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4057B
PULSE MULTIPLIER/DIVIDIER/K-FACTOR SCALER W/ OPTIONAL ANALOG OUTPUT

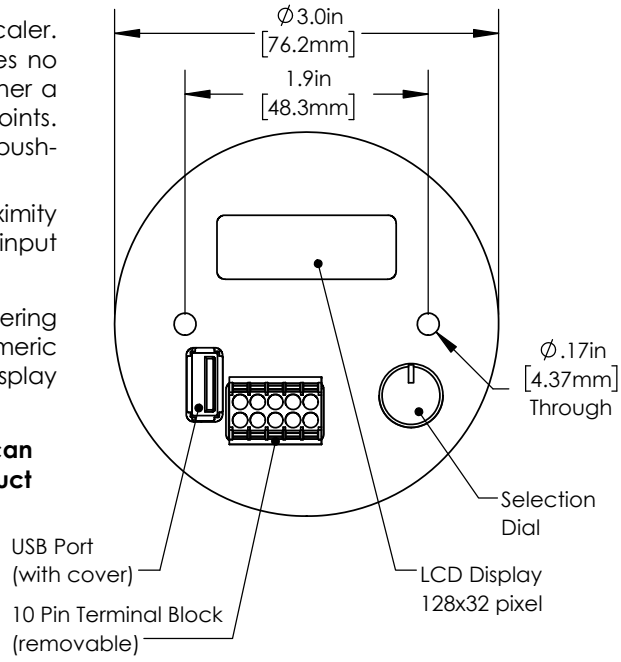
PRODUCT DESCRIPTION

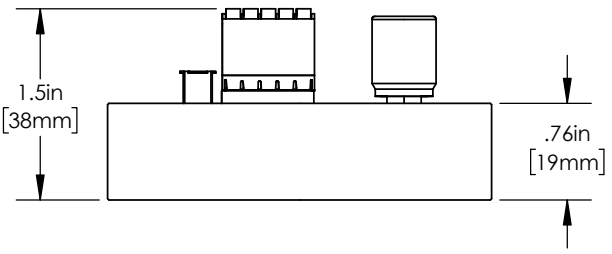
The 4057B is a user programmable pulse multiplier, divider, or K-factor scaler. An optional analog output converter can be included, which requires no external test equipment for setup. The analog output can provide either a voltage or current signal with adjustable minimum and maximum set points. Output modes are quickly selected via a backlit LCD screen and push-button dial or through a configuration utility.

All models can accept input from digital amplified pickups, proximity sensors/switches, and other square wave sources. Options for direct input from magnetic VRS and RF speed sensors are also available.

Settings and current input/output values are shown in selected engineering units on the LCD Display. The 4057B can be secured by a 4-digit numeric password to prevent unauthorized changes to settings but still allow display of current input/output values.

It is advised that the "4057 Series User Guide" be read before use. This can be found in the configuration utility (under the Help menu), on the product webpage, or by contacting Spectec.





SPECIFICATIONS

Supply Voltage (Vs): 12-30 VDC
[Up to 40VDC without Mag or RF options]

Supply Current (Is): 75 - 120 mA

Input Type/Sensitivity: Digital: CMOS, TTL, 0-30V, OC†, PNP†
(†with external resistors)
5V minimum signal level
Optional input types:
Magnetic (VRS): 5, 12, 30, 50 or 100mVpp
RF Coil: 4 or 10 Ohms

Frequency Input Range:
Digital: 0.3 Hz to ~100 KHz
Mag (VRS): 3 Hz to ~35 KHz*
RF Coil: 0.5 Hz to ~7 KHz
(Only one input type can be utilized at a time)
(*Depends on signal strength,100kHz option available, Contact Factory)

Digital Output Options: TTL, NPN, OC or PNP, See Page 2 for options
(100 kHz maximum output frequency)

Multiplier Options: **Range:** .010 to 99 999.990 (resolution .001)
(only up to 100 kHz max frequency)

Divider Options: **Range:** .010 to 99 999.990 (resolution .001)
Pulse Width: 1% - 99%

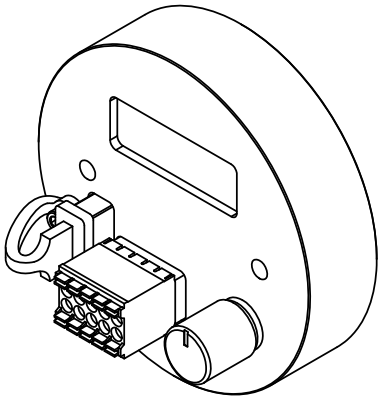
K-Factor / Linearization Options: Linearization of 2 to 16 points of frequency/k-factor pairs

Analog Output Options: (DAC)
[Available on some models]

Frequency to Current (FTC) Outputs: (Sourcing)
4-20mA, 0-20mA, or 0-24mA
±0.01mA

Frequency to Voltage (FTV) Outputs:
0-5V or 0-10V
±0.01 % FSR typ., ±2 ppm/°C output drift

DAC output can be configured with a 0 Hz scale or an offset frequency



Operating Temp. Range: -20° to 75°C (-4° to 167°F) with Vs=12V
-20° to 55°C (-4° to 131°F) with Vs=30V

Terminal Connections: Pluggable Terminal Block
Push-In wire connection, 24 – 16 AWG wire
See Page 2 for wiring / pinout

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ORDER INFORMATION

STYLE: **OPTIONS:**

4057B - ☐ ☐ ☐ ☐ **Programmable Signal Converter**

Digital Output Type:
- **1** - 0 - 5V, NPN [TTL]
- **2** - 0 - 10V, NPN
- **3** - 0 - 12V, NPN
- **4** - 0 - Vs, NPN with internal 3.1k Ohm pull-up
- **5** - 0 - Vs, NPN (OC), Open Collector
- **6** - PNP

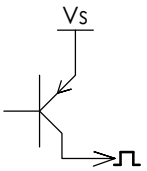
Output Options:
- **1** - Digital Frequency Output (Standard Model: Multiplied/Divided/K-Factor Scaled Output Only)
- **2** - Analog FTC/FTV Output in addition to Digital Frequency Output

Mag Input:
- **0** - No Magnetic Coil (VRS) Input Option
- **1** – Mag Coil (VRS) 100mVpp Sensitivity
- **2** - Mag Coil (VRS) 50mVpp Sensitivity
- **3** - Mag Coil (VRS) 30mVpp Sensitivity
- **4** - Mag Coil (VRS) 12mVpp Sensitivity
- **5** - Mag Coil (VRS) 5mVpp Sensitivity

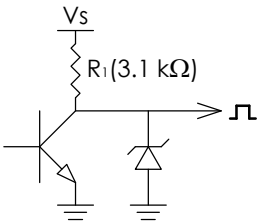
RF Input:
- **0** - No RF Coil Input Option
- **1** - RF4 (4 Ohm)
- **2** - RF10 (10 Ohm)

Digital Signal Input and Digital Frequency Output Included on All Models

PNP Output



NPN Output

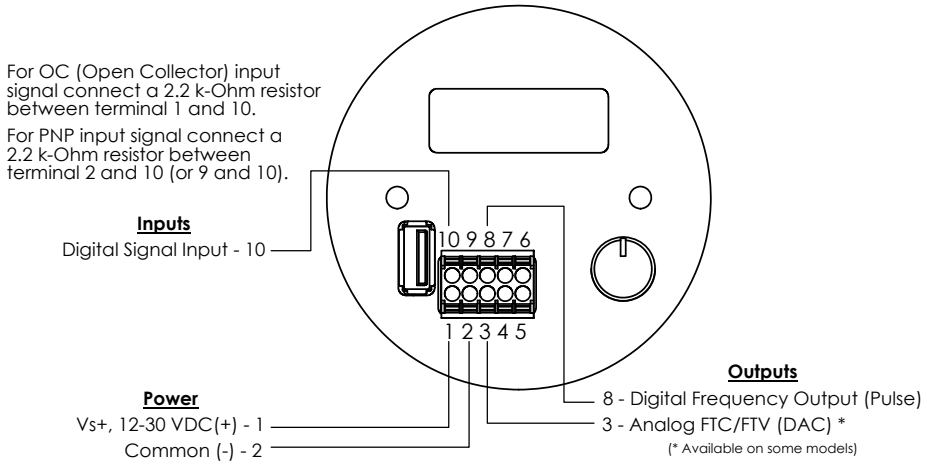


Active Sensor or other Digital Input Wiring:

Power
1 - Vs+, 12-30 VDC(+)
2 - Common (-)
9 - Common (-) [extra reference point]

Inputs
10 - Digital Signal Input
4 & 7 - No Connection
5 & 6 - No Connection

Outputs
8 - Digital Frequency Output (Pulse)
3 - Analog FTC/FTV (DAC) [Available on some models]



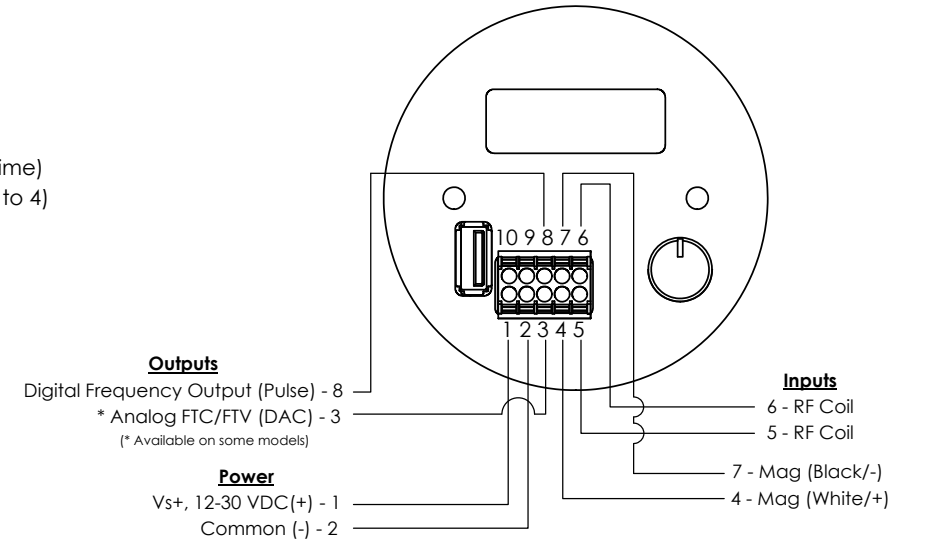
Passive Sensor (Magnetic VRS or RF) Wiring:

[Available on some models]

Power
1 - Vs+, 12-30 VDC(+)
2 - Common (-)
9 - Common (-) [extra reference point]

Inputs (Only capable of untilizing 1 input at a time)
4 & 7 - Magnetic VRS Coil (If polarized: White/+ to 4)
5 & 6 - RF Coil
10 - No Connection

Outputs
8 - Digital Frequency Output (Pulse)
3 - Analog FTC/FTV (DAC) [Available on some models]



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