



PIG-SIG® NI

Non-Intrusive Pig Passage Indicator



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■ PIG-SIG® NI
Non-intrusive
pig passage
indicator



Close-up view of high-contrast LCD screen

Description

The PIG-SIG® NI produces simple and reliable, non-intrusive detection of pig passages anywhere within a pipeline system. The unit is easily banded onto the line, where it immediately begins scanning both for transmitter and permanent magnet-equipped pigs. No tapping is required, saving the operator time and money normally spent on the installation of conventional signal devices. (See five easy steps to install on page 4 of this bulletin.)

When pigs pass the PIG-SIG NI, the time and date are clearly displayed on a high-contrast, easily viewed LCD screen, along with a flashing "Recent Passage" message. If multiple pig passages have occurred, dates and times of the last 10 passages may be retrieved by simply scrolling back through the PIG-SIG NI memory.

The PIG-SIG NI also offers options that include enhanced long-distance viewing, even from helicopters or light aircraft.

Features

The PIG-SIG NI standard enclosure is a fully certified aluminum, explosion-proof housing with a tempered glass window.* Its attachment bands and buckles are made of stainless steel.

The Non-Intrusive Pig Passage Indicator is designed to detect TracMaster™ CD42-Tx pig location, tracking transmitters, and TDW Trip Magnets. It is bi-directional with auto reset on every passage. Detection speed ranges from 0.1 meters per second to 20 meters per second.

The PIG-SIG NI fits 3- through 72-inch (75 mm - 1800 mm) line sizes and works on pipe wall thicknesses up to 1.5 inches (38.1 mm). Can operate for a full year on just two standard 1.5-volt DC D-cell alkaline batteries. Or it can be equipped with optional solar panels and left to operate indefinitely, an ideal solution for remote locations. Operating temperatures range from -2°F to 167°F (-20°C to 75°C).

The PIG-SIG NI electrical circuitry utilizes a double-pole, double-throw isolated contact closure that closes after pig passage and opens again in 15 seconds. Its maximum operating current is 2 amps at 30 volts DC. A portable version, which operates only on battery power, can be removed from one location to another.

The visual indicator is an LCD flash for one hour, constant for 11 hours, then auto reset. It can also be reset manually.

Options

The PIG-SIG NI makes the following options available to help customers meet individual application needs:

- Long-distance viewing that permits operators to see confirmation of pig passage up to 100 meters away or from a helicopter or light aircraft (24-volt DC units only).
- SatCom satellite uplink, which transmits the times and dates of pig passages via ORBCOMM internet email or by a variety of other communication devices. The SatCom system is solar-powered and trickle-charged, making it an ideal operating option for remote areas.

Also available:

- 24-volt DC units for temperatures to -50°F.
- Models for environmentally harsh conditions. Consult factory for options.

* Class: Class I-Groups B,C,D; Class II-Groups E,F,G; Class III; NEMA4, NEMA7BCD, NEMA9EFG
Certifications: FM Standard 3615; CSA Standard C22.2 No.30; UL Standard 1203; CENELEC Standard EN50014, 50018

Electrical Conduit Feed-Through Type: 3/4 NPT Female

Patented in the United States and in foreign countries.

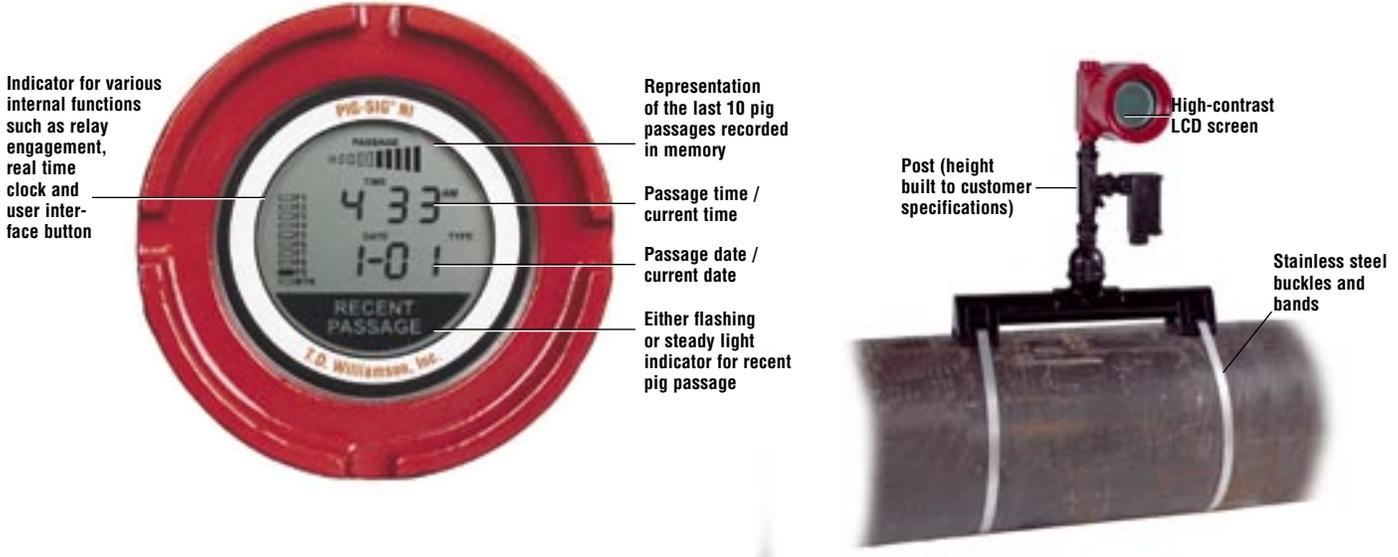
Toll Free

1-800-571-7447

1-888-TDWmSon (839-6766)

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The high-contrast LCD screen gives the operator a clear view of the time and date of pig passage.



Standard Unit (3V D-Cell or 24V DC Power with SCADA Connection Point) Includes Banding Kit

Height		Extension		3"-14"		16"-34"		36"-52"		54"-72"		Weight	
Inches	mm	Inches	mm	Part Number	Part Number	Part Number	Part Number	Part Number	Part Number	Lbs.	Kg.		
12	305	Standard	305	04-3575-0112-01	04-3575-0112-02	04-3575-0112-03	04-3575-0112-04	30	14				
24	610	12	305	04-3575-0124-01	04-3575-0124-02	04-3575-0124-03	04-3575-0124-04	31	14				
36	914	24	610	04-3575-0136-01	04-3575-0136-02	04-3575-0136-03	04-3575-0136-04	32	15				
48	1219	36	914	04-3575-0148-01	04-3575-0148-02	04-3575-0148-03	04-3575-0148-04	33	15				
60	1524	48	1219	04-3575-0160-01	04-3575-0160-02	04-3575-0160-03	04-3575-0160-04	35	16				
72	1829	60	1524	04-3575-0172-01	04-3575-0172-02	04-3575-0172-03	04-3575-0172-04	36	16				
84	2134	72	1829	04-3575-0184-01	04-3575-0184-02	04-3575-0184-03	04-3575-0184-04	37	17				
96	2438	84	2134	04-3575-0196-01	04-3575-0196-02	04-3575-0196-03	04-3575-0196-04	38	17				

Portable Unit (3V D-Cell Power Only - No SCADA Connection Point) Includes Banding Kit and Carrying Case

Height		Extension		3"-14"		16"-34"		36"-52"		54"-72"		Weight	
Inches	mm	Inches	mm	Part Number	Part Number	Part Number	Part Number	Part Number	Part Number	Lbs.	Kgs.		
6	152	Not Applicable		04-3575-0206-01	04-3575-0206-02	04-3575-0206-03	04-3575-0206-04	50	23				



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Part Numbers

Stainless steel banding tool	04-3575-0005-00
Standard carrying case	04-3575-0010-00
Banding kit for 3" - 14" pipe includes 2 each 5-foot bands and 2 buckles	04-3575-0009-01
Banding kit for 16" - 34" pipe includes 2 each 10-foot bands and 2 buckles	04-3575-0009-02
Banding kit for 36" - 52" pipe includes 2 each 15-foot bands and 2 buckles	04-3575-0009-03
Banding kit for 54" - 72" pipe includes 2 each 20-foot bands and 2 buckles	04-3575-0009-04
Heat Insulator Kit*	04-3575-0022

*When the surface temperature of the pipe exceeds the maximum temperature rating of the unit, a Heat Insulator Kit must be installed between the bracket/antenna and the pipe.
NOTE: When using the Heat Insulator, the next longer pipe banding kit will be required.

TDW Trip Magnets

TDW PIG-SIG® NI trip magnets are high-strength, rare-earth, permanent magnets which have been potted into a PVC outer shell. Each one has an integral 1/2-inch UNC stainless steel mounting stud. TDW PIG-SIG trip magnets are supplied in three sizes: M1 for pigs up to 14 inches, M2 for pigs 16 thru 30 inches, and M3 for pigs 32 inches and above.

TDW PIG-SIG NI trip magnets will work effectively on virtually any brand or type of mechanical pig except spheres. Generally, the TDW PIG-SIG NI trip magnet should be mounted at or near the longitudinal axis of the pig, where it is not surrounded by metal. The long axis of the magnet should be along the central axis of the pig.

On certain types of non-metallic pigs, the magnet can be placed within the body, such as TDW's OptionAll™ pigs. On foam pigs with built-in transmitter cavities, the magnet can be placed inside the cavity. On foam pigs without

transmitter cavities, the magnet can be placed inside a hole that the user cuts into the rear of the pig. RTV Silicone may be used to seal the opening. For internal mounting dimensions, refer to the chart below.

On small, mandrel-body type pigs, such as TDW's WCK Pig, it will be necessary to modify the rear of the pig to add a special mounting bracket to accept the magnet. On large-bodied pigs, such as TDW's VANTAGE® Pig, a simple mounting plate can be added to the rear of the pig. The TDW PIG-SIG NI trip magnet requires a 0.562-inch diameter mounting hole for attachment to a bracket or plate and should be secured with a 1/2-inch UNC lock-nut.

The exact mounting component will vary from pig to pig. If the user cannot determine a suitable mounting, contact TDW and it will supply the necessary mounting parts for any brand or type of pig.

Dimensions and Part Numbers

Trip Magnet	Pipe Size		Minimum Opening Sizes Required						Part Number
			Diameter		Length		Weight		
	Inches	mm	Inches	mm	Inches	mm	Lbs.	Kg.	
M1	up to 14	up to 350	1.375	35	3.370	86	1	0.5	04-3575-0004-01
M2	16 - 30	400 - 750	1.375	35	7.750	197	3	1.4	04-3575-0004-02
M3	32 & above	800 & above	1.625	41	13.125	333	5	2.3	04-3575-0004-03

PIG-SIG[®] NI - 5 Easy Steps to Install:

- 1. Buckle and band pre-assembly.



- 2. Band attaching base to pipeline.



- 3. Tighten tension on bands.



- 4. Trim off excess banding.



- 5. Secure the buckles.

