

VACUUM GAUGE HEAD, BAYARD-ALPERT TYPE

Ultra-high vacuum gauge head of the Bayard-Alpert type. Measuring range 10^{-3} torr to 4×10^{-11} torr; sensitivity approx. 12 per torr.

Type IOG-18 has a glass envelope.

Type IOG-18N has a fernico skirt, prepared for easy welding.

The heads with a glass envelope are provided with an electrically conductive layer on the inside of the envelope. By applying a fixed potential to the layer, excess primary electrons are attracted directly to the envelope rather than oscillating around the collector thereby leading to very stable measurements of low pressure.

Moreover the gauge head features a low thermal inertia and a low filament power consumption.

CHARACTERISTICS

Pressure range

10^{-3} to 4×10^{-11} torr

Sensitivity (for nitrogen)

approx. 12 per torr

Emission current range, type IOG-18

1 μ A to 50 mA

type IOG-18N

1 μ A to 30 mA

Filament characteristics

see page 4

Insulation resistance

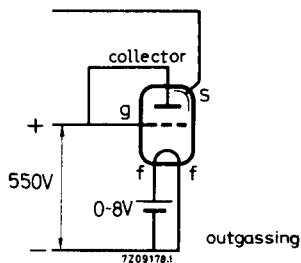
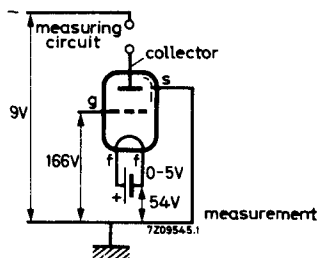
Collector to other electrodes

min. $10^{14} \Omega$

Grid to other electrodes

min. $10^{12} \Omega$

TYPICAL OPERATING CONDITIONS



Emission current (see also page 4)

measurement

100 μ A, 1 mA or 10 mA

outgassing, type IOG-18

50 mA

type IOG-18N

30 mA

LIMITING VALUES

Pressure (filament litt)	max. 10^{-3} torr
Filament voltage	max. 8 V
Emission current	max. 50 mA
Grid input power, type IOG-18	max. 30 W
type IOG-18N	max. 20 W
Bulb temperature during operation	max. 100 °C
Bake-out temperature	max. 450 °C

MECHANICAL DATA

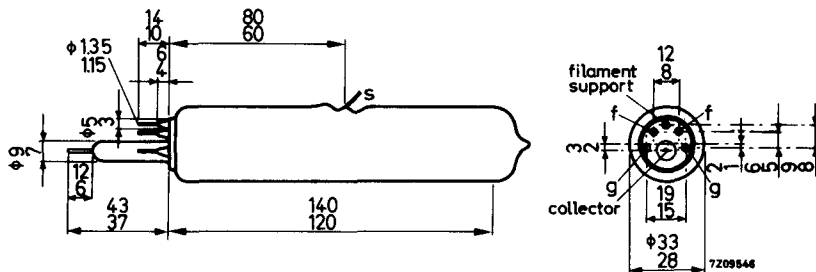
Dimensions in mm

Material

Filament	Tungsten
Tubulation (with type IOG-18)	Kodial
Skirt (with type IOG-18N)	Fernico

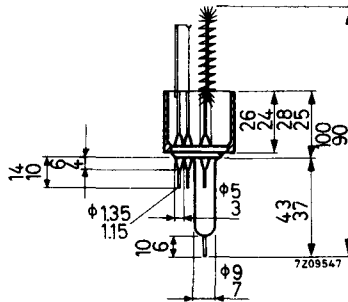
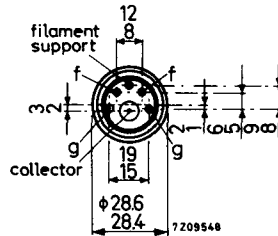
Mounting position: any

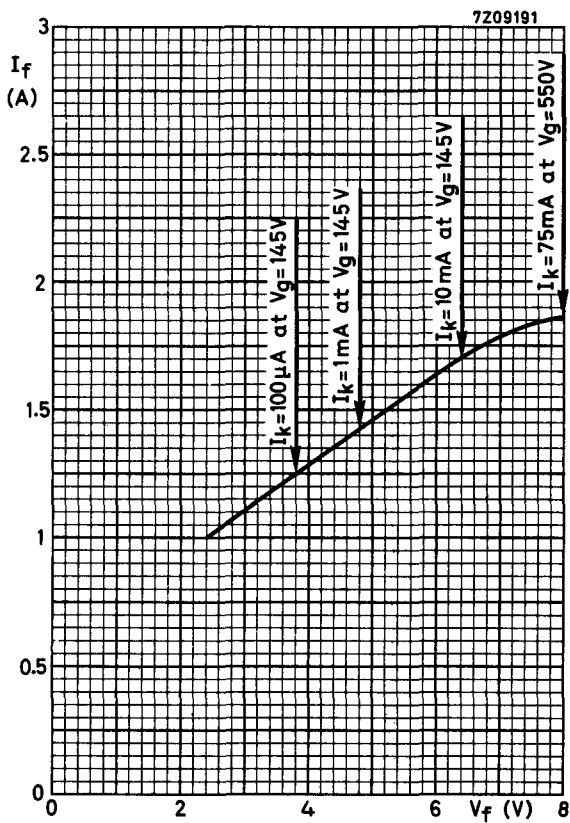
IOG-18



MECHANICAL DATA (continued)

IOG-18N





PHILIPS

Data handbook



**Electronic
components
and materials**

IOG18 IOG18N

page	sheet	date
1	1	1970.01
2	2	1970.01
3	3	1970.01
4	4	1970.01
	FP	2001.05.17