

1. Overview



EPHD22803 scintillation detector (while drilling) is a high temperature resistant and vibration-resistant scintillation detector for measuring azimuth gamma. It integrates high temperature NaI(Tl) crystal, high temperature PMT assembly, high voltage power supply and processing circuit, which can directly output TTL digital level. The unique design ensures the stable performance of the detector in high temperature vibration environment. This product has the advantages of simple and convenient use, high reliability and not easy to damage. It is mainly used to determine azimuth gamma in oil logging environment for geological steering.

2. Specifications

▶ Detector diameter (mm)	Φ26
▶ Detector length (mm)	374 (No connector)
▶ Scintillator size (mm)	Φ21×141.5
▶ Input voltage (V)	24±4
▶ Input current Max. (mA)	23 (24V Input voltage)
▶ Output signal (Negative TTL)	+5V Relative to ground ,5μs~10μs
▶ High temperature and normal temperature counting rate deviation ⁻¹ Max.	5%
▶ Counting rate change induced by vibration ¹⁾ Max. (s ⁻¹)	√BASE
▶ Natural gamma counting rate Min. (s ⁻¹)	100
▶ High temperature life ⁴⁾ Min. (h)	400
▶ Vibration ⁵⁾	15g rms, 50Hz~1000Hz
▶ Shock	500g, 0.5ms
▶ Operating temperature ⁶⁾ (°C)	-30~+175
▶ Storage temperature ⁶⁾ (°C)	-30~+70

- Tested in natural gamma environment
- BASE: The average counting rate of continuous acquisition for 300s when the detector operates in non-vibration state
- Test environment: Specified test site (Detector Production Workshop of BHP)
- High temperature life: Total time accumulated in high temperature operation when the detector operates at 175°C with a 10% change in the output counting rate relative to the initial value
- Resonance frequency ≥1000Hz
- Temperature change rate during detector operation and storage ≤3 °C/min

3. Overall dimensions and connection methods (unit: mm)

● EPHD22803

