

**Models 876PH, 876CR, and 876EC
Intelligent Transmitters
with HART Communication Protocol**
—
Style A

Model	Measurement
876PH	PH, ORP, and ISE Measurements
876CR	Contacting Conductivity and Resistivity Measurement
876EC	Electrodeless Conductivity Intelligent Transmitter

Give instrument Model Code when ordering.
*Parts preceded by an asterisk are recommended spare parts.
See Recommended Spare Parts Summary section for quantities.

TO ORDER PARTS, CALL 1-866-746-6477.

Life Is On

Foxboro[®]
by Schneider Electric

Model Code: 876PH Transmitter

<u>Description</u>	<u>Model</u>
Intelligent Transmitter for pH, ORP, and ISE Measurement	876PH
<u>Input and Output Communications</u>	
Analog Sensor Input with Digital HART and 4 to 20 mA Output	-T
Smart PH Sensor Input with Digital HART and 4 to 20 mA Output (a)	-S
<u>Enclosure Mounting</u>	
Panel Mounting	W
Surface Mounting	X
Pipe Mounting (Horizontal or Vertical Pipe)	Y
<u>Electrical Safety (Also see Electrical Safety Specifications section)</u>	
ATEX intrinsically safe; II 1 G, Ex ia IIC, Zone 0.	AA
ATEX intrinsically safe for II 3 G, Ex ic IIC, Zone 2.	AN
CSA intrinsically safe; Class I, II, III, Division 1; and Ex ia IIC, Zone 0.	CA
CSA for Class I, II, III, Division 2; and energy limited for Ex nL IIC, Zone 2.	CN
FM intrinsically safe; Class I, II, III, Division 1; and AEx ia IIC, Zone 0.	FA
FM nonincendive for Class I, II, III, Division 2; and energy limited for AEx nC IIC, Zone 2.	FN
IECEx intrinsically safe; II 1 G, Ex ia IIC, Zone 0.	DA
IECEx intrinsically safe II 3 G, Ex ic IIC, Zone 2.	DN
NEPSI, Ex ia IIC Ga; intrinsically safe for Zone 0 (b)	NA
NEPSI, Ex ic IIC Gc; intrinsically safe for Zone 2 (b)	NN
EAC, 0Ex ia IIC Ga; intrinsically safe for Zone 0	RA
EAC, 2Ex ic IIC Gc; intrinsically safe for Zone 2	RN
No Certification	ZZ
<u>Optional Selections</u>	
Special per Engineering Order (c)	-1
Storm Door (d)	-7
Detailed Instruction Manual (e)	-M
Example: 876PH-TXFA-7	

- a. ORP and ISE are not supported with the -S option.
- b. NEPSI only applies to the -T option.
- c. Provides ability to preconfigure the instrument with custom temperature compensation.
- d. Helps to protect the front panel controls, particularly in field mounting applications.
- e. A DVD-ROM is shipped as standard with each transmitter.

Model Code: 876CR Transmitter

<u>Description</u>	<u>Model</u>
Intelligent Transmitter for Contacting Conductivity and Resistivity Measurement	876CR
<u>Output Signal</u> Intelligent; Digital HART and 4 to 20 mA	-T
<u>Enclosure Mounting</u> Panel Mounting	W
Surface Mounting	X
Pipe Mounting (Horizontal or Vertical Pipe)	Y
<u>Electrical Safety (Also see Electrical Safety Specifications section)</u> ATEX, II 1 G, Ex ia IIC, intrinsically safe, Zone 0	AA
ATEX, II 3 G, Ex nL IIC, intrinsically safe, Zone 2	AN
CSA and FMc, Ex ia IIC, intrinsically safe, Class I, II, and III, Div 1, Zone 0	CA
CSA and FMc, Ex nL IIC, nonincendive, Class I, II, and III, Div 2, Zone 2	CN
FM, AEx ia IIC, intrinsically safe, Class I, II, and III, Div 1, Zone 0	FA
FM, AEx nC IIC, nonincendive, Class I, II, and III, Div 2, Zone 2	FN
IECEX, II 1 G, Ex ia IIC, intrinsically safe, Zone 0	DA
IECEX, II 3 G Ex nL IIC, energy limited, Zone 2	DN
NEPSI, Ex ia IIC Ga; intrinsically safe for Zone 0	NA
NEPSI, Ex ic IIC Gc; intrinsically safe for Zone 2	NN
EAC, 0Ex ia IIC Ga; intrinsically safe for Zone 0	RA
EAC, 2Ex ic IIC Gc; intrinsically safe for Zone 2	RN
No Certification	ZZ
<u>Optional Selections</u> Special per Engineering Order (a)	-1
Storm Door (b)	-7
Detailed Instruction Manual (c)	-M
Example: 876CR–TXFA–7	

- a. Provides ability to preconfigure the instrument with custom temperature compensation.
- b. Helps to protect the front panel controls, particularly in field mounting applications.
- c. A DVD-ROM is shipped as standard with each transmitter.

Model Code: 876EC Transmitter

<u>Description</u>	<u>Model</u>
Electrodeless Conductivity Intelligent Transmitter	876EC
Output Signal HART and 4 to 20 mA Output	-T
Enclosure Mounting Panel Mounting Surface Mounting Tube or Pipe Mounting (Horizontal or Vertical Pipe)	W X Y
Electrical Safety (Also see Electrical Safety Specifications section) ATEX, II 1 G, EEx ia IIC, intrinsically safe, Zone 0 ATEX, II 3 G, EEx nL IIC, energy limited, Zone 2 CSA and FMc, Ex ia IIC, intrinsically safe, Class I, II, and III, Div 1, Zone 0 CSA and FMc, Ex nL IIC, nonincendive, Class I, II, and III, Div 2, Zone 2 FM, AEx ia IIC, intrinsically safe, Class I, II, and III, Div 1, Zone 0 FM, AEx nL IIC, nonincendive, Class I, II, and III, Div 2, Zone 2 IECEX, II 1 G, EEx ia IIC, intrinsically safe, Zone 0 IECEX, II 3 G EEx nL IIC, energy limited, Zone 2 NEPSI, Ex ia IIC Ga; intrinsically safe for Zone 0 NEPSI, Ex ic IIC Gc; intrinsically safe for Zone 2 EAC, 0Ex ia IIC Ga; intrinsically safe for Zone 0 EAC, 2Ex ic IIC Gc; intrinsically safe for Zone 2 No Certification	AA AN CA CN FA FN DA DN NA NN RA RN ZZ
Optional Selections Special per Engineering Order (a) Storm Door (b) Detailed Instruction Manual (c)	-1 -7 -M
Example: 876EC-TXFA-7	

- a. Provides ability to preconfigure the instrument with custom temperature compensation.
- b. Helps to protect the front panel controls, particularly in field mounting applications.
- c. A DVD-ROM is shipped as standard with each transmitter.

Parts

Figure 1. Transmitter Assembly (876PH, 876CR, and 876EC)

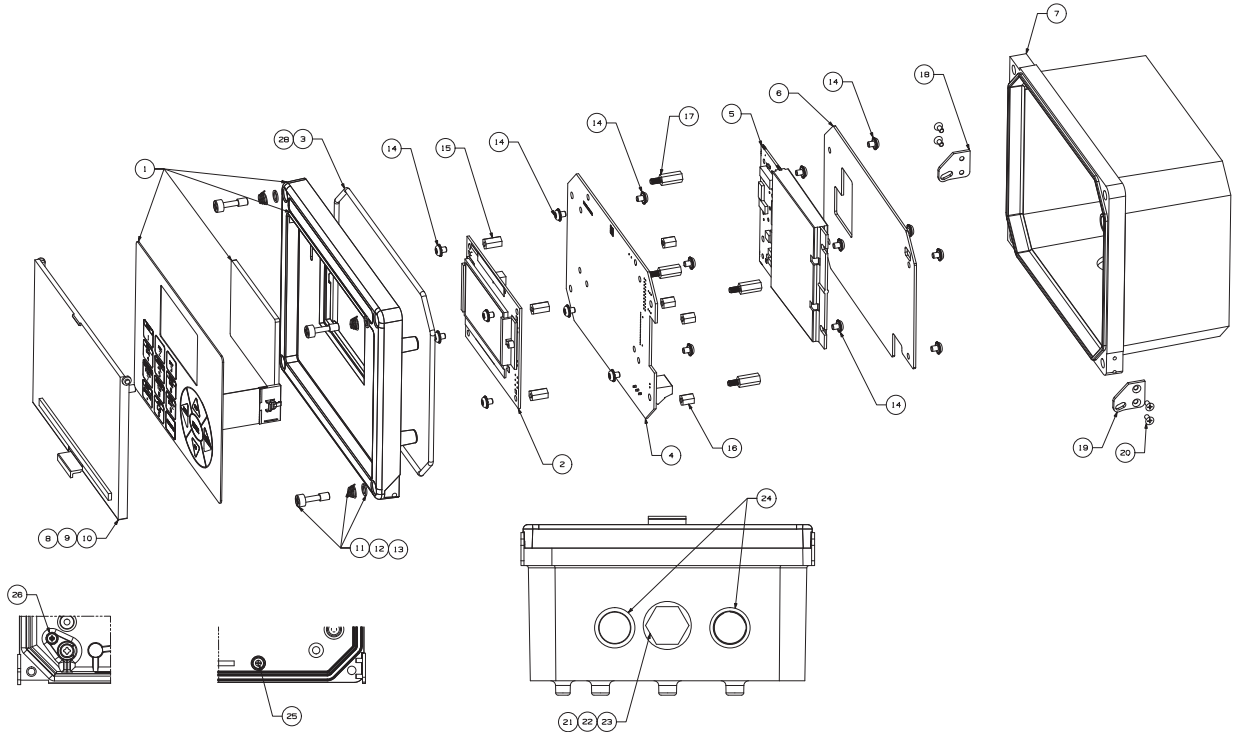


Table 1. Parts for Figure 1: “Transmitter Assembly (876PH, 876CR, and 876EC)”

Item	Part No.	Qty.	Part Name
1	Below	1	Bezel/Keypad Assembly ordered as assembled units on
	BS814AJ		Label Logo 876PH
	BS814LF		Label Logo 876EC
	BS814LG		Label Logo 876CR
2	BS814CF	1	PWA, Display
3	Below	1	Gasket, Bezel
	BS810YN		Gasket, Bezel; Electrically Conductive for 876EC
	BS807PG		Gasket Bezel for 876CR and 876PH
4	Below	1	Calibrated PWA, Processor
	BS814CA		876PH with HART Protocol; Code -T
	BS814CB		876CR with HART Protocol; Code -T
	BS814CC		876EC with HART Protocol; Code -T
5	Below	1	Calibrated PWA, Loop Power/MAU; Potted Assembly
	BS814CD		876PH with HART Protocol; Code -T
	BS814CD		876CR with HART Protocol; Code -T
	BS814CE		876EC with HART Protocol; Code -T
6	Below	1	Cover, Safety (a)

Table 1. Parts for Figure 1: “Transmitter Assembly (876PH, 876CR, and 876EC)”

Item	Part No.	Qty.	Part Name
	BS813LU		876PH with HART Protocol; Code -T
	BS813DA		876CR with HART Protocol; Code -T
	BS813LV		876EC with HART Protocol; Code -T
7	BS813VJ	1	Enclosure, Transmitter (b)
8	BS809WB	1	Door, Storm; Plexiglass; Option -7
9	U0120BP	2	Flat Nylon Washers (c)
10	BS807UF	1	Label
11	X0174EW	4	Screw, Captive; Cross-recessed filhd, 0.190-32 x 0.688, ss
12	X0173SQ	4	Washer, Nylon; Black; 0.312, O.D. x 0.22 I.D. x 0.31 thick
13	X0167GM	4	Spring, Ejector
14	X0174ES	17	Screw, SEMS; Cross-recessed pnhd, 0.138-32 x 0.250, ss
15	X0174EH	4	Standoff, 0.250 hex; ss; 0.188-32 x 0.437; internal/internal
16	X0174EB	4	Standoff, 0.250 hex; ss; 0.188-32 x 0.312; internal/internal
17	X0174EC	4	Standoff, 0.250 hex; ss; 0.188-32 x 0.562; internal/external
18	BS813VK	1	Hinge, Left Side
19	BS813VL	1	Hinge, Right Side
20	X0173ST	4	Screw, Hinge; Flat Hd; 0.112-40 x 0.25
21	L0123CA	1	Plug, NEMA; Ryton; 1 in Hexhd; 1/2 NPSM
22	X0201ED	1	Gasket, Sealing; Buna-N
23	X0173UP	1	Locknut; Nylon; 1/2 NPT
24	X0172BL	2	Plug; Polyethylene; to fit 1/2 NPT
25	BS807DP	1	Cable, Ground (d)
26	X0170HX	1	Screw, Ground Cable

- a. Specify instrument type when ordering this part, to help ensure correct label is supplied.
- b. BS813ZJ is the part number of the enclosure without the data label or certification label. In order to replace the enclosure according to the original sales order, it is required that you send the original enclosure back to the factory so that the data and certification labels can be replaced.
- c. Washers maybe needed to increase tension on the storm door so that the door can stay open. The washers are placed between the storm door and the bezel.
- d. Ground cable part number BS807DP connects to housing ground and bezel ground terminals shown in Figure 1.

Figure 2. Transmitter Assembly (876PH-S)

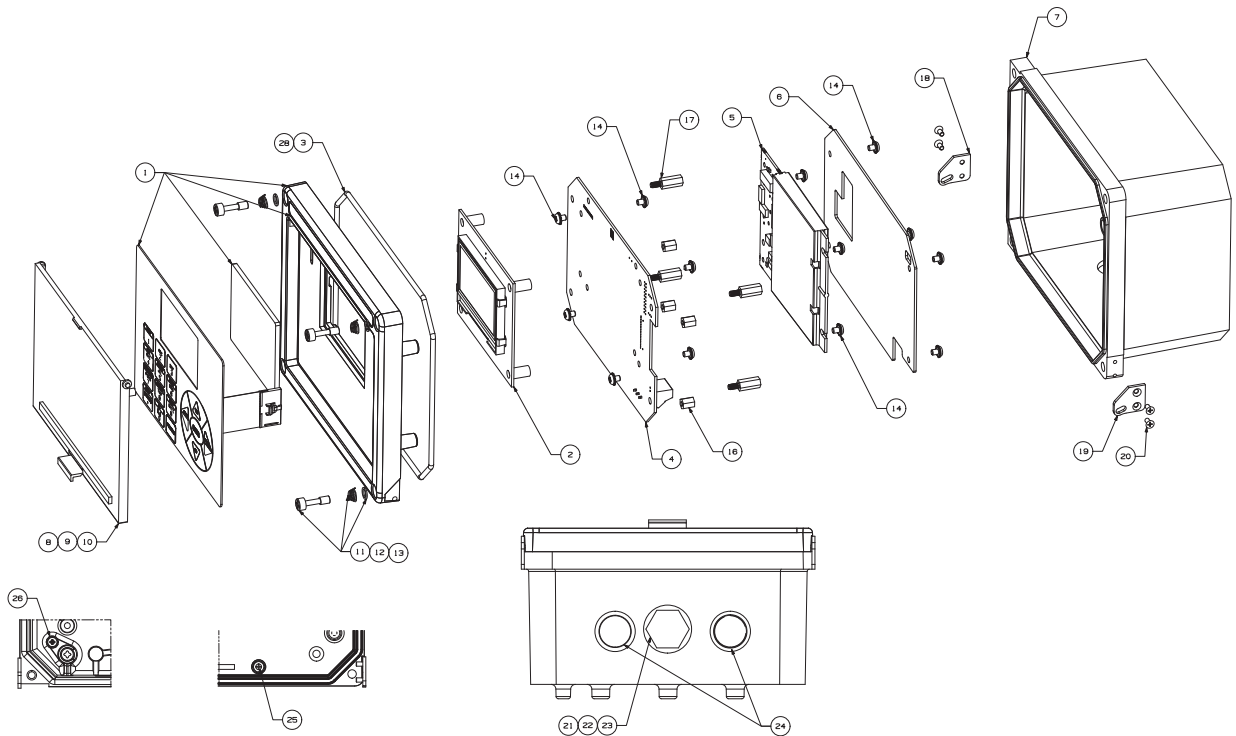


Table 2. Parts for Figure 2: “Transmitter Assembly (876PH-S)”

Item	Part No.	Qty.	Part Name
1	BS814LH	1	Bezel/Keypad Assembly 876PH-S
2	D0184AM	1	PWA, Display, Backlight
3	BS807PG	1	Gasket, Bezel
4	BS814KX	1	876PH-S, Calibrated PWA and HART Protocol; Code -S
5	BS814AE	1	876PH-S, Calibrated PWA, Loop Power/MAU; Potted Assembly with HART Protocol: Code -S (a)
6	BS815NV	1	Safety Cover 876PH-S with HART Protocol: Code -S (b)
7	BS814PJ	1	Enclosure, Transmitter (c)
8	BS813VJ	1	Door, Storm; Plexiglass; Option -7
9	U0120BP	2	Flat Nylon Washers (d)
10	BS807UF	1	Label
11	X0170EW	4	Screw, Captive; Cross-recessed filhd, 0.190-32 x 0.688, ss
12	X0173SQ	4	Washer, Nylon; Black; 0.312, O.D. x 0.22 I.D. x 0.31 thick
13	X0167GM	4	Spring, Ejector
14	X0174ES	16	Screw, SEMS; Cross-recessed pnhd, 0.138-32 x 0.250, ss
16	X0174EB	4	Standoff, 0.250 hex; ss; 0.188-32 x 0.312; internal/internal
17	X0201QD	4	Standoff, 0.250 hex; ss; 0.188-32 x 0.437; internal/external
18	BS813VK	1	Hinge, Left Side
19	BS813VL	1	Hinge, Right Side
20	X0173ST	4	Screw, Hinge; Flat Hd; 0.112-40 x 0.25

Table 2. Parts for Figure 2: “Transmitter Assembly (876PH-S)”

Item	Part No.	Qty.	Part Name
21	L0123CA	1	Plug, NEMA; Ryton; 1 in Hexhd; 1/2 NPSM
22	X0201ED	1	Gasket, Sealing; Buna-N
23	X0173UP	1	Locknut; Nylon; 1/2 NPT
24	X0172BL	2	Plug; Polyethylene; to fit 1/2 NPT (a)
25	X0174EQ	1	Screw, Cable, Ground
26	X0170HX	1	Screw, Ground Cable
27	BS814KZ	1	Kit, Cord Grip 876PH-S (e)

- a. On removal of the polyethylene plugs, which is used during shipment, the openings must be sealed properly. For 876PH-S, item 24 on the right side must be replaced by items 22, 23, and 27, which are supplied separately, but not pre-installed.
- b. Specify instrument type when ordering this part, to help ensure correct label is supplied.
- c. BS814PJ is the part number of the enclosure without the data label or certification label. In order to replace the enclosure according to the original sales order, it is required that you send the original enclosure back to the factory so that the data and certification labels can be replaced.
- d. Washers maybe needed to increase tension on the storm door so that the door can stay open. The washers are placed between the storm door and the bezel.
- e. Cord Grip Kit includes Item 22, Item 23 above, and PN X0179LS, Smart Connector Cord Grip.

Figure 3. Enclosure Mounting Kits

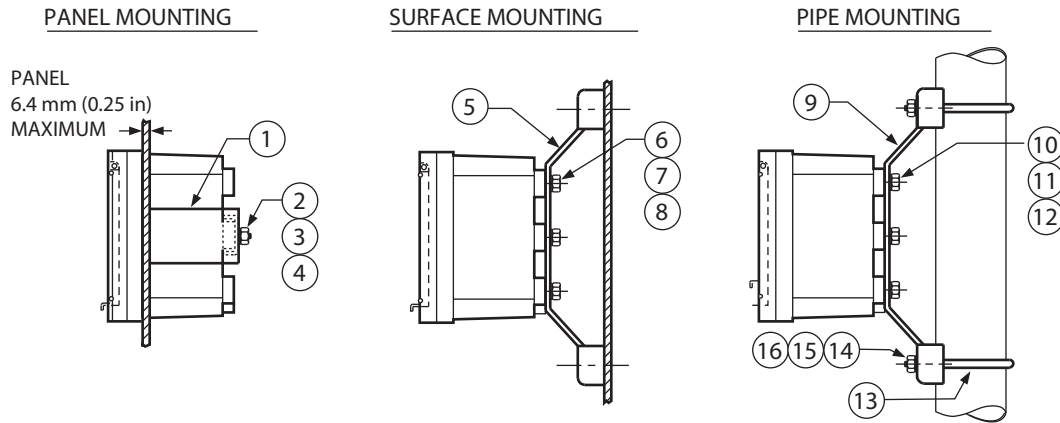


Table 3. Parts for Figure 2: “Transmitter Assembly (876PH-S)”

Item	Part No.	Qty.	Part Name
–	BS806WX	–	Kit, Panel Mounting
1	BS806WY	1	Clamp, Panel Retainer
2	X0173SJ	2	Screw, Set, Hex Recess, 0.250-20 x 1.5
3	X0143AX	2	Washer, Flat, 0.250
4	C3000ZN	2	Nut, Self-Lock, 0.250-20
–	BS806ZN	–	Kit, Surface Mounting
5	BS806WW	1	Bracket, Mounting
6	X0173SZ	4	Screw, Hex Cap, 0.250-20
7	X0143AX	4	Washer, Flat, 0.250
8	K0123ME	4	Washer, Lock, 0.250
–	BS806WV	–	Kit, Pipe Mounting Bracket
9	BS806WW	1	Bracket, Mounting
10	X0173SZ	4	Screw, Hex Cap, 0.250-20
11	X0143AX	4	Washer, Flat, 0.250
12	K0123ME	4	Washer, Lock, 0.250
13	N0126KC	1	Clamp, U-Bolt, 0.312-18
14	X0142BW	4	Nut, Hex Head, 0.312-18
15	X0143AY	4	Washer, Flat, 0.312
16	A2015AB	4	Washer, Lock, 0.312

Recommended Spare Parts Summary

Table 4. Recommended Spare Parts (876PH, 876CR, and 876EC)

Figure Number	Item Number	Part Number	Part Name	Number of Parts Recommended for		
				1 Inst.	5 Inst.	20 Inst.
1	6	BS810YN BS807PG	Gasket, Bezel; Electrically Conductive for 876EC Gasket Bezel for 876CR and 876PH	1	3	10
	5	BS814CF	PWA, Display	1	2	5
	7	Below BS814CA BS814CB BS814CC	Calibrated PWA, Processor; HART 876PH with HART Protocol; Code -T 876CR with HART Protocol; Code -T 876EC with HART Protocol; Code -T	1	2	5
	8	Below BS814CD BS814CD BS814CE	Calibrated PWA, Loop Power/MAU; HART 876PH with HART Protocol; Code -T 876CR with HART Protocol; Code -T 876EC with HART Protocol; Code -T	1	2	5

Table 5. Recommended Spare Parts (876PH-S)

Figure Number	Item Number	Part Number	Part Name	Number of Parts Recommended for		
				1 Inst.	5 Inst.	20 Inst.
2	6	BS807PG	Gasket, Bezel	1	3	10
	5	BS814CG	PWA, Display, BL	1	2	5
	7	BS814KX	Calibrated PWA, Processor; HART 876PH-S with HART Protocol; Code -T	1	2	5
	8	BS814CE	Calibrated PWA, Loop Power/MAU; HART 876Ps with HART Protocol; Code -T	1	2	5

Schneider Electric Systems USA, Inc.
38 Neponset Avenue
Foxboro, MA 02035
United States of America
<http://www.schneider-electric.com>

Global Customer Support
Inside U.S.: 1-866-746-6477
Outside U.S.: 1-508-549-2424
<https://pasupport.schneider-electric.com>

Copyright 2011-2018 Schneider Electric Systems USA, Inc. All rights reserved.

Schneider Electric and Foxboro are trademarks of Schneider Electric Systems USA, Inc., its subsidiaries, and affiliates. All other trademarks are the property of their respective owners.

