

1. Overview



The EPSD-XY001GW plastic scintillator detector is mainly used for continuous monitoring of X-ray and gamma-ray radiation in the environment. The instrument probe uses a current integrator type plastic scintillator detector, which can be used for both general environmental monitoring and monitoring of pulsed radiation beams such as accelerators. It is widely used in radiation protection, workplace monitoring, nuclear medicine, nuclear power plants, and other fields. The probe has high sensitivity and stable and reliable measurement results. The equipment uses the standard Modbus transmission protocol, which allows flexible networking for building multi-detector area monitoring systems.

2. Main technical parameters

- ▶ Energy Response 30keV-3MeV
- ▶ Measurement range 0.01uSv/h - 100mSv/h Also suitable for pulsed radiation fields
- ▶ Background Less than 10 nSv/h
- ▶ Crystal 2-inch plastic scintillator
- ▶ Weight 0.8kg
- ▶ Size Dimeter 60mm, Length 295mm
- ▶ Communication mode RS485
- ▶ Power supply +12V

3. Communication requirements

Communication mode:	RS485	Parity check:	None
Baud rate:	9600	Stop bit:	1
Data bit:	8	Data flow control:	None

* The interval of each instruction is greater than 50ms, and the interval between each byte of the same instruction is less than 40ms;
* Data bits are sent with the high bit first and the low bit second.

4. Host query command

1、Query

Address	Function code	Data starting address H	Data starting address L	Data length H	Data length L	CRC High byte	CRC Low byte
Addr	Cmd	Addr_H	Addr_L	Length_H	Length_L	CRC_H	CRC_L
0x01	0x03	00	00	00	00	CRC_H	CRC_L

2、Response

Address	Function code	Number of data	Data 1_H	Data 1_L	Data n_H	Data n_L	CRC High byte	CRC Low byte
Addr	Cmd	Length	Data_H	Data_L			Data_H	Data_L	CRC_H	CRC_L
0x01	0x03	00	00	00			00	00	CRC_H	CRC_L

5. Host setup commands

1、Setup

Address	Function code	Data starting address H	Data starting address L	Data length H	Data length L	CRC High byte	CRC Low byte
Addr	Cmd	Addr_H	Addr_L	Data_H	Data_L	CRC_H	CRC_L
0x01	0x06	00	00	00	00	CRC_H	CRC_L

2、Response

Address	Function code	Data address H	Data address L	Data H	Data L	CRC High byte	CRC Low byte
Addr	Cmd	Addr_H	Addr_L	Data_H	Data_L	CRC_H	CRC_L
0x01	0x06	00	00	00	00	CRC_H	CRC_L

3、Hardware requirements

<p>Hardware interface:</p> <p>The probe adopts a 5-core GX16 aviation plug interface, in which the order is 12V, 485_A+, 485_B-, NC, GND.</p>	
<p>Power supply requirements:</p> <p>12V, Maximum power consumption of 200mA.</p>	