SPECTEC
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4070
DIGITAL SCALER

Rev. 1   9-04

PRODUCT DESCRIPTION

The Digital Scaler conditions and scales the output from a magnetic pickup coil into desired units of measurement. Two models are available:

4070-01/-03
PRESET SCALER

Similar to the 4070-01, but with preprogrammed K-factor. K-factor can be changed at factory. This unit offers the security that K-factor setting cannot be easily changed unless an exchange circuit card is installed. Field exchangeable PCB's are available for K-factor change.

4070-10/-13
MANUALLY ADJUSTABLE SCALER

The output of the signal conditioning circuit is fed into the scaling circuit where the signal is divided down by a power of 10, then is fed to a 12 binary scaler, which has a divisor range of 1 to 99,999,999. The scaler is equal to the sum of the binary and power of 8 numbers represented by each of the closed switches. This scaler generates one output pulse to the output relay every time it receives a quantity of input pulses equal to the scaler number.

SPECIFICATIONS

Enclosure:	Fiberglass (Light gray in color) Industry standards NEMA-4 3.8" x 5.1" x 2.3" or Explosion Proof Junction Box
Vs, Supply Voltage:	8.5 to 30 VDC
Is, Supply Current:	18 mA
Input:	Mag. Pickup to 4000Hz with 30mV input sensitivity
Output:	0 – Vs, NPN with adjustable probe width
Scaling:	1 to 99,999,999
Accuracy:	± 1 Count
Temp. Range:	-25 to 160 °F (-32 to 71°C)

PART NUMBERS

4070-01/-11: Circuit Card Only
4070-02/-12: With NEMA-4 Enclosure
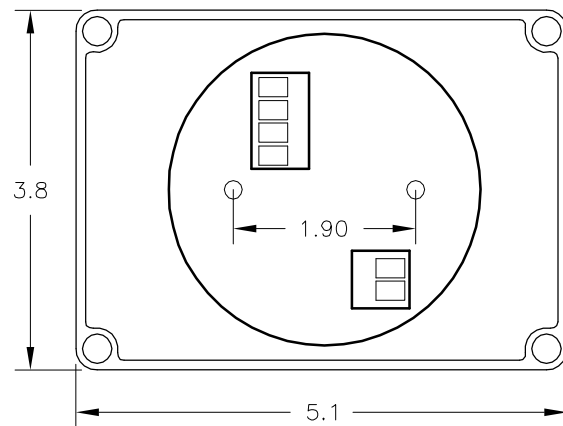**4070-03/-13:** With Explosion Proof Junction Box

PROGRAMMING (–01/-03)

Example: Given a 1 ½" Fluid Turbine with a calibration factor of 308.36 pulses per gallon. The desired activation of the relay is one time for each five gallons of fluid that passes through the turbine.

The factor of 308.36 pulses per gallon multiplied by five gallons equals 1541.8, this is rounded off to 1542, which does not exceed the binary scaler, Sw-2. Therefore, set Sw-1 to position 1 (X1).

```
 1542 desired divisor
-1024 largest binary number ≤ to the divisor
  518 remainder
-  512 largest binary number ≤ to the divisor
    6 remainder
-    4 largest binary number ≤ to the divisor
    2 remainder
-    2 largest binary number ≤ to the divisor
    0 remainder
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NEMA-4

JUNCTION BOX