

# MAG-TRANS®

## PREMIER LEVEL TRANSMITTER

- » **Standardized Dual Compartment**
- » **Stainless Steel Enclosure Option**
- » **Two Wire: Loop Powered**
  - » 10-30 Vdc (24 Vdc Nominal)
- » **Graphic Display:**
  - » Inch-Metric-Percent
  - » Scroll-Tile
- » **HART – Protocol**
- » **PACTware**
- » **Local Programming**
- » **Repeatable**
- » **Reliable**
- » **Variable Range**
- » **Choice of Material:**
  - » Alloy
  - » Plastic
- » **Process Temperatures: -50°F to +800°F**
- » **Process Pressures: Vacuum to 2000 PSIG**
- » **Class 1, DIV 1, GRP B, C, D**



**ISO 9001 Certified**  
**Certificate Number: 1410004**

# THE MAG-TRANS® 2523 SERIES LEVEL TRANSMITTER

## DESCRIPTION

The MAG-TRANS® 2523 Series Level Transmitter is the next generation in Magnetostrictive Level Sensing Technology. It contains a dual compartment enclosure attached to the piezomagnetic wave guide sensor. The output is reliable, repeatable, fast and accurate.

## MOUNTING CONFIGURATION

**MT2523:** Non-Invasive MAG-TRANS® Transmitter attached directly to the MAG-GAGE®/Byass Chamber, with a variety of mounting options.

**IT2523:** Direct insertion into Tank/Vessel, or Bypass Chamber.

## STANDARD FEATURES

- » Dual Compartment Enclosure
- » Epoxy Coated: Copper Free Aluminum, optional ALL-316SS
- » Two Wire, Loop Powered 10-30 Vdc (24 Vdc Nominal)
- » Graphic Display: Inch, Metric, Percent, Scroll or Tile
- » HART-Protocol Field Communication
- » Local Programming Quick and Easy Setup
- » Top, Bottom, Left, or Right Mounting positions with optional Remote mounting



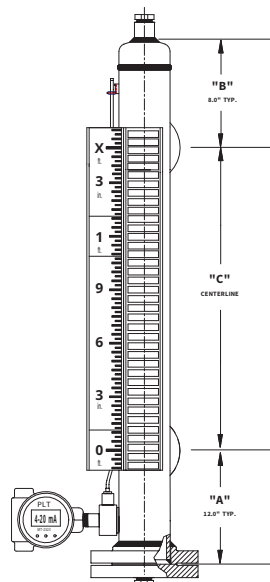
## SPECIFICATIONS

|                           |                             |                     |                            |
|---------------------------|-----------------------------|---------------------|----------------------------|
| Accuracy                  | +/- 0.015                   | Input               | 10-30 Vdc (24 Vdc Nominal) |
| Repeatability             | .001% Full Span             | Output              | 4-20mA, HART               |
| Linearity                 | .020% Full Span             | Software            | HART/PACTware              |
| Refresh Rate              | 25x per second              | Display             | LCD – Graphic              |
| Damping                   | 1.0-25.0 Seconds            | Process Pressure    | 2000 PSIG                  |
| Electrical Classification | Class 1, Div 1, Grp B, C, D | Process Temperature | 800°F                      |
|                           |                             | Ambient Temperature | -25°F to 175°F             |



# INSTALLATION OPTIONS

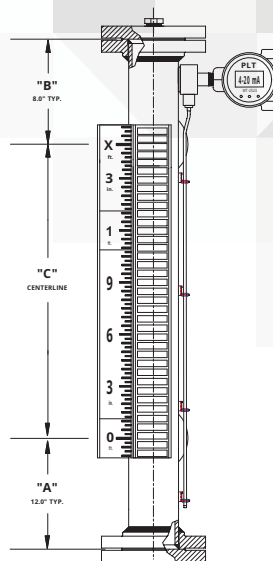
## EXTERNAL Non-Invasive



BML



TML



TMR

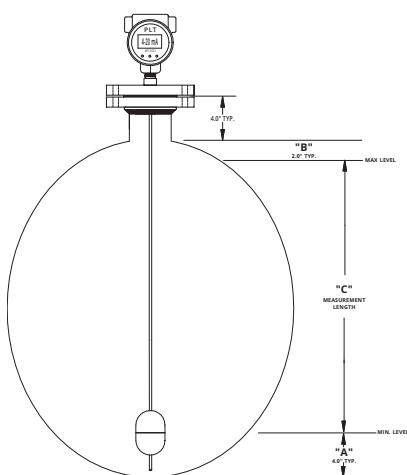


BMR

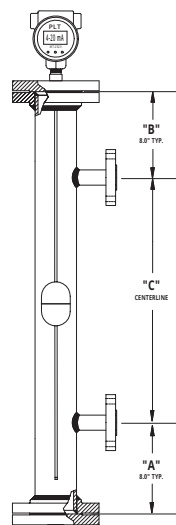
Left Mounting Position

Right Mounting Position

## INTERNAL Direct Insertion



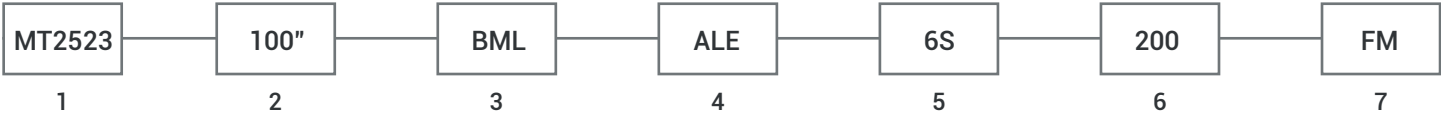
Tank/Vessel



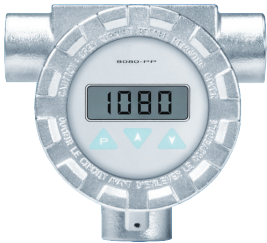
Bypass Chamber (Internal)

# MT2523 EXTERNAL MOUNTING NON-INVASIVE MAG-TRANS® / MAG-GAGE® ORDERING GUIDE

## Order Information Example



|   |   |   |   |
|---|---|---|---|
| <div>1</div> <div>Model</div> <div>MT2523</div>                           | <div>2</div> <div>Length</div> <div>0" to 360"</div>                  | <div>3</div> <div>Mounting Location</div> <div>                     BML: Bottom Left<br/>                     TML: Top Left<br/>                     BMR: Bottom Right<br/>                     TMR: Top Right                 </div>   | <div>4</div> <div>Dual Compartment Housing Material</div> <div>                     ALE: Epoxy Coated Aluminum<br/>                     SSE: All 316 Stainless Steel                 </div> |
| <div>5</div> <div>Probe Material</div> <div>6S: 316 Stainless Steel</div> | <div>6</div> <div>Process Temperature</div> <div>-50°F to 800°F</div> | <div>7</div> <div>Options</div> <div>                     HT: High Temp<br/>                     RD: Remote Display<br/>                     FM: FM Approved<br/>                     FRD: Field Mounted Loop Powered Indicator<br/>                     FRDS: All Stainless Steel FRD                 </div> |   |



**FRD:** Field Mounted, Loop Powered Indicator – Can be externally mounted anywhere within power loop. Epoxy Coated Aluminum or 316 SS Class1, Div1, Group B, C, D

All 316 Stainless Steel

**FRDS:**



# IT2523 INTERNAL MOUNTING MAG-TRANS® IN-TANK/BYPASS CHAMBER ORDERING GUIDE

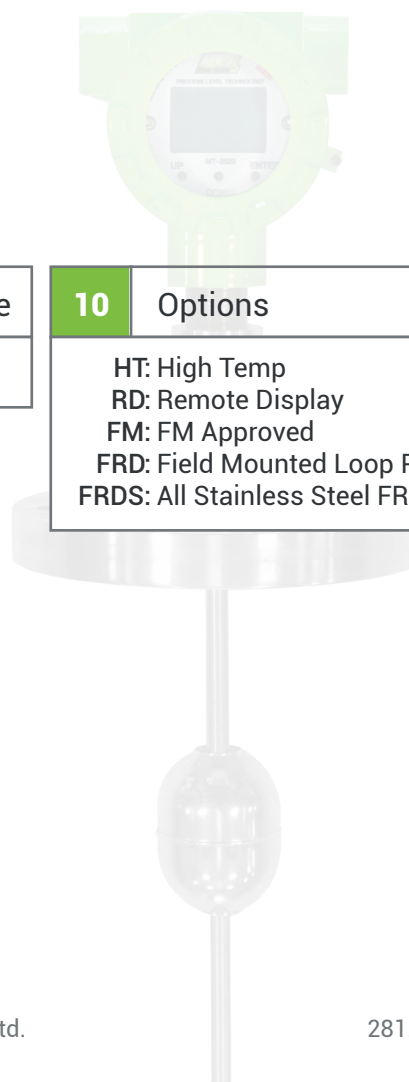
## Order Information Example

|        |      |    |     |    |         |     |     |     |    |
|--------|------|----|-----|----|---------|-----|-----|-----|----|
| IT2523 | 100" | TM | ALE | 6S | 2.0/150 | 1.0 | 150 | 200 | FM |
| 1      | 2    | 3  | 4   | 5  | 6       | 7   | 8   | 9   | 10 |

|                |                 |                            |  |
|----------------|-----------------|----------------------------|--|
| <b>1</b> Model | <b>2</b> Length | <b>3</b> Mounting Location | <b>4</b> Dual Compartment Housing Material                 |
| IT2523         | 0" to 240"      | TM: Top Mount              | ALE: Epoxy Coated Aluminum<br>SSE: ALL 316 Stainless Steel |

|   |   |                           |
|---|---|---------------------------|
| <b>5</b> Probe Material   | <b>6</b> Instrument Connection          | <b>7</b> Specific Gravity |
| 6S: 316 Stainless Steel<br>4S: 304 Stainless Steel<br>A2: Alloy 20<br>HC: Hastelloy<br>MO: Monel<br>AL: Aluminum<br>TT: Titanium<br>CP: CPVC<br>KY: PVDF/KYNAR<br>PM: Specify Other | Ex: 2.0/150 RF<br>Specify Size / Rating | 0.30 to 2.0               |

|                           |                              |  |
|---------------------------|------------------------------|--|
| <b>8</b> Process Pressure | <b>9</b> Process Temperature | <b>10</b> Options  |
| VAC to 2000 PSIG          | -50°F to 300°F               | HT: High Temp<br>RD: Remote Display<br>FM: FM Approved<br>FRD: Field Mounted Loop Powered Indicator<br>FRDS: All Stainless Steel FRD |



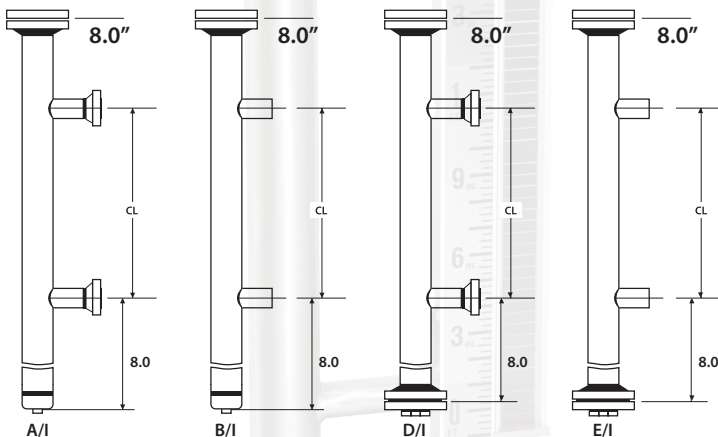
# ORDERING GUIDE FOR BYPASS CHAMBERS

## Bypass Order Information Example

|    |    |     |    |      |    |       |     |    |     |    |
|----|----|-----|----|------|----|-------|-----|----|-----|----|
| BP | 6S | A/I | 3" | 150# | WN | 2"/40 | 100 | 75 | 48" | X  |
| 1  | 2  | 3   | 4  | 5    | 6  | 7     | 8   | 9  | 10  | 11 |

|   |   |  |   |
|---|---|--|---|
| <b>1</b> Model<br>BP: Bypass Chamber                                      | <b>2</b> Materials<br>6S: 316 S.S.<br>4S: 304 S.S.<br>HC: Hastelloy<br>M4: Monel 400<br>A20: Alloy 20<br>CP: CPVC<br>PVDF: KYNAR<br>CM: Other   | <b>3</b> Mounting Style<br>Specify Style | <b>4</b> Side Connections<br>½" to 4"   |
| <b>5</b> Flange Rating<br>150# to 2500#                                   | <b>6</b> Process Connection<br>LJ: Lap Joint with Stub End<br>SO: Raised Face Slip-On Flanges<br>WN: Raised Face Weld Neck Flanges<br>RJ: Ring Joint Flanges<br>FC: FNPT<br>MC: MNPT<br>SW: Socket-Weld |  |   |
| <b>7</b> Pipe Size & Schedule<br>Size: 2" to 4"<br>Sched: 10, 40, 80, 160 | <b>8</b> Pressure<br>Unit in PSIG   | <b>9</b> Temperature<br>Unit in °F       | <b>10</b> CL Dimension<br>Measuring Length  |
|   |   |  | <b>11</b> Options<br>ST: Steam Tracing<br>HT: Heat Tracing<br>IB: Insulation Blanket<br>CI: Cryogenic Insulation<br>N: Nace<br>CRN: Canadian Registration<br>X: Special Options (Specify) |

### Customer Specified Mounting Styles



### Standards

- All flanges, fittings and Pipe meet ASME/ANSI standards
- Fabricated/Welded to B31.1/B31.3 Code



# MAG-TRANS® TOTAL LEVEL CONTROL

## Why have excessive connections on your vessel for multiple methods of level control?

With the Mag-Gage in combination of the Mag-Trans and MGS-200EX switches, you can have:

- An easy to read and repeatable physical indication
- An accurate and user friendly 4-20mA transmitter
- Point level switches for alarms or pumps

All off of just TWO process connections!



## MAG-GAGE® with MAG-TRANS®

## Dual Chamber with MAG-TRANS®





### INQUIRIES

Upon product inquiry, a thorough analysis of the customer's application and product specifications is performed. Promptly after the initial inquiry, PLT issues a quotation in complete compliance with the application/specifications previously submitted.

### DELIVERIES

After purchase date, a standard shipping term between 2-4 weeks will be issued with all standard orders. Requests for a faster delivery or immediate (24 hour) delivery can be accommodated. Any delivery requirements are to be given with initial inquiry in order to ensure on time delivery.



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