

## Ultrasonic transducers / EchoMax XPS

### Overview



EchoMax XPS transducers use ultrasonic technology to measure level in a wide range of liquids and solids.

### Benefits

- Integral temperature compensation
- Low ringing effect reduces blanking distance
- Optional foam facing for dusty applications
- Self-cleaning and low-maintenance
- Chemically resistant
- Hermetically sealed

### Application

XPS transducers can be fully immersed, are resistant to steam and corrosive chemicals, and can be installed without flanges.

The XPS series offers versions for various measuring ranges up to 30 m (100 ft) and up to a max. temperature of 95 °C (203 °F).

During operation, the EchoMax transducers emit acoustic pulses in a narrow beam. The level monitor measures the propagation time between pulse emission and its reflection (echo) to calculate the distance.

## Selection and ordering data

EchoMax XPS-10 Ultrasonic level transducer Continuous, non-contact, 10 m (32.81 ft) range, for liquids and solids.		Article No. 7ML111- ● ● ● ● 0 5-				
Click on the Article No. for the online configuration in the PIA Life Cycle Portal.						
<b>Mounting thread and facing</b>						
1" NPT [(Taper), ASME B1.20.1]	0					
1" NPT [(Taper), ASME B1.20.1] with foam facing <sup>1)</sup>	1					
1" NPT [(Taper), ASME B1.20.1] with PTFE facing <sup>2)</sup>	2					
R 1" [(BSPT), EN 10226]	3					
R 1" [(BSPT), EN 10226] with foam facing <sup>1)</sup>	4					
R 1" [(BSPT), EN 10226] with PTFE facing <sup>2)</sup>	5					
<b>Cable length</b>						
5 m (16.40 ft)			B			
10 m (32.81 ft)			C			
30 m (98.43 ft)			E			
50 m (164.04 ft)			F			
100 m (328.08 ft)			K			
<b>Mounting flange</b>						
None				A		
3" ASME, 150 lb, flat faced				C		
4" ASME, 150 lb, flat faced				D		
6" ASME, 150 lb, flat faced				E		
8" ASME, 150 lb, flat faced				F		
DN 80, PN 10/16, Type A, flat faced				G		
DN 100, PN 10/16, Type A, flat faced				J		
DN 150, PN 10/16, Type A, flat faced				L		
JIS10K3B Style				M		
JIS10K4B Style				P		
JIS10K6B Style				R		
(Note: Flange bolting patterns and facings dimensionally correspond to the applicable ASME B16.5 or EN 1092-1, or JIS B 2220 standard.)						
<b>Approvals</b>						
ATEX II 2GD Ex mb IIC T4 Gb, ATEX II 2GD Ex tb IIIC T135°C Db, Ta = -40°C to +95°C; UKEX II 2GD Ex mb IIC T4 Gb, UKEX II 2GD Ex tb IIIC T135°C Db, Ta = -40°C to +95°C; IECEX SIR 13.0009X Ex mb IIC T4 Gb, IECEX SIR 13.0009X Ex tb IIIC T135°C Db, Ta = -40°C to +95°C; FM Class I, Div. 2, Groups A, B, C, D; FM Class II, Div. 1, Groups E, F, G; FM Class III INMETRO Ex mb IIC T4 Gb, Ex tb IIIC T135°C Db NEPSI Ex mb IIC T4 Gb, Ex tD A20 IP6X T135°C EAC Ex CE KCC RCM UKCA					3	
CSA Class I, Div. 1, Groups A, B, C, D, Class II, Div. 1, Groups E, F, G, Class III <sup>3)</sup>					4	

1) Not available with flanged versions.

2) Available with flanged versions only.

3) Valid with mounting thread and facing options 0 ... 2 only.

Selection and Ordering data	Order code
<b>Further designs</b>	
Please add "-Z" to Article No. and specify Order code(s).	
<u>Stainless steel tag [69 mm x 50 mm (2.71 x 1.97 inch)]</u>	
Tag (device parameters, max. 27 characters), plate, stainless steel 304/1.4301	Y15

## Ultrasonic transducers / EchoMax XPS

## Selection and ordering data (continued)

Selection and ordering data	Article No.
<b>Operating Instructions</b>	
All literature is available to download for free, in a range of languages, at <a href="http://www.siemens.com/processinstrumentation/documentation">http://www.siemens.com/processinstrumentation/documentation</a>	
<b>Accessories</b>	
Tag, stainless steel with hole, 12 x 45 mm (0.47 x 1.77 inch), one text line for fastening on sensors	7ML1930-1BJ
Submergence shield kit	7ML1830-1BH
Sunshield	A5E32964662
Easy Aimer 2, aluminum, NPT with ¾" x 1" PVC coupling	7ML1830-1AQ
Easy Aimer 2, aluminum with M20 adapter and 1" and 1½" BSPT aluminum couplings	7ML1830-1AX
Easy Aimer 304, NPT with 1" stainless steel coupling	7ML1830-1AU
Easy Aimer 304, with M20 adapter and 1" and 1½" BSPT 304 stainless steel couplings	7ML1830-1GN
Universal box bracket, mounting kit	7ML1830-1BK

Selection and ordering data	Article No.
Channel bracket, wall mount	7ML1830-1BL
Extended channel bracket, wall mount	7ML1830-1BM
Channel bracket, floor mount	7ML1830-1BN
Extended channel bracket, floor mount	7ML1830-1BP
Bridge channel bracket, floor mount (see Mounting Brackets catalog page for more information)	7ML1830-1BQ
1" NPT locknut, plastic	7ML1830-1DS
1" BSP locknut, plastic	7ML1830-1DR
1" BSP locknut, flanged, plastic	7ML1830-1DN
Plastic adapter 1" BSP - 20 mm	7ML1830-1EA
Plastic adapter 1" NPT	7ML1930-1FX
Plastic adapter 1" NPT/M20	7ML1830-1EF

EchoMax XPS-10C Ultrasonic level transducer Continuous, non-contact, 0.3 ... 10 m (0.98 ... 32.81 ft) range, for liquids and solids. Includes integral temperature sensor	Article No.					
	7ML112-1-	●	●	●	●	0
Click on the Article No. for the online configuration in the PIA Life Cycle Portal.						
<b>Mounting thread and facing</b>						
1" NPT [(Taper), ASME B1.20.1]		0				
1" NPT [(Taper), ASME B1.20.1] with foam facing <sup>1)</sup>		1				
1" NPT [(Taper), ASME B1.20.1] with PTFE facing <sup>2)</sup>		2				
<b>Cable length</b>						
5 m (16.40 ft)			B			
10 m (32.81 ft)			C			
30 m (98.43 ft)			E			
50 m (164.04 ft)			F			
100 m (328.08 ft)			K			
<b>Mounting flange</b>						
None				A		
3" ASME, 150 lb, flat faced				C		
4" ASME, 150 lb, flat faced				D		
6" ASME, 150 lb, flat faced				E		
8" ASME, 150 lb, flat faced				F		
(Note: Flange bolting patterns and facings dimensionally correspond to the applicable ASME B16.5 standard)						
<b>Approvals</b>						
CSA Class I, Div. 2					5	

<sup>1)</sup> Not available with flanged versions.

<sup>2)</sup> Available only with flanged versions.

Selection and Ordering data	Order code
<b>Further designs</b>	
Please add "-Z" to Article No. and specify Order code(s).	
<u>Stainless steel tag [69 mm x 50 mm (2.71 x 1.97 inch)]</u>	
Tag (device parameters, max. 27 characters), plate, stainless steel 304/1.4301	Y15

Selection and ordering data	Article No.
<b>Operating Instructions</b>	
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<b>Accessories</b>	
Tag, stainless steel with hole, 12 x 45 mm (0.47 x 1.77 inch), one text line for fastening on sensors	7ML1930-1BJ
Submergence shield kit	7ML1830-1BH

## Selection and ordering data (continued)

Selection and ordering data	Article No.
Sunshield	A5E32964662
Easy Aimer 2, aluminum, NPT with ¾" x 1" PVC coupling	7ML1830-1AQ
Easy Aimer 2, aluminum with M20 adapter and 1" and 1½" BSPT aluminum couplings	7ML1830-1AX
Easy Aimer 304, NPT with 1" stainless steel coupling	7ML1830-1AU
Easy Aimer 304, with M20 adapter and 1" and 1½" BSPT 304 stainless steel couplings	7ML1830-1GN
Universal box bracket, mounting kit	7ML1830-1BK

Selection and ordering data	Article No.
Channel bracket, wall mount	7ML1830-1BL
Extended channel bracket, wall mount	7ML1830-1BM
Channel bracket, floor mount	7ML1830-1BN
Extended channel bracket, floor mount	7ML1830-1BP
Bridge channel bracket, floor mount (see Mounting Brackets catalog page for more information)	7ML1830-1BQ
1" NPT locknut, plastic	7ML1830-1DS
1" BSP locknut, plastic	7ML1830-1DR

EchoMax XPS-15 Ultrasonic level transducer Continuous, non-contact, 15 m (49.21 ft) range, for liquids and solids.	Article No.					
	7ML111-8-	●	●	●	●	0
Click on the Article No. for the online configuration in the PIA Life Cycle Portal.						
<b>Mounting thread and facing</b>						
1" NPT [(Taper), ASME B1.20.1]	0					
1" NPT [(Taper), ASME B1.20.1] with foam facing <sup>1)</sup>	1					
1" NPT [(Taper), ASME B1.20.1] with PTFE facing <sup>2)</sup>	2					
R 1" [(BSPT), EN 10226]	3					
R 1" [(BSPT), EN 10226] with foam facing <sup>1)</sup>	4					
R 1" [(BSPT), EN 10226] with PTFE facing <sup>2)</sup>	5					
<b>Cable length</b>						
5 m (16.40 ft)			B			
10 m (32.81 ft)			C			
30 m (98.43 ft)			E			
50 m (164.04 ft)			F			
100 m (328.08 ft)			K			
<b>Mounting flange</b>						
None				A		
6" ASME, 150 lb, flat faced				D		
8" ASME, 150 lb, flat faced				E		
DN 150, PN 10/16, Type A, flat faced				J		
DN 200, PN 10, Type A, flat faced				K		
JIS10K 6B				N		
JIS10K 8B				P		
(Note: Flange bolting patterns and facings dimensionally correspond to the applicable ASME B16.5 or EN 1092-1, or JIS B 2220 standard.)						
<b>Approvals</b>						
ATEX II 2GD Ex mb IIC T4 Gb, ATEX II 2GD Ex tb IIIC T135°C Db, Ta = -40°C to +95°C; UKEX II 2GD Ex mb IIC T4 Gb, UKEX II 2GD Ex tb IIIC T135°C Db, Ta = -40°C to +95°C; IECEx SIR 13.0009X Ex mb IIC T4 Gb IECEx SIR 13.0009X Ex tb IIIC T135°C Db, Ta = -40°C to +95°C; INMETRO Ex mb IIC T4 Gb, Ex tb IIIC T135°C Db NEPSI Ex mb IIC T4 Gb, Ex tD A20 IP6X T135°C EAC Ex CE KCC RCM UKCA FM Class I, Div. 2, Groups A, B, C, D; FM Class II, Div. 1, Groups E, F, G; FM Class III CSA Class I, Div. 1, Groups A, B, C, D, Class II, Div. 1, Groups E, F, G, Class III <sup>3)</sup>					3	
						4

<sup>1)</sup> Not available with flanged versions.

<sup>2)</sup> Available with flanged versions only.

<sup>3)</sup> Available with mounting options 0 ... 2 only.

## Ultrasonic transducers / EchoMax XPS

## Selection and ordering data (continued)

Selection and Ordering data	Order code
<b>Further designs</b>	
Please add "-Z" to Article No. and specify Order code(s).	
Stainless steel tag [69 mm x 50 mm (2.71 x 1.97 inch)]	
Tag (device parameters, max. 27 characters), plate, stainless steel 304/1.4301	Y15

Selection and ordering data	Article No.
<b>Operating Instructions</b>	
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<b>Accessories</b>	
Tag, stainless steel with hole, 12 x 45 mm (0.47 x 1.77 inch), one text line for fastening on sensors	7ML1930-1BJ
Submergence shield kit	7ML1830-1BJ
Sunshield	A5E32964662
Universal box bracket, mounting kit	7ML1830-1BK
Channel bracket, wall mount	7ML1830-1BL

Selection and ordering data	Article No.
Extended channel bracket, wall mount	7ML1830-1BM
Channel bracket, floor mount	7ML1830-1BN
Extended channel bracket, floor mount	7ML1830-1BP
Bridge channel bracket, floor mount (see Mounting Brackets catalog page for more information)	7ML1830-1BQ
1" NPT locknut, plastic	7ML1830-1DS
1" BSP locknut, plastic	7ML1830-1DR
1" BSP locknut, flanged, plastic	7ML1830-1DN
Easy Aimer 2, aluminum, NPT with ¾" x 1" PVC coupling	7ML1830-1AQ
Easy Aimer 2, aluminum with M20 adapter and 1" and 1½" BSPT aluminum couplings	7ML1830-1AX
Easy Aimer 304, NPT with 1" stainless steel coupling	7ML1830-1AU
Easy Aimer 304, with M20 adapter and 1" and 1½" BSPT 304 stainless steel couplings	7ML1830-1GN
Plastic adapter 1" BSP - 20 mm	7ML1830-1EA
Plastic adapter 1" NPT	7ML1930-1FX
Plastic adapter 1" NPT/M20	7ML1830-1EF

	Article No.
<b>EchoMax XPS-15F Ultrasonic level transducer</b> Continuous, non-contact, 15 m (49.21 ft) range, for liquids and solids.	7ML117-1- ● ● ● ● 0
Click on the Article No. for the online configuration in the PIA Life Cycle Portal.	
<b>Mounting thread and facing</b>	
1" NPT [(Taper), ASME B1.20.1]	1
<b>Cable length</b>	
5 m (16.40 ft)	B
10 m (32.81 ft)	C
30 m (98.43 ft)	D
50 m (164.04 ft)	E
100 m (328.08 ft)	F
<b>Mounting flange, flush mount</b>	
None	A
6" ASME, 150 lb, flat faced	B
8" ASME, 150 lb, flat faced (Note: Flange bolting patterns and facings dimensionally correspond to the applicable ASME B16.5, or EN 1092-1, or JIS B 2220 standard.)	C
<b>Approvals</b>	
FM Class I, Div. 1, Groups A, B, C, and D, Class II Div. 1, Groups E, F, and G, Class III	1

Selection and Ordering data	Order code
<b>Further designs</b>	
Please add "-Z" to Article No. and specify Order code(s).	
Stainless steel tag [69 mm x 50 mm (2.71 x 1.97 inch)]	
Tag (device parameters, max. 27 characters), plate, stainless steel 304/1.4301	Y15

Selection and ordering data	Article No.
<b>Operating Instructions</b>	
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<b>Accessories</b>	
Tag, stainless steel with hole, 12 x 45 mm (0.47 x 1.77 inch), one text line for fastening on sensors	7ML1930-1BJ
Submergence shield kit	7ML1830-1BJ
Sunshield	A5E32964662
Universal box bracket, mounting kit	7ML1830-1BK
Channel bracket, wall mount	7ML1830-1BL

## Selection and ordering data (continued)

Selection and ordering data	Article No.
Extended channel bracket, wall mount	7ML1830-1BM
Channel bracket, floor mount	7ML1830-1BN
Extended channel bracket, floor mount	7ML1830-1BP
Bridge channel bracket, floor mount (see Mounting Brackets catalog page for more information)	7ML1830-1BQ
1" NPT locknut, plastic	7ML1830-1DS
Easy Aimer 2, aluminum, NPT with ¾" x 1" PVC coupling	7ML1830-1AQ
Easy Aimer 304, NPT with 1" stainless steel coupling	7ML1830-1AU

EchoMax XPS-15C Ultrasonic level transducer Continuous, non-contact, 0.3 m ... 15 m (0.98 ... 49.21 ft) range, for liquids and solids. Includes integral temperature sensor.	Article No.					
	7ML112-4-	●	●	●	●	0
Click on the Article No. for the online configuration in the PIA Life Cycle Portal.						
<b>Mounting thread and facing</b>						
1" NPT [(Taper), ASME B1.20.1]	0					
1" NPT [(Taper), ASME B1.20.1] with foam facing <sup>1)</sup>	1					
1" NPT [(Taper), ASME B1.20.1] with PTFE facing <sup>2)</sup>	2					
<b>Cable length</b>						
5 m (16.40 ft)			B			
10 m (32.81 ft)			C			
30 m (98.43 ft)			E			
50 m (164.04 ft)			F			
100 m (328.08 ft)			K			
<b>Mounting flange</b>						
None				A		
6" ASME, 150 lb, flat faced				D		
8" ASME, 150 lb, flat faced				E		
(Note: Flange bolting patterns and facings dimensionally correspond to the applicable ASME B16.5 standard.)						
<b>Approvals</b>						
CSA Class I, Div. 2					5	

1) Not available with flanged versions.

2) Available only with flanged versions.

Selection and Ordering data	Order code
<b>Further designs</b>	
Please add "-Z" to Article No. and specify Order code(s).	
Stainless steel tag [69 mm x 50 mm (2.71 x 1.97 inch)]	
Tag (device parameters, max. 27 characters), plate, stainless steel 304/1.4301	Y15

Selection and ordering data	Article No.
<b>Operating Instructions</b>	
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<b>Accessories</b>	
Tag, stainless steel with hole, 12 x 45 mm (0.47 x 1.77 inch), one text line for fastening on sensors	7ML1930-1BJ
Submergence shield kit	7ML1830-1BJ

Selection and ordering data	Article No.
Sunshield	A5E32964662
Universal box bracket, mounting kit	7ML1830-1BK
Channel bracket, wall mount	7ML1830-1BL
Extended channel bracket, wall mount	7ML1830-1BM
Channel bracket, floor mount	7ML1830-1BN
Extended channel bracket, floor mount	7ML1830-1BP
Bridge channel bracket, floor mount (see Mounting Brackets catalog page for more information)	7ML1830-1BQ
1" NPT locknut, plastic	7ML1830-1DS
Easy Aimer 2, aluminum, NPT with ¾" x 1" PVC coupling	7ML1830-1AQ
Easy Aimer 304, NPT with 1" stainless steel coupling	7ML1830-1AU
Easy Aimer 2, aluminum with M20 adapter and 1" and 1½" BSPT aluminum couplings	7ML1830-1AX
Easy Aimer 304, with M20 adapter and 1" and 1½" BSPT 304 stainless steel couplings	7ML1830-1GN
1" NPT locknut, plastic	7ML1830-1DS
1" BSP locknut, plastic	7ML1830-1DR

## Ultrasonic transducers / EchoMax XPS

## Selection and ordering data (continued)

	Article No.				
<b>EchoMax XPS-30 Ultrasonic level transducer</b> Continuous, non-contact, 30 m (98.42 ft) range, for liquids and solids.	7ML112-	●	●	●	0
3-					
Click on the Article No. for the online configuration in the PIA Life Cycle Portal.					
<b>Mounting thread and facing</b>					
1½" universal thread	0				
1½" universal thread, foam facing <sup>1)</sup>	1				
1½" universal thread, PTFE facing <sup>2)</sup>	2				
<b>Cable length</b>					
5 m (16.40 ft)			B		
10 m (32.81 ft)			C		
30 m (98.43 ft)			E		
50 m (164.04 ft)			F		
100 m (328.08 ft)			K		
<b>Mounting flange</b>					
None				A	
6" ASME, 150 lb, flat faced				D	
8" ASME, 150 lb, flat faced				E	
DN 150, PN 10/16, Type A, flat faced				J	
DN 200, PN 10, Type A, flat faced				K	
JIS10K 6B				N	
JIS10K 8B				P	
(Note: Flange bolting patterns and facings dimensionally correspond to the applicable ASME B16.5 or EN 1092-1, or JIS B 2220 standard.)					
<b>Approvals</b>					5
ATEX II 1D, 2G Ex mb IIC T4 Gb, ATEX II 1D, 2G Ex tb IIIC T135°C Da, Ta = -40°C to +95°C; UKEX II 1D, 2G Ex mb IIC T4 Gb, UKEX II 1D, 2G Ex tb IIIC T135°C Da, Ta = -40°C to +95°C; IECEX SIR 13.0009X Ex mb IIC T4 Gb, IECEX SIR 13.0009X Ex tb IIIC T135°C Da, Ta = -40°C to +95°C FM Class I, Div. 2, Groups A, B, C, D; FM Class II, Div. 1, Groups E, F, G; FM Class III INMETRO Ex mb IIC T4 Gb, Ex tb IIIC T135°C Db NEPSI Ex mb IIC T4 Gb, EX tD A21 IP6X T135°C EAC Ex CE KCC RCM UKCA					

<sup>1)</sup> Not available with flanged versions.

<sup>2)</sup> Available with flanged versions only.

Selection and Ordering data	Order code
<b>Further designs</b>	
Please add "-Z" to Article No. and specify Order code(s).	
Stainless steel tag [69 mm x 50 mm (2.71 x 1.97 inch)]	
Tag (device parameters, max. 27 characters), plate, stainless steel 304/1.4301	Y15

Selection and ordering data	Article No.
<b>Operating Instructions</b>	
All literature is available to download for free, in a range of languages, at <a href="http://www.siemens.com/processinstrumentation/documentation">http://www.siemens.com/processinstrumentation/documentation</a>	
<b>Accessories</b>	
Tag, stainless steel with hole, 12 x 45 mm (0.47 x 1.77 inch), one text line for fastening on sensors	7ML1930-1BJ
1½" BSPT locknut, plastic	7ML1830-1DP
Easy Aimer 2, aluminum, NPT with 1½" galvanized coupling	7ML1830-1AN
Easy Aimer 304, NPT with 1½" stainless steel coupling	7ML1830-1AT
Easy Aimer 2, aluminum with M20 adapter and 1" and 1½" BSPT aluminum couplings	7ML1830-1AX
Easy Aimer 304, with M20 adapter and 1" and 1½" BSPT 304 stainless steel couplings	7ML1830-1GN
Adapter 1½" BSP	7ML1830-1EB

## Selection and ordering data (continued)

	Article No.					
<b>EchoMax XPS-30C Ultrasonic level transducer</b> Continuous, non-contact, 30 m (98.42 ft) range, for liquids and solids.	7ML115-	●	●	●	●	1
Click on the Article No. for the online configuration in the PIA Life Cycle Portal.						
<b>Mounting thread and facing</b>						
1½" universal thread		0				
1½" universal thread, foam facing <sup>1)</sup>		1				
1½" universal thread, PTFE facing <sup>2)</sup>		2				
<b>Cable length</b>						
5 m (16.40 ft)			B			
10 m (32.81 ft)			C			
30 m (98.43 ft)			E			
50 m (164.04 ft)			F			
100 m (328.08 ft)			K			
<b>Mounting flange</b>						
None				A		
6" ASME, 150 lb, flat faced				D		
8" ASME, 150 lb, flat faced				E		
DN 150, PN 10/16, Type A, flat faced				J		
DN 200, PN 10, Type A, flat faced				K		
JIS10K 6B				N		
JIS10K 8B				P		
(Note: Flange bolting patterns and facings dimensionally correspond to the applicable ASME B16.5 or EN 1092-1, or JIS B 2220 standard.)						
<b>Approvals</b>						
CSA, Class I, Div. 2, Groups A, B, C, D; Class II, Div. 1, Groups E, F, G; Class III						4

<sup>1)</sup> Not available with flanged version.

<sup>2)</sup> Available for flanged versions only.

Selection and Ordering data	Order code
<b>Further designs</b>	
Please add "-Z" to Article No. and specify Order code(s).	
Stainless steel tag [69 mm x 50 mm (2.71 x 1.97 inch)]	
Tag (device parameters, max. 27 characters), plate, stainless steel 304/1.4301	Y15

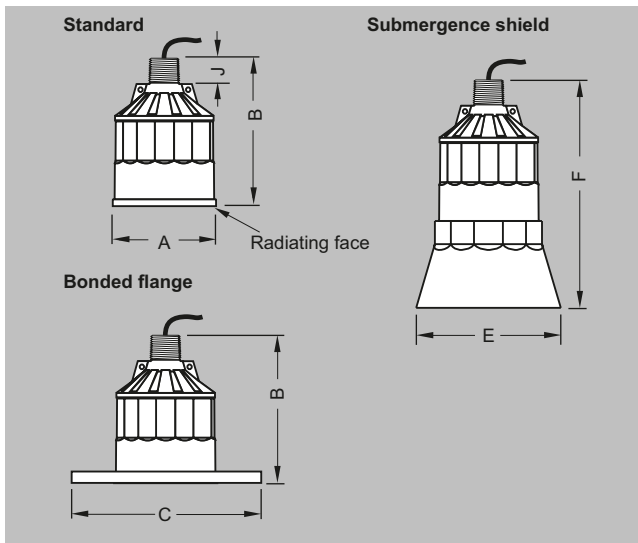
Selection and ordering data	Article No.
<b>Operating Instructions</b>	
All literature is available to download for free, in a range of languages, at <a href="http://www.siemens.com/processinstrumentation/documentation">http://www.siemens.com/processinstrumentation/documentation</a>	
<b>Accessories</b>	
Easy Aimer 2, aluminum, NPT with 1½" galvanized coupling	7ML1830-1AN
Easy Aimer 304, NPT with 1½" stainless steel coupling	7ML1830-1AT
1½" BSPT locknut, plastic	7ML1830-1DP
Adapter 1½" BSP	7ML1830-1EB

## Ultrasonic transducers / EchoMax XPS

## Technical specifications

Input	XPS-10/XPS-10C	XPS-15/XPS-15C/XPS-15F	XPS-30/XPS-30C
Measuring range <sup>1)</sup>	0.3 ... 10 m (1 ... 33 ft)	<u>Standard:</u> 0.3 ... 15 m (1 ... 50 ft) <u>XPS-15F:</u> 0.45 ... 15 m (1.5 ... 50 ft)	0.6 ... 30 m (2 ... 100 ft)
<b>Output</b>			
Frequency	44 kHz	44 kHz	30 kHz
Beam angle	12°	6°	6°
<b>Environmental</b>			
Location	Indoors/outdoors	Indoors/outdoors	Indoors/outdoors
Ambient temperature	-40 ... +95 °C (-40 ... +203 °F)	-40 ... +95 °C (-40 ... +203 °F) <u>XPS-15F:</u> -20 ... +95 °C (-4 ... +203 °F)	-40 ... +95 °C (-40 ... +203 °F)
Storage temperature	-40 ... +95 °C (-40 ... +203 °F)	-40 ... +95 °C (-40 ... +203 °F) <u>XPS-15F:</u> -20 ... +95 °C (-4 ... +203 °F)	-40 ... +95 °C (-40 ... +203 °F)
Pollution degree	4	4	4
Pressure	8 bar g (120 psi g) <u>Flanged:</u> 0.5 bar g (7.25 psi g)	8 bar g (120 psi g) <u>Flanged:</u> 0.5 bar g (7.25 psi g)	0.5 bar g (7.25 psi g) <u>Flanged:</u> 0.5 bar g (7.25 psi g)
<b>Design</b>			
Weight	0.8 kg (1.8 lb)	1.3 kg (2.8 lb) <u>Flanged:</u> 2 kg (4.4 lb)	4.3 kg (9.5 lb)
Power supply	Operation of transducer only with approved Siemens controllers	Operation of transducer only with approved Siemens controllers	Operation of transducer only with approved Siemens controllers
Material	<u>Standard:</u> PVDF <u>Flanged:</u> PVDF with CPVC flange <u>Option:</u> PTFE face with CPVC flange	<u>Standard:</u> PVDF <u>Flanged:</u> PVDF with CPVC flange <u>Option:</u> PTFE face with CPVC flange	<u>Standard:</u> PVDF <u>Flanged:</u> PVDF with CPVC flange <u>Option:</u> PTFE face with CPVC flange
Color	Blue	Blue <u>XPS-15F:</u> Gray	Blue
Process connection	1" NPT or 1" BSPT	1" NPT or 1" BSPT <u>XPS-15F:</u> 1" NPT	1.5" universal thread (NPT or BSPT)
Degree of protection	IP66/68	IP66/68	IP66/68
Cable	2-wire twisted pair/braided and foil shielded 0.5 mm <sup>2</sup> (20 AWG) PVC jacket	2-wire twisted pair/braided and foil shielded 0.5 mm <sup>2</sup> (20 AWG) PVC jacket	2-wire twisted pair/braided and foil shielded 0.5 mm <sup>2</sup> (20 AWG) PVC jacket
Separation	Max. 365 m (1 200 ft)	Max. 365 m (1 200 ft)	Max. 365 m (1 200 ft)
<b>Certificates and approvals</b>	<u>Standard:</u> CE, UKCA, CSA, FM, ATEX, UKEX, IEC Ex, NEPSI, CRN, VLAREM II, RoHS, China RoHS, WEEE, REACH, NSF/ANSI/CAN 61-2022, FDA (wetted sensor), Environmental Product Declaration (EPD), Kazakhstan Metrology <u>XPS-10C:</u> CSA, CRN, VLAREM II, RoHS, China RoHS, WEEE, REACH, NSF/ANSI/CAN 61-2022, FDA (wetted sensor), Environmental Product Declaration (EPD), Kazakhstan Metrology	<u>Standard:</u> CE, UKCA, CSA, FM, ATEX, UKEX, IEC Ex, NEPSI, CRN, VLAREM II, RoHS, China RoHS, WEEE, REACH, NSF/ANSI/CAN 61-2022, FDA (wetted sensor), Environmental Product Declaration (EPD), Kazakhstan Metrology <u>XPS-15C:</u> CSA, CRN, VLAREM II, RoHS, China RoHS, WEEE, REACH, NSF/ANSI/CAN 61-2022, FDA (wetted sensor), Environmental Product Declaration (EPD), Kazakhstan Metrology <u>XPS-15F:</u> FM Class I, Div. 1, Groups A, B, C, and D, Class II Div. 1, Groups E, F, and G, Class III, CRN, VLAREM II, RoHS, China RoHS, WEEE, REACH, NSF/ANSI/CAN 61-2022, FDA (wetted sensor), Environmental Product Declaration (EPD), Kazakhstan Metrology	<u>Standard:</u> CE, UKCA, CSA, FM, ATEX, UKEX, IEC Ex, NEPSI, VLAREM II, RoHS, China RoHS, WEEE, REACH, NSF/ANSI/CAN 61-2022, FDA (wetted sensor), Environmental Product Declaration (EPD), Kazakhstan Metrology <u>XPS-30C:</u> CSA, CRN, VLAREM II, RoHS, China RoHS, WEEE, REACH, NSF/ANSI/CAN 61-2022, FDA (wetted sensor), Environmental Product Declaration (EPD), Kazakhstan Metrology
<b>Production and development certification</b>	<ul style="list-style-type: none"> <li>• ISO 9001</li> <li>• ISO 14001</li> <li>• ISO 18001</li> <li>• ISO 45001</li> <li>• IEC 62443-4-1</li> <li>• EN ISO/IEC 80079-34</li> <li>• PED 2014/68/EU</li> </ul>	<ul style="list-style-type: none"> <li>• ISO 9001</li> <li>• ISO 14001</li> <li>• ISO 18001</li> <li>• ISO 45001</li> <li>• IEC 62443-4-1</li> <li>• EN ISO/IEC 80079-34</li> <li>• PED 2014/68/EU</li> </ul>	<ul style="list-style-type: none"> <li>• ISO 9001</li> <li>• ISO 14001</li> <li>• ISO 18001</li> <li>• ISO 45001</li> <li>• IEC 62443-4-1</li> <li>• EN ISO/IEC 80079-34</li> <li>• PED 2014/68/EU</li> </ul>

## Dimensional drawings

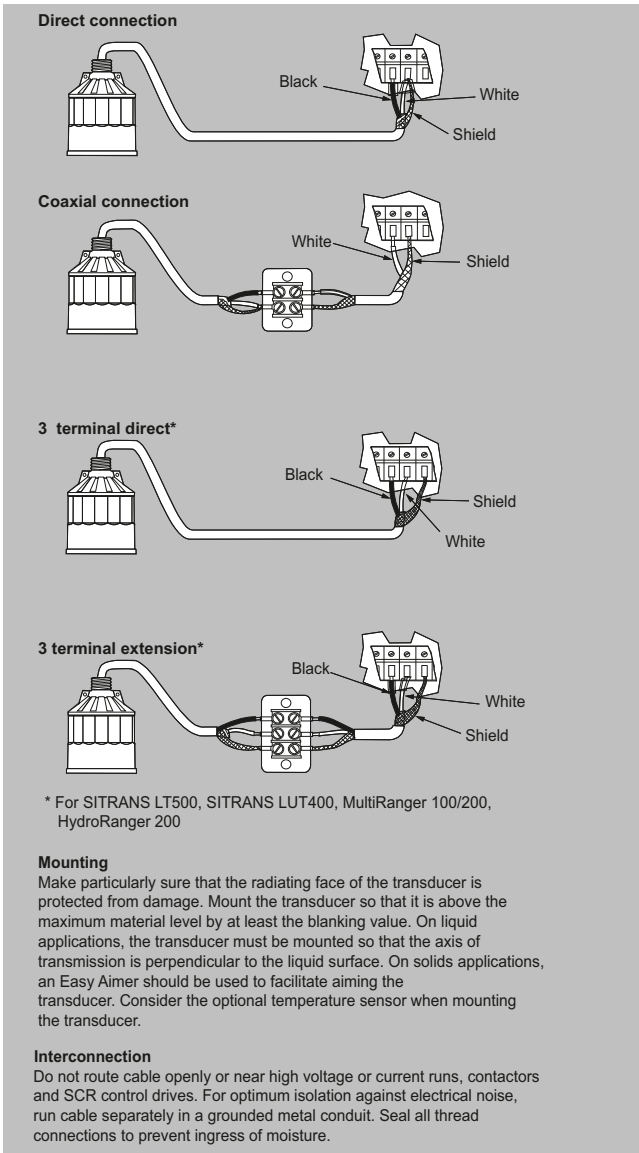


XPS ultrasonic transducer

Version	XPS-10	XPS-15	XPS-30
<b>Dimension</b>			
<b>A</b>	88 mm (3.464 inch)	121 mm (4.764 inch)	175 mm (6.890 inch)
<b>B</b>	122 mm (4.803 inch)	132 mm (5.197 inch)	198 mm (7.795 inch)
<b>C</b>	According to ASME, DIN, and JIS	According to ASME, DIN, and JIS	According to ASME, DIN, and JIS
<b>E</b>	124 mm (4.882 inch)	158 mm (6.220 inch)	n/a
<b>F</b>	152 mm (5.984 inch)	198 mm (7.795 inch)	n/a
<b>J</b>	28 mm (1.1 inch)	28 mm (1.1 inch)	28 mm (1.1 inch)

## Ultrasonic transducers / EchoMax XPS

## Circuit diagrams



XPS ultrasonic transducer connections