CIC1 Ion Chamber Detector

Safety Grade 1E Qualified	High TID

The CIC1 Ion Chamber Detector is a 1E qualified instrument designed to survive and operate during a LOCA condition. The CIC1 provides an output current proportional to the gamma energy that impinges upon the tube. An external Current-To-Frequency converter is used to condition the output current from the CIC1 detector into a pulse rate suitable for counting by an associated RM1 series radiological activity monitor. The CIC1 is provided in a sealed stainless steel enclosure and is interconnected to the Current-To-Frequency converter using triaxial cable or two coaxial cables.

The associated CIC1WF Current-To-Frequency converter is housed in a NEMA4 qualified wall mount enclosure and can be mounted up to 100 meters away from the detector. The CIC1WF converter provides biasing voltage to the detector and includes the circuit for converting the detector output current into TTL level pulses. The pulse frequency is proportional to the measured current from the CIC1. The CIC1WF converter is powered by low voltage 12 VDC power provided by the associated RM1 series display and control unit

CIC1 Ion Chamber

Apantec No. DS-CIC-1

APANTEC, LLC
805 West 5th Street, Suite 13, Lansdale Pennsylvania, USA, 19446
Phone: 267-638-0362, FAX: 267-263-4577
http://www.apantec.com

Specifications CIC

Size:		242mm long x 63.5mm diameter
Active Length:		86.4mm
Housing Material:		Type 304 Stainless Steel
Tube Manufacturer		
Part Number:		LND # 52111
Gas & Pressure:		Xenon, 1520Torr
Effective Chamber Volume:		17.0 cm_3
Operating Voltage:		1500 V
Maximum Voltage:		3000 V
Gamma Sensitivity:		1.0E-10 Amps/R/Hr for Co_{60}
Operating Temp:		60°C maximum
Connectors:	High Voltage	SHV, mating connector included
	Signal	TNC, mating connector included

Specifications CIC1WF

Input Signal:	Current from Ion Chamber Detector, CIC1.
Input Current Range:	10^{-14} Amps to 10^{-7} Amps.
Input Power:	± 15 V from Remote Ratemeter.
Output Power:	± 5 V and internally generated High Voltage to CIC1.
Output Signal:	TTL level pulse signal at RATEMETER connector, frequency proportional to the Gamma field signal strength, capable of driving 1000 feet of cable to the Ratemeter.
Terminations:	High Voltage: SHV type connector; mating connector included. Signal: TNC type connector, mating connector included.
Ratemeter:	Hummel 14 pin circular type connector; mating connector included.

CIC1WF Current-to-Frequency Converter

APANTEC, LLC
805 West 5th Street, Suite 13, Lansdale Pennsylvania, USA, 19446
Phone: 267-638-0362, FAX: 267-263-4577
http://www.apantec.com