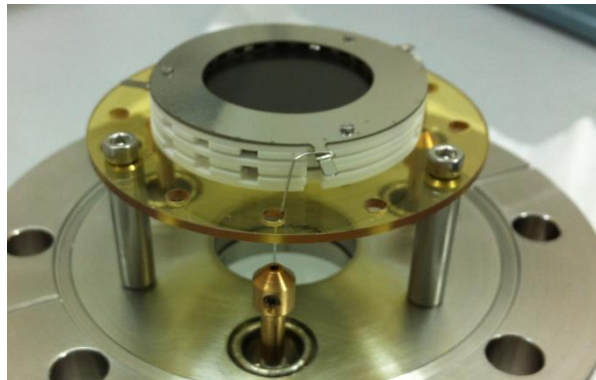


MCP-Detector CF-Viewport Assembly

Preparation & Features

GIDS-GmbH offers open MCP detectors with phosphor screen for different applications in image mode. It is possible to image electrons, positrons, protons, heavy ions, x-rays, VUV- and UV-radiation and measure position and cluster parameters depending on the readout system used. Additional thread holes could be integrated from the non-vacuum side to allow the mounting of a camera or another readout system. Due to the assembly in Ultra-High-Vacuum flange (CF-Viewport) it is possible to integrate the system in analytic instruments which are based on the CF standard. It is also possible to mount the MCP assembly on other viewport standards like ISO-K, ASA or custom specific ones. The viewports have 3 integrated vacuum SHV feedthroughs to supply the high voltage to the MCP detector. The feedthroughs for MCP-in and MCP-out are of the type SHV5 and the one for the Anode is of the type SHV10. The connectors needed on the non-vacuum side are included in the price.

The MCP detectors are available in two versions. A narrow version with minimum diameter of the assembly and a wide version with stable ground plate (yellow) as shown below if some space is available on the sides of the vacuum chamber.



APPLICATIONS

- Particle detection in analytical Systems image mode
 - Mass Spectrometer
 - TOF-Mass Spectrometer
- Cosmic Rays
 - Detection of Plasma ions
 - Detection UV-,VUV-light and X-rays
- Elementary Particle Physics
 - Detection of Ions, Electrons, Positrons, High energy particles and X-rays

FEATURES

- standard sizes
- attractive prices
- high efficiency
- sensitive to electrons, ions, VUV- and UV-light, X-rays and γ -rays
- P20, P43, P46, P47 and other types
- immunity to magnetic fields
- demountable
- bake-out up to 200°C possible
- single, double and triple MCP setups available



Standard	CF40 - 2 3/4" viewport	CF63 - 4 1/2" viewport	CF100 - 6" viewport	CF160 - 8" viewport	CF200 - 10" viewport
MCP-09-P	N*	W / N	W / N	W / N	W / N
MCP-12-P	-	W / N	W / N	W / N	W / N
MCP-14-P	-	W / N	W / N	W / N	W / N
MCP-18-P	-	N*	W / N	W / N	W / N
MCP-25-P	-	N*	W / N	W / N	W / N
MCP-45-P	-	-	W / N	W / N	W / N
MCP-77-P	-	-	-	W / N	W / N
Screen on B270 or quartz glass depending on Phosphor Type Other Phosphor Types on request					
N = narrow version, W = wide Version					
N* versions with other HV feedthroughs					

Nomenclature

The detector type **MCP-09-PN** is an open MCP Detector with 9 mm active diameter and Phosphor screen. This detector is mounted in a **CF63** viewport. The part number is **MCP-09-PN-CF63**.

To specify the open MCP-detector to be integrated into the flange the number of MCP's **X** (1,2 or 3), the aspect ratio **XX 40** (40:1) or **60** (60:1), the Phosphor type required and the mount type is needed in addition **MCP-09-X-XX-PN-CF63**. Please check datasheet [MCP-Detector-Types.pdf](#) or request the information by e-mail, contact form or give us a call.

High Voltages

The recommended MCPout-MCPin voltages are for 40:1 (60:1) MCPs as follows

- Single MCP 0,9 kV (1,1 kV)
- Double MCP 1,8 kV (2,2 kV)
- Triple MCP 2,7 kV (3,3 kV)

The recommended Anode voltage is

- Screen-MCPout 3,0 kV (max. 4,0 kV)
for single, double and triple MCP setups.

How to get a quote

Send an e-mail with your contact data, the part number and additional specific details to info@gids-gmbh.com or call +49 (0)621-820394-34 or send a fax to +49 (0)621-820394-33.

Precaution

Handle the MCP setup or the bare MCP under clean room conditions because dust and humidity may affect the MCP performance.

Avoid too touch the MCP or the assembly with bare hands. Use powder free latex or vinyl gloves.

MCP's or MCP setups should be kept under vacuum conditions or in a dry nitrogen atmosphere if long time storage is needed.

The MCP should be operated under vacuum conditions below 1×10^{-6} Torr ($1,3 \times 10^{-4}$ Pa).

In case of first operation or after a long term storage degas the MCP's for some hours without Voltages supplied. Switch on HV only under vacuum conditions below 1×10^{-6} Torr see Datasheet [MCP-Detector-Handling.pdf](#).

Custom specific MCP detector assemblies

- with metal anode and Phosphor screen
- CsI coating of input MCP possible
- reach best resolution for your application
- reach best efficiency for your application
- fit into your mechanical setup
- High Resolution versions available

