

Proudly Distributed By

## **TURBINE FLOWMETERS BY HOFFER**

*Perfecting Measurement™*

## **Redi-Pulse Pickup Coil**

Product Bulletin RP-104E

### **TECHNICAL DATA SHEET**

#### **OUTSTANDING FEATURES**

- ◆ Pickup coil includes a self-contained preamplifier which provides a conditioned pulse output.
- ◆ Both magnetic and modulated carrier pickup coils are available.
- ◆ Eliminates peripheral signal conditioning modules and associated junction boxes.
- ◆ Economical when compared to standard signal conditioning modules.
- ◆ Certified with CE mark for compliance with EMC Directive 89/336/EEC.
- ◆ Operates from DC voltage.
- ◆ Conditioned pulse output may be transmitted up to 5,000 feet .



#### **THEORY OF OPERATION**

The Redi-Pulse pickup coils are for use with turbine type flowmeters and include a self-contained preamplifier within the pickup coil housing. The pickup coil produces a conditioned pulse output which offers the benefit of greater noise immunity when compared to standard pickup coils. The incorporation of the signal conditioning module inside of the pickup coil itself eliminates the need for conventional signal conditioners that are meter mounted in a junction box, directly on top of the turbine flowmeter.

The Redi-Pulse coil is available in both magnetic and modulated carrier coil versions. Turbine flowmeters specified with the magnetic coil will provide the user with a flow range with a 10:1 to 25:1 turndown ratio depending on meter size and type of bearings specified. Turbine flowmeters specified with the modulated carrier coil will provide the user with a usable flow range up to 100:1 when the turbine meter is specified with ball bearings. For additional information concerning performance specifications on the turbine flowmeters available from Hoffer Flow Controls, request the "Turbine Flowmeter Engineering Guide".

#### **PERFORMANCE SPECIFICATIONS**

##### **Frequency Range:**

Approximately 10 to 10,000 Hz.

##### **Pickup Coil Body Material:**

300 Series stainless steel.

#### **APPLICATIONS OF THE REDI-PULSE**

##### **Application 1 -**

A user requires a flowmeter with a very wide flow range. He plans to incorporate the flowmeter into another assembly and the size/weight of the flowmeter is a major consideration. The final assembly provided by this customer may be shipped anywhere throughout the world.

This customer could use the Hoffer HO Series of turbine flowmeters. Liquid flowmeters in this series will provide 100:1 flow turndown ranges when the flowmeter is specified with ball bearings and the Redi-Pulse modulated carrier pickup coil. The Redi-Pulse will provide a conditioned square wave pulse output in one of several output forms. The user will not have to deal with traditionally bulky/heavy junction boxes associated with the packaging of many signal conditioners. Finally, the Redi-Pulse coil and Hoffer turbine flowmeter are certified to meet the EMC Directive concerning emissions and immunity. The final flowmeter assembly includes the CE mark.

##### **Application 2 -**

A customer wishes to send a pulse output to a remote panel-mounted totalizer/rate indicator. The area in which the flowmeter will be installed contains some electrical noise and the customer is concerned with the integrity of the flowmeter signal through the area to his remote indicator. DC power is available.

One solution available would be to specify a Hoffer turbine flowmeter with either a magnetic or modulated carrier Redi-Pulse coil. The output signal can be a TTL/CMOS pulse type for transmission to the remote indicator. Since the flowmeter signal is conditioned directly at the flowmeter the output signal will be suitable for transmission through the electrically noisy environment.

## ORDERING INFORMATION

(Add Part Number in the pickup coil field of flowmeter model number)

Part Number

- - - - - ( ) RP

Number of Coils (As option on new meter)

- 1 One Coil
- 2 Two Coils (Specify mechanical degrees apart)

Types

- M Magnetic (Variable Reluctance Type)
- MH Magnetic - **Rim Rotor Only**
- R RF (Modulated Carrier Coil)

Output

- 5 TTL/CMOS (0 – 5 VDC, 5 mA source, 100mA sink)  
(must select option #1 on Power Input)
- 10 0 – 10 VDC Square Wave (must select option #2 on Power Input)
- O Open Collector (must select option #1 on Power Input)

Power Input

- 1 8 – 30 VDC @ 10 mA max. @ no load
- 2 15 – 30 VDC @ 10 mA max. @ no load, required for 0 – 10 VDC square wave only\*

Connection

- S Standard mates with MS3106A-105L-35  
(Includes 3 pin connector on new meter only)
- P12 Pigtail leads (Standard cable is 12" in length unless otherwise specified)
- E12 ½" MNPT threads with 12" pigtail leads (explosion-proof version)
- E240 ½" MNPT threads with 240" pigtail leads (explosion-proof version)

\* Do not specify this power with TTL/CMOS or open collector pulse outputs.

## Approvals:

- (EN50081-1:1992) Generic Emission Standard
- (EN50082-2:1995) Generic Immunity Requirements
- (CE) Compliant to EMC Directive 89/336/EEC

## Physical Characteristics:

- Operating Temp: -40 to 85°C (-40 to 185°F) for both Mag & RF
- Storage Temp: -65 to 150°C (-85 to 302°F) for both Mag & RF

## Pin Connections:

- Pin A (Red): Input Power (+)
- Pin B (Black): Common (-)
- Pin C (White): Pulse Output (+)

The Redi-Pulse pickup coil is not available on Teflon flowmeter series.



**HOFFER FLOW CONTROLS, INC.**

107 Kitty Hawk Lane, P. O. Box 2145, Elizabeth City, NC 27906-2145  
800-628-4584 252-331-1997 FAX 252-331-2886  
www.hofferflow.com email: info@hofferflow.com

The specifications contained herein are subject to change without notice and any user of said specifications should verify from the manufacturer that the specifications are currently in effect. Otherwise, the manufacturer assumes no responsibility for the use of specifications which may have been changed and are no longer in effect.

