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CIRCOR Pipeline Engineering

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Omni-Directional Pig Signaller

The Omni-directional pig signaller is a mechanical device that is fitted onto a pipeline via either a boss or flange connection that provides an Omni-directional intrusive protrusion (referred to as the trigger) through the pipeline wall and into the bore of the pipeline to detect the passage of a pigging tool via means of either a visual (referred to as the flag), electrical or dual visual/electrical signal.

Features of the Omni-Directional Pig Signaller:

- > Compact design.
- > Can be fitted to pipeline nominal sizes from 2"ns and above.
- > No dynamic seals eliminating seal wear and potential leak paths.
- > Omni-directional trigger assembly allowing for the signaller to be mounted in a none predetermined orientation.
- > Trigger and flag assembly failsafe design not activated by internal or externals forces such as pipeline vibration, high force winds, etc. therefore eliminating potential false signals.
- Magnetic operation eliminates potentially problematic mechanical linkages.
- > Designed to be able to be removed under operational pressure using industry standard tooling.

Specialised Features:

- Magnetically operated 316 stainless steel proximity switch c/w integrated junction box (Datasheet available upon request)
- Switch rated to UL/CSA Class I Division 1 Groups A, B, C, D Class II Division 1 Groups E, F, G
- > 2"ns ASME B16.5 flange connections available in both RF and RTJ face types and Material grades. (Other flange types, nominal sizes and materials available upon request)



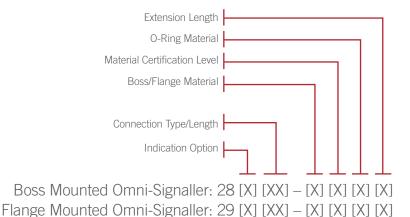




Boss mounted Visual Omni-directional signaller with the flag in both the Set (pre pig passage) and 'Tripped' (post pig passage) position

Omni Signaller Product Codes

The nine digit product code (defined as a five digit prefix and a four digit suffix) allows for a multiple omni-signaller configurations to be easily defined covering a wide range of operational and service requirements.



Prefix 5 Digit Code:

Mounting Type:

28 = Boss Mounted

29 = Flange Mounted

Indication Option:

1 = Visual Indication (V)

2 = Electrical Indication (E)

3 = Dual Indication Visual and Electrical (D)

Connection Type / Length:

00 = No boss or flange connection

Boss Mounted

01 = Boss to suit 2"ns 0.125" to 0.188" wall (4.25" long)02 = Boss to suit 2"ns 0.189" to 0.375" wall (4.125" long) 03 = Boss to suit 2.5"ns 0.125" to 0.188" wall (4.25" long) 04 = Boss to suit 2.5"ns 0.189" to 0.375" wall (4.125" long) 05 = Boss to suit 3"ns 0.062" to 0.124" wall (4.375" long) 06 = Boss to suit 3"ns 0.125" to 0.188" wall (4.25" long) 07 = Boss to suit 3"ns 0.189" to 0.375" wall (4.125" long) 08 = Boss to suit 3"ns 0.376" to 0.562" wall (4" long) 09 = Boss to suit 3.5"ns 0.125" to 0.188" wall (4.25" long) 10 = Boss to suit 3.5"ns 0.189" to 0.375" wall (4.125" long) 11 = Boss to suit 3.5"ns 0.563" to 0.75" wall (3.75" long) 12 = Boss to suit 4"ns 0.125" to 0.188" wall (4.25" long) 13 = Boss to suit 4"ns 0.189" to 0.375" wall (4.125" long) 14 = Boss to suit 4"ns 0.376" to 0.562" wall (4" long) 15 = Boss to suit 4"ns 0.563" to 0.75" wall (3.75" long) 16 = Boss to suit 5"ns 0.125" to 0.188" wall (4.25" long) 17 = Boss to suit 5"ns 0.189" to 0.375" wall (4.125" long) 18 = Boss to suit 5"ns 0.563" to 0.75" wall (3.75" long) 19 = Boss to suit 6>"ns 0.125" to 0.249" wall (4.25" long) 20 = Boss to suit 6>"ns 0.25" to 0.5" wall (4" long) 21 = Boss to suit 6>"ns 0.501" to 0.75" wall (3.75" long) 22 = Boss to suit 6>"ns 0.751" to 1" wall (3.5" long) 23 = Boss to suit 6>"ns 1.001" to 1.25" wall (3.25" long) 24 = Boss to suit 6>"ns 1.251" to 1.5" wall (3" long) 25 = Boss to suit 6>"ns 1.501" to 1.75" wall (2.75" long) Please note that all boss mounted Omni-signallers are rated to ASME class 1500 as standard.

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50 = 2"ns ASME 150 RF Flange 51 = 2"ns ASME 300 RF Flange 52 = 2"ns ASME 600 RF Flange 53 = 2"ns ASME 900/1500 RF Flange 54 = 2"ns ASME 150 RTJ Flange

55 = 2"ns ASME 300 RTJ Flange

56 = 2"ns ASME 600 RTJ Flange

57 = 2"ns ASME 900/1500 RTJ Flange

Please note that all flange mounted Omni-signallers require the connection nozzle height confirming at time of order.

Suffix 4 Digit Code

Boss / Flange Material:			
0 = No Boss Connection			
1 = ASTM A333 Gr.6 / API 5L X52 (Dual Certified)			
2 = ASTM A105 / ASTM A350 LF2 (Dual Certified)			
3 = ASTM A694 F52			
4 = ASTM A694 F60			
5 = ASTM A694 F65			
6 = ASTM A694 F70			
7 = ASTM A694 F316			
Please note that other materials are			

Please note that other materials are available upon request.



Material Certification Level:

1 = EN 10204 3.1

2 = EN 10204 3.2

O-Ring Material:

1 = FKM (-4°F / +392°F)

2 = FFKM (-59.8°F / +437°F)

3 = HNBR (-58°F / +320°F)

 $4 = NBR (-22^{\circ}F / +248^{\circ}F)$

Please note that other materials are available upon request.

Extension Length:		
0 = No extension		
1 = 12" (304.8mm)		
2 = 24" (609.6mm)		
3 = 36" (914.4mm)		
4 = 48" (1219.2mm)		
5 = 60" (1524mm)		
6 = 72" (1828.8mm)		
7 = 84" (2133.6mm)		
8 = 96" (2438.4mm)		
9 = 108" (2743.2mm)		
C = Client Specific Length		

Please note that all client specific lengths need confirming at time of order.

Example: 28120-1110 Omni-Signaller Definition:

- > Boss mounted
- > Visual Indication
- To suit 6"ns and above pipeline with a wall thickness range of between 0.25" to 0.5"
- > ASTM A333 Gr.6 / API 5L X52 Boss material
- > EN 10204 3.1 material certification
- > FKM O-ring seal material
- > No extension

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