



Счетчик-индикатор контроля HRT1

Технические характеристики

Архангельск (8182)63-90-72
Астана +7(7172)727-132
Белгород (4722)40-23-64
Брянск (4832)59-03-52
Владивосток (423)249-28-31
Волгоград (844)278-03-48
Вологда (8172)26-41-59
Воронеж (473)204-51-73
Екатеринбург (343)384-55-89
Иваново (4932)77-34-06
Ижевск (3412)26-03-58
Казань (843)206-01-48

Калининград (4012)72-03-81
Калуга (4842)92-23-67
Кемерово (3842)65-04-62
Киров (8332)68-02-04
Краснодар (861)203-40-90
Красноярск (391)204-63-61
Курск (4712)77-13-04
Липецк (4742)52-20-81
Магнитогорск (3519)55-03-13
Москва (495)268-04-70
Мурманск (8152)59-64-93
Набережные Челны (8552)20-53-41

Нижний Новгород (831)429-08-12
Новокузнецк (3843)20-46-81
Новосибирск (383)227-86-73
Орел (4862)44-53-42
Оренбург (3532)37-68-04
Пенза (8412)22-31-16
Пермь (342)205-81-47
Ростов-на-Дону (863)308-18-15
Рязань (4912)46-61-64
Самара (846)206-03-16
Санкт-Петербург (812)309-46-40
Саратов (845)249-38-78

Смоленск (4812)29-41-54
Сочи (862)225-72-31
Ставрополь (8652)20-65-13
Тверь (4822)63-31-35
Томск (3822)98-41-53
Тула (4872)74-02-29
Тюмень (3452)66-21-18
Ульяновск (8422)24-23-59
Уфа (347)229-48-12
Челябинск (351)202-03-61
Череповец (8202)49-02-64
Ярославль (4852)69-52-93

TURBINE FLOWMETERS BY **HOFFER**

Perfecting Measurement™



HRT1

Rate Indicator/Totalizer with
HART® Communication Protocol

Product Bulletin HRT1-111G

TECHNICAL DATA SHEET

OUTSTANDING FEATURES

- ♦ **HART® Field Communication Protocol**
- ♦ **5 Digit Rate, 8 Digit Totalizer LCD display with configurable decimal point location**
- ♦ **8 Digit, Non-resettable Grand Total display**
- ♦ **Pulse Input supports turbine as well as many other pulse generating flowmeters**
- ♦ **4-20mA Analog Output**
- ♦ **Up to 20 Point Linearization**
- ♦ **Optional Scaled Pulse Output representing an increment of volume for each pulse**
- ♦ **Two Optional Alarm Outputs configurable for Rate and Total**
- ♦ **Magnetically operated reed switch for Total reset**
- ♦ **Internal battery backup**
- ♦ **Configuration and Grand Total stored in non-volatile memory; Grand Total saved once per minute**



Explosion-proof Enclosure Option

GENERAL DESCRIPTION

Featuring 5 digits of rate and 8 digits of total, the HRT1 is a loop powered indicator capable of accepting magnetic pickup, DC pulse or switch closure inputs. The HRT1 uses the 4-20mA loop to provide power when this output is used and to provide the HART® communication link.

SPECIFICATIONS

GENERAL

TOTAL DISPLAY:

8 Digits 0.26" high. Resettable

Total Units: GAL, LIT, FT3, M3, BBL & "blank"

GRAND TOTAL:

8 Digits 0.26" high, Non-resettable. Value stored once per minute in non-volatile memory. Grand Total is displayed for 15 seconds after pressing the button.

RATE DISPLAY:

5 Digits 0.5" High, Display updates once every two seconds

Rate Units: /SEC /MIN /HR /DAY

K-factor: The pulses per unit of Total (e.g. pulses/gallon) are configurable in the range 0.001 to 99,999,999

Linearization: Up to 20 points

Decimal Points: Configurable for 0, .0, .00 or .000 for rate and total

Accuracy: Total: ± 1 count, Rate: $\pm 0.01\%$

INPUTS

Magnetic Pickup:

Frequency Range: 0.2 Hz to 5000 Hz

Signal Level: 30 mV_{p-p} to 30V_{p-p}

Opto-Isolated DC Pulse:

Frequency Range: 0 Hz to 3000 Hz

Signal Type: DC Pulse

High (Logic 1): 4 to 30 VDC

Low (Logic 0): <1 VDC

Min Pulse Width: 0.1 msec

Contact Closure:

Frequency Range: 0 to 5000 Hz

Signal Type: Contact closure, Sig+ Terminal to DC common

Internal Pull-up: 220 K Ω to +3.3 VDC

Reset:

Signal Type: Contact closure, Reset Terminal to DC common

Min On: 25 msec

Internal Pull-Up: 100K Ω to +3.3 VDC

External Magnet: Activates internal reed switch

DC POWER/LOOP POWERED

Voltage: 8 to 30 VDC

Current: <24 mA

Loop Burden: 8 VDC maximum

Supply Backup: (1) C-size Lithium battery

Battery Life: 4 years typical

Protection: Reverse polarity protected

ANALOG OUTPUT

Scale: 4-20mA follows rate

Accuracy: 0.02% of Full Scale @ 20°C

Temperature drift: 40 ppm/°C

Update Time: 2.0 seconds

Connection: Two wire

PULSE OUTPUT

Type: 0-5 TTL, 0-Supply Voltage, open collector (30 VDC, 100mA)

ALARM 1 AND ALARM 2

Type: 0-5V TTL, 0-Supply voltage, open collector (30 VDC, 100 mA)

Function: Rate or Total

PHYSICAL

Operating Temperature:

-40°F (-40°C) to + 158°F (70°C)

Humidity: 0 - 90% Non-condensing

Packaging: NEMA 4X, Panel mount or Explosion-proof

Dimensions for NEMA 4X enclosure:

4.33" (110 mm) wide x 4.33" (110 mm) long x 4.33" (110 mm) tall

Enclosure Exd Ratings:

STYLE 3

CSA/FM: CLASS I, DIV.1, GR. ABCD, CLASS II, DIV.1, GR. EFG, CLASS III, TYPE 4X;

CLASS 1 ZONE1 AEx d IIC, IP66

STYLE 3A

Same as above plus ATEX/IECEx: II 2 G Ex d IIC Gb; IP66

STYLE 7

CSA: CLASS I, DIV.1, GR. BCD, CLASS II, DIV.1, GR. EFG, CLASS III, TYPE 4X, IP66;

CLASS I ZONE 1 Ex d IIB+H2, IP66

ATEX/IECEx: II 2 G Ex d IIC Gb; IP66

HRT1 ORDERING INFORMATION

Basic Model Number		HRT1	- (A)	- (B)	- (C)	- (D)	- (E)	- (F)	- (G)
Series:									
A. Enclosure Style:									
2	NEMA 4X Enclosure (HRT1 mounted behind clear cover)								
3*	Explosion-Proof Enclosure								
3A*	ATEX Exd Enclosure								
P	Panel Mount Enclosure								
PD	Panel Mount Enclosure with Door and Lock								
4	NEMA 1 enclosure (HRT1 mounted to the outside of clear cover for indoor/dry installation only)								
5	NEMA 4X enclosure (HRT1 behind clear cover) with Sunshade								
7*	ATEX Stainless Steel Explosion-Proof Enclosure								
*Options for Enclosure Style 3, 3A and 7									
(M)	Insert "M" for M20 Thread. M20 Thread not available for use in Canada								
(S)	Sunshade								
B. Pulse Input:									
M	Magnetic coil, Pulse, Dry contact								
R	Isolated Pulse, RPM, RPR, Hall Effect coils								
C. Analog Output:									
W	Wired 4-20mA Loop Powered								
T	Wireless 4-20mA Output. TBA (Coming in near future)								
D. Pulse Output:									
5	0-5 TTL/CMOS								
OC	Open Collector								
V	8-30 VDC with Pullup to V+								
E. Alarms: (Two opto-isolated alarms with user-defined levels for rate and/or total)									
5	0-5 TTL/CMOS								
OC	Open Collector								
V	8-30 VDC with Pullup to V+								
F. Mounting:									
F	Nema 4X Style 2 enclosure mounted on turbine. Must be used with "X" riser turbine option.								
FHT	8" long temperature riser for Nema 4X Style 2 enclosure mounted on turbine. Required when fluid temperature exceeds 140 deg. F. Must be used with "X" riser turbine option.								
FX	Explosion-proof Style 3 enclosure mounted on turbine. Must be used with "X" riser option on turbine.								
FXHT	8" long temperature riser for Explosion-Proof Style 3 enclosure mounted on turbine. Required when temperatures exceed 140 deg. F. Must be used with "X" riser turbine option.								
NP	Nema 4X enclosure pipe mounting kit 2" pipe or smaller. Specify if pipe is vertical or horizontal.								
G. Special Features:									
CE	CE Mark required for Europe								
SP	Any special features that are not covered in the model number use a written description of the -SP								

По вопросам продажи и поддержки обращайтесь:

Архангельск (8182)63-90-72
Астана +7(7172)727-132
Белгород (4722)40-23-64
Брянск (4832)59-03-52
Владивосток (423)249-28-31
Волгоград (844)278-03-48
Вологда (8172)26-41-59
Воронеж (473)204-51-73
Екатеринбург (343)384-55-89
Иваново (4932)77-34-06
Ижевск (3412)26-03-58
Казань (843)206-01-48

Калининград (4012)72-03-81
Калуга (4842)92-23-67
Кемерово (3842)65-04-62
Киров (8332)68-02-04
Краснодар (861)203-40-90
Красноярск (391)204-63-61
Курск (4712)77-13-04
Липецк (4742)52-20-81
Магнитогорск (3519)55-03-13
Москва (495)268-04-70
Мурманск (8152)59-64-93
Набережные Челны (8552)20-53-41

Нижний Новгород (831)429-08-12
Новокузнецк (3843)20-46-81
Новосибирск (383)227-86-73
Орел (4862)44-53-42
Оренбург (3532)37-68-04
Пенза (8412)22-31-16
Пермь (342)205-81-47
Ростов-на-Дону (863)308-18-15
Рязань (4912)46-61-64
Самара (846)206-03-16
Санкт-Петербург (812)309-46-40
Саратов (845)249-38-78

Смоленск (4812)29-41-54
Сочи (862)225-72-31
Ставрополь (8652)20-65-13
Тверь (4822)63-31-35
Томск (3822)98-41-53
Тула (4872)74-02-29
Тюмень (3452)66-21-18
Ульяновск (8422)24-23-59
Уфа (347)229-48-12
Челябинск (351)202-03-61
Череповец (8202)49-02-64
Ярославль (4852)69-52-93

Единый адрес для всех регионов: hfr@nt-rt.ru || www.hoffer.nt-rt.ru



HOFFER FLOW CONTROLS, INC.

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.

The quality system covering the design, manufacture and testing of our products is certified to International Standard ISO 9001.

