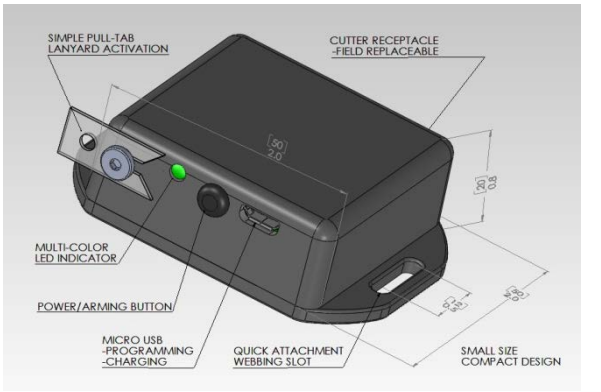
# Electronic Initiation Device 1R

## FEATURES:

- Compact, light-weight design
- Quick-attach enclosure
- Reusable
- High accuracy
- Fully programmable trigger options
  - ♦ Time delays milliseconds - minutes
  - ♦ Altitude by absolute pressure
  - ♦ Shock by accelerometer
  - ♦ Sensor lockout and backup timer
- Factory programming available
- Device status indicator LEDs
- Rechargeable battery
- Compatible with typical AAD cutters, "non-explosive" classification
- Energy pulse up to 75 mJ




## Applications:

- ♦ Parachute deployment trigger
- ♦ Parafoil brake release
- ♦ Drogue or main parachute riser release
- ♦ Disconnect signal upon landing
- ♦ Delay-on signal

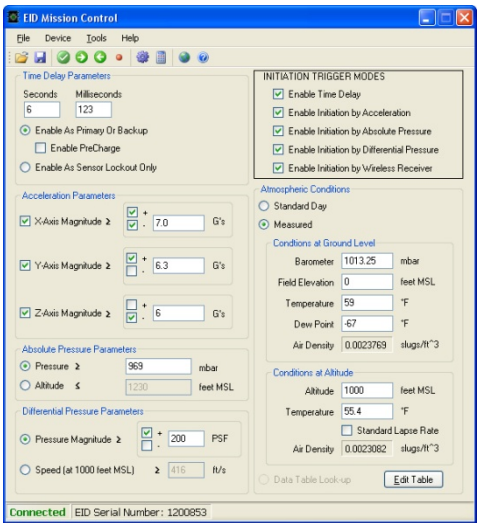
## GENERAL DESCRIPTION:

The **E**lectronic **I**nitiation **D**evice, riser attachment model **1R**, is a capacitive discharge device compatible for use with 'electric rope cutters' or other hot-bridgewire devices. Paired with the EID Mission Control Software, the EID1R unit can be programmed for planned initiation based upon selectable parameters, which include time elapses, pressures, and accelerations. The EID1R is lanyard activated or can be customized to an application. Key initiation parameters are stored to internal memory in real-time and can be downloaded for review after initiation.

## DESKTOP APPLICATION SOFTWARE*:

- Initiation parameters programming
- Post-initiation operations review
- Pressure altitude & speed calculator tool
- Selectable display units, imperial or metric
- USB 2.0 to serial communication
- MS .Net Framework version 3.5 or newer
- Windows® XP/Vista/7/8/10 compatible

* Mobile app also available

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# SPECIFICATIONS:

ELECTRICAL

| | |
|---|---|
| Power Supply: | 3.7 volt battery<br>RJD2032 rechargeable<br>Reverse polarity protected<br>6.5 volt Absolute Maximum Rating |
| Current Draw: | Standby: < 50 µA nominal<br>Running: 8 mA nominal average<br>Pulse Charging: <20 mA peak, duration <10 sec |
| USB Charging: | ~40 mA peak (~0.5C rate) |

ENVIRONMENTAL

| | |
|---|---|
| Temperature: | -20°C to 60°C Operating |
| Humidity: | 15 - 85% RH, non-condensing |
| Enclosure: | IP40, ABS plastic<br>IP40 & IP67, Aluminum available |

MECHANICAL

| | |
|---|---|
| Connector(s): | Internal: Molex 22-05-7035 (mate 50-37-5033)<br>External options:<br>-CYPRES 2 cutter receptacle<br>-Vigil 2+ cutter receptacle<br>-Other, customer specified |
| Dimensions: | ABS plastic enclosure<br>2.6" x 2.0" x 0.8" [66.3 mm x 50 mm x 20 mm]<br>2x mounting slots: 0.47" x 0.14" [12 mm x 3.5 mm]<br>slot separation: 2.28" [57.8 mm]<br><br>Aluminum enclosure<br>2.9" x 2.0" x 1.1" [73 mm x 50 mm x 28 mm]<br>2x mounting slots: 0.49" x 0.18" [12.4 mm x 4.6 mm]<br>slot separation: 2.44" [62 mm] |
| Weight: | ABS plastic: < 2 oz. nominal (~50 g), including battery<br>Aluminum: <3.5 oz. nominal (~95 g), including battery |

CONTROL INPUT/OUTPUT

| | |
|---|---|
| Output Pulse: | 2-lead, 7.8 volts typical<br>Energy pulse: ~75 mJ |
| Power Button: | Rubber, high-force push: approx 3 lb (~1300gf)<br>Plastic, low-force push: approx 8 oz (~260gf) |
| Communication: | Micro USB type B receptacle<br>RS-232 serial protocol via internal USB adapter |

INITIATION TRIGGER MODES

| | |
|---|---|
| Time Delay: | Set in seconds and milliseconds<br>Use as primary trigger, Or use as lockout of other triggers<br>Typical accuracy 0.1% |
| Absolute Press: | Set trigger as pressure or altitude<br>Range: 300 to 1100 mbar<br>Typical accuracy 0.25% full scale |
| Acceleration: | Programmable G-force trigger<br>Range: ±16 Gs<br>Typical accuracy 1% full scale |
| Wireless[1]: | Paired transmitter and receiver(s)<br>Range: ~300+ feet<br>Typical actuation time ~10 ms |

**PART NUMBER QUICK REFERENCE**

**EID1 R-TPG**

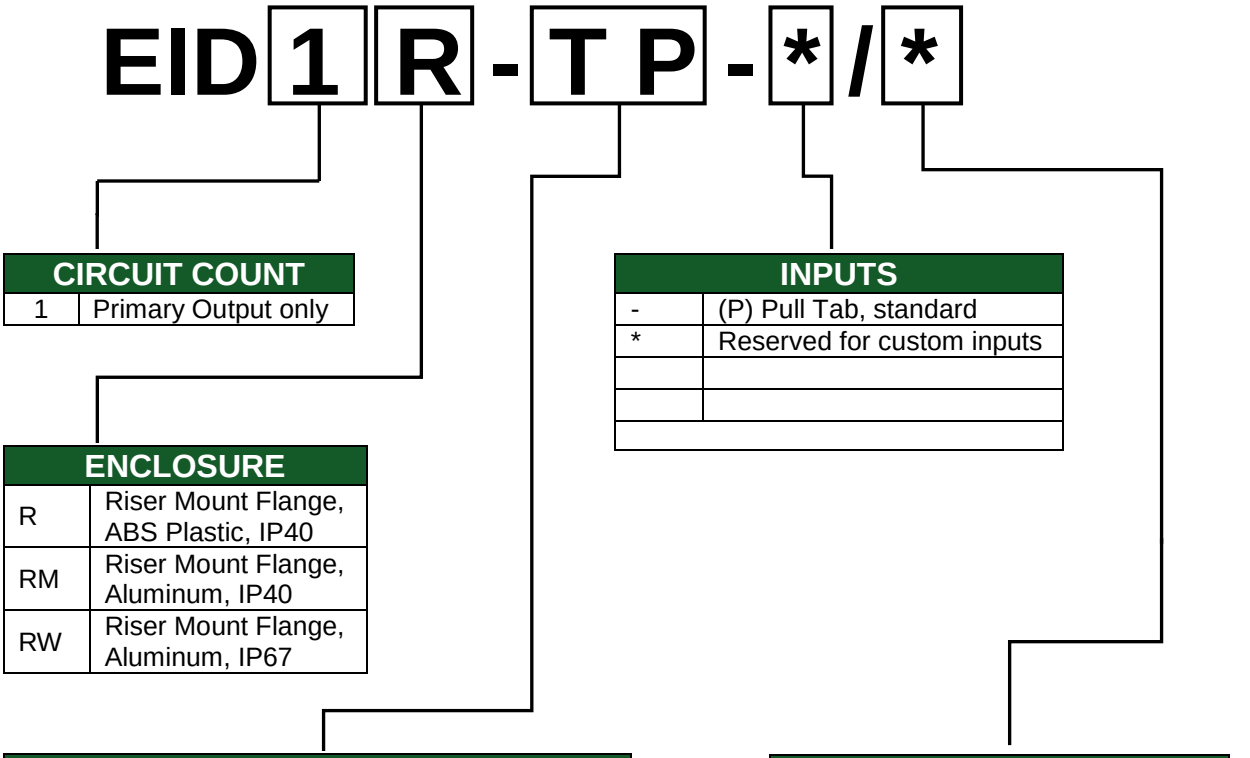
Product Series

Enclosure Type
- **R** = Flanged, IP40
- **RM** = Flanged, IP40
- **RW** = Flanged, IP67

Initiation Mode
- **T** = Time Delay
- **L** = Landing Detect
- **P** = Absolute Pressure Threshold
- **G** = Acceleration Threshold
- **W** = Wireless Receiver

[1] Option is available only when pairing EID units with wireless transmitter and receiver modules.

## PART NUMBER DESCRIPTION:




| CIRCUIT COUNT | |
|---|---|
| 1 | Primary Output only |

| INPUTS | |
|---|---|
| - | (P) Pull Tab, standard |
| * | Reserved for custom inputs |
| | |
| | |
| | |

| ENCLOSURE | |
|---|---|
| R | Riser Mount Flange, ABS Plastic, IP40 |
| RM | Riser Mount Flange, Aluminum, IP40 |
| RW | Riser Mount Flange, Aluminum, IP67 |

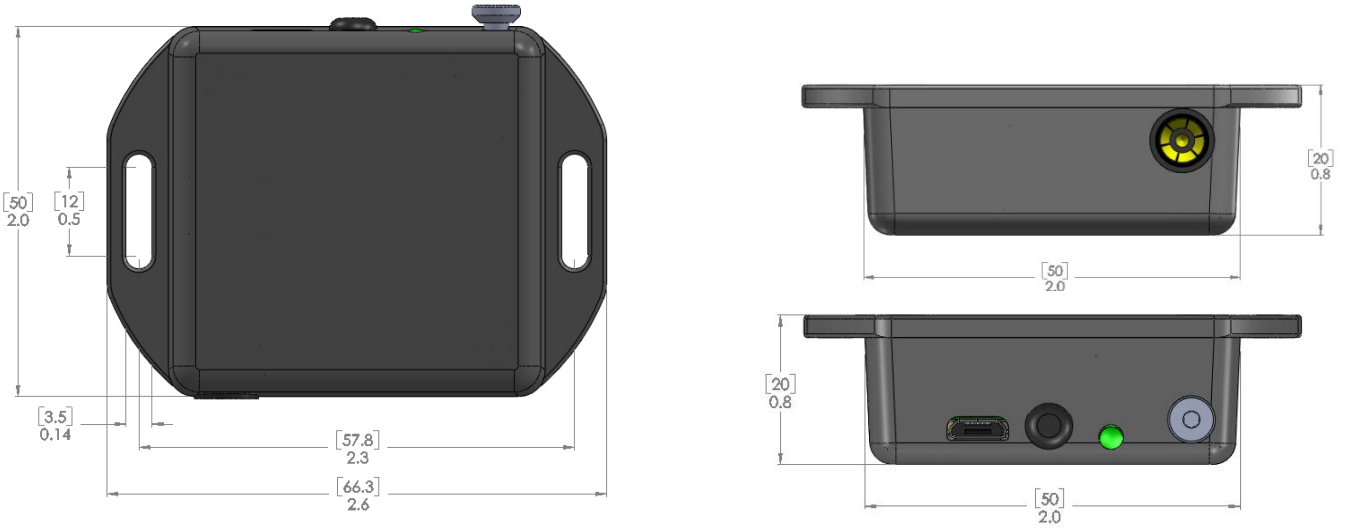
| INITIATION MODES | |
|---|---|
| T--- | Time Delay only |
| TL-- | Time & Landing Detect |
| TP-- | Time & Absolute Pressure Threshold |
| TG-- | Time & Acceleration Threshold |
| TPG- | Time & Absolute Pressure & Acceleration Thresholds |
| ---W[1] | Wireless Initiation Module |

| OUTPUTS | |
|---|---|
| - | (C) CYPRES (legacy option) |
| V | Vigil 2+ receptacle |
| * | Reserved for custom outputs |
| | |
| | |

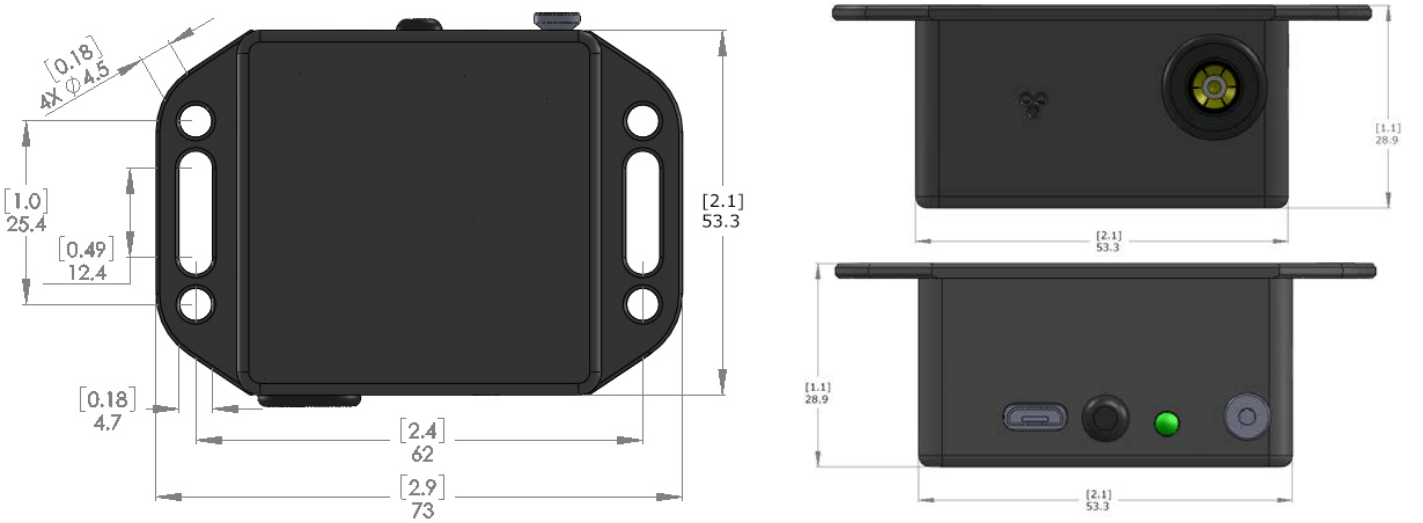
[1] Option is available when pairing EID units with wireless transmitter and receiver modules.

## DEVICE DESCRIPTIONS: Dimensions in inches [millimeters] unless otherwise noted.

### EID1R Plastic Enclosure (ABS plastic)




### EID1R Metal Enclosure (Aluminum)




* Note: Latest enclosure features or revisions may not be shown above.

## NOTES:

### FCC Compliance Statement

This device complies with Part 15 of the FCC rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

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