppl.)
(*)	RetractoFit Series	G: IIC; D: IIIC	TÜV S2
(*)	RetractoFit PEEK Series	G: IIB; cannot be used in dust	TÜV S2
(*)	FlexiFit Series, type a, b and c	G: IIC; D: IIIC	TÜV S5
237200-OP	MasterFit 120	G: IIC; D: IIIC	TÜV S5
237225-OP	MasterFit 150	G: IIC; D: IIIC	TÜV S5
237235-OP	MasterFit 200	G: IIC; D: IIIC	TÜV S5
237910	Flange Adapter	G: IIB; cannot be used in dust	TÜV S4
(*)	Retractex B Series	G: IIC; D: IIIC	Assessment report 194 / Ex 476.00 / 07
(*)	Retractex C Steel (M) Series Retractex C Steel LT (M) Series (process connection in stainless steel)	G: IIC; D: IIIC	TÜV S10
(*)	Retractex C Plastic (M) Series Retractex C Plastic LT (M) Series Type A and B (process connection in PEEK, PVDF or other polymeric materials)	G: IIB or IIA (see certificate for the restrictions) cannot be used in dust	TÜV S10
(*)	Retractex BC Steel (M) Series	G: IIC; D: IIIC	TÜV S10
(*)	Retractex BC Plastic (M) Series (process connection in PEEK, PVDF or other polymeric materials)	G: IIB or IIA (see certificate for the restrictions) cannot be used in dust	TÜV S10
(*)	Hygienic Socket	G: IIC; D: IIIC	TÜV S11
(*)	FlowCell Series	G: IIA; cannot be used in dust	TÜV S11
(*)	FlexiFlow Series	G: IIB; D: IIIC	TÜV S11
(*)	Sensor Dummy Series	G: IIC; D: IIIC	TÜV S11

Abbreviations for Retractable:

LT: long tube

M: manual retraction (not pneumatic)

Type A: insertion tube completely made of plastics (e.g. polypropylene, PEEK, ...)

Type B: Insertion tube made of plastic and steel

(*): several part numbers possible. Serial number must be >4000.