

Intelligent Electronic Trigger

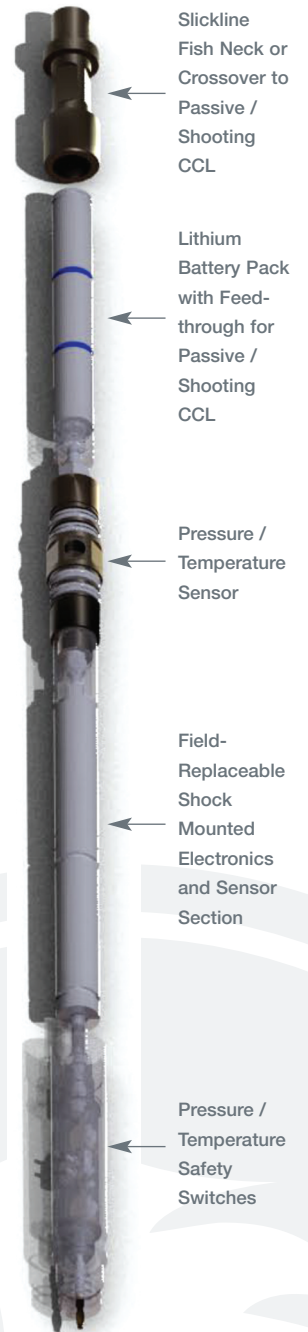
Expro's Intelligent Electronic Trigger is a high-integrity memory-based tool suitable for any remote explosive or non-explosive operation where the operator requires a reduction in running costs while maintaining the highest possible degree of safety and control for a memory based tool.

The field-replaceable electronics and sensor section ensures multiple backup tools can be available at a fraction of the cost of a complete tool.

A complete log of time, status, pressure, temperature, axial and radial acceleration (tilt and shock) and output voltage is stored to the tools flash memory for post-job analysis. A low-cost passive casing collar locator (CCL) can also be added to collect CCL data during the drift run, eliminating the need for an additional correlation tool.

The tool is activated or de-activated using a pre-programmed sequence of time, pressure/temperature safe windows and if required a series of pressure pulses and/or acceleration movements.

The tool is independently certified as safe for use in offshore environments and meets the recommendations of API RP67.



Specifications:		
Diameter	1.69"	42.9 mm
Optional	1.375"	34.9 mm
Length (make-up)	3.83 ft	1.17 m
Weight	22 lbs	10 kg
Limitations:		
Maximum Pressure	15,000 psi	103.4 MPa
Maximum Temperature	165 °C	329 °F
Extended	175 °C	347 °F
Memory Capacity	3MB, >524,000 data sets (Module A) 1MB, 65,536 data sets (Module C) 1MB, 65,536 data sets (Module D)	
Accuracy	<+/-0.05 % FS (Pressure) <+/-0.5 °C (Temperature) <+/-0.1g (Acceleration)	
Typical Resolution	< 0.01 psi (Pressure) < 0.01°C (Temperature) < 0.01g (Acceleration)	
Mechanical:	Top Connection	15/16" x 10 UN (5/8" Sucker Rod) fish neck can be replaced with CCL crossover
	Bottom Connection	1-3/16" x 12 UNF GO Pin
Other information:	Power Requirements	2 x PMX165 'C' Lithium Battery
	Current Consumption	5 mA (> 22.5 days' operation from a single battery)
	Wetted Materials	17-4PH or NACE MR-01-75 Compatible
Specifications CCL correlation:	Dimensions	Depends on CCL
	Additional Current	500 µA (Idle)
	Composition	2mA (1 sample/sec)
	Sample Rate	CCL is sampled 8 x per sec., and stored once per sec. to memory

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Specifications:

Operating Parameters:

Time	Initial Delay
	Final Delay
	Maximum Run Time
Pressure/ Temperature	Low/High Pressure/Temperature Interlock Windows
Tilt	Min/Max Deviation Windows
Acceleration	Max Delta Acceleration on Axial and Radial Axes
Baseline Stability	Min/Max Baseline Pressure
	Max Delta Baseline Pressure
	Specific deviation/acceleration limits (optional)
Pressure and/or	Up to 8
Acceleration Pulses	Each pulse duration = 1s to 1hr
Restart during Final Delay	Min/Max Restart Pressure
	Max Delta Restart Pressure
	Specific deviation/acceleration limits (optional)

Supported Devices:

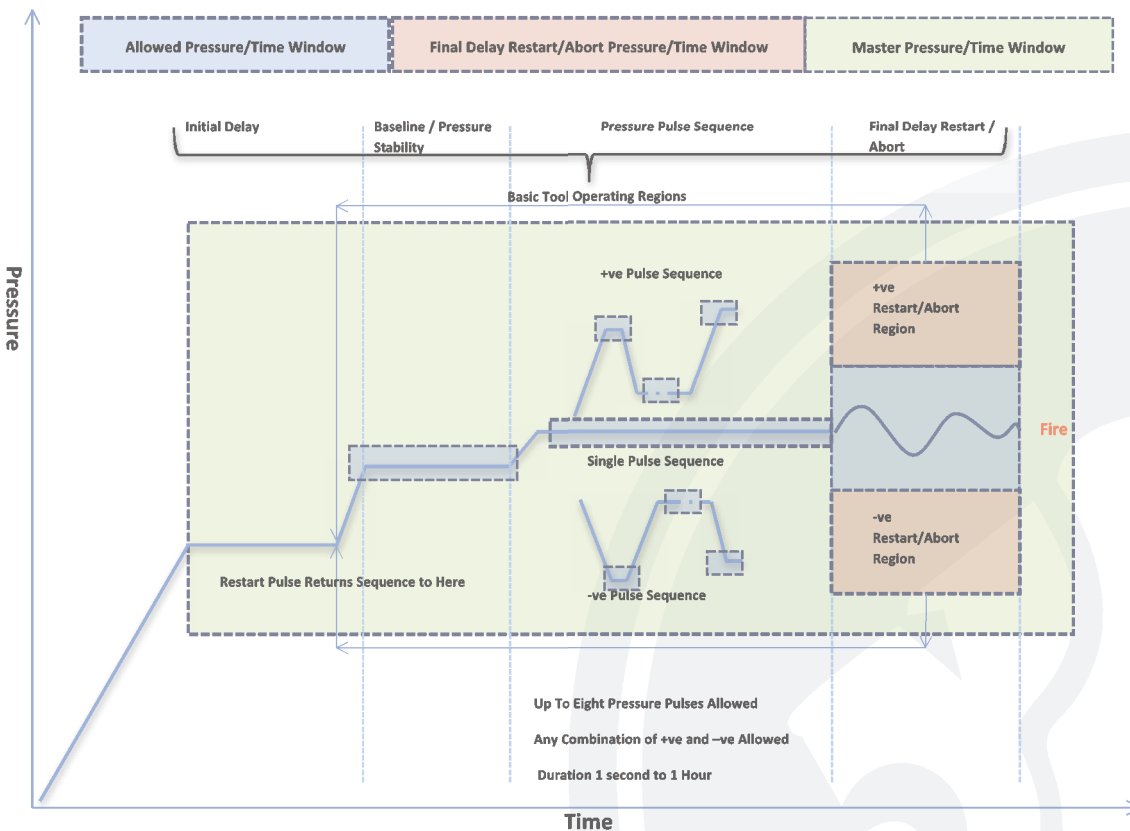
- EBW Igniters and Detonators using Ecosse EBW Firesets
- JRC RED Devices
- Dynawell Electronic Detonators and Igniters (RF safe devices)
- HPI Low Voltage Coil (same electronics module as DynaWell)

Features:

- High operating pressure and temperature (15,000 psi and 165°C)
- Field-Replaceable Electronics and Sensor Module
- CCL correlation requires no additional electronics
- Simple to use software (Windows XP/Vista compatible) with USB connection to tool
- Extends number of applications where tool can be run.
- Multiple backups can be held at a fraction of the cost. All module types are inter-changeable.
- Allows operator to verify tool is operational.
- No external interfaces required allowing

Applications:

- The Expro Intelligent Trigger can be used to perforate, plug and cut tubing, liner or casing and can be run on Slickline, e-line, coil tubing and is suitable for TCP or DST operations.
- Perforating
 - Dump Bailing
 - Plug Setting
 - Fluid Sampling
 - Cutting
 - Remote Valve Activation



* This is a proprietary product of Sentergy, a Probe company.