Small Size – Alloys

ORDER IT!
Ordering is Easy! See Page C-11.
Easy online ordering too!

XM/XT-800 Series – Compact Analog Sensors

- Stainless or Brass Construction
- 1/4″ Resolution
- Lengths to 144 inches (366 cm)
- OEM Configurations Available

These compact transmitters feature the rugged durability of stainless steel or brass construction. The XM-800 series provides analog output, and can be combined with GEMS Digital Meter Receiver Stations and compact Level Cubes described in this catalog. Our versatile XT-800 Series adds a choice of signal conditioning for use with GEMS digital bargraph receivers or other digital display and control equipment.

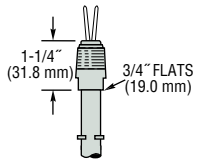
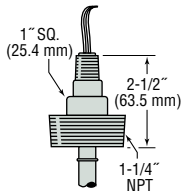
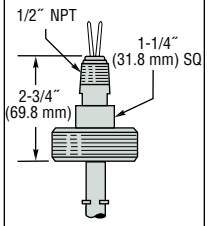
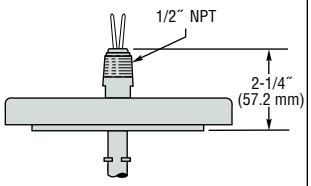
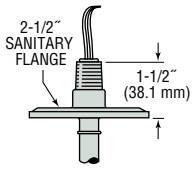
Approvals

XM-800 and XT-800 Series transmitters may carry the following commercial approvals:

FM Approved, Explosion-Proof (J-Box and Stainless Steel Float required).
UL-Recognized.

XM-800 Series transmitters only:
CSA Certified

1. Mounting Types

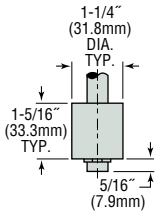
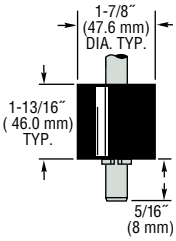
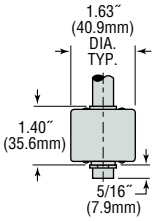
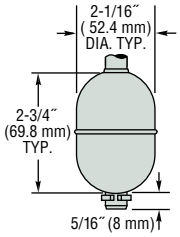
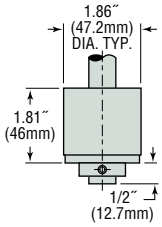
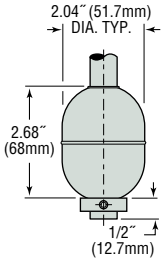
Type 1 1/2″ NPT	Type 2 1-1/4″ NPT	Type 3 2″ NPT	Type 4 3″ 150# Flange	Type 6 2-1/2″ Sanitary Flange
				

Stem Material	Brass or 316 Stainless Steel	316 Stainless Steel	
Mounting Material	Brass or 316 Stainless Steel	Carbon Steel or 316 Stainless Steel	316 Stainless Steel
Float Stop Material	Brass Units: Beryllium Copper Grip Rings; Stainless Steel Units: S.S. ARMCO PH-15-7MO Grip Rings		
Operating Temperature* With J. Box Mounted or XM Signal Conditioners	Oil: -40°F to +230°F (-40°C to 110°C), Water to +180°F (82.2°C)—Buna N Float -40°F to +230°F (-40°C to 110°C)—Stainless Steel Float		
With Stem Mounted Signal Conditioners	+5°F to +160°F (-15°C to +70°C)		
Operating Pressure	Dependent on Float Type; See Next Page		
Overall Length, Max.	72″(183 cm) Tubing; 144″(366 cm) Pipe (Types 3 & 4 only)		

* Consult factory for higher temperature ranges.

2. Float Types

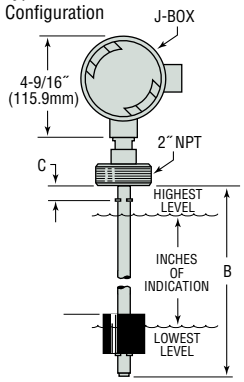
Based on the overall length required by your tank, select from two main subsets of floats below; further refine selection based on material and performance parameters.

	For Overall Lengths To 72″				For Lengths Greater Than 72″ (144″ Max.)	
Float Material	**Buna N**		**Stainless Steel**		**Buna N**	**Stainless Steel**
Float Dimensions						
Compatible Mountings	1, 2, 3, 4, 6	1, 3, 4	1, 3, 4, 6	1, 3, 4	3, 4	3, 4
Part Number	**164255**[2]	**43359**	**156490**	**43590**	**69654**	**52084**
Min. Liquid Spec. Gravity	.55	.55	.70	.75	.55	.75
Operating Pressure, Max.[1]	150 psi (10 bar)	150 psi (10 bar)	80 psi (6 bar)	300 psi (21 bar)	150 psi (10 bar)	300 psi (21 bar)
Operating Temp., Max.	Water: 180°F (82°C) Oil: 230°F (110°C)		230°F (110°C)[3]		Water: 180°F (82°C) Oil: 230°F (110°C)	230°F (110°C)*

Notes:
1. @ Ambient Temperature
2. Recommended for Type 2 mounting only.
3. Consult factory for higher temperature range.

3. To Determine Dimensions

Typical Configuration



B: Overall Length = Inches of Indication + C + X (See Table at Right)

C: Distance From Bottom of Mounting to Float Stop (Customer Specified):
- 1/4″ (6.4mm) Minimum
- 1-1/4″ (31.8mm) Minimum on Type 1, XT Series only.

Calculating Length

To find Overall Length when Inches or Indication is known:
- Inches of Indication + C* + X = Overall Length

To find Maximum Inches of Indication when Overall Length is known:
- Overall Length - C* - X = Maximum Inches of Indication

*C dimension is determined by customer.

Float Factor – X

Float Part Number	X
164255	2.0″ (50.8)
43359	2.5″ (63.5)
156490	2.062″ (52.4)
43590	3.437″ (87.3)
69654	2.687″ (68.3)
52084	3.625″ (92.1)

Inch (mm)

4. Input/Output

For XM-800 Series, no special output designation is necessary.
For XT-800 Series, specify the desired signal conditioning by Part Number.
Additional information about GEMS signal conditioning modules is found on Page C-26.

Series	Input Voltage	Output Signal	Part Number	Electrical Termination	Compatible Mountings				
					Type 1	Type 2	Type 3	Type 4	Type 6
XM-800	10 to 30 VDC	Proportional Voltage	—	Lead Wires (3), #22 AWG, 24″ (60.9 cm), PTFE Jacket	•	•	•	•	•
XT-800	8 to 24 VDC*	0-5 VDC	**51965**	Lead Wires, #22 AWG, 24″ (60.9 cm), PTFE Jacket	•	•	•	•	•
	14 to 30 VDC*	0-12 VDC	**51970**		•	•	•	•	•
	8 to 24 VDC*	0-5 VDC	**52536**	Junction Box		•	•	•	•
	15 to 30 VDC*	0-12 VDC	**52537**			•	•	•	•
	10 to 40 VDC	4-20 mA	**52555**			•	•	•	•
		4-20 mA	**112300** ⚡	Panel Mount with Plug-in Base	•	•	•	•	•
	7 to 24 VDC*	4-20 mA	**239896**	Lead Wires (2), #22 AWG, 24″ (60.9 cm), PTFE Jacket	•	•	•	•	•

* Stem mounted.
⚡ = Stock item

☑ Product Check List

FAX IT!
860-747-4244

Photocopy This Form
Use one form for each product type you are selecting.
This form may also be completed online at gemssensors.com for RFQ.

This is a ☐ Request for a Quote
☐ Order P.O.# _____

Quantity Needed _____

Date Required ____/____/____

Shipping Method:_____

Partials Accepted: ☐ Yes
☐ No

Name _____

Company _____

Street _____

City_____ State ____ Zip_____

Phone (_____) _____

Fax (_____) _____

Float Type Level Transmitters – XM/XT-800 Series

Application Environmental Conditions

This information is essential to the accurate and proper operation of your GEMS configurable sensors. Please complete fully and accurately.

1. Liquid Media: _____

2. Pressure: Minimum _____ psig Maximum _____ psig

3. Temperature: Minimum _____ °F Maximum _____°F

4. Specific Gravity: Minimum _____ Maximum _____

5. Viscosity: _____ SSU

6. Tank Material: _____

Tank Depth: _____

7. Unit is Mounted In: ☐ Tank Top ☐ Tank Bottom

8. Moisture Protection Required? ☐ Yes ☐ No

1. Series:

☐ XM/XT-800 (1/4˝ Resolution)

2. Mounting Type:

☐ Type 1 (1/2˝ NPT) ☐ Type 2 (1-1/4˝ NPT) ☐ Type 3 (2˝ NPT)
☐ Type 4 (3˝ 150# flange) ☐ Type 6 (2-1/2˝ sanitary flange)

3. Materials:

a. Stem:
☐ Brass[1] ☐ 316 Stainless Steel

b. Mounting:
☐ Brass[1] ☐ 316 Stainless Steel
☐ Carbon Steel (Type 4 flange only)

c. Collar Float Stops[2]:
☐ Brass ☐ 316 Stainless Steel

Notes:
1. Type 1, Type 2 and Type 3 only
2. Standard Float Stops supplied in PH 15-7 MO on S.S. units and Beryllium Copper on Brass units. Brass and S.S. Float Stops with Brass and S.S. units only, respectively.

4. Float Type[1]:

Match to Overall Length of Transmitter Stem

To 72 Inches	Over 72 Inches
☐ 164255 – Buna N[2]	☐ 69654 – Buna N
☐ 43359 – Buna N	☐ 52084 – Stainless Steel
☐ 156490 – Stainless Steel	
☐ 43590 – Stainless Steel	

Notes:
1. Stainless Steel float required for FM Approved Explosion Proof units.
2. Recommended for Type 2 mounting.

5. Dimensions:

Overall Length (complete one line only):

Float Selected	Indicating Length (Half Inches)	+	"C" Dimension ±1/16˝ (1.8 mm)	+	Float Factor X Inch (mm)	=	Overall Length
43359		+		+	2.5 (63.5)	=	
43590		+		+	3.44 (87.3)	=	
52084		+		+	3.63 (92.1)	=	
69654		+		+	2.69 (68.3)	=	
156490		+		+	2.06 (52.3)	=	
164255		+		+	2 (50.8)	=	

Notes:
1. Indicating Length: 1/2˝ increments
2. Minimum C Dimension = 1/4˝; or 1/2˝ on units greater than 72˝ in length.

6. Input/Output:

a. Optional 24 VDC Power Supply:
☐ 115 VAC input ☐ 230 VAC input

b. Signal Conditioners (XT-800 Series Only)
Output Shown in Parenthesis:
☐ 51965 (0-5 VDC – stem)
☐ 51970 (0-12 VDC – stem)
☐ 52536 (0-5 VDC – J-box)
☐ 52537 (0-12 VDC – J-box)
☐ 52555 (4-20 mA – J-box)
☐ 120650 (0-5 VDC – panel mount)
☐ 149600 (0-10 VDC – panel mount)
☐ 112300 (4-20 mA – panel mount)
☐ 239896 (4-20 mA – stem)

7. Options:

☐ Explosion Proof J-Box* ☐ NEMA 4 J-Box

* Required for FM Approved Explosion Proof units

Please contact Gems for any configuration or special requirements not covered on this form. **800-378-1600**

Quote: $ _____ Date Quoted:____/____/____

Gems™ Sensors & Controls

ORDER IT!