IntelleX™ Low Power Electronic Firing Head

High integrity memory based tool

Probe's IntelleX™ Low Power Electronic Firing Head 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 tool's flash memory for post-job analysis. A low-cost passive 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.

Independently certified as safe for use in offshore environments and meets the recommendations of API RP67.

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Specifications

Diameter	1.69"	42.9mm
Optional	1.375"	34.9mm
Length (make-up)	3.83 ft	1.17m
Weight	22 lbs	10 kg
Maximum pressure	15,000 psi	103.4MPa
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)	
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	
Power requirements	2 x PMX165 "C" Lithium Battery	
Current consumption	5mA (>22.5 days' operation from a single battery)	
Wetted materials	17-4PH or NACE MR-01-75 Compatible	
Dimensions	Depends on CCL	
Additional current composition	500uA (idle)	
Composition	2mA (1 sample/sec)	
Sample rate	CCL is sampled 8 x per sec., and stored once per sec. to memory	
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 acceleration pulses	Up to 8	
	Each pulse duration = 1s to 1hr	
Restart during final delay	Min/Max Restart pressure	
	Max Delta Restart pressure	
	Specific deviation/acceleration limits (optional)	

Applications

The IntelleX™ Low Power Electronic Firing Head 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
— Plug setting
— Cutting
— Dump bailing
— Fluid sampling
— Remote valve activation

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)
— Extends number of applications where tool can be run
— Field-Replaceable Electronics and Sensor Module
— Multiple backups can be held at a fraction of the cost. All module types are inter-changeable
— CCL correlation requires no additional electronics
— Allows operator to verify tool is operational
— Simple to use software (Windows XP/Vista compatible) with USB connection to tool
— No external interfaces required allowing simple programming and data retrieval with fast USB upload