ORTEC

ORTEC 142PC

Preamplifier

Charge-sensitive preamplifier designed specifically for proportional counters.



Nominal sensitivity	Dynamic input capacitance	Guaranteed noise
4 V/pC [1]	**1000 pF** [1]	**<340 rms electrons at 0 pF; <485 at 100 pF** [1]

Specifications

PERFORMANCE

Guaranteed noise	<340 rms electrons at 0 pF; <485 at 100 pF	[1]
Integral nonlinearity	≤±0.05%; 0–±7 V open circuit or ±3.5 V into 93 Ω	[1]

ELECTRONICS & SIGNAL

Dynamic input capacitance	1000 pF	[1]
Detector bias isolation	±3000 V	[1]
Open loop gain	≥40,000	[1]
utput impedance	93 Ω per output	[1]

CONNECTIVITY & INTERFACE

Input and bias connectors	SHV	[1]
Energy and timing output	BNC; identical signals	[1]

POWER & BATTERY

Nominal sensitivity	4 V/pC	[1]

GENERAL

Rise time; +0.5 V into 93 Ω	25 ns at 0 pF; 150 ns at 100 pF	[1]

Sources

[1] **142 Preamplifier (142PC brochure)**
RTEC (AMETEK) · datasheet · p. 1, Specifications – Performance; p. 1, table 'Noise' (Typical / Guaranteed); p. 1, Outputs (ENERGY AND TI MING) · checked 2026-10-16
https://edge.sitecorecloud.io/ametekinc1236b-ametekb19a-productiondcfa-1d17/media/Project/Ametek/ortec-onlin...

Every value is taken from the manufacturer's own document; the number after the value refers to the source list. Always check against the latest datasheet before ordering.

The data comes from the manufacturer’s published documents. Manufacturers may change specifications; the current configuration and performance are confirmed in the quotation.