ORTEC

MPC-900-DP

Manual single-sample alpha/beta counter with gasless scintillation detector

Benchtop gross alpha/beta counter with a dual-phosphor scintillator that needs no counting gas and is easy to move. An optional anti-coincidence guard detector reduces cosmic background, and DUO Express handles programming, data m anagement and control charts. Radon compensation is available f or air filters.



Detector type

Dual-phosphor scintillator (ZnS + plastic), Ø5.1 cm ; gasless operation [1]

Weight

40 lb; guard +7 lb; shield +50 lb [1]

Specifications

DETECTOR

Detector type	Dual-phosphor scintillator (ZnS + plastic), Ø5.1 cm; gasless operation	[1]
Window	Aluminised, 80 µg/cm²	[1]
Sample geometry	Planchets Ø5.1 cm (2 in), 1/8, 1/4 or 5/16 in deep (3.2, 6.3 or 7.9 mm)	[1]

PERFORMANCE

Typical detection efficiency	Top / 1/8″ / 1/4″ / 5/16″ bottom – optimised for lower-energy betas: ^{239}Pu 41/34/27/24%, ^{90}Sr/Y 53/46/39/37%, ^{99}Tc 34/28/24/22%; optimised for higher-energy betas: ^{239}Pu 40/33/27/24%, ^{90}Sr/Y 50/43/37/35%, ^{99}Tc 27/22/19/17%	[1]
Background rate	Warranted alpha/beta (cpm): <0.2/<25 with lead and guard; <0.2/<30 with guard, no lead; <0.2/<55 with lead, no guard; <0.2/<65 with neither	[1]

COOLING

Sample capacity	1 sample (manual)	[1]

SOFTWARE & DATA

Software	DUO Express for system programming, data management and control charts	[1]

CONNECTIVITY & INTERFACE

Communication	Data export via USB flash drive and USB PIC Link	[1]
User interface	Touch screen	[1]

POWER & BATTERY

Power supply	110–240 V AC, 50–60 Hz	[1]

MECHANICAL

Dimensions	51.4 × 22.9 × 40.6 cm (H × W × D)	[1]

Weight	40 lb; guard +7 lb; shield +50 lb	[1]

ENVIRONMENT & RATINGS

perating temperature	10–40 °C	[1]

ORDERING & ACCESSORIES

ptions	Cosmic guard (ORT-MPC-900-DP-G), lead ring (ORT-MPC-900-SHLD), 1/8, 1/4 and 5/16 in planchets	[1]

GENERAL

Count modes	Alpha only; alpha/beta simultaneously; alpha then beta	[1]

Sources

[1] **ORT-MPC-900-DP/ORT-MPC-900-DP-G Manual Single Sample Gross Counter**
RTEC (AMETEK) · product-page · More Information; Specifications – Physical; Specifications; Specifications – Physical · checked 2026-10-16
https://web.archive.org/web/20261016000000/https://www.ortec-online.com/products/systems/gross-alpha-beta-me...

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.