

# Quick Start Manual



Read the user's manual carefully before starting to use the unit.  
Producer reserves the right to implement changes without prior notice.

### Safety Information

- De-pressurize and vent system prior to installation or removal
- Confirm chemical compatibility before use
- **DO NOT** exceed maximum temperature or pressure specifications
- **ALWAYS** wear safety goggles or face-shield during installation and service
- **DO NOT** alter product construction



#### Warning | Caution | Danger

Indicates a potential hazard. Failure to follow all warnings may lead to equipment damage, injury, or death.



#### Note | Technical Notes

Highlights additional information or detailed procedure.



#### Installation Instructions

Do not tighten by grasping the case of the transmitter as this may cause damage. Always pressure test connections for leaks with water prior to use on chemical service. The user shall ensure that the correct transmitter pressure range and the correct materials of construction are selected.



#### Personal Protective Equipment (PPE)

Always utilize the most appropriate PPE during installation and service of Truflo products.



#### Pressurized System Warning

Sensor may be under pressure. Take caution to vent system prior to installation or removal. Failure to do so may result in equipment damage and serious injury.



#### Please ensure that the Instruments are not to be subject to water hammer or pressure spikes! Always Pressure Test System with H2O Prior to Initial Start-Up

Before installation be certain the appropriate instrument has been selected considering operating pressure, full scale pressure, wetted material requirements, media compatibility, operating temperature, vibration, pulsation, desired accuracy and any other instrument component related to the service application including the potential need for protective attachments and/or special installation requirements. Failure to do so could result in equipment damage, failure and/or personal injury. Ensure only qualified personnel are permitted to install and maintain this instrument.



#### Pressurize System Warning

Sensor may be under pressure, take caution to vent system prior to installation or removal. Failure to do so may result in equipment damage and/or serious injury.



#### Please Ensure Full Pipe

PRD Series can be installed in a horizontal or vertical direction.

### Technical Specifications

General	
Pressure Sensor	Ceramic ( AL <sub>2</sub> O <sub>3</sub> 96% )   SS316L
Measured Fluids	H <sub>2</sub> O   Chemical Liquids   Gases
Applied Temperature	-40°F - 257°F   -40°C - 125°C
Over Pressure	200% of FS min.
Burst Pressure	300% of FS min.
Pressure Units	Psi   Bar   KPa   Kg/cm <sup>2</sup>
Display	0~999   Green   Red
Material	PP   PVDF   SS316L
Thermal Drift	SS316L : ± 0.05% FS/°C   Ceramic : ± 0.1% FS/°C
Mounting	Direct Mount   Bottom Connection
Protection Class	IP66   NEMA 4X
Process Connection	½" MNPT / FNPT (PP   PVDF)   ¼" MNPT (SS316L)
Electrical	
Operating Voltage	10-30VDC
Current Consumption	50mA max.
Output	
Transmitter Output	4-20mA   0-10V*
Relay Outputs	(2) 1 Amp Relays or 2 NPN   2 PNP
Current Output	150mA max.
Relay Contact Rated	1A   30 VDC max.
Performance	
Accuracy	Ceramic : ± 1.0% of FS @ 25°C Max.   SS316L : ± 0.3% of FS @ 25°C Max.
Repeatability	Ceramic : ± 1.0% FS Max.   SS316L : ± 0.3% FS Max..
Standards and Approvals	
CE   FCC	
RoHS Compliant	

\*Optional

### Product Introduction

Available in PP | PVDF | 316 SS

Ceramic or Stainless Steel Diaphragm

M12 Quick Connect

LED Display

Relay 2 (LED)

Relay 1 (LED)

LED Upset Condition Change

Example

Outlet

Inlet

- ⊗ Prevent Pumps from Running Dry
- ⊗ Notification for Filter | Strainer Change-Out
- ⊗ Output to Alarm | Shut Off Pump

### Display Features

Alarm Status	No Alarm	Alarm 1   Alarm 2 ON
Display	Green	Red

Relay Set Points	Press <b>SET</b> ⌚ 5 seconds
Function Setting	Press <b>▲▼</b> ⌚ 5 seconds

Press **SET** X 2 to Load the Setting Value and to proceed to next setting

Press and Hold the **SET** key, while tapping the **▼** key to DECREASE the Setting Value,

Press **▲** key to INCREASE the Setting Value.

### Programming



Select / Save / Continue



Change Digit Value

Steps	Display	Range	Description
<b>#1</b> Press and Hold SET Press  HOLD 5 SEC			Current Pressure Value
<b>#2</b> Lock Setting Press SET X 2		0 - F	LK.9 = Settable Press  to change values
<b>#3</b> Pressure Unit Selection Press SET X 2		0 - 3	ut.0 = Bar ut.1 = Kg/cm2 ut.2 = Psi (Default) ut.3 = KPa
<b>#4</b> Decimal Point Press SET X 2		0 - 2	dP.0 = No Decimal Point dP.1 = 1 Decimal Point dP.2 = 2 Decimal Point
<b>#5</b> Response Time Press SET X 2		0 - 9	Press  to change values
<b>#6</b> Alarm Mode Selection Press SET X 2		0 - 4	At.1 = S1 At.2 = S2 At.3 = S1 & S2 Refer to Alarm Mode
<b>#7</b> Alarm Delay Mode Press SET X 2		0 - 2	dn.0 = Power ON Delay dn.1 = Alarm ON Delay dn.2 = Power ON + Alarm ON delay
<b>#8</b> Alarm Delay Time Press SET X 2		0 - 99	Delay Time (Sec.)

### Alarm Settings



Select / Save / Continue



Change Digit Value

Steps	Display	Range	Description
<b>#1</b> Home Screen Press <b>SET</b> Hold  5 SEC			Current Pressure Value
<b>#2</b> Alarm AL1 Setting Press <b>SET</b> X 2		0 - 999	Set Point for Relay 1
<b>#3</b> Alarm AL2 Setting Press <b>SET</b> X 2		0 - 999	Set Point for Relay 2 **NOTE : AL2 must be set higher than AL1; If AL2 ≤ AL1, PV will display <b>Error</b> while press <b>SET</b> key
<b>#4</b> Alarm Hysteresis Setting Press <b>SET</b> X 2		0 - 99	Program Hysteresis of Relay Output **Hysteresis is a buffer around the Programmed Set Point

### Alarm Mode Settings

Mode	Description	
<b>At.0</b>	No Alarm	
<b>At.1</b>		
	$CV \geq (AL1) \rightarrow R1/AL1 \text{ ON} ; CV < (AL1 - H) \rightarrow R1/AL1 \text{ OFF}$	$CV \leq (AL2) \rightarrow R2/AL2 \text{ ON} ; CV > (AL2+H) \rightarrow R2/AL2 \text{ OFF}$
<b>At.2</b>		
	$CV < (AL1 - H) \rightarrow R1/AL1 \text{ ON} ; CV \geq AL1 \rightarrow R1/AL1 \text{ OFF}$	$CV > (AL2 + H) \rightarrow R2/AL2 \text{ ON} ; CV \leq AL2 \rightarrow R2/AL2 \text{ OFF}$
<b>At.3</b>		
	$CV \geq AL1 \rightarrow R1/AL1 \text{ OFF} ; CV < (AL1 - H) \rightarrow R1/AL1 \text{ ON}$	$CV \geq AL2 \rightarrow R2/AL2 \text{ OFF} ; CV < (AL2 - H) \rightarrow R2/AL2 \text{ ON}$
<b>At.4</b>		
	$CV \geq (AL1) \rightarrow R1/AL1 \text{ ON} ; CV < (AL1 - H) \rightarrow R1/AL1 \text{ OFF}$	$CV \geq AL2 \rightarrow R2/AL2 \text{ ON} ; CV < (AL2 - H) \rightarrow R2/AL2 \text{ OFF}$

# Truflo® — PRD Series

## Digital LED Pressure Transmitter | Switch

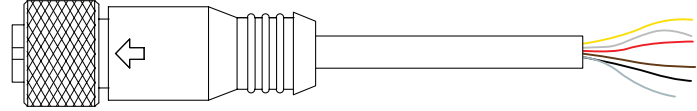
### Wiring Diagram



PRD M12 Male

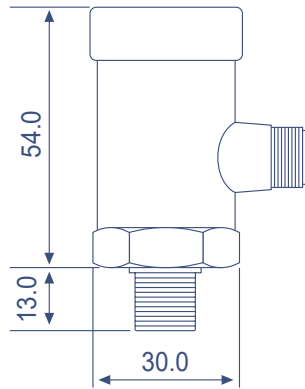


M12 Female Cable



M12 Wiring		
Pin	Color	Description
1	Brown	+ 10-30 VDC
2	White	Relay 2
3	Blue	-VDC
4	Black	Relay 1
5	Grey	Com
6	Yellow	+mA or +V

### Dimensions (mm)



### Model Selection

PRD- [010] - [PP] - [M] - [P] (Optional Suffix)

Pressure Range	Material	Connection	Alarm Method
N01: -14.5 – 0.0 Psi   -1 – 0 Bar	PP: PP	PP   PVDF	2 x 1 Amp Relays (std)
C01: -14.5 – 14.5 Psi   -1 – 1 Bar	PF: PVDF	F: ½" FNPT	Suffix 'P' 2 x PNP
P06: 0.0 – 8.7 Psi   0 – ½ Bar	SS: 316 SS	M: ½" MNPT	Suffix 'N' 2 x NPN
001 : 0.0 – 14.5 Psi   0 – 1 Bar		SS: ¼" MNPT	
010 : 0.0 – 145.0 Psi   0 – 10 Bar			
030: 0.0 – 435.0 Psi   0 – 30 Bar (SS Only)			

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