



Member of the FM Global Group

FM Approvals
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CERTIFICATE OF COMPLIANCE

HAZARDOUS (CLASSIFIED) LOCATION ELECTRICAL EQUIPMENT

This certificate is issued for the following equipment:

InPro2a /b/c/d/e/f/g. pH Electrodes.

IS / I, II, III / 1 / ABCDEFG / T6 Ta = 60°C - 53800002; Entity

Input Entity Parameters: V t = 15 V, I t = 30 mA, P Max = 0.25 W, C i = 0.1 µF, L i 0 mH.

a = sub-family: 2000, 2001, 2002, 2003

b = empty or name

c = empty or SG for solution ground

d = a-length

e = temperature sensor: Pt100, Pt1000, Pt3000

f = electrolyte

g = connection

Special Condition for use;

The pH Probe shall be installed in compliance with the mounting, and spacing, and segregation requirement of the ultimate application and is suitable for use with the following InTrac7XX and InFit76X/Y series Probe Holders listed below.

InTrac7XX *1/*2/*3/*4/*5/*6*7*8

XX Sub designation

InTrac776 = Retractable housing for liquid filled pH electrodes

InTrac777 = Retractable housing for gel-filled and polymer electrodes and sensors

InTrac779 = Retractable housing for turbidity sensors

InTrac797 = Retractable housing for gel filled and polymer electrodes and sensors, with double rinsing chamber

InTrac799 = Retractable housing for turbidity sensors, with double rinsing chamber

*1 = operation mode (e.g. M= manual; P= pneumatic; R= pneumatic with pneumatic position indicators; X= pneumatic with Ex inductive position indicators)

*2 = insertion length (070...500 mm)

*3 = wetted material (stainless steel, Hastelloy, titanium or other alloys)

*4 = process adaptation (e.g. flange etc.)

*5 = wetted o-ring material (e.g. Viton, EPDM, Kalrez, Silicon etc.)

*6 = material of cylinder body (stainless steel or conductive Polypropylene)

*7 = connection of rinsing chamber (e.g. Serto and others)

*8 = zero or specials



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InFit76X *1/*2/*3/*4/*5/*6*7*8

Sub designation

InFit761 = Housing for pH/redox electrode with solid electrolyte and for 12mm sensors and PG 13.5 thread
InFit764 = Housing for pH/redox electrode with liquid electrolyte

- *1 = Protective cage (W = with; N = without)
- *2 = Sensor housing connection (Y = 19 mm - shaft, S = 25 mm -shaft, C = CIP - shaft, K = NPT - shaft)
- *3 = Insertion length: (25 – 375mm)
- *4 = wetted parts (metallic material or conductive plastic material)
- *5 = Process Connection (e.g. flange etc.)
- *6 = Wetted O-Ring Material (FKM (Viton), EPDM, FFKM (Kalrez), MVQ (Silicon))
- *7 = Position of O-Ring (Nut- Distance in mm)
- *8 = Identifier open for special versions (S = Special version, - Standard version)

InFit76Y *1/*2/*3/*4/*5/*6*7

Sub designation

InFit762 = Long housing for pH/redox electrode with polymer electrolyte and for 12mm sensors and PG 13.5 thread
InFit763 = Long housing for pH/redox electrode with liquid electrolyte

- *1 = Protective cage (W = with; N = without)
- *2 = Sensor housing connection (F = Turbidity sensor (FSC), L = IND Conductivity sensor, G = 12mm Sensor with PG 13.5 thread, U = Electrode with liquid electrolyte a= 120mm, H = Electrode with liquid electrolyte a= 150mm)
- *3 = Insertion length: (400 - 4000mm)
- *4 = wetted parts (metallic material or conductive plastic material)
- *5 = Process Connection (e.g. flange etc.)
- *6 = Wetted O-Ring Material (FKM (Viton), EPDM, FFKM (Kalrez), MVQ (Silicon))
- *7 = Identifier open for special versions (S = Special version, - Standard version)

InPro3a /b/c/d/e/f. pH Electrodes.

IS / I, II, III /1 / ABCDEFG /T6 Ta = 60°C - 53800002; Entity

Input Entity Parameters: V t = 15 V, I t = 30 mA, P Max = 0.25 W, C i = 0.1 µF, L i 0 mH.

a = sub-family: 3100, 3101, 3102, 3103, 3200, 3201, 3202, 3203,
3250, 3251, 3252, 3253

b = empty or name

c = empty or SG for solution ground

d = a-length

e = temperature sensor: Pt100, Pt1000, Pt3000

f = connection

Special Condition for use;

The pH Probe shall be installed in compliance with the mounting, and spacing, and segregation requirement of the ultimate application and is suitable for use with the following InTrac7XX and InFit76X/Y series Probe Holders listed below.

InTrac7XX *1/*2/*3/*4/*5/*6*7*8

XX Sub designation

InTrac776 = Retractable housing for liquid filled pH electrodes

InTrac777 = Retractable housing for gel-filled and polymer electrodes and sensors

InTrac779 = Retractable housing for turbidity sensors

InTrac797 = Retractable housing for gel filled and polymer electrodes and sensors, with double rinsing chamber

InTrac799 = Retractable housing for turbidity sensors, with double rinsing chamber

- *1 = operation mode (e.g. M= manual; P= pneumatic; R= pneumatic with pneumatic position indicators; X= pneumatic with Ex inductive position indicators)
- *2 = insertion length (070...500 mm)
- *3 = wetted material (stainless steel, Hastelloy, titanium or other alloys)
- *4 = process adaptation (e.g. flange etc.)

- *5 = wetted o-ring material (e.g. Viton, EPDM, Kalrez, Silicon etc.)
- *6 = material of cylinder body (stainless steel or conductive Polypropylene)
- *7 = connection of rinsing chamber (e.g. Serto and others)
- *8 = zero or specials

InFit76X *1/*2/*3/*4/*5/*6*7*8

Sub designation

InFit761 = Housing for pH/redox electrode with solid electrolyte and for 12mm sensors and PG 13.5 thread

InFit764 = Housing for pH/redox electrode with liquid electrolyte

- *1 = Protective cage (W = with; N = without)
- *2 = Sensor housing connection (Y = 19 mm - shaft, S = 25 mm -shaft, C = CIP - shaft, K = NPT - shaft)
- *3 = Insertion length: (25 – 375mm)
- *4 = wetted parts (metallic material or conductive plastic material)
- *5 = Process Connection (e.g. flange etc.)
- *6 = Wetted O-Ring Material (FKM (Viton), EPDM, FFKM (Kalrez), MVQ (Silicon))
- *7 = Position of O-Ring (Nut- Distance in mm)
- *8 = Identifier open for special versions (S = Special version, - Standard version)

InFit76Y *1/*2/*3/*4/*5/*6*7

Sub designation

InFit762 = Long housing for pH/redox electrode with polymer electrolyte and for 12mm sensors and PG 13.5 thread

InFit763 = Long housing for pH/redox electrode with liquid electrolyte

- *1 = Protective cage (W = with; N = without)
- *2 = Sensor housing connection (F = Turbidity sensor (FSC), L = IND Conductivity sensor, G = 12mm Sensor with PG 13.5 thread, U = Electrode with liquid electrolyte a= 120mm, H = Electrode with liquid electrolyte a= 150mm)
- *3 = Insertion length: (400 - 4000mm)
- *4 = wetted parts (metallic material or conductive plastic material)
- *5 = Process Connection (e.g. flange etc.)
- *6 = Wetted O-Ring Material (FKM (Viton), EPDM, FFKM (Kalrez), MVQ (Silicon))
- *7 = Identifier open for special versions (S = Special version, - Standard version)

InPro4a /b/c/d/e/f. pH Electrodes.

IS / I, II, III /1 / ABCDEFG /T6 Ta = 60°C - 53800002; Entity

Input Entity Parameters: V t = 15 V, I t = 30 mA, P Max = 0.25 W, C i = 0.1 µF, L i 0 mH.

a = sub-family: 4200, 4201, 4202, 4203, 4250, 4251, 4252, 4253,
4500, 4501, 4502, 4503, 4550, 4551, 4552, 4503,
4800, 4801, 4802, 4803, 4260, 4261, 4262, and 4263

b = empty or name

c = empty or SG for solution ground

d = a-length

e = temperature sensor: Pt100, Pt1000, Pt3000

f = connection

Special Condition for use;

The pH Probe shall be installed in compliance with the mounting, and spacing, and segregation requirement of the ultimate application and is suitable for use with the following InTrac7XX and InFit76X/Y series Probe Holders listed below.

InTrac7XX *1/*2/*3/*4/*5/*6*7*8

XX Sub designation

InTrac776 = Retractable housing for liquid filled pH electrodes

InTrac777 = Retractable housing for gel-filled and polymer electrodes and sensors

InTrac779 = Retractable housing for turbidity sensors

InTrac797 = Retractable housing for gel filled and polymer electrodes and sensors, with double rinsing chamber

InTrac799 = Retractable housing for turbidity sensors, with double rinsing chamber

- *1 = operation mode (e.g. M= manual; P= pneumatic; R= pneumatic with pneumatic position indicators; X= pneumatic with Ex inductive position indicators)
- *2 = insertion length (070...500 mm)
- *3 = wetted material (stainless steel, Hastelloy, titanium or other alloys)
- *4 = process adaptation (e.g. flange etc.)
- *5 = wetted o-ring material (e.g. Viton, EPDM, Kalrez, Silicon etc.)
- *6 = material of cylinder body (stainless steel or conductive Polypropylene)
- *7 = connection of rinsing chamber (e.g. Serto and others)
- *8 = zero or specials

InFit76X *1/*2/*3/*4/*5/*6*7*8

Sub designation

InFit761 = Housing for pH/redox electrode with solid electrolyte and for 12mm sensors and PG 13.5 thread

InFit764 = Housing for pH/redox electrode with liquid electrolyte

- *1 = Protective cage (W = with; N = without)
- *2 = Sensor housing connection (Y = 19 mm - shaft, S = 25 mm -shaft, C = CIP - shaft, K = NPT - shaft)
- *3 = Insertion length: (25 – 375mm)
- *4 = wetted parts (metallic material or conductive plastic material)
- *5 = Process Connection (e.g. flange etc.)
- *6 = Wetted O-Ring Material (FKM (Viton), EPDM, FFKM (Kalrez), MVQ (Silicon))
- *7 = Position of O-Ring (Nut- Distance in mm)
- *8 = Identifier open for special versions (S = Special version, - Standard version)

InFit76Y *1/*2/*3/*4/*5/*6*7

Sub designation

InFit762 = Long housing for pH/redox electrode with polymer electrolyte and for 12mm sensors and PG 13.5 thread

InFit763 = Long housing for pH/redox electrode with liquid electrolyte

- *1 = Protective cage (W = with; N = without)
- *2 = Sensor housing connection (F = Turbidity sensor (FSC), L = IND Conductivity sensor, G = 12mm Sensor with PG 13.5 thread, U = Electrode with liquid electrolyte a= 120mm, H = Electrode with liquid electrolyte a= 150mm)
- *3 = Insertion length: (400 - 4000mm)
- *4 = wetted parts (metallic material or conductive plastic material)
- *5 = Process Connection (e.g. flange etc.)
- *6 = Wetted O-Ring Material (FKM (Viton), EPDM, FFKM (Kalrez), MVQ (Silicon))
- *7 = Identifier open for special versions (S = Special version, - Standard version)

InPro6a /b/c/d/e/f. Dissolved Oxygen Sensors.

IS / I, II, III /1 / ABCDEFG /T6 Ta = 60°C - 53800002; Entity

Input Entity Parameters: V t = 15 V, I t = 30 mA, P Max = 0.25 W, C i = 0.1 µF, L i 0 mH.

a = sub-family: 6800, 6810, 6820, 6830, 6900, 6910

b = empty or name

c = diameter of the sensor

d = a-length

e = empty or name

f = 8-digit code for material, membrane type, construction, connection

Special Condition for use;

The Dissolved Oxygen Sensors shall be installed in compliance with the mounting, and spacing, and segregation requirement of the ultimate application and is suitable for use with the following InTrac7XX and InFit76X/Y series Probe Holders listed below.

InTrac7XX *1/*2/*3/*4/*5/*6*7*8

XX Sub designation

InTrac776 = Retractable housing for liquid filled pH electrodes

InTrac777 = Retractable housing for gel-filled and polymer electrodes and sensors

InTrac779 = Retractable housing for turbidity sensors

InTrac797 = Retractable housing for gel filled and polymer electrodes and sensors, with double rinsing chamber

InTrac799 = Retractable housing for turbidity sensors, with double rinsing chamber

- *1 = operation mode (e.g. M= manual; P= pneumatic; R= pneumatic with pneumatic position indicators; X= pneumatic with Ex inductive position indicators)
- *2 = insertion length (070...500 mm)
- *3 = wetted material (stainless steel, Hastelloy, titanium or other alloys)
- *4 = process adaptation (e.g. flange etc.)
- *5 = wetted o-ring material (e.g. Viton, EPDM, Kalrez, Silicon etc.)
- *6 = material of cylinder body (stainless steel or conductive Polypropylene)
- *7 = connection of rinsing chamber (e.g. Serto and others)
- *8 = zero or specials

InFit76X *1/*2/*3/*4/*5/*6*7*8

Sub designation

InFit761 = Housing for pH/redox electrode with solid electrolyte and for 12mm sensors and PG 13.5 thread

InFit764 = Housing for pH/redox electrode with liquid electrolyte

- *1 = Protective cage (W = with; N = without)
- *2 = Sensor housing connection (Y = 19 mm - shaft, S = 25 mm -shaft, C = CIP - shaft, K = NPT - shaft)
- *3 = Insertion length: (25 – 375mm)
- *4 = wetted parts (metallic material or conductive plastic material)
- *5 = Process Connection (e.g. flange etc.)
- *6 = Wetted O-Ring Material (FKM (Viton), EPDM, FFKM (Kalrez), MVQ (Silicon))
- *7 = Position of O-Ring (Nut- Distance in mm)
- *8 = Identifier open for special versions (S = Special version, - Standard version)

InFit76Y *1/*2/*3/*4/*5/*6*7

Sub designation

InFit762 = Long housing for pH/redox electrode with polymer electrolyte and for 12mm sensors and PG 13.5 thread

InFit763 = Long housing for pH/redox electrode with liquid electrolyte

- *1 = Protective cage (W = with; N = without)
- *2 = Sensor housing connection (F = Turbidity sensor (FSC), L = IND Conductivity sensor, G = 12mm Sensor with PG 13.5 thread, U = Electrode with liquid electrolyte a= 120mm, H = Electrode with liquid electrolyte a= 150mm)
- *3 = Insertion length: (400 - 4000mm)
- *4 = wetted parts (metallic material or conductive plastic material)
- *5 = Process Connection (e.g. flange etc.)
- *6 = Wetted O-Ring Material (FKM (Viton), EPDM, FFKM (Kalrez), MVQ (Silicon))
- *7 = Identifier open for special versions (S = Special version, - Standard version)

InPRO725X *1/*2*3

IS / I, II, III /1 /ABCDEFG /T6 Ta = 60°C - 53800003ME; Entity

Input Entity Parameters: V t = 16 V, I t = 150 mA, P Max = 0.155 W, C i = 900 pF, L i = 0.3 mH.

Sub designation

InPRO7250 = Standard inductive conductivity sensor with PEEK jacket

- *1 = Sensor Type (HT = High temperature, ST = Standard Temperature, VP = sensor with plug connection)
- *2 = Temperature sensor: (Pt100, Pt1000)
- *3 = Cable length for sensors with fixed cables in meters



Equipment Ratings:

Intrinsically safe, with Entity parameters, for use in Class I, II, III, Division 1, Groups A, B, C, D, E F, G hazardous (classified) locations in accordance with manufacturer's Control Drawing.

FM Approved for:

Mettler-Toledo GmbH, Process Analytics
Im Hackacker 15, CH-8902 Urdorf, Switzerland



This certifies that the equipment described has been found to comply with the following FM Approval Standards and other documents:

| | |
|---------------|------|
| Class 3600 | 1998 |
| Class 3610 | 1999 |
| Class 3810 | 1989 |
| Supplement #1 | 1995 |

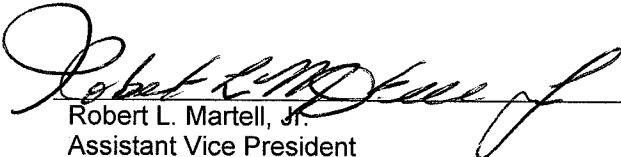
Original Project ID: 3021227

Approval Granted: June 17, 2004

Subsequent Revision Reports / Date Approval Amended

| Report Number | Date | Report Number | Date |
|---------------|-----------------------|---------------|------|
| 3022594 | February 28, 2005 | | |
| 3023397 | July 21, 2005 | | |
| 060705 | <i>Sept. 19, 2006</i> | | |

FM Approval LLC


Robert L. Martell, Jr.
Assistant Vice President

Sept. 19, 2006
Date