

ADVANCED GAMMA MODULE SPECIFICATIONS



OilField Guidance Inc.

FEATURES

- Digital Interface
- Two Gamma Outputs: Count Pulse, Q-Bus Output via GV0
- Extensive Vibration Statistics output
- Available via GV1–7

DESCRIPTION

The Advanced Gamma Module is designed to measure the background gamma radiation occurring in well bores. To achieve high gamma sensitivity, a one-inch diameter by six inch long scintillation crystal is used to detect gamma rays. Two gamma outputs are present TTL Level negative going count pulse and Q-bus output (counts per second) via the use of variable (GV0).

One advantage of using the Q-bus to collect gamma data is that it avoids using the gamma count pulse channel, which is sometimes subject to noise, resulting in high erroneous count rates.

The Advanced Gamma Module vibration data is collected at 200 samples /second over 20 seconds (total of 400 samples) and is analyzed to produce the following Q-bus data GV1 - GV6:

- GV1 and GV4: Percent of axial and transverse vibration samples exceeding a user settable threshold (e.g. 12 Gee)
- GV2 and GV5: Axial and transverse highest bin number (1 - 5) with greater than 5% of counts
- GV3 and GV6: Axial and transverse maximum vibration measurement during the sampling period.

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MODULE SPECIFICATION

MECHANICAL

Tool OD	47.625 mm (1.875")		
Length	BOX X BOX	BOX X PIN	
	41.00"	37.00 "	
Temperature Range	-25°C to +150°C (-40°F to +300°F)		
Pressure Range	0–137 Mpa (0–20,000 psi)		

PERFORMANCE

Sensitivity	1 Count per API (User Calibratable)		
Accuracy	+/-5% to 150°C (300°F)		
Resolution	6" (236mm)	Thin-Bed, 8" hole diameter 50% points	

ENVIRONMENTAL

Temperatures	Operating: 0 to 150 C, Storage -25C to 160C			
Vibration(3 Axis)	50-300Hz	Random	Shock Z-Axis	Shock Y-Axis
	30G	30G	500G, 0.5 ms	1000 G 0.5 ms

POWER AND SIGNAL

Input Voltage	15-30 Volts		
Input Current	<20 mA (Constant Power)		
Maximum Voltage	31.5 Volts		
Pulse	Pulse ~ 1 microsecond long at gamma count – TTL +5 to 0V		
Digital Interface	Logic Level: TTL/CMOS, Baud Rate 9600 Baud, Q-Bus		