

# Instrumentation Product Guide

define  
design

deliver

# Table of Contents

## New Hayward “Plug & Play” Instrumentation Products and Solutions

...easy to install, highly accurate ways to measure and regulate your process system performance

For more than 50 years, Hayward Flow Control's thermoplastic fluid handling products and solutions have proven to excel in the harshest environments. Thousands of customers worldwide have installed our valves and actuators, filters, strainers and pump products into aggressive and corrosive systems, as well as delicate life support systems where the strictest chemical balance is required. We understand the rigorous demands of industrial piping, and are committed to offering advantageous products for your application that will keep your process systems working when they have to.

Hayward Flow Control now offers a full range of innovative and corrosion resistant Instrumentation solutions for your process system's needs. This new category from Hayward includes flow meters, level sensors, pressure gauges and other flow solutions to measure and regulate your system's performance in the harsh environments that our products serve. Additionally, our new flow meters, level sensors and gauges complement our industry-leading range of thermoplastic valves, actuators, strainers, filters and bulkhead fittings, and tank accessories, pumps, and the applications they service. A complete package of solutions to make your piping systems run smoothly.

Instrumentation Products and Solutions from Hayward Flow Control carry our industry-leading, full two-year warranty. As an ISO9001 certified company, we strive for the highest quality possible for use in a wide range of demanding applications.

### INSTRUMENTATION

TF SERIES Multi-Function True Union Paddlewheel Flow Meter .....	1
TFD SERIES Flow Meter/Totalizer + Visual Alert Alarm .....	3
TFT SERIES Insertion Paddle Wheel Flow Meter with Transmitter .....	5
TLD SERIES Submersible PVC Level Pressure Sensor .....	7
TLS SERIES Industrial Level Pressure Transmitter .....	9
TLH SERIES High Performance Level Pressure Transmitter .....	11
TLF SERIES Submersible Level Junction Box .....	13
VSA SERIES Industrial Visual/Audible Sentry Alarm System .....	14
TLC SERIES Level Process Display .....	15
TLM SERIES Industrial Level Controller .....	17
TLV SERIES Flow Display, Batch Totalizer .....	19
GDS SERIES Double Sided All Thermoplastic Liquid Filled Pressure Gauge & Isolator .....	21
GD SERIES Digital LED Pressure Alarm .....	23
GA SERIES Pressure Gauge & Isolator .....	25
GLD SERIES LED/LCD Pressure Gauge & Isolator .....	27
GP SERIES Pressure Gauge & Isolator .....	29
Recommended Product Applications .....	33
Additional Hayward Flow Control and Pressure Regulating Products .....	33



## TF SERIES

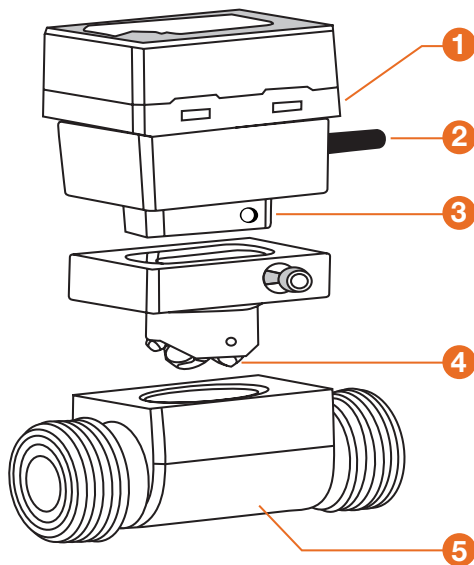
### MULTI-FUNCTION TRUE UNION PADDLEWHEEL FLOW METER

The TF Series Paddlewheel Flow Meter provides High Accuracy economically while ideal for thermoplastic piping systems. The TF Series consists of a rugged true union industrial design that is suitable for corrosive applications while providing a 1 amp selectable output relay that can be used as an alarm for high or low flow rate conditions.

#### KEY FEATURES & BENEFITS

- Perfect for Pump and Filter Protection
- True Union Design 1/2" – 2" (Flanged 3" – 4")
- High Accuracy– Less than  $\pm 1.0\%$  of Full Scale
- Unit of Flow Measurement is Selectable (Liter/Gallon/Kilo-liter)
- Corrosion Resistant Materials–PVC and Polypropylene
- Economical Visual Indication
- Easy Installation – No Mounting Kits
- High Flow Range 0.33 ft/s – 32.8 ft / 0.3 m/s – 10 m/s
- Easy to Program
- Large Bright LED Digital Display
- Horizontal or Vertical Installation
- Low Pressure Drop
- 4-20 mA and 0-5 VDC Pulse Output Signal
- NEMA 4X/IP65 Enclosure
- Password Protected Security

#### EXPLODED VIEW



#### SPECIFICATIONS

Fluid	Water or Chemicals Liquid – Viscosity Range: 5-20 centistokes
Accuracy	$\pm 1.0\%$ of F.S. @ 20°C (68°F) – Repeatability $\pm 0.5\%$ of Full Scale
Max Flow Velocity	32.8 ft/s max – (10 m/s max) (8 ft/s max. recommended for plastic piping systems)
Min Flow Velocity	0.33 ft/s min – (0.3 m/s min.)
Pressure Rating	150 psi / 10 Bar at 70°F / 23°C Non-Shock
Turndown	100:1
Response Time	Real Time
Material of Construction	Paddle: Tefzel / Body: PVC or PP Shaft: Zirconium Ceramic Seals: EPDM/FPM
Operating Temperature	PVC < 140°F (60°C) PP < 176°F (80°C)
Electronics	-13°F / -25°C to 122°F / +50°C
Protection Class	NEMA 4X
Approvals & Listings	CSA Listed, CE Approval and RoHS Compliant
Min Flow	1/2 to 1 GPM, 3/4 to 1-2/5 GPM, 1 to 2-1/2 GPM, 1-1/2 to 6-1/2 GPM, 2 to 10-1/2 GPM

# TF Series

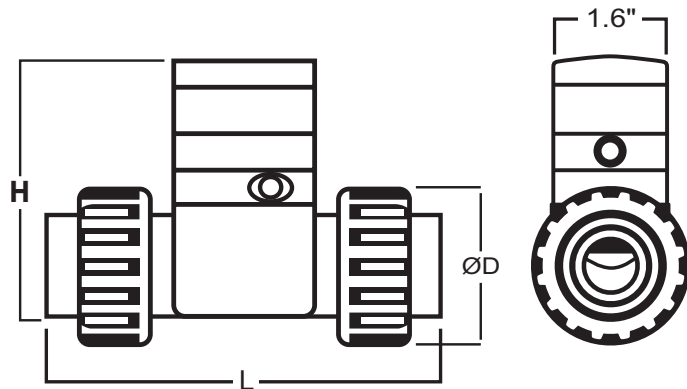
## MULTI-FUNCTION TRUE UNION PADDLEWHEEL FLOW METER

### TF SERIES PARTS LIST

1. Flow Controller
2. Lead Wire
3. Hall Sensor
4. Paddlewheel - Tefzel
5. Body, End Connection & Unions - PVC or PP

### TF SERIES MODELS:

TFM = Paddlewheel Flow Meter with Transmitter  
 TFP = Paddlewheel Flow Meter & Flow Totalizer  
 TFS = Paddlewheel Flow Meter & Relay Output



### DIMENSIONS

Pipe Size	H		L		D	
	TFM/TFP		All Models			
	in	mm	in	mm	in	mm
1/2"	3.74	95	5.51	140	1.61	41
3/4"	3.82	97	5.91	150	2.09	53
1"	3.95	100.3	6.30	160	2.36	60
1-1/2"	4.67	119	7.28	185	3.27	83
2"	5.21	132	7.75	197	4.33	110

### FLOW DATA FOR SCHEDULE 80 PIPE SIZE

(O.D.)	Flow Rate (LPM) / USGPM	
	0.3 m/s min. (1 ft/s)	10 m/s max. (32.8 ft/s*)
1/2"	3.5/0.92	120.0/31.7
3/4"	5.0/1.32	170.0/44.9
1"	9.0/2.4	300.0/79.2
1-1/2"	25.0/6.6	850.0/224.4
2"	40.0/10.6	1350.0/356.4

\*Max. recommended velocity in thermoplastic piping is 8 ft/s

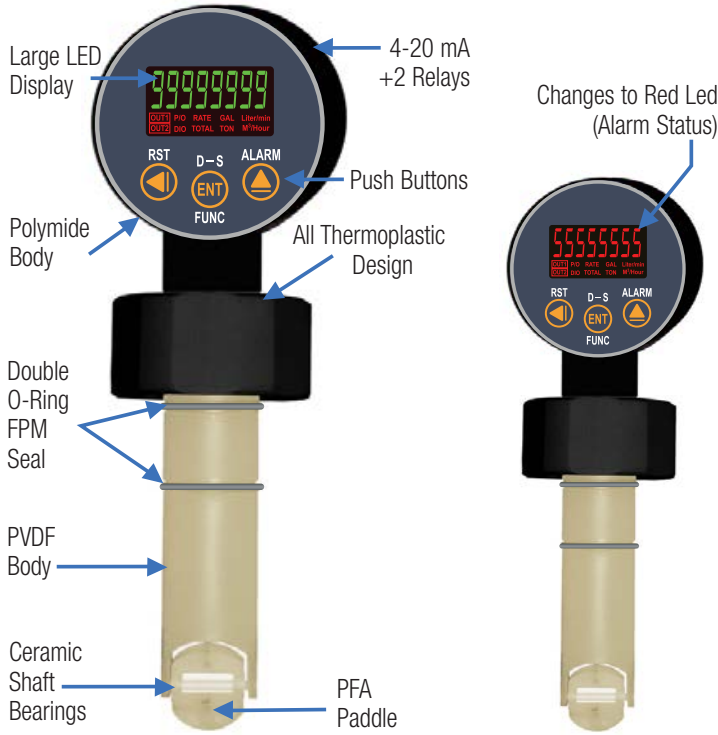


Hayward is a registered trademark of Hayward Industries, Inc. © 2015 Hayward Industries, Inc.

Contact Hayward Flow Control with questions:

USA: 1.888.429.4635 • Fax: 1.888.778.8410 • One Hayward Industrial Drive • Clemmons, NC 27012 • Email: hflow@haywardnet.com  
 Canada: 1.888.238.7665 • Fax: 1.905.829.3636 • 2880 Plymouth Drive • Oakville, ON L6H 5R4 • Email: hflowcanada@haywardnet.com  
 Visit us at: haywardflowcontrol.com





## TFD SERIES

### PADDLEWHEEL FLOW METER & TOTALIZER WITH ALERT ALARM

#### KEY FEATURES & BENEFITS

- Corrosion Resistant All Thermoplastic Wetted Parts - PVDF Body - Zirconium Dioxide Ceramic Shaft - PFA PTFE Paddle
- Large Digital Display Changes from Green to Red When in Alarm State
- Accuracy  $\pm 0.75\%$  of Full Scale
- For Pipe Sizes 1/2 - 24 Inches
- Flow Rate + Totalizer (Resettable - Insight on Volume Till Change-Out)
- Flow Velocity Range 0.33 to 32.8 ft/s (0.1 to 8 m/s)\*
- Eprom Memory - Totalizer Value will not be lost
- NEMA 4X Protection
- Bright LED Display Flow Units--Liter, USGPM
- Dual Output Relays
- 4-20 mA Output Standard
- Simple Installation

#### SPECIFICATIONS

Supply Voltage	DC 14 to 28V	Turndown	100:1
Measuring Accuracy	$\pm 0.75\%$ Full Scale	RS-485 Protocol	Modbus RTU Mode
Repeatability	$\pm 0.5\%$ Full Scale	Output Frequency	60.5Hz m/s Nominal (18.45Hz ft/s nominal) (Max. 10Hz (totalizer last digit))
Pipe Size	1/2" to 4"/DN15 to DN100 (-0) 6" to 24"/DN150 to DN600 (-1)	Pulse Output Type	Transistor NPN Open-Collector (Max. DC60V/100mA)
Input Sampling (Output Responses) Time	6 Cycles/Sec.	LED Display	Bright Red or Green LED (0.4" High)
Readout Range	0-99999 (Flow Rate) 0-99999999 (Totalizer)	Parameter Setting	Push Button
Relay Output	Adjustable Set Points	Memory Mode	Non-Volatile Eprom Memory
Relay Contact Output	DC 3-V-3 Amp	Measuring Viscosity Range	0.5 to 20 centistokes (cst)
Analog Output	4-20 mA	Maximum Operating Pressure/Temperature	PVDF Body 200 psi @ -22°F (-30°C) to 86°F (30°C) / 36 psi @ 194°F (90°C)
Output Drive	<10mA <10V	Storage Temperature	-22°F to 176°F-22°F (-30°C to 80°C) (20 to 90RH Non-Condensed)
Protection Class	IP66/NEMA 4X	Certification	EN 55022:1998/A1:2000 Class A
RS-485 Baud Rate	19200/9600/4800/2400 (selective)		

\* Max. recommended velocity for plastic pipe is 8 ft/s

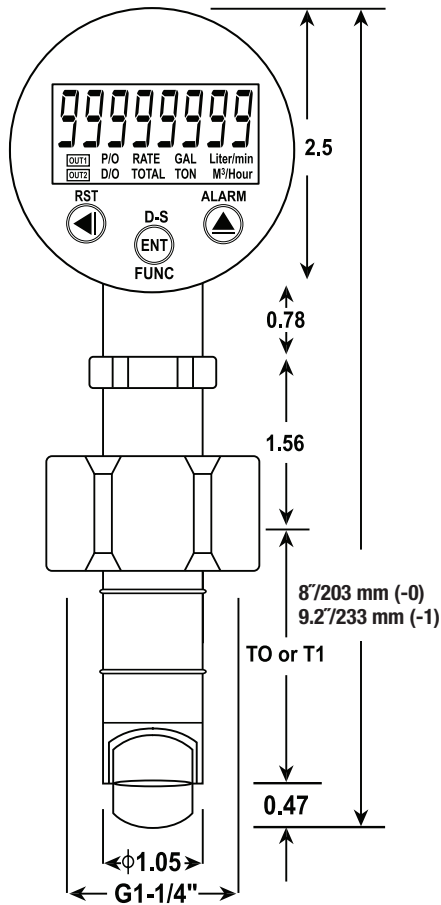
# TFD Series

## PADDLEWHEEL FLOW METER & TOTALIZER WITH VISUAL ALERT ALARM

### MATERIALS

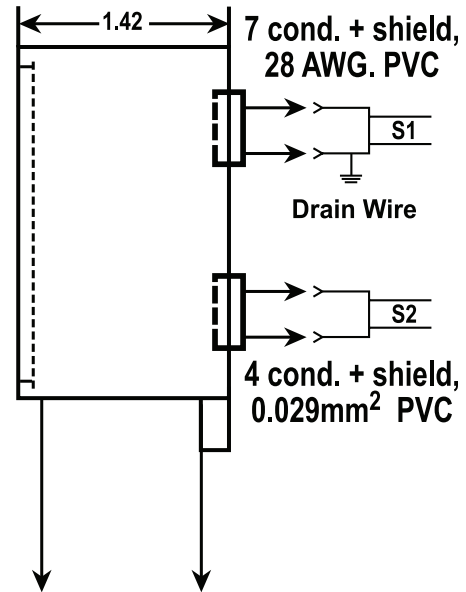
Sensor Body Material	Natural PVDF
Rotor Material	PFA PTFE
Shaft and Bearing Material	Zirconium Dioxide Ceramic (ZrO <sub>2</sub> )
O-rings Material	FKM
Display Housing Materials	Polyamide 66 + PBT + 15% Glass Filled (UL94V-0)

### DIMENSIONS (UNIT : INCH)

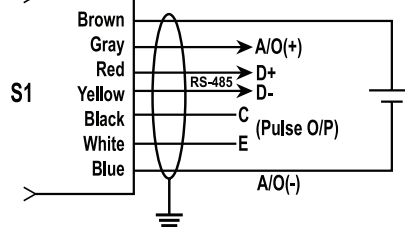


Sensor Length (-0) = 2.70" / 68.5 mm  
 Sensor Length (-1) = 3.88" / 98.5 mm

### TERMINAL CONNECTIONS

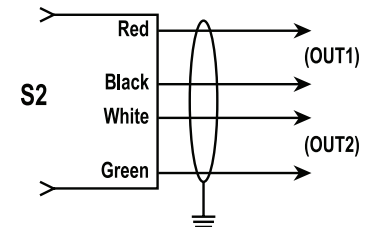


#### • Analog/RS-485/Pulse output type



• Power = DC14~28V

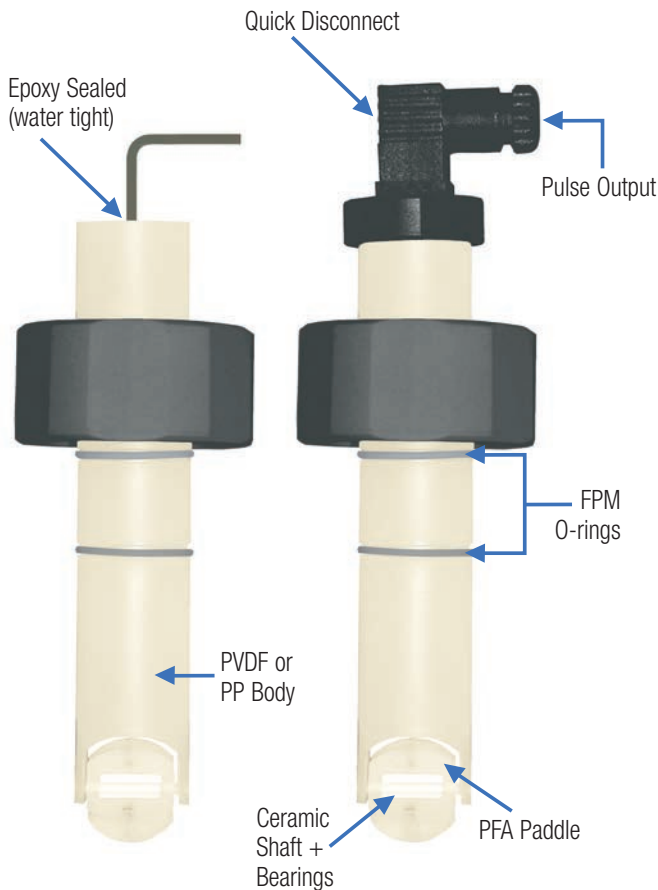
#### • Relay output type



Hayward is a registered trademark of Hayward Industries, Inc. © 2015 Hayward Industries, Inc.

Contact Hayward Flow Control with questions:

USA: 1.888.429.4635 • Fax: 1.888.778.8410 • One Hayward Industrial Drive • Clemmons, NC 27012 • Email: hflow@haywardnet.com  
 Canada: 1.888.238.7665 • Fax: 1.905.829.3636 • 2880 Plymouth Drive • Oakville, ON L6H 5R4 • Email: hflowcanada@haywardnet.com  
 Visit us at: haywardflowcontrol.com



## TFT SERIES

### INSERTION PADDLEWHEEL FLOW METER WITH TRANSMITTER

#### KEY FEATURES & BENEFITS

- All Thermoplastic Construction
- Excellent Chemical Resistance
- Pipe Size Range 1/2" - 24" / DN15 - DN600
- Measuring Flow Range (0.33 to 32.8 ft/s)\*
- Easy to Install
- Excellent for Low or High Temperatures  
-4°F to 194°F (-25°C to 90°C)
- NEMA 4X / IP65 or NEMA 6 / IP68 Ratings
- Extra Long Lasting PFA Paddle (Zirconium Dioxide Ceramic Shaft & Bearings)
- Double O-ring Seal
- High Pressure Rating (up to 200 psi / 14 Bar)

#### SPECIFICATIONS

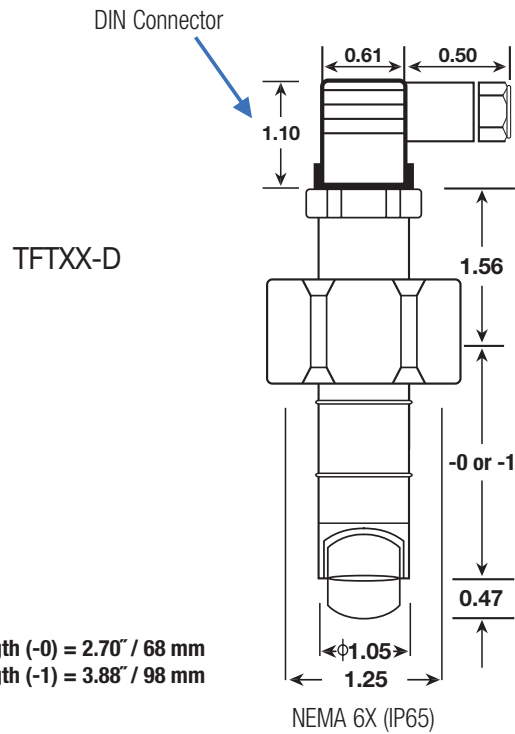
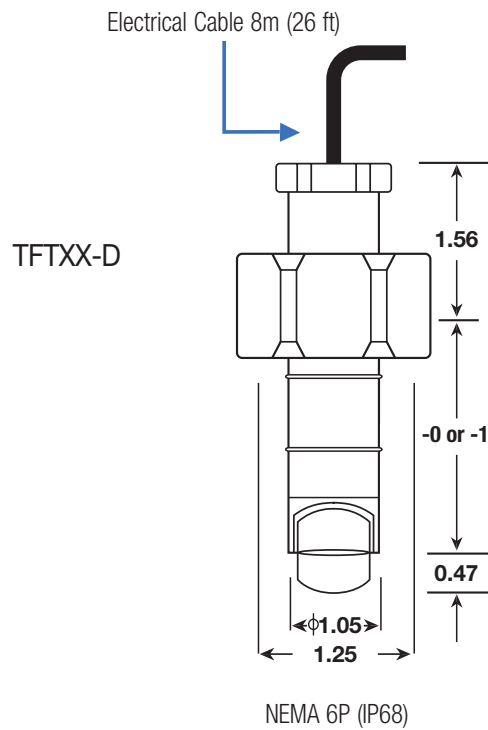
Supply Voltage	DC 24V
Measuring Accuracy	±0.75% of full scale
Repeatability	±0.5% of full scale
Pipe Size	1/2" to 4" / DN15 to DN100 (-0) 6" to 24" / DN150 to DN600 (-1)
Output Frequency	60.5 Hz per m/s nominal, 18.45 Hz per ft/s nominal
Output Signal	0-5 VDC
Sensor Body Material	Polypropylene or PVDF
Rotor Material	PTFE
Shaft and Bearings Material	Zirconium Dioxide Ceramic (ZrO <sub>2</sub> )
O-ring Material	FKM
Electrical Connection	DIN Mini-Connector 43650-A (IP65) Electrical Cable (IP68)
Cable Type	3 conductor + shield 0.26A WG.PVC
Reverse Voltage Protection	Included as Standard
Viscosity Range	0.5 to 20 centistokes (cst)
Maximum Particle Size	<10% with Particle Size (<0.5 mm cross section or length)
Maximum Operating Pressure/Temperature	PVDF body 200 psi @ -30°F to 80°F 36 psi @ 194°F PP Body 180 psi @ -13°F to 80°F / 25 psi @ 180°F
Storage Condition	PVDF -40°F to 194°F PP -22°F to 195°F
CE EMC Certification	EN 55022:1998

\* Max. recommended velocity for plastic pipe is 8 ft/s

# TFT Series

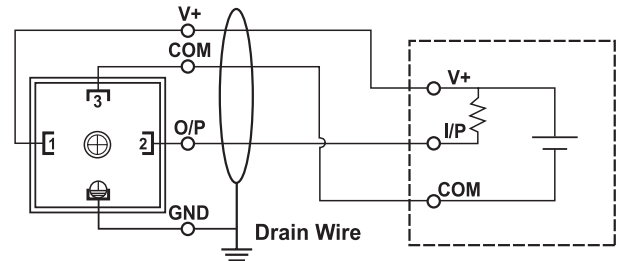
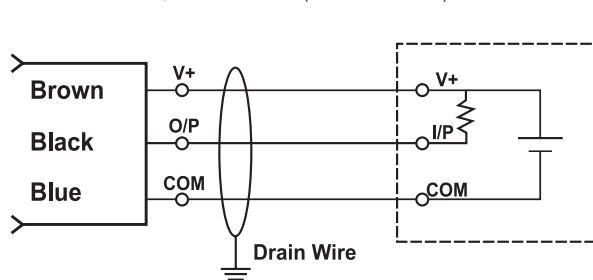
## INSERTION PADDLEWHEEL FLOW METER WITH TRANSMITTER

### DIMENSIONS (UNIT : INCH)



### TERMINAL CONNECTIONS—FLOW CONTROLLER

3 Cond. + Shield, 28 AWG. PVC (221°F / 105°C)



Hayward is a registered trademark of Hayward Industries, Inc. © 2015 Hayward Industries, Inc.

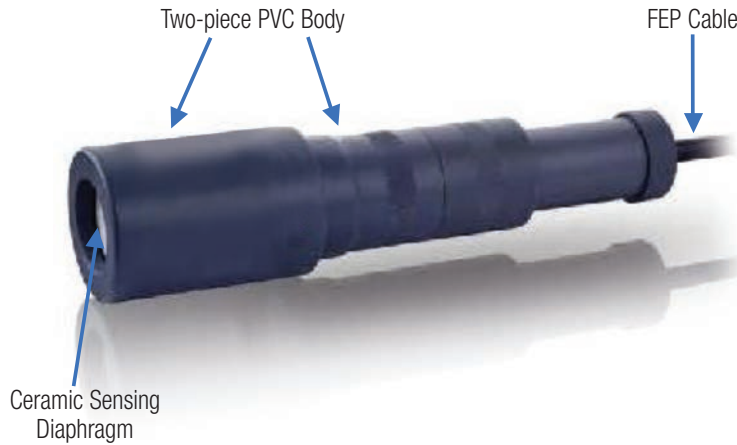
Contact Hayward Flow Control with questions:

USA: 1.888.429.4635 • Fax: 1.888.778.8410 • One Hayward Industrial Drive • Clemmons, NC 27012 • Email: hflow@haywardnet.com  
Canada: 1.888.238.7665 • Fax: 1.905.829.3636 • 2880 Plymouth Drive • Oakville, ON L6H 5R4 • Email: hflowcanada@haywardnet.com  
Visit us at: haywardflowcontrol.com



## TLD SERIES Submersible PVC Level Pressure Sensor

The TLD Series modular two-piece all thermoplastic submersible probe is designed for quick change-outs. Replace sensor head - no need to change wiring. An easy solution for foam, vapor and condensate applications.



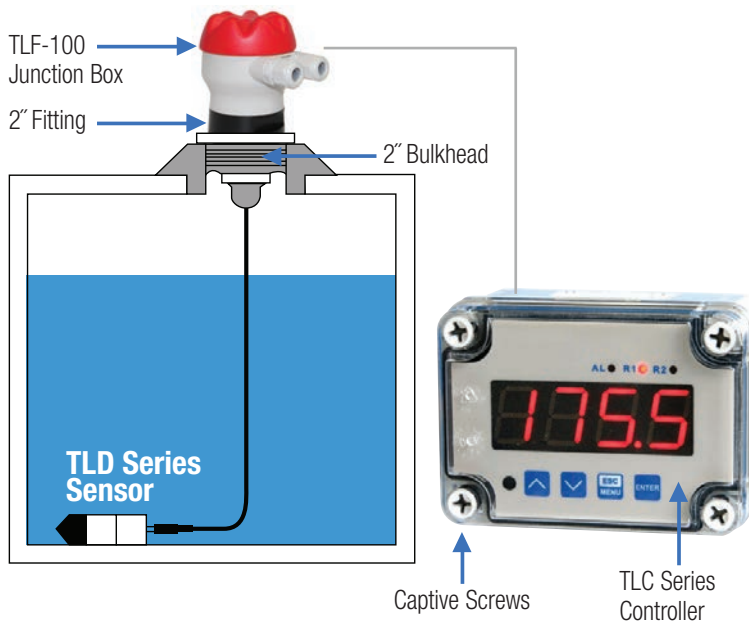
### KEY FEATURES & BENEFITS

- Two-piece Modular Design
- Change Sensor Head without having to Rewire
- Excellent Chemical Resistance
- All PVC Rugged Design
- FEP Cable
- Highly Accurate > 0.25%
- Capable of Reading Tank/Sump Level 1.6 ft - 100 ft

### APPLICATIONS

- Waste Water Treatment
- Chemical Dosing
- Leachate Collection
- Sodium Hypochlorite
- Corrosive Chemicals
- Foam, Soaps
- Fuming Chemicals - HCL, Nitric

### TYPICAL INSTALLATION



# TLD Series

## SUBMERSIBLE PVC LEVEL PRESSURE SENSOR

### INPUT PRESSURE RANGE

Nominal Pressure	psi	2.2	3.5	6.1	8.7	10.8	14.3	17.3	23.4	26.0	43.4
Level	ft	5.0	8.0	14	20	25	33	40	54	60	100

### OUTPUT SIGNAL/SUPPLY

Standard | 2-wire: 4-20 mA / VS = 9-32 VDC

### PERFORMANCE

Accuracy	Standard: IEC 60770 1 Option: < ± 0.35% FSO < ± 0.25% FSO
Permissible Load	$R_{max} = [(VS - VS_{min}) / 0.02 A] \Omega$
Influence Effects	Supply: 0.05% Full Scale/10V Load: 0.05% Full Scale/KΩ
Long-term Stability	± 0.1% Full Scale over one year
Turn-on Time	700 msec
Mean Response	< 200 msec measuring rate 5/sec
Max. Response Time	380 msec

1 accuracy according to IEC 60770 – limit point adjustment (non-linearity, hysteresis, repeatability)

### THERMAL EFFECTS (OFFSET AND SPAN)

Thermal Error	± 0.1% FSO / 10 K in compensated range 0-50°C
---------------	--

### PERMISSIBLE TEMPERATURES

Medium	5°F - 140°F (-10°C - 60°C)
Electronic/Environment	5°F - 140°F (-10°C - 60°C)
Storage	5°F - 140°F (-10°C - 60°C)

### ELECTRICAL PROTECTION 2

Short-circuit Protection	Permanent
Reverse Polarity Protection	No Damage, but also no function
Electromagnetic Compatibility	Emission and immunity according to EN 61326

2 additional external overvoltage protection unit in terminal box KL 1 or KL 2 with atmospheric pressure reference available on request

### ELECTRICAL CONNECTION

Cable with Sheath Material	FEP 5°F - 140°F (-10°C - 60°C) Black
Cable Protection	Standard: Without Cable Protection

3 cable with integrated air tube for atmospheric pressure reference

### MATERIALS (MEDIA WETTED)

Housing	PVC
Seals	FKM (Standard)
Diaphragm	Standard: Ceramic Al <sub>2</sub> O <sub>3</sub> 96% Option: Ceramic Al <sub>2</sub> O <sub>3</sub> 99.9%

### MISCELLANEOUS

Current Consumption	Max. 25 mA
Weight	Approx. 400 g (without cable)
Ingress Protection	IP 68
CE Conformity	EMC Directive: 2004/108/EC

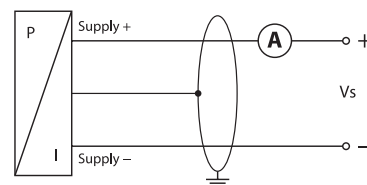
### PIN CONFIGURATION

Electrical Connection	Binder Series 723 4 (5-pin)		Cable Colors (DIN 47100)
	2-Wire	3-Wire	
Supply +	3	3	White
Supply -	1	4	Brown
Signal + (only for 3-wire)	-	1	Green
Shield	5	5	Green / Yellow

4 in separated version

### WIRING DIAGRAM

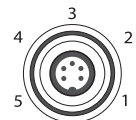
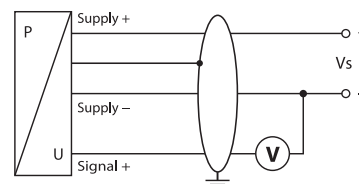
#### 2-wire-system (current)



Connector



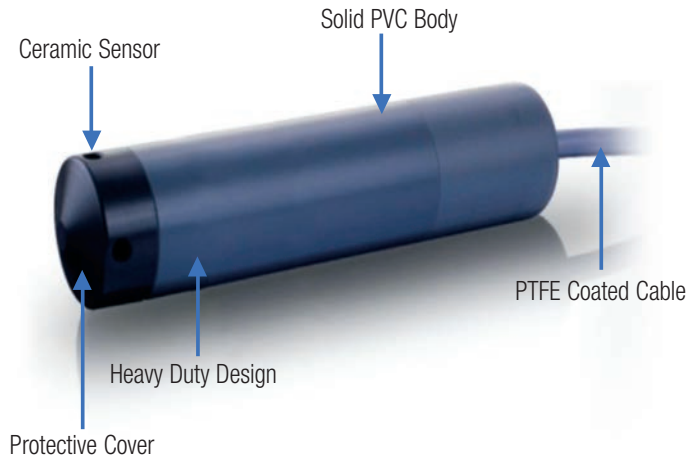
#### 3-wire-system (voltage)



Hayward is a registered trademark of Hayward Industries, Inc. © 2015 Hayward Industries, Inc.

Contact Hayward Flow Control with questions:

USA: 1.888.429.4635 • Fax: 1.888.778.8410 • One Hayward Industrial Drive • Clemmons, NC 27012 • Email: hflow@haywardnet.com  
 Canada: 1.888.238.7665 • Fax: 1.905.829.3636 • 2880 Plymouth Drive • Oakville, ON L6H 5R4 • Email: hflowcanada@haywardnet.com  
 Visit us at: haywardflowcontrol.com

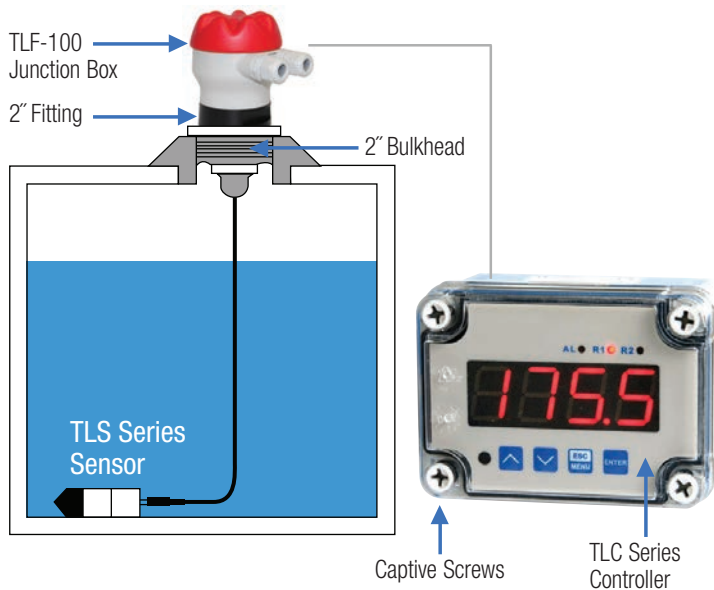


## TLS SERIES Industrial Level Pressure Transmitter

### KEY FEATURES & BENEFITS

- Designed for Continuous Level Measurement for Aggressive Liquid Medias
- Flush Sensor - Non Clogging Design
- PVC Transmitter for Aggressive Fluids
- PVC Body with Ceramic Sensor (Corrosion Resistant)
- Compact Design
- Excellent Long-Term Stability
- High Accuracy
- Heavy Duty PTFE Cable (3m, 5m, 10m or 15m Length) - Other Lengths Available
- Excellent for Foam, Vapor or Condensate
- Excellent for All Tanks/Sumps - Large (54') or Small (16')
- Ceramic Sensing Diaphragm
- No Moving Parts
- Automatic Temperature Compensation
- CSA Listed and CE Approval

### TYPICAL INSTALLATION



### TYPICAL APPLICATIONS

- Waste Water Treatment
- Leachate Collection
- Waste Sumps or Pits
- Chemical Dosing
- Pits
- Chemical Tanks

### SPECIFICATIONS

Pressure Measurement	0 – 14 ft/H <sub>2</sub> O up 54 ft/H <sub>2</sub> O 5.8 psi – 23 psi
Power Source	DC Power Only
Output Signal	2 wire: 4-20 mA

# TLS Series

## INDUSTRIAL LEVEL PRESSURE TRANSMITTER

### INPUT PRESSURE RANGE

Nominal Pressure Gauge	psi	5.8	8.7	14.5	23
Level	ft/H <sub>2</sub> O	13.0	20.0	33.5	54
Overpressure	psi	2.1	29	29	58
Burst Pressure	psi	29	58	58	72

### OUTPUT SIGNAL/SUPPLY

Standard | 2-wire: 4-20 mA

### PERFORMANCE

Accuracy	±0.5% Full Scale or Better
Permissible Load	$R_{max} = [(V_s - V_{smin}) / 0.02A] \Omega$
Influence Effects	Supply: 0.05% Full Scale/10V Load: 0.05% Full Scale/K $\Omega$
Long-term Stability	±0.1% Full Scale over one year
Response Time	<10 msec or better

<sup>1</sup>accuracy according to IEC 60770 – limit point adjustment (non-linearity, hysteresis, repeatability)

### THERMAL EFFECTS (OFFSET AND SPAN)

Thermal Error	<0.2% FSO/K in compensated range -13°F - 158°F (-25 - 70°C)
---------------	--

### PERMISSIBLE TEMPERATURES

Permissible Temperatures	Medium	32°F - 140°F (0°C - 60°C)
	Storage	14°F - 140°F (-10°C - 60°C)

### ELECTRICAL PROTECTION

Short-circuit Protection	Permanent
Reverse Polarity Protection	No Damage to Sensor
Electromagnetic Compatibility	Emission Immunity according to EN 61326
Short-circuit Protection	Permanent

### ELECTRICAL CONNECTION

Cable with sheath material (3 wire cable with integrated air tube for atmospheric pressure reference)	FEP PTFE 0°F - 200°F (-32°C - 93°C)
--	-------------------------------------

### MATERIALS (WETTED)

Housing	PVC
Seals	FKM or EPDM (FKM – Standard)
Diaphragm	Ceramic Al <sub>2</sub> O <sub>3</sub>

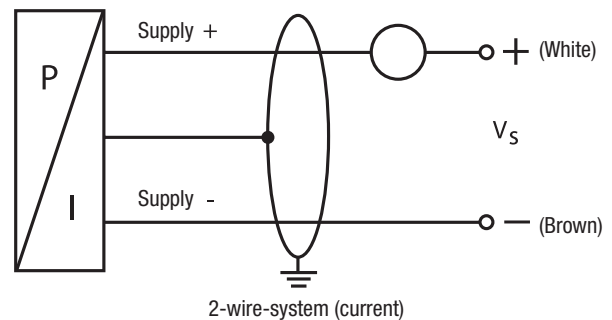
### PIN CONFIGURATION

Electrical Connection	Cable	Colors
Supply +		White
Supply -		Brown
Shield		Green / Yellow

### MISCELLANEOUS

Current Consumption	Max. 25 mA
Weight	Approx. 0.4 lb / 0.2 kg (without cable)
Ingress Protection	IP 68
CE-Conformity	EMC Directive: 2004/108/EC

### WIRING DIAGRAM

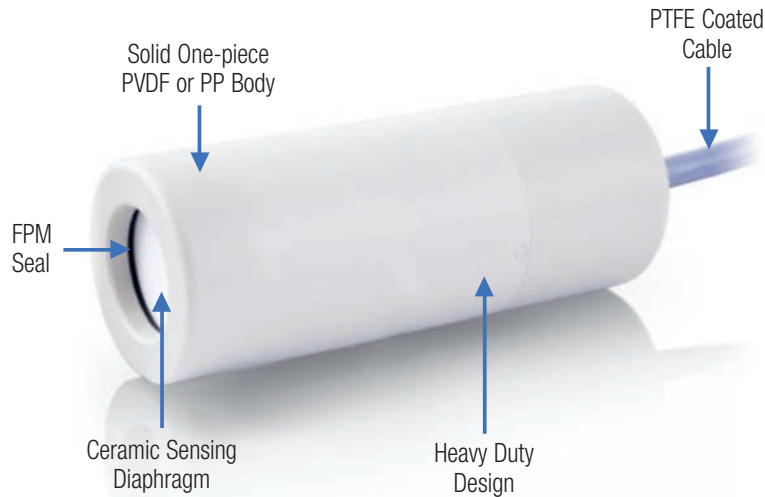


Hayward is a registered trademark of Hayward Industries, Inc.  
© 2015 Hayward Industries, Inc.

Contact Hayward Flow Control with questions:

USA: 1.888.429.4635 • Fax: 1.888.778.8410 • One Hayward Industrial Drive • Clemmons, NC 27012 • Email: hflow@haywardnet.com  
Canada: 1.888.238.7665 • Fax: 1.905.829.3636 • 2880 Plymouth Drive • Oakville, ON L6H 5R4 • Email: hflowcanada@haywardnet.com  
Visit us at: haywardflowcontrol.com

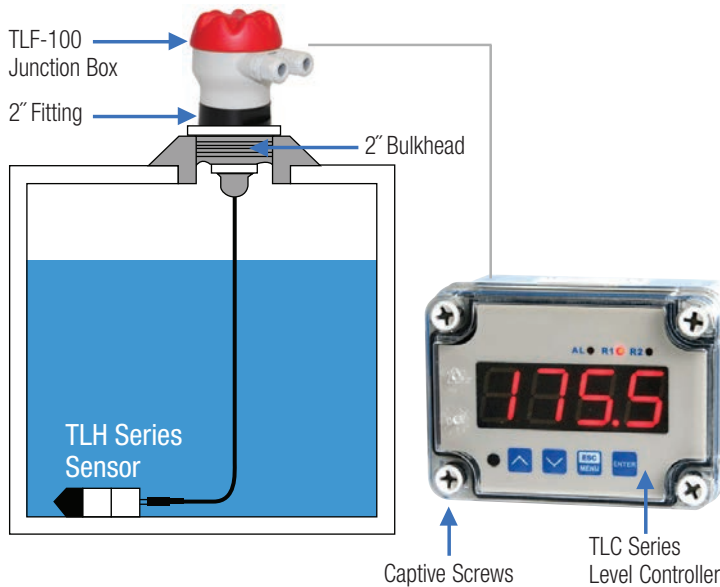
## TLH SERIES High Performance Level Pressure Transmitter



### KEY FEATURES & BENEFITS

- Continuous Level Measurement in the Toughest Industrial Environments and Corrosive Media
- All Thermoplastic Construction
- Housing Material in PVDF or PP Materials
- Excellent for Tank Level Measurement
- No Moving Parts
- High Accuracy
- Ceramic Sensing Diaphragm
- Flush Sensor – Non-clogging
- Great for Applications where Foam – Vapor – Turbulence May Occur
- Small Footprint
- FEP PTFE Coated Cable (3m, 5m, 10m or 15m lengths)
- No Lost Signals

### TYPICAL INSTALLATION



### TYPICAL APPLICATIONS

- Acids
- Caustics
- Sodium Hypochlorite
- Peroxides
- Leachate
- Sumps or Pits
- Chemical Dosing Holding Tanks

### SPECIFICATIONS

Pressure Measurement	0-5.4 ft/H <sub>2</sub> O to 54 ft/H <sub>2</sub> O 2.33 psi – 23 psi
Output Signal	2 wire: 4-20 mA



# TLH Series

## HIGH PERFORMANCE LEVEL PRESSURE TRANSMITTER

### INPUT PRESSURE RANGE

Nominal Pressure Gauge	psi	5.8	8.7	14.5	23
Level	ft/H <sub>2</sub> O	13.0	20.0	33.5	54
Overpressure	psi	2.1	29	29	58
Burst Pressure	psi	29	58	58	72

### OUTPUT SIGNAL/SUPPLY

Standard | 2-wire: 4-20 mA

### PERFORMANCE

Accuracy	±0.5% Full Scale or Better
Permissible Load	$R_{max} = [(V_s - V_{smin}) / 0.02A] \Omega$
Influence Effects	Supply: 0.05% Full Scale/10V Load: 0.05% Full Scale/K $\Omega$
Long-term Stability	±0.1% Full Scale over one year
Response Time	<10 msec or better

<sup>1</sup>accuracy according to IEC 60770 – limit point adjustment (non-linearity, hysteresis, repeatability)

### THERMAL EFFECTS (OFFSET AND SPAN)

Thermal Error	<0.2% FSO/K in compensated range -13°F - 158°F (-25°C - 70°C)
---------------	--

### PERMISSIBLE TEMPERATURES

Permissible Temperatures	Medium	32°F - 140°F (0°C - 60°C)
	Storage	14°F - 140°F (-10°C - 60°C)

### ELECTRICAL PROTECTION

Short-circuit Protection	Permanent
Reverse Polarity Protection	No Damage to Sensor
Electromagnetic Compatibility	Emission Immunity according to EN 61326
Short-circuit Protection	Permanent

### ELECTRICAL CONNECTION

Cable with sheath material (3 wire cable with integrated air tube for atmospheric pressure reference)	FEP PTFE 0°F - 200°F (-32°C - 93°C)
--	-------------------------------------

### MATERIALS (WETTED)

Housing	PVC
Seals	FKM or EPDM (FKM – Standard)
Diaphragm	Ceramic Al <sub>2</sub> O <sub>3</sub>

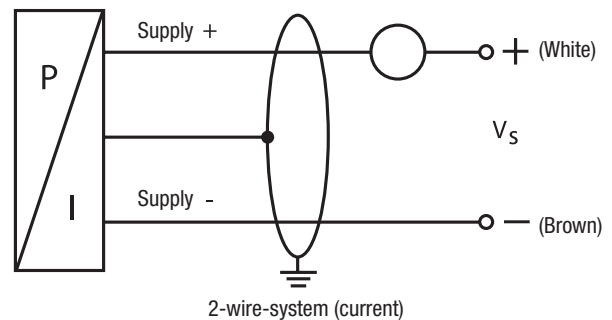
### PIN CONFIGURATION

Electrical Connection	Cable	Colors
Supply +		White
Supply -		Brown
Shield		Green / Yellow

### MISCELLANEOUS

Current Consumption	Max. 25 mA
Weight	Approx. 0.4 lb / 0.2 kg (without cable)
Ingress Protection	IP 68
CE-Conformity	EMC Directive: 2004/108/EC

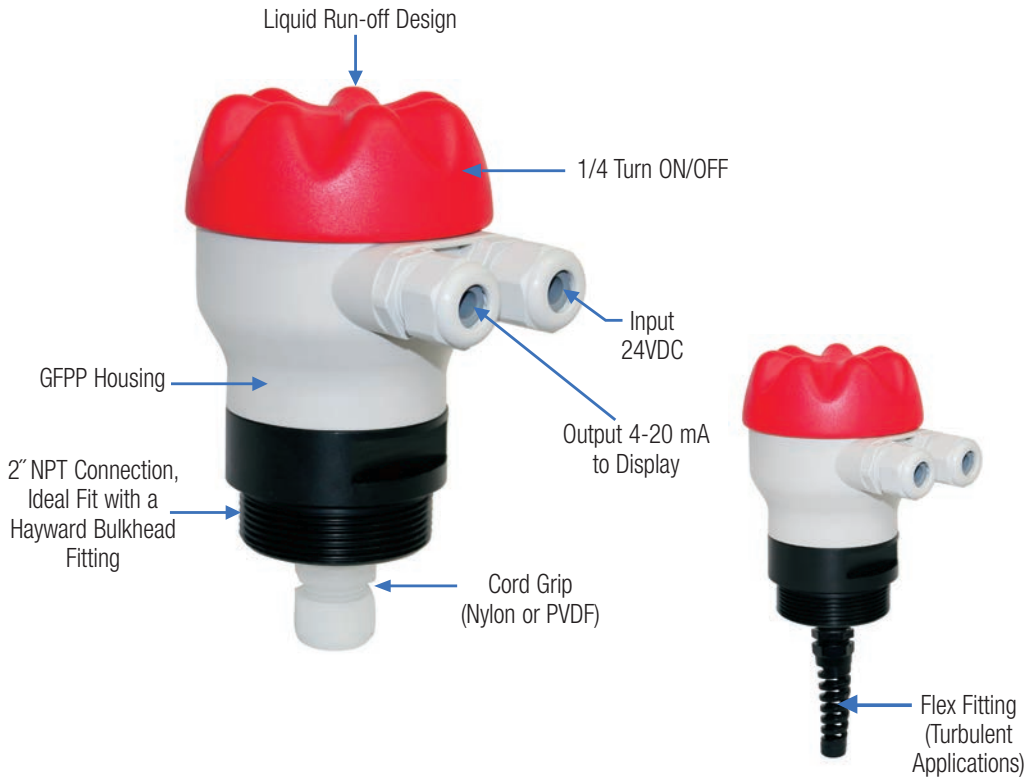
### WIRING DIAGRAM



Hayward is a registered trademark of Hayward Industries, Inc. © 2015 Hayward Industries, Inc.

Contact Hayward Flow Control with questions:

USA: 1.888.429.4635 • Fax: 1.888.778.8410 • One Hayward Industrial Drive • Clemmons, NC 27012 • Email: hflow@haywardnet.com  
 Canada: 1.888.238.7665 • Fax: 1.905.829.3636 • 2880 Plymouth Drive • Oakville, ON L6H 5R4 • Email: hflowcanada@haywardnet.com  
 Visit us at: haywardflowcontrol.com



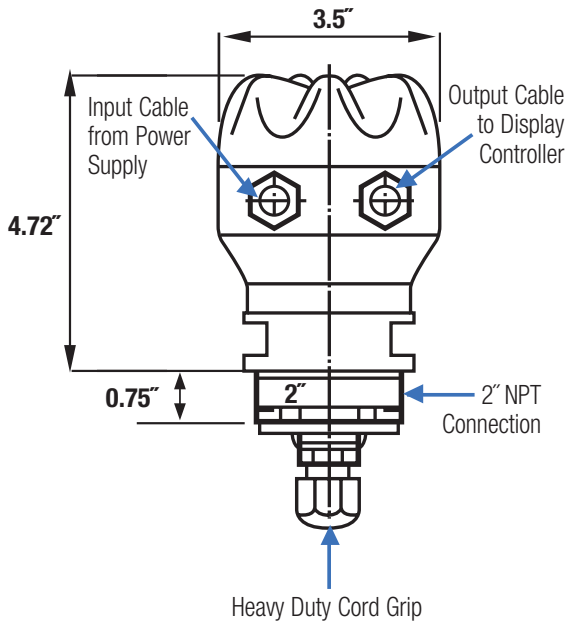
## TLF SERIES

### SUBMERSIBLE LEVEL JUNCTION BOX

#### KEY FEATURES & BENEFITS

- Suitable for All TL Series Sensors
- Glass Reinforced Polypropylene Housing for High Impact Resistance
- NEMA 4X Enclosure
- Threaded Polyethylene 2" Connection
- 2X Cord Grips: Cable-in, Cable-out
- Excellent Chemical Resistance
- Weather Resistant
- Easy Installation with Hayward Bulkhead Fittings

#### DIMENSIONS AND ADDITIONAL FEATURES



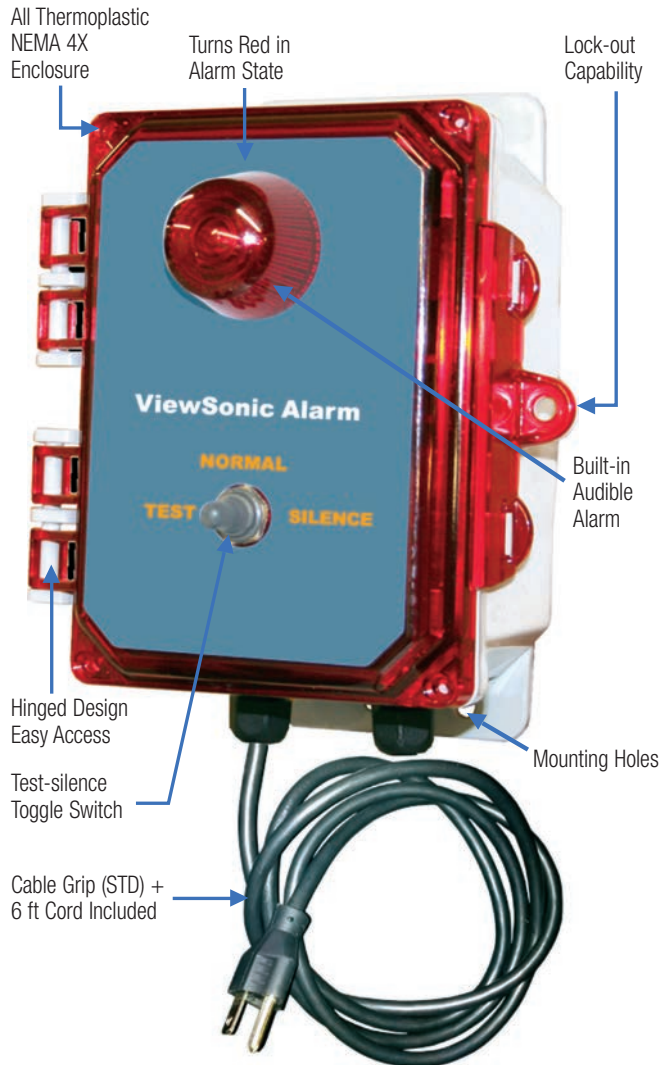
#### OPTIONAL CORD GRIPS\*



*\* For fuming chemicals please ensure cord grip is sealed to prevent internal corrosion.*

## VSA SERIES

### INDUSTRIAL VISUAL/AUDIBLE SENTRY ALARM SYSTEM



#### KEY FEATURES & BENEFITS

- High Intensity Red Alarm Light
- 90 dB Audible Alarm with External Test-Silence-Normal Positions
- Rugged NEMA 4X Industrial Design Enclosure
- Latching Lockable Cover (No Screws Required) Lockable
- External Mounting Feet Installs in Minutes
- UL Listed Enclosure (CSA)
- High Impact All Thermoplastic Polycarbonate Shell
- Small Foot Print – Compact Design
- Excellent Chemical Resistance
- Includes 6 ft Power Cord + Seal-tight Cord Connector

#### TYPICAL APPLICATIONS

- High/Low Level Sensing for Tanks/Sumps
- Bag/Filter Change-out
- Leak Detection
- Flow/No Flow Sensors – Pump Protection
- Upset Condition Notification

#### SPECIFICATIONS

Dimensions	7" x 5" x 4.5"
Enclosure	NEMA 4X
Weight	2.1 lbs.
Voltage/Freq/Amps	120v/60 Hz/1 Amp
Input Power	100v – 240v



Hayward is a registered trademark of Hayward Industries, Inc. © 2015 Hayward Industries, Inc.

Contact Hayward Flow Control with questions:

USA: 1.888.429.4635 • Fax: 1.888.778.8410 • One Hayward Industrial Drive • Clemmons, NC 27012 • Email: [hflow@haywardnet.com](mailto:hflow@haywardnet.com)  
Canada: 1.888.238.7665 • Fax: 1.905.829.3636 • 2880 Plymouth Drive • Oakville, ON L6H 5R4 • Email: [hflowcanada@haywardnet.com](mailto:hflowcanada@haywardnet.com)  
Visit us at: [haywardflowcontrol.com](http://haywardflowcontrol.com)



## TLC SERIES

### LEVEL PROCESS DISPLAY

The TLC Series process meter features easy to operate functional programming menu and a clear 4-digit, 3/4" LED display. The NEMA 4X Class (IP 65) housing makes the TLC Series an ideal choice for heavy-duty applications where corrosion resistance is needed. The optional infrared controller can be used to change the settings without opening the enclosure.

#### KEY FEATURES & BENEFITS

- All in One Controller with NEMA 4X Enclosure
- Input: 4-20 mA (Standard)
- 1A Relay Output & 4-20 mA Output
- Power Supply Output: 24 VDC (Standard)
- RS-485/Modbus RTU Standard
- Signal Peak Value Detection
- 3 Wire Cord Grips Included

#### ACCESSORIES

- IR Remote Controller\*

#### SPECIFICATIONS

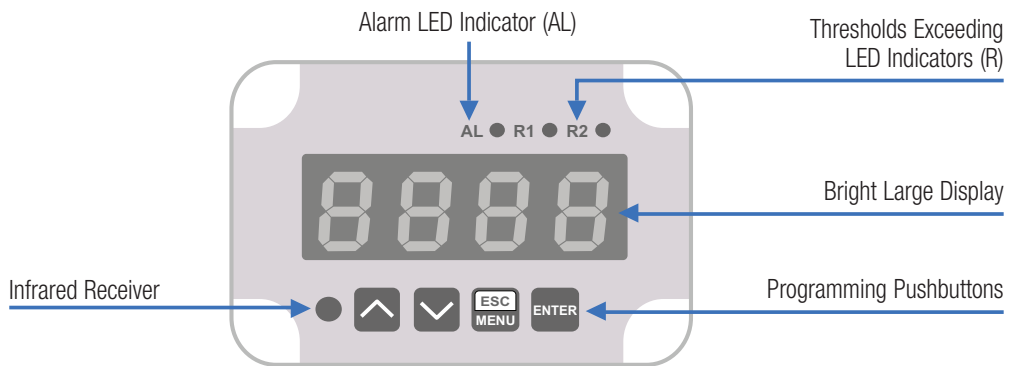
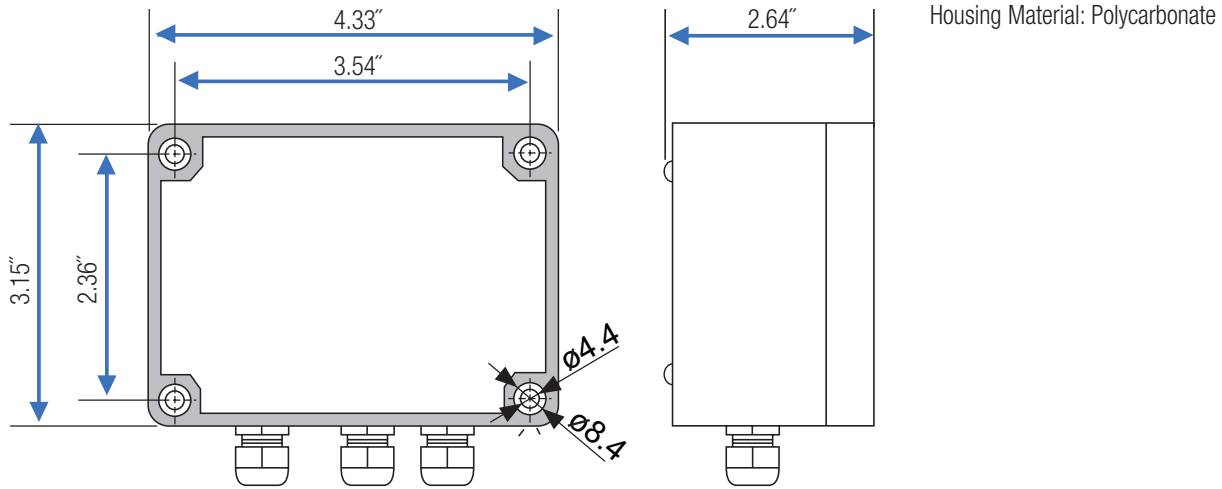
Power Supply/ Power Consumption	85–260 VAC/VDC
Display	LED, 3/4" 4-Digit, Red, Adjustable Brightness
Displayed Values	-999–9999 with decimal point
Input	0-20 mA or 4-20 mA
Accuracy	0.1% @ 25°C + One Digit
Stability	50 ppm/°C
Outputs (option)	0 or 2 x REL I <sub>max</sub> = 1A
Passive Current Output (option)	4-20 mA (operating range max. 2.8 ÷ 24mA)
Power Supply Output	24 VDC
Communication Interface	RS-485
Operating Temp	-4°F – 158°F (-20°C - 70°C)
Storage Temp	-4°F – 158°F (-20°C - 70°C)
Protection Class	NEMA 4X (IP65)
Case	Wall Mounted

\*Remote controller is not part of the device and is available upon request.

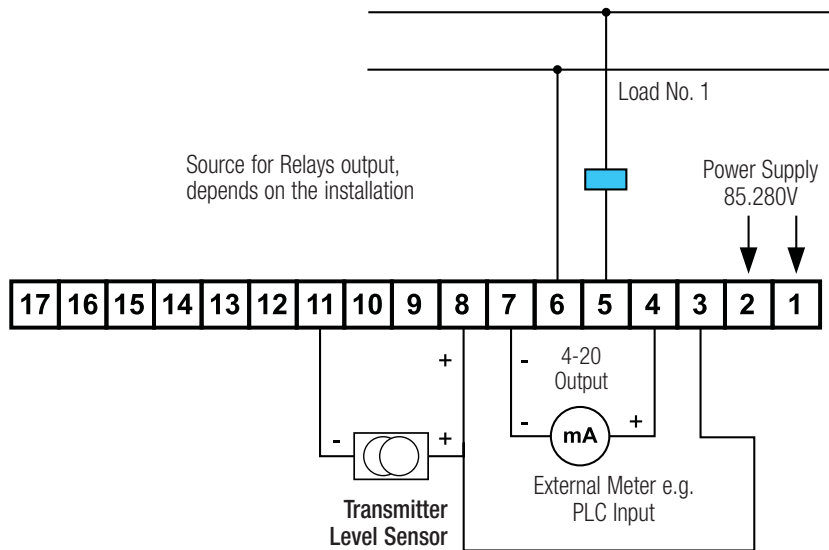
# TLC Series

LEVEL PROCESS CONTROLLER & DISPLAY

## DIMENSIONS AND MATERIALS (UNIT : INCH)



## PIN ASSIGNMENT



Hayward is a registered trademark of Hayward Industries, Inc. © 2015 Hayward Industries, Inc.

Contact Hayward Flow Control with questions:

USA: 1.888.429.4635 • Fax: 1.888.778.8410 • One Hayward Industrial Drive • Clemmons, NC 27012 • Email: hflow@haywardnet.com  
 Canada: 1.888.238.7665 • Fax: 1.905.829.3636 • 2880 Plymouth Drive • Oakville, ON L6H 5R4 • Email: hflowcanada@haywardnet.com  
 Visit us at: haywardflowcontrol.com



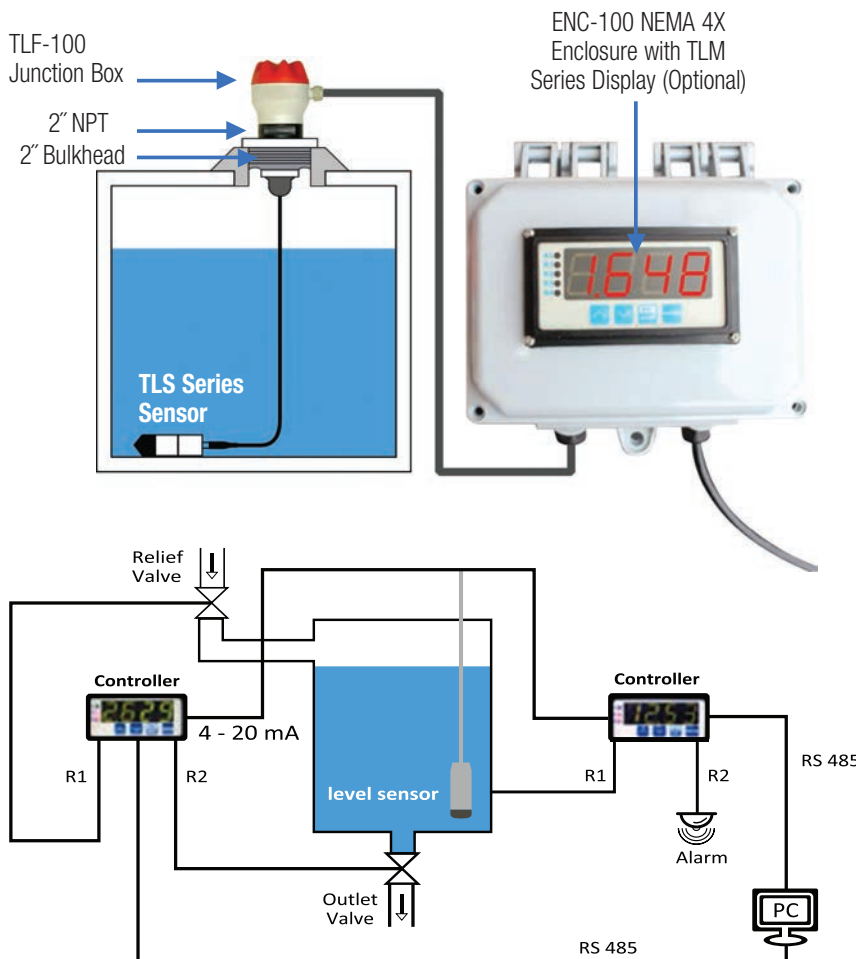


## TLM SERIES Industrial Level Controller

### KEY FEATURES & BENEFITS

- Large Bright LED Display
- Deceleration of Relay Outputs
- Adjustable Display Brightness
- Analog Output 4-20 mA & 2 Relays
- Acoustic Signal (Beep)
- Input Signal 4-20 mA
- 4-digit LED Display
- Sensor Power Supply 24 VDC Output
- Communication Interface RS-485 (Modbus RTU)
- 4 Configurable Relays (1 amp)
- Standard Dimensions for Retrofit Applications

### TYPICAL INSTALLATIONS



# TLM Series

## INDUSTRIAL LEVEL CONTROLLER

### SUPPLY

Supply Voltage	Standard: 85 to 260 VAC
Power Consumption	Max. 4.5 VA or W

### SIGNAL INPUT

Input Signal	Standard 4-20 mA
--------------	------------------

### CONTACTS (OPTIONAL)

Contact	2 SPST - Relays or 4 SPST Relays
Switching Voltage	Max. 250 VAC
Switching Current	Max. 1 A (cos $\phi$ 1)

### ANALOG OUTPUT (OPTIONAL)

Output Signal	4-20 mA
Permissible Load	Max. 700 $\Omega$

### TRANSDUCER SUPPLY

DC Output	24 VDC to Sensor
-----------	------------------

### COMMUNICATION/PERFORMANCE

Communication Interface	RS-485 (Modbus RTU)
Transmission Speed	1200 - 115200 bit/sec.

### PERMISSIBLE TEMPERATURES

Operating Temperature	-4°F - 122°F (-20°C - 50°C)
Storage Temperature	-4°F - 122°F (-20°C - 50°C)

### ELECTRICAL PROTECTION

Electrical Safety	EN 61010-1 EMC EN 61326 CSA
-------------------	-----------------------------------

### MISCELLANEOUS

Type of Protection	IP 65 (Front Foil) NEMA 4X
Display	4-digit LED Display, Red, 4 x 20 mm
Range of Indication	- 999 to 9999 + Decimal Point
Accuracy (25°C)	$\pm$ 0.1% FSO
Housing Dimensions	3.78" x 1.89" x 3.86"
Housing	Panel
Housing Material	NORYL-GFN2S E1



Hayward is a registered trademark of Hayward Industries, Inc. © 2015 Hayward Industries, Inc.

Contact Hayward Flow Control with questions:

USA: 1.888.429.4635 • Fax: 1.888.778.8410 • One Hayward Industrial Drive • Clemmons, NC 27012 • Email: [hflow@haywardnet.com](mailto:hflow@haywardnet.com)  
Canada: 1.888.238.7665 • Fax: 1.905.829.3636 • 2880 Plymouth Drive • Oakville, ON L6H 5R4 • Email: [hflowcanada@haywardnet.com](mailto:hflowcanada@haywardnet.com)  
Visit us at: [haywardflowcontrol.com](http://haywardflowcontrol.com)



## TLV SERIES

### FLOW DISPLAY, BATCHER TOTALIZER

The TLV Series is a flow display located in a NEMA 4X, wall mounted case (IP 65), designed to work in tandem with Pulse Flow Meters or with current inputs of 0-20 mA or 4-20 mA. The TLV Series can totalize flow for 16 digits.

#### KEY FEATURES & BENEFITS

- Simple Plug and Play Design
- 2 Relay Outputs
- Power Supply Output 24 VDC
- RS-485 / Modbus RTU Standard
- Display of Instantaneous Flow Rate and the Total Flow Values
- Batching and Counting of Doses
- 4-20 mA Output + Relay Output
- 4-20 mA Output Standard
- Simple Installation

#### ACCESSORIES

- IR Remote Controller IRC-20
- Remote Controller is not Part of the Device and is Available Upon Request

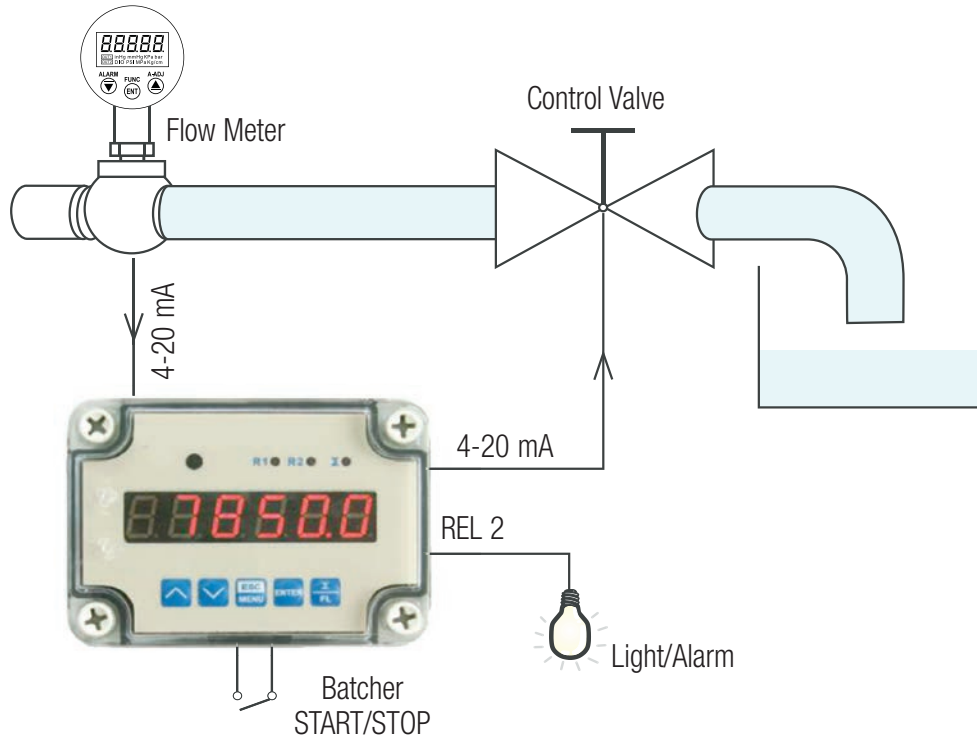
#### SPECIFICATIONS

Power Supply/ Power Consumption	85 - 260 VAC	Passive Current Output (option)	4-20 mA (operating range max. 2.8 - 24 mA) (available with 1 relay or OC output, see ordering)
Display	LED, 6 x 13 mm high, 8 levels of adjustable brightness	Power Supply Output	24 VDC +5%, -10% / max. 100 mA, stabilized
Displayed Values	0 - 999999 + decimal point	Communication Interface	RS-485, 8N1 and 8N2, 1200 bit/s - 115200 bit/s, Modbus RTU (not galvanically isolated)
Input	Current: 0-20 mA or 4-20 mA	Data Memory	Non-volatile memory, EEPROM type
Accuracy	0.1% @ 70°C + One Digit (for 0 - 20 mA range)	Operating Temperature	-4°F - 158°F (-20°C - 70°C)
Stability	50 ppm/°C	Storage Temperature	-4°F - 158°F (-20°C - 70°C)
Counter Capacity	Total Flow: over 4 x 10 <sup>9</sup> (max. 16 significant digits)	Protection Class	NEMA 4X
Readout Precision	Instantaneous Flow Values: Selected in the 0 - 0.000 decimal of unit Total Flow and Batcher: Selected in the 0 - 0.000 of unit	Case	Wall-Mounted; Material: Polycarbonate
Units	Instantaneous Flow Values: 1 GPM, LTR'S Total Flow and Batcher: 1 GPM, LTR'S	Dimensions (WxHxD)	110 x 105 x 67 mm
Output (option)	0 or 2 x REL I <sub>max</sub> = 1A		

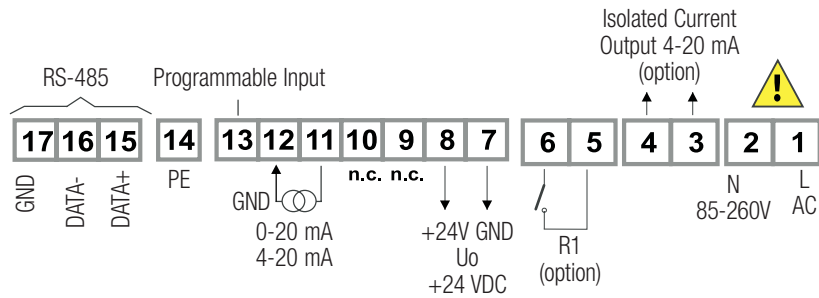
# TLV Series

## PADDLEWHEEL FLOW METER & TOTALIZER WITH VISUAL ALERT ALARM

### TYPICAL INSTALLATION



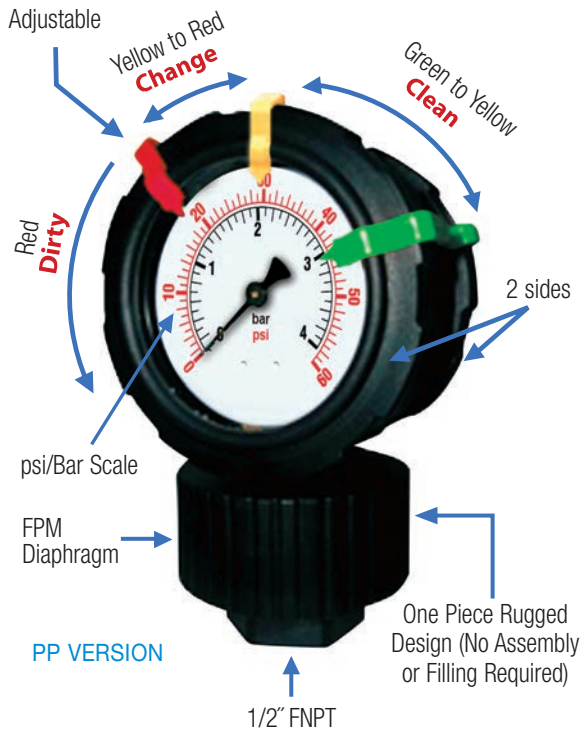
### PIN ASSIGNMENT



Hayward is a registered trademark of Hayward Industries, Inc. © 2015 Hayward Industries, Inc.

Contact Hayward Flow Control with questions:

USA: 1.888.429.4635 • Fax: 1.888.778.8410 • One Hayward Industrial Drive • Clemmons, NC 27012 • Email: hflow@haywardnet.com  
 Canada: 1.888.238.7665 • Fax: 1.905.829.3636 • 2880 Plymouth Drive • Oakville, ON L6H 5R4 • Email: hflowcanada@haywardnet.com  
 Visit us at: haywardflowcontrol.com


**PP VERSION**

**PVDF VERSION**

## GDS SERIES

### DOUBLE SIDED ALL THERMOPLASTIC LIQUID FILLED PRESSURE GAUGE & ISOLATOR

#### KEY FEATURES & BENEFITS

- Industry's First All Thermoplastic Double Sided Gauge
- Heavy Duty Rugged Design; Simple to Install
- Completely Corrosion Resistant
- For use as a Visual Pressure Alert for Change-out or BAG Replacement
- Extra Large Colored Display
- High Accuracy of 1.5%
- Factory Pre-filled Glycerin / Vacuum
- No Filling Required
- One-piece Molded Design (No Assembly)
- Suitable for Corrosive Media + Slurries

#### SPECIFICATIONS

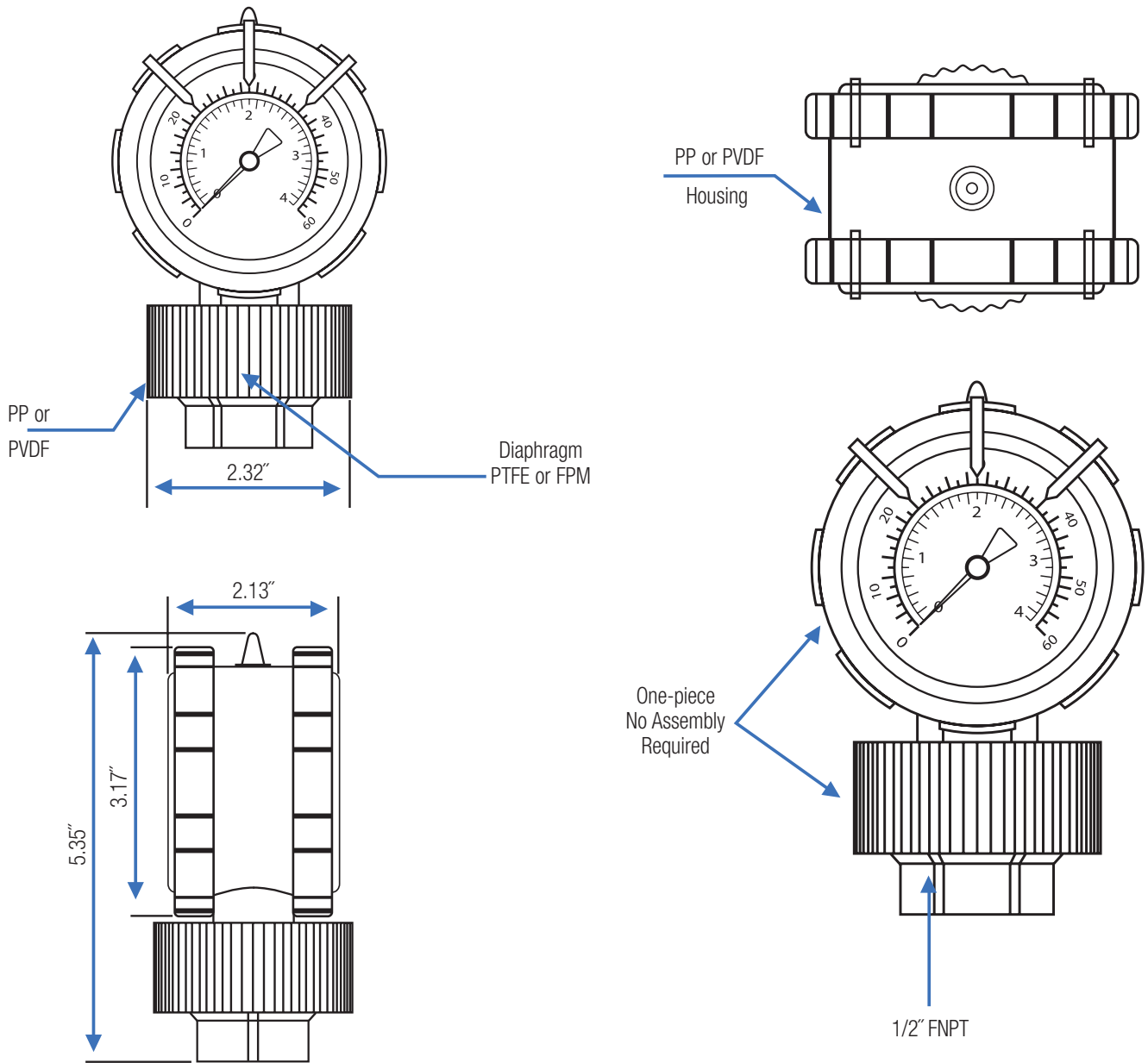
Dial Diameter	Large 2-1/2" (Big Numbers-Clear Markers)
Mounting	Direct Mount, Bottom Connection FNPT 1/2"
Housing	PVDF or Polypropylene with FPM or PTFE Diaphragm - One-piece Molded Design (No Assembly or Filling Required)
Lens	Safety Glass
Dial	Red/Black Scale White Background, dial arc 270°
Measuring Principle	Bourdon Tube-316 SS (Non Wetted) Diaphragm (Wetted Part) – FPM (Standard)
Movement	316 SS (Non Wetted)
Gauge	3 Adjustable Plastic Markers-Pressure Range Pointers fitted on the Bezel (Green, Yellow, Red)
Connection	1/2" FNPT
Filling	Glycerin Filled
Accuracy	±1.5% F.S.
Operating Temperature	Max. Working Temp. PVDF-195°F / 90°C, PP-170°F / 76°C
Pressure Range	Standard Range 0-60 / 0-100 / 0-160 psi (Second Scale: Bar) Other units available, e.g., MPa, etc.



# GDS Series

DOUBLE SIDED ALL THERMOPLASTIC LIQUID FILLED PRESSURE GAUGE & ISOLATOR

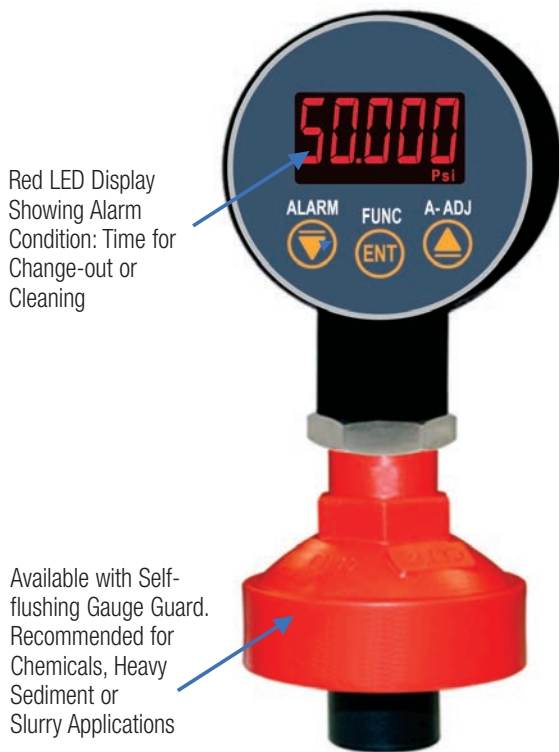
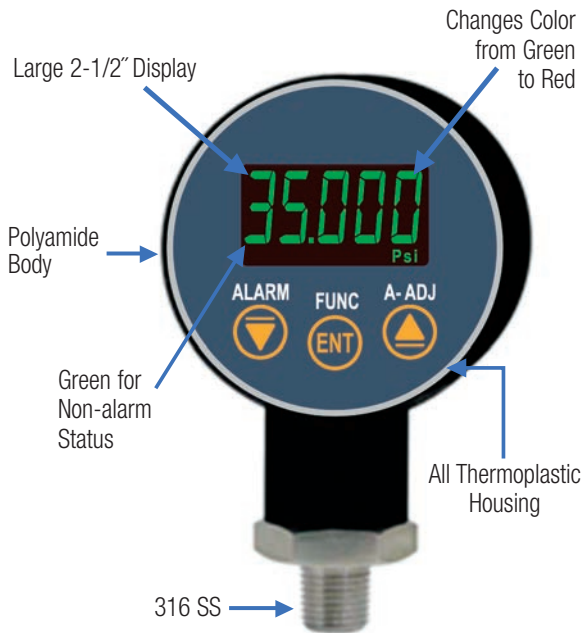
## DIMENSIONS & FEATURES



Hayward is a registered trademark of Hayward Industries, Inc. © 2015 Hayward Industries, Inc.

Contact Hayward Flow Control with questions:

USA: 1.888.429.4635 • Fax: 1.888.778.8410 • One Hayward Industrial Drive • Clemmons, NC 27012 • Email: [hflow@haywardnet.com](mailto:hflow@haywardnet.com)  
Canada: 1.888.238.7665 • Fax: 1.905.829.3636 • 2880 Plymouth Drive • Oakville, ON L6H 5R4 • Email: [hflowcanada@haywardnet.com](mailto:hflowcanada@haywardnet.com)  
Visit us at: [haywardflowcontrol.com](http://haywardflowcontrol.com)



## GD SERIES Digital LED Pressure Alarm

**IDEAL FOR BASKET STRAINERS  
& BAG FILTER MONITORING**

### KEY FEATURES & BENEFITS

- Display Changes from Green to Red (Alarm Status)
- Highly Accurate  $\pm 0.25\%$  of Full Scale
- Ceramic Diaphragm 316 SS 1/2" NPT Process Port
- Display Pressure Units psi, Bar, Kg/Cm<sup>2</sup>, KPA, MPA, In Hg
- Two 3 Amp Relay Alarm Functions
- 4-20 mA Analog Output Function (Remote Display)
- Digital RS-485 Interface Function (optional)
- IP66 NEMA 4X Housing
- Thermoplastic Gauge Isolator for Corrosive Services, Slurries, Heavy Sediment (optional)
- Adjustable Range
- Adjust  $\Delta P$  Set Points
- Lockable Software Security

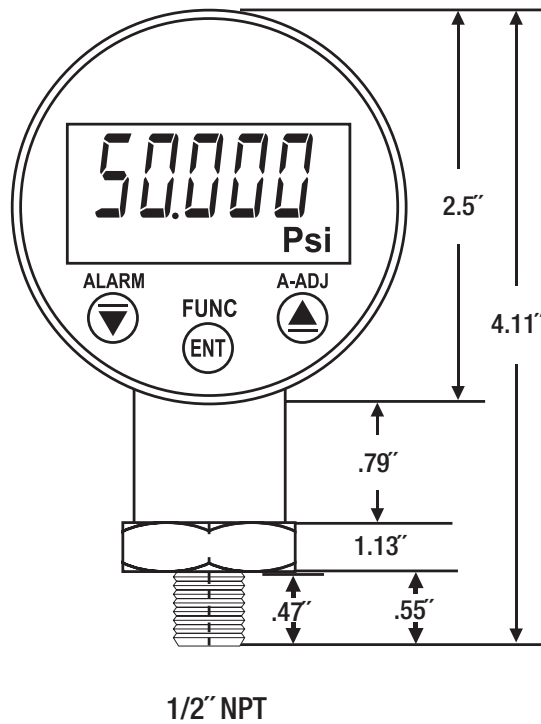
### SPECIFICATIONS

Supply Voltage	DC 14 to 30 V
Measuring Accuracy	0.25% Full Scale
Display Range	-19999 ~ 99999
Relay Contact Output	DC 30V-3A
Analog Output	4-20 mA
Display	Bright Red/Green LED High (0.4")
Parameter Setting	Push Button
Memory Mode	Non-Volatile E2 PROM Memory
Diaphragm Materials	Ceramic Al <sub>2</sub> O <sub>3</sub> Sensor
Pressure Port Materials	316 SS
Display Materials	Polyamide 66+ 15% Glass Filled
Operating Temperature Range	-4°F to 176°F (-20°C to 80°C)
Storage Temperature Range	-22°F to 176°F (-35°C to 80°C)
Pressure Range	0 to 400 psi

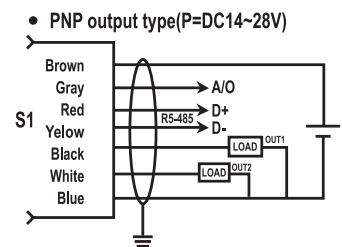
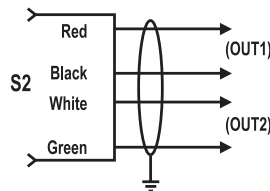
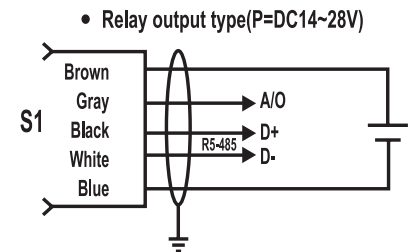
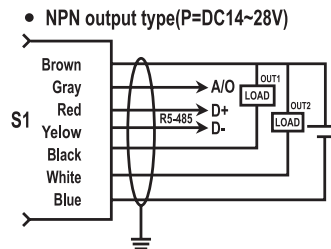
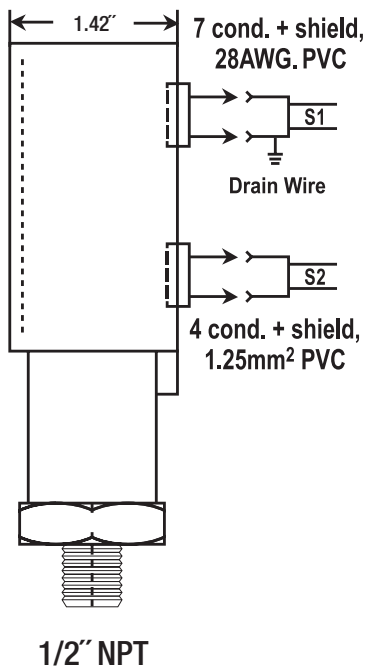
# GD Series

DIGITAL LED PRESSURE ALARM

DIMENSIONS (UNIT : INCH)



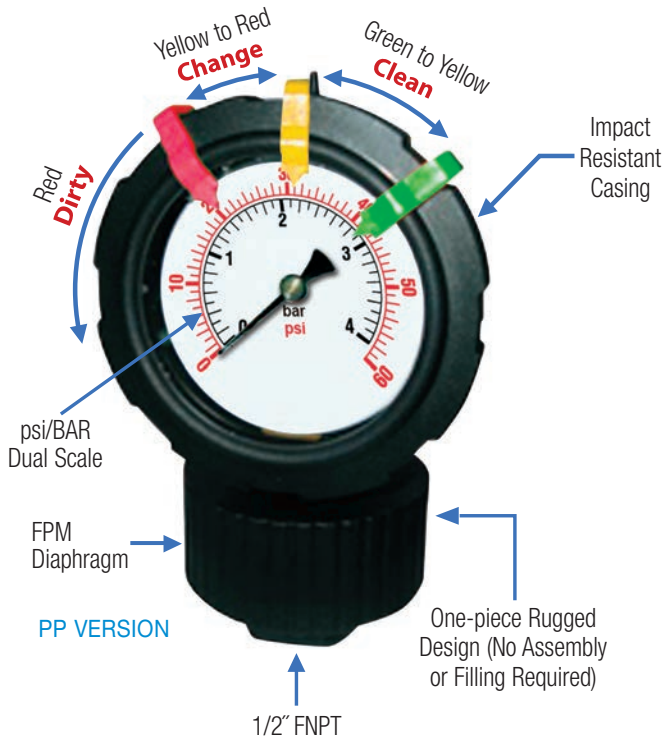
## CONNECTION DIAGRAM



Hayward is a registered trademark of Hayward Industries, Inc. © 2015 Hayward Industries, Inc.

Contact Hayward Flow Control with questions:

USA: 1.888.429.4635 • Fax: 1.888.778.8410 • One Hayward Industrial Drive • Clemmons, NC 27012 • Email: [hflow@haywardnet.com](mailto:hflow@haywardnet.com)  
 Canada: 1.888.238.7665 • Fax: 1.905.829.3636 • 2880 Plymouth Drive • Oakville, ON L6H 5R4 • Email: [hflowcanada@haywardnet.com](mailto:hflowcanada@haywardnet.com)  
 Visit us at: [haywardflowcontrol.com](http://haywardflowcontrol.com)



PP VERSION



PVDF VERSION

## GA SERIES Pressure Gauge & Isolator

**IDEAL FOR FILTER AND STRAINER  
CHANGE-OUT ALERT**

### KEY FEATURES & BENEFITS

- Industry's First All Thermoplastic Combo Gauge & Isolator
- One-piece Molded Design (No Assembly)
- Heavy Duty Design; Simple to Install
- Completely Corrosion Resistant
- Extra Large Colored Display
- High Accuracy
- Factory Pre-filled Glycerin / Vacuum Sealed
- No Filling Required
- Suitable for Corrosive Media + Slurries
- Simple Installation
- Calibration Certified

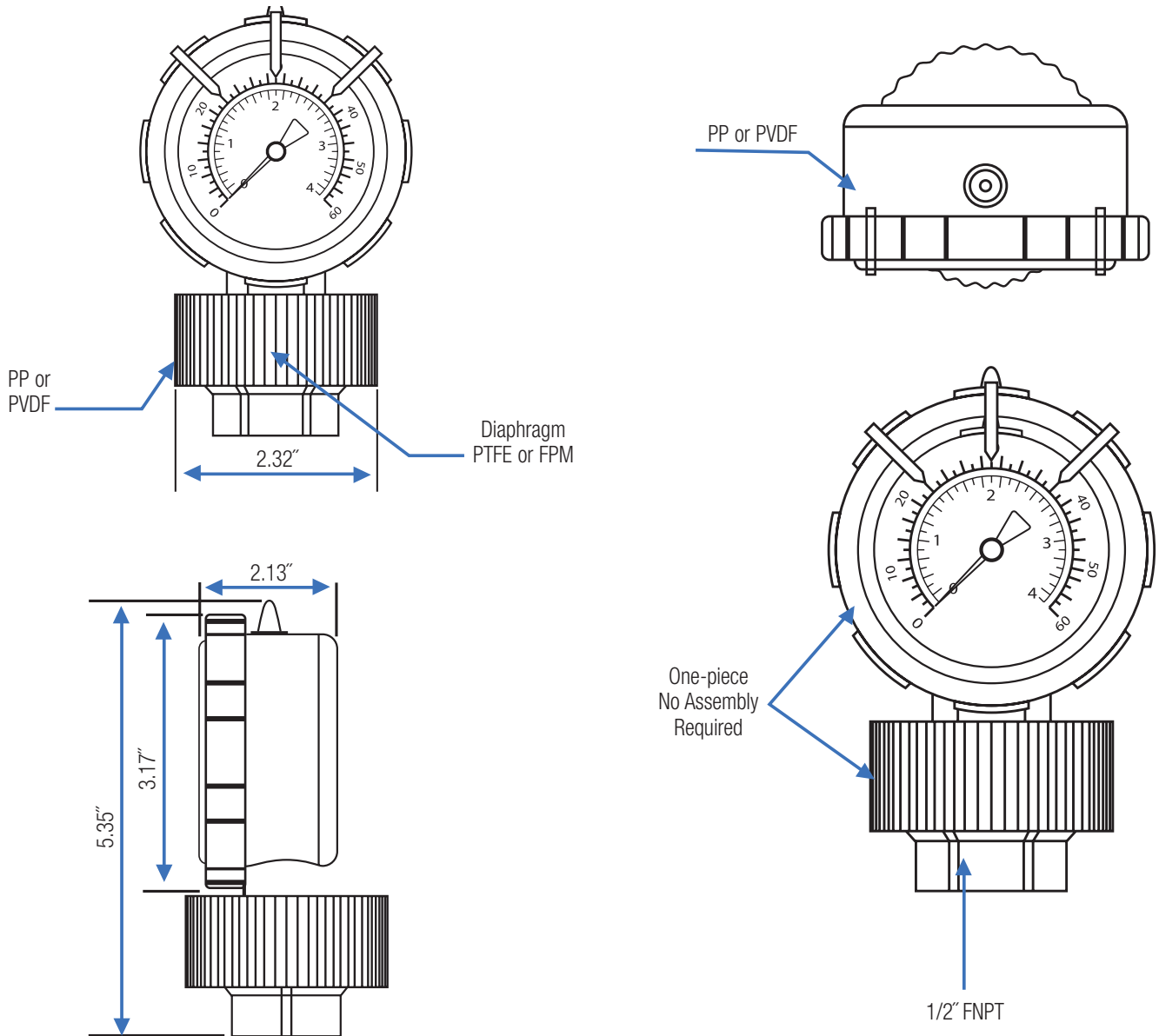
### SPECIFICATIONS

Dial Diameter	Large 2-1/2" Face (Big Numbers-Clear Markers)
Mounting	Direct Mount, Bottom Connection FNPT 1/2"
Housing	PVDF or Polypropylene with FPM or PTFE Diaphragm
Lens	Safety Glass
Dial	Red & Black Scale White Background, Dial Arc 270°
Measuring Principle	Bourdon Tube-316 SS (Non Wetted) Diaphragm (Wetted Part) - FPM (Standard)
Movement	316 SS (Non Wetted)
Gauge	Red, Yellow, Green Moveable Plastic Markers- Pressure Range Pointers Fitted on the Bezel
Connection	1/2" FNPT
Filling	Options: Glycerin or Silicone Filled
Accuracy	±1.5% F.S.
Operating	Max. Working Temp. PVDF-195°F, PP-170°F Temperature
Pressure Range	Standard Range 0-60 / 0-100 / 0-160 psi (Second Scale: Bar) Other units available, e.g., bar, MPa, etc.

# GA Series

## PRESSURE GAUGE & ISOLATOR

### DIMENSIONS AND MATERIALS



Hayward is a registered trademark of Hayward Industries, Inc. © 2015 Hayward Industries, Inc.

Contact Hayward Flow Control with questions:

USA: 1.888.429.4635 • Fax: 1.888.778.8410 • One Hayward Industrial Drive • Clemmons, NC 27012 • Email: [hflow@haywardnet.com](mailto:hflow@haywardnet.com)  
Canada: 1.888.238.7665 • Fax: 1.905.829.3636 • 2880 Plymouth Drive • Oakville, ON L6H 5R4 • Email: [hflowcanada@haywardnet.com](mailto:hflowcanada@haywardnet.com)  
Visit us at: [haywardflowcontrol.com](http://haywardflowcontrol.com)

## GLD SERIES LED + LCD Pressure Gauge & Isolators

### INDUSTRY'S FIRST LED DIGITAL ALL THERMOPLASTIC COMBO GAUGE + ISOLATOR

#### KEY FEATURES & BENEFITS

- All Thermoplastic Construction (Gauge + Isolator)
- Heavy Duty One-piece Molded Design (No Assembly Required)
- No Filling Required
- Corrosion Resistant
- Designed to Act as Visual Pressure Alert for Bag/Filter Change-out
- Extra Large LED Display
- No Programming Required
- Reduces Small Pressure Surges caused by Water Hammer or Metering Pump Pulsations
- PTFE Diaphragm Standard
- High Accuracy  $\pm 1.0\%$
- Suitable for Corrosive Media & Slurries
- 15 ft of Cable for LED Model
- Replaceable Lithium Battery - LCD Model
- Long Battery Life (3 years) - LCD Model
- Simple Installation

#### SPECIFICATIONS

Dial Diameter	2-1/2"
Mounting	Direct Mount, Bottom Connection
Housing	PVDF or Polypropylene with PTFE Diaphragm
Protection Class	NEMA 4X
Lens	Polycarbonate
Dial	LED or LCD Display
Connection	1/2" FNPT
Accuracy	$\pm 1.0\%$
Operating Temperature	Max. Working Temp. PVDF 195°F (90°C), PP 170°F (76°C)
Pressure Range	0-290 psi (Ambient Temp)
Output	4-20 mA + 2 (NPN or PNP) - LED Only
Power Requirement	10-30 VDC - LE / Battery - LC

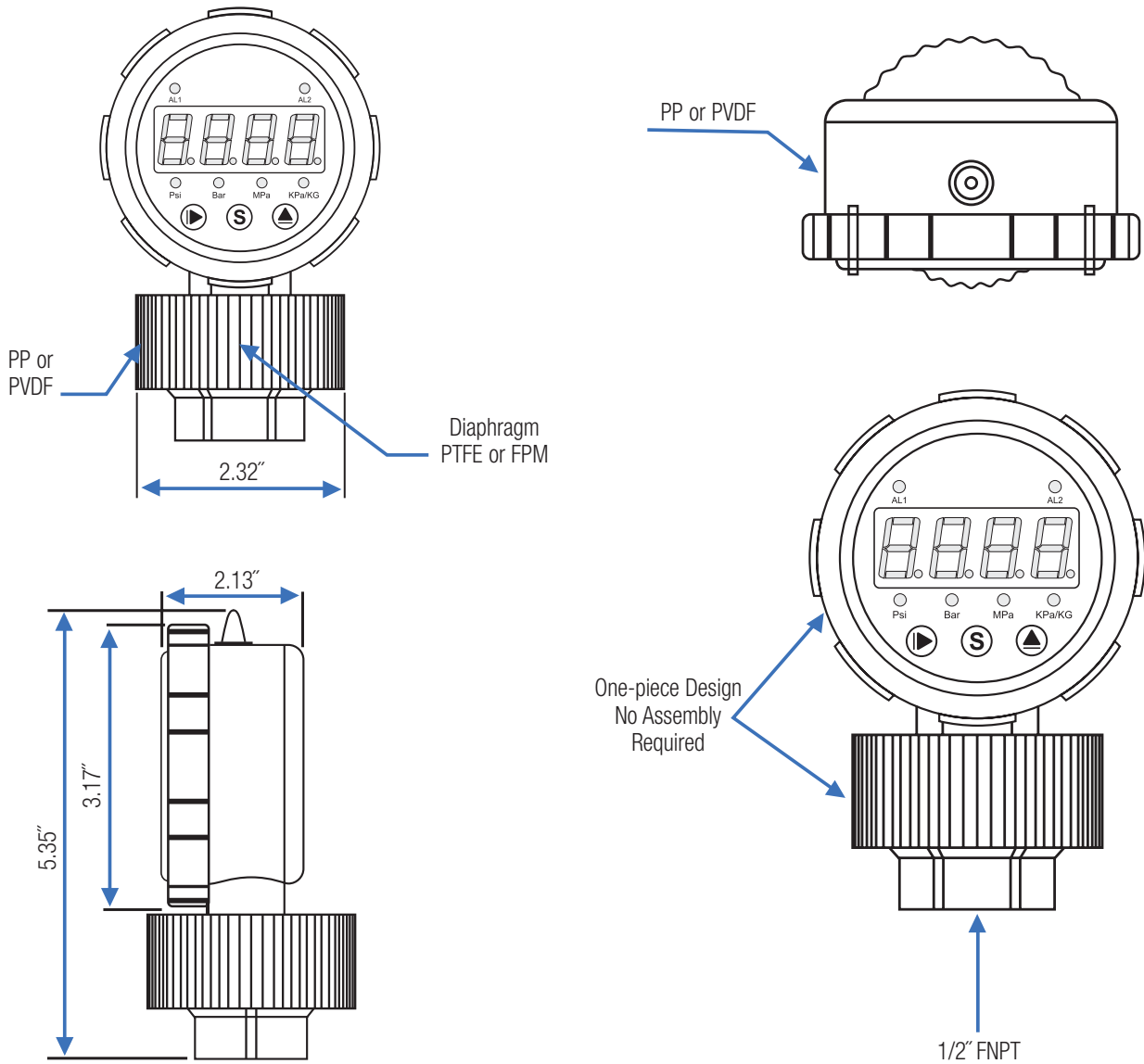




# GLD Series

## LED/LCD PRESSURE GAUGE & ISOLATOR

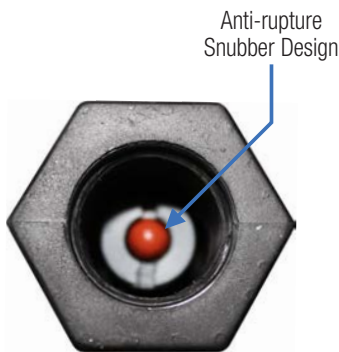
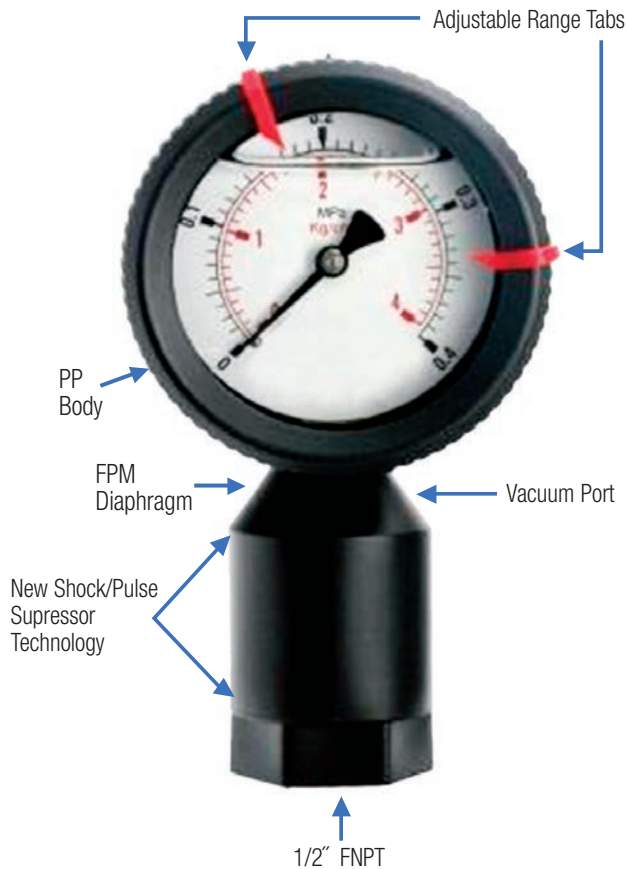
### DIMENSIONS AND MATERIALS (UNITS : INCH)



Hayward is a registered trademark of Hayward Industries, Inc. © 2015 Hayward Industries, Inc.

Contact Hayward Flow Control with questions:

USA: 1.888.429.4635 • Fax: 1.888.778.8410 • One Hayward Industrial Drive • Clemmons, NC 27012 • Email: [hflow@haywardnet.com](mailto:hflow@haywardnet.com)  
Canada: 1.888.238.7665 • Fax: 1.905.829.3636 • 2880 Plymouth Drive • Oakville, ON L6H 5R4 • Email: [hflowcanada@haywardnet.com](mailto:hflowcanada@haywardnet.com)  
Visit us at: [haywardflowcontrol.com](http://haywardflowcontrol.com)



## GP SERIES Pressure Gauge & Isolator

### PULSE AND SURGE SUPPRESSOR

#### KEY FEATURES & BENEFITS

- All Thermoplastic Construction (Gauge + Isolator)
- Heavy Duty One-piece Molded Design (No Assembly Required)
- Simple to Install
- Completely Corrosion Resistant
- Red Markers Designed to Indicate Optimum Operating Range
- Extra Large Colored Display
- Reduces Pressure Surges caused by Water Hammer or Metering Pump Pulsations
- High Accuracy  $\pm 1.5\%$
- Factory Prefilled – Glycerin or Silicone / Vacuum Filled
- No Filling Required
- Suitable for Corrosive Media + Slurries

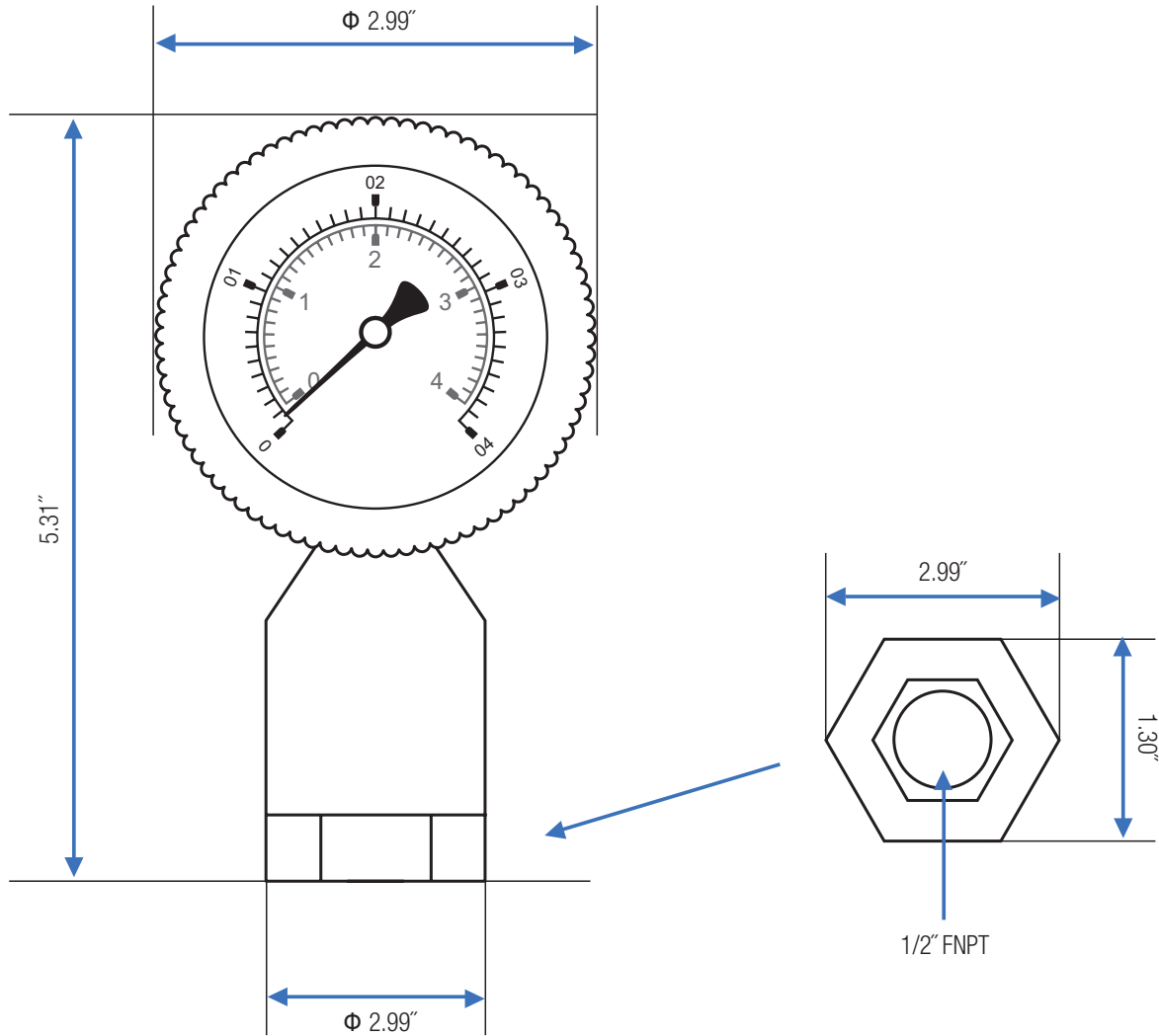
#### SPECIFICATIONS

Dial Diameter	Large 2-1/2" (Big Numbers-Clear Markers)
Mounting	Direct Mount, Bottom Connection 1/2" FNPT
Housing	One-piece Molded Design Polypropylene (No Assembly or Filling Required)
Lens	Tough Impact Glass
Dial	Red & Black Scale White Background, Dial Arc 270°
Measuring Principle	Bourdon Tube-316 SS (Non Wetted) Diaphragm (Wetted Part) - FPM (Standard)
Movement	316 SS (Non Wetted)
Gauge	Two Red Adjustable Plastic Markers Pressure Range Pointers Fitted on the Bezel
Connection	Female Thread 1/2" NPT
Filling	Glycerin or Silicone Filled
Accuracy	$\pm 1.5\%$ F.S.
Operating Temperature	Max. Working Temp. 176°F/80°C
Pressure Range	Standard Range 0-30 / 0-60 / 0-160 psi (Second Scale: Bar) Other units available, e.g., bar, MPa, etc.

# GP Series

## PRESSURE GAUGE & ISOLATOR

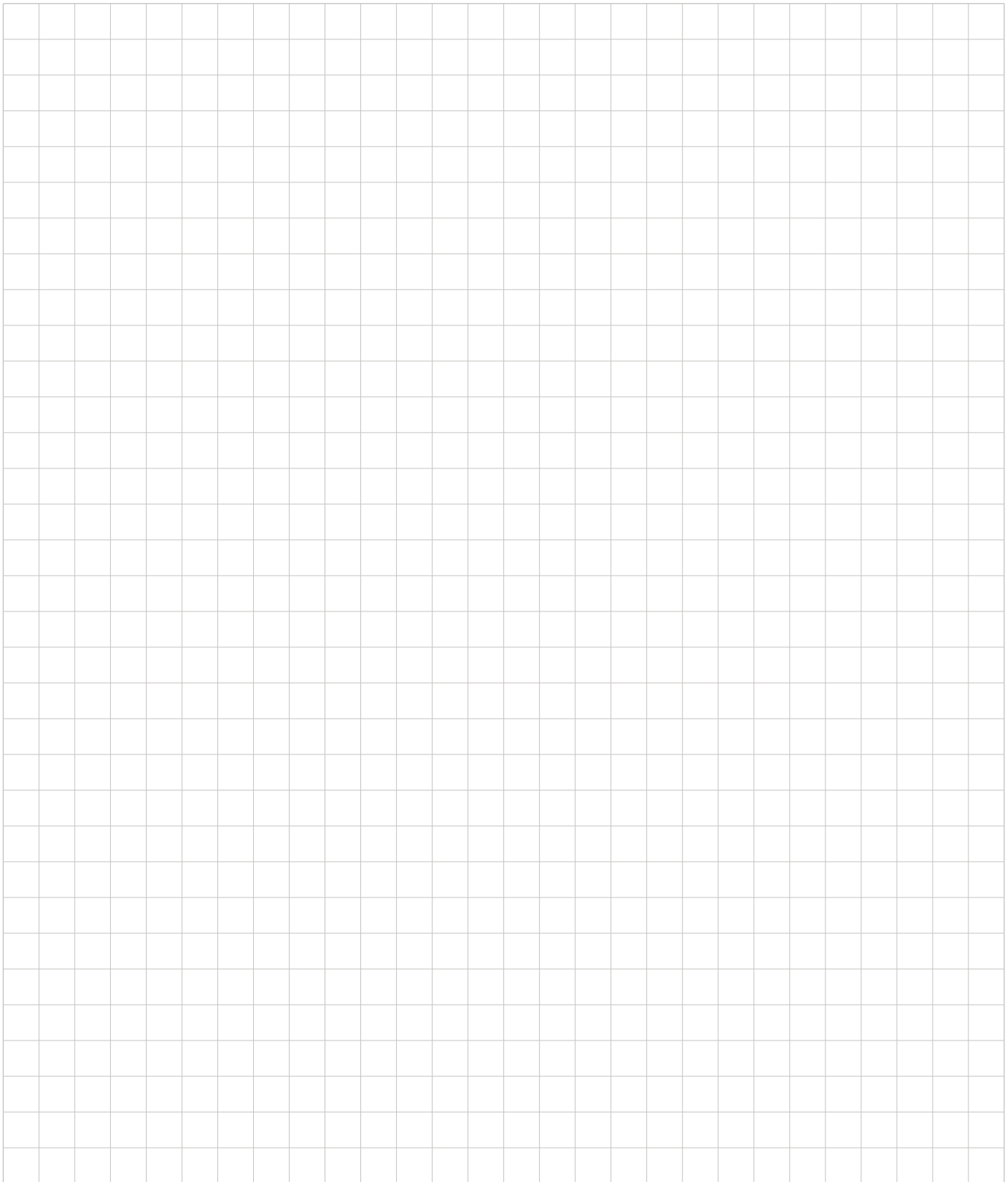
DIMENSIONS (UNIT : INCH)



Hayward is a registered trademark of Hayward Industries, Inc. © 2015 Hayward Industries, Inc.

Contact Hayward Flow Control with questions:

USA: 1.888.429.4635 • Fax: 1.888.778.8410 • One Hayward Industrial Drive • Clemmons, NC 27012 • Email: [hflow@haywardnet.com](mailto:hflow@haywardnet.com)  
Canada: 1.888.238.7665 • Fax: 1.905.829.3636 • 2880 Plymouth Drive • Oakville, ON L6H 5R4 • Email: [hflowcanada@haywardnet.com](mailto:hflowcanada@haywardnet.com)  
Visit us at: [haywardflowcontrol.com](http://haywardflowcontrol.com)





## Recommended Product Applications

### PRODUCT LINE

PROCESS OR APPLICATION	True Union Flow Meters	Insert Paddle Wheel Flow Meters	Level Pressure Transmitter	Controllers, Indicators and Alarms	Thermoplastic Pressure Gauges
Aquatic & Animal Life Support	•	•	•	•	•
Chemical & Process Handling	•	•	•	•	•
Cooling Towers	•	•	•	•	•
Filtration & Separation Systems	•				•
Food & Beverage	•	•	•	•	•
HVAC	•	•		•	•
Irrigation	•	•	•	•	•
Marine	•	•	•	•	•
Mining	•	•	•	•	•
Municipal Water Treatment	•	•		•	•
Paper & Pulp	•	•		•	•
Plating & Surface Finishing	•	•	•	•	•
Power Generation	•	•			•
Pump Protection	•	•			•
Reverse Osmosis	•	•		•	•
Semiconductor	•	•		•	•
Storage & Dosing Tanks			•	•	
Waste Water Treatment	•	•	•	•	•
Water Parks	•	•		•	•

## Additional Hayward Flow Control and Pressure Regulating Products

### CV SERIES PROFILE2™ PROPORTIONAL CONTROL BALL VALVES

#### KEY FEATURES

- Precise Flow Control
- Socket, Threaded or Flanged Ends
- Available in PVC and CPVC
- Reversible Seats
- True Union Design
- Manual or Actuated



### SV SERIES TRUE UNION SOLENOID VALVES

#### KEY FEATURES

- Available in PVC and CPVC
- Corrosion-Resistant Polyester Coil
- No Pressure Differential Required for Operation
- Both 1/2" Conduit or SJ-Type Cord Electrical Connection
- 110 VAC Standard with optional 12/24 VAC or VDC and 220 VAC
- Normally Closed Design



### RV SERIES PRESSURE RELIEF VALVES

#### KEY FEATURES

- Available in PVC and CPVC
- Hand Adjustable, No Tools Needed
- Integrally Molded Threaded Gauge Port
- Pressure Relief from 5 psi to 75 psi



### DAB SERIES TRUE UNION AND FLANGED DIAPHRAGM VALVES

#### KEY FEATURES

- Available in PVC, CPVC, PP and PVDF
- Position Indicator
- Sure-Grip Handwheel
- Choice of FPM, EPDM or PTFE Diaphragms
- Pneumatic or Electric Actuation



### PR SERIES PRESSURE REGULATOR VALVES

#### KEY FEATURES

- Available in PVC and CPVC
- Hand Adjustable, No Tools Needed
- Integrally Molded Threaded Gauge Port
- Regulates from 5 to 75 psi
- Prevents Downstream Pressure from Exceeding the Set Pressure



### GG SERIES GAUGE GUARDS

#### KEY FEATURES

- Available in PVC, CPVC, PP and PVDF
- Threaded NPT Connections
- FPM Membrane
- All Thermoplastic, No Rust or Corrosion
- No Metal Fasteners
- Rugged, Low Profile, Compact Design
- Work in Any Position
- Large Volume Gauge Guard Available







Hayward is a registered trademark of Hayward Industries, Inc. © 2015 Hayward Industries, Inc.

INSPG0115

Contact Hayward Flow Control with questions:

**USA:** 1.888.429.4635 • Fax: 1.888.778.8410 • One Hayward Industrial Drive • Clemmons, NC 27012 • Email: [hflow@haywardnet.com](mailto:hflow@haywardnet.com)  
**Canada:** 1.888.238.7665 • Fax: 1.905.829.3636 • 2880 Plymouth Drive • Oakville, ON L6H 5R4 Canada • Email: [hflowcanada@haywardnet.com](mailto:hflowcanada@haywardnet.com)  
 Visit us at: [www.haywardflowcontrol.com](http://www.haywardflowcontrol.com)