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End Window Counter Tube

Type 70 072

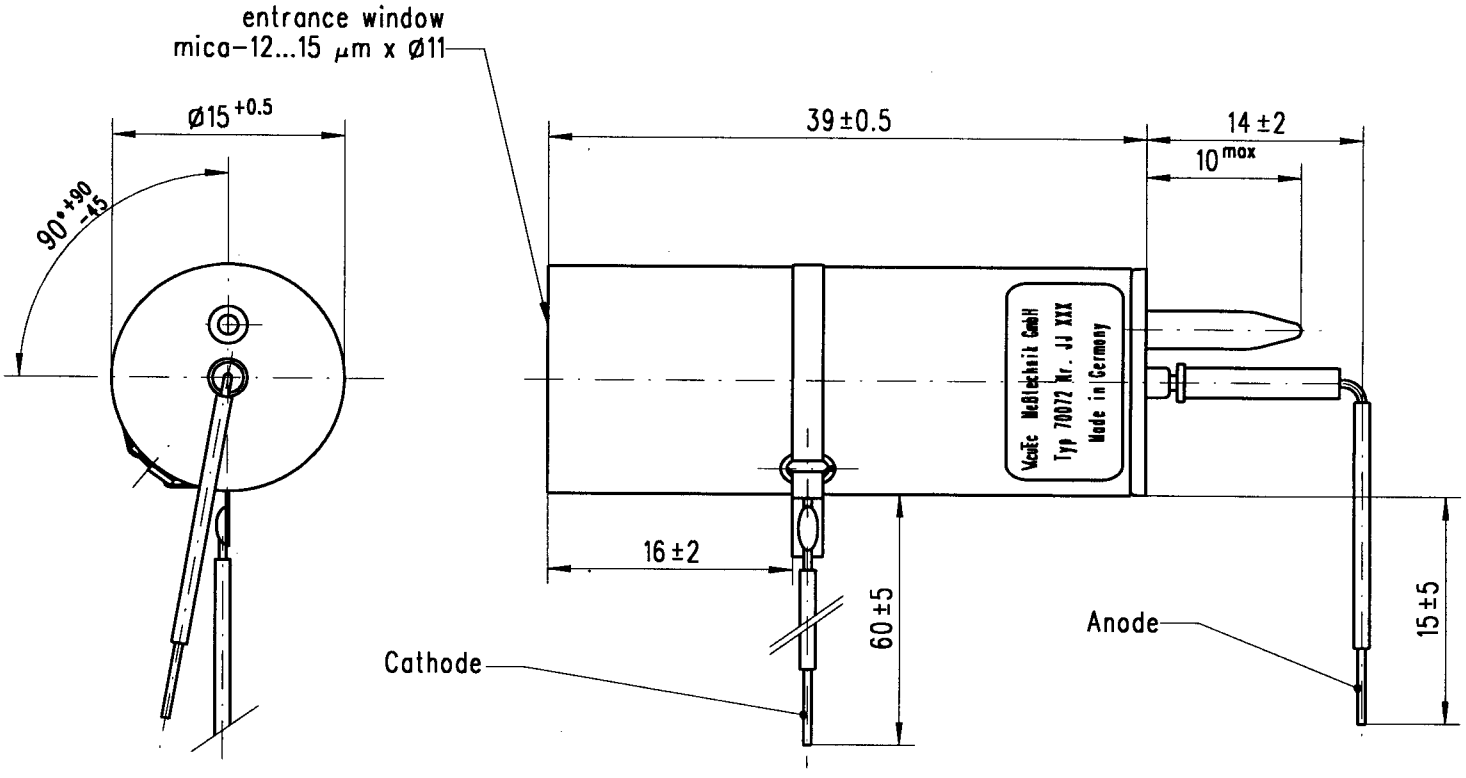
Order No. 072 00 02

Application

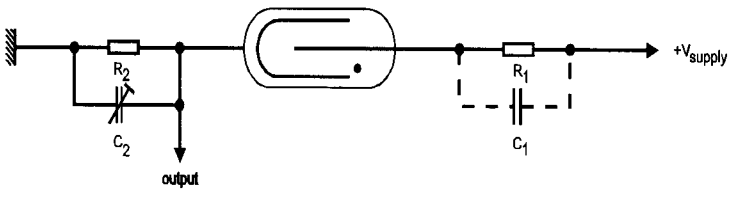
The halogen-quenched Geiger Müller tube 70 072 is proven suitable for Alpha and Beta radiation. It can be used also for measuring Gamma radiation and x-rays.

Construction

Metal sheaf with a mica entrance window (Al-coated).



Measurement circuit



R_1 = 10 MΩ

R_2 = 220 kΩ

$R_1 C_1 = R_2 C_2$

We reserve the right to alter the specifications.

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Technical data

The given values apply for ambient temperature (+25°C) for the following working conditions.

Physical data

Energy range	
Alpha particles	≥ 3,5 MeV
Beta particles	≥ 50 keV
x-ray or gamma rays	≥ 2,5 keV
Background (5 cm Pb + 0,3 cm Al)	≤ 7 Imp/min
Entrance window	
Diameter	11 mm
Thickness	1.5 to 2 mg/cm^2
Material	Mica (Al coated)
Length of active volume	36 mm
Cathode diameter	13 mm
Anode diameter	1 mm
Mass (weight)	30 g
Gas filling	Neon/Halogen
Life expectancy	> 6 · 10^{10} Imp

Electrical data

(measured at +25°C and n = 10^4 pulses per minute with a $^{90}Sr/^{90}Y$ source, measurement circuit shown overleaf)

starting voltage	(350 ... 380) V
Plateau voltage range	(400 ... 600) V
Plateau length	200 V
Plateau gradient	≤ 4 % / 100V
Recommended supply voltage working conditions	500 V
Dead time (for R_1= 10 MΩ, 500 V)	≤ 90 µs
Anode resistor R_1	10 MΩ

Limiting values

Storage temperature range	(–30 ...+70) °C
Working temperature range	(–30 ...+70) °C
Anode resistor	min 4.7 MΩ
Anode voltage	max 600 V

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