

# Breakthrough End of Life Indicator (BTI)

*Reliable, end-of-life protection for GateKeeper® GPU Gas Purifiers*

Entegris' breakthrough indicator (BTI) provides an accurate way to determine when your GateKeeper® GPU gas purifier is no longer removing moisture impurities. This moisture sensor is installed after the gas purifier and it will notify you when moisture impurities are contacting the sensor. When breakthrough occurs it's time to contact Entegris and send the purifier back for regeneration. The regeneration of the gas purifier allows you to maximize the return on your purifier investment. The result is purification with the lowest cost of ownership. The BTI effectively measures moisture in the gas stream. Moisture is a problem contaminant in virtually every application, making it an ideal contaminant to measure. Moisture is also one of the first contaminants to saturate a purifier since it is generally present in the highest levels.

Our BTI sensors are assembled in an electropolished stainless steel manifold. When installed downstream the GPU, it utilizes direct measurement of the gas stream, providing reliable, end-of-life indication. Competitive end-of-life detectors on the other hand, rely on a change in color or media composition, which are both unreliable indicators.



*Compatible with the following gases: Air, H<sub>2</sub>, O<sub>2</sub>, CO<sub>2</sub>, N<sub>2</sub>, Ar, He, Ne, Xe, Kr. Purifier and valves sold separately.*

## FEATURES & BENEFITS

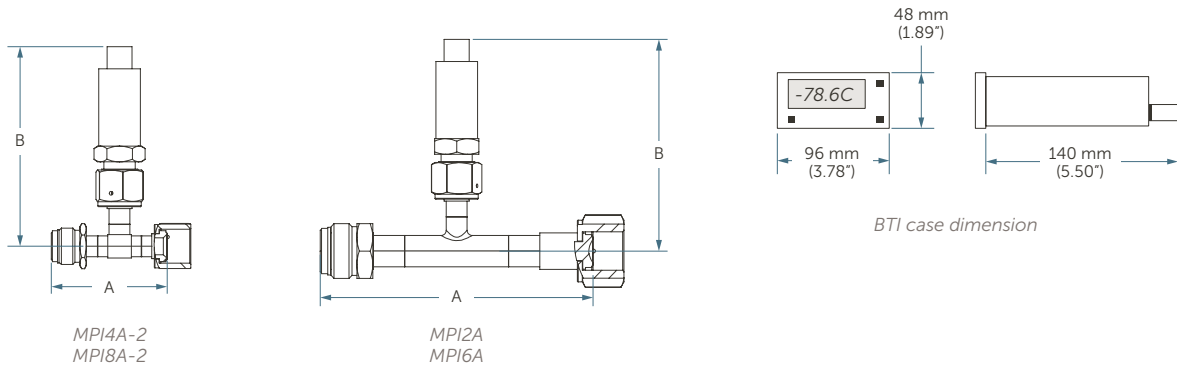
- Reliable end-of-life detection
- Effectively detects moisture
- The BTI is offered in a tee manifold configuration made of 316 L electropolish stainless steel material in 1/4", 1/2", 3/4" and 1" VCR sizes

## SPECIFICATIONS

- Measures breakthrough when inlet challenge levels to the purifier are greater than 100 ppb
- 115 – 220 VAC 50, 60 Hz power supply
- 4 – 20 mA output
- Max flow rate of 2,500 slpm (Full GPU flow range)
- 0° to 65°C (32° to 149°F) operating temperature range
- Adjustable for different operating pressures
- Ceramic sensor technology
- Digital display box – DIN mountable, RS232 serial interface
- Dewpoint accuracy  $\pm 10^{\circ}\text{C}$  between the range of 200° to -600°C (392° to -1048°F)
- LED display, designed for panel or bench mounting. Preset range 0.001 to 9.999 ppmv

GateKeeper GPU model	Connection size	BTI part number
GPU 15 GPU 35 GPU 70 GPU 80 GPU 100 GPU 200 GPU 300 GPU 500 GPU 700 GPU 2500-4R	1/4"	MPI4A-2
GPU 2500-8R GPU 3000 GPU 5000 GPU 10M-8R	1/2"	MPI8A-2
GPU 10M-12R GPU 13M-12R GPU 17M-12R GPU 20M-12R	3/4"	MPI12A
GPU 13M-16R GPU 17M-16R GPU 20M-16R	1"	MPI16A

## DIMENSIONS



## ORDERING INFORMATION

The GateKeeper GPU Gas Purifier is ordered separately from the BTI.  
The BTI will include the following:

- Hygrometer sensor
- Manifold tee for installing directly after a GateKeeper GPU Gas Purifier
- LED display

BTI option material part number	A (length)	B (height)	Connections
MPI4A-2	2.71"	4.72"	¼" F-M VCR
MPI8A-2	2.78"	4.79"	½" F-M VCR
MPI12A	6.55"	5.08"	¾" F-M VCR
MPI16A	8.53"	5.21"	1" F-M VCR

## FOR MORE INFORMATION

Please call your Regional Customer Service Center today to learn what Entegris can do for you.  
Visit [entegris.com](https://www.entegris.com) and select the [Contact Us](#) link to find the customer service center nearest you.

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