Overview
The ABB Multiwave PUV3402 LED process photometer is used in the hydrocarbon processing industry and the chemical industry for measurements that are used for process control, environmental compliance and safety measurements. The range of the measurements can be from ppm level to high percent levels and can be made in either vapor or liquid samples.

Features
The ABB PUV3402-LED builds from the successful PUV3402. The PUV3402 LED uses long life wavelength specific Light Emitting Diodes (LED) in the UV and Visible spectral regions to provide both the measure and reference wavelengths. This eliminates the traditional moving part of the filter wheel, which reduces the maintenance requirements of the analyzer. The LED source provides a UV analyzer with a low zero rate, and thus significantly extends the time between calibrations.
PUV3402 LED process photometer

Applications for process control, environmental compliance and safety measurements

---

**Specification**

Environmental (enclosure)
- Protected from direct sunlight and rain
- IP 52

Ambient temperature
- Range 0 to +45 °C (32 to 113 °F)

Humidity
- 95% relative humidity, non-condensing

Dimensions (W x D x H)
- 254 x 266.7 x 342.9 x 681.0 to 1665.0 mm L*
- 10.0 x 10.5 x 13.5 x 26.8 to 65.5 in. L*)
  * Dependent on cell pathlength

Weight
- 36.28 kg (80 lbs)
  (minimum, configuration dependent)

Mounting
- Wall

EMI/RFI considerations
- Conform to Class A industrial environment

Electrical entries
- Top and bottom

Tube fittings
Sample inlet/outlet
- Size: ¼ in. Standard Gyrolok (Swagelok optional)
- Material: 316SS, Monel, Hastelloy C

Purge Inlet and Outlet
- Size: ¼ in. NPT-F Gyrolok
- Material: 316 SS

Output signals
Analog
- 4 each 4 to 20 mA isolated into 600 Ω max.

Contact Closures
- 2 each relay, 3 W at 0.25,
- 5 each isolated solid state
- Both relay and solid state contact closures
- NO or NC

Digital outputs
- 4 each 110 V DC, 25 W each

Digital Inputs
- 8 each 2 each are dedicated

Power
- Size
  - 18 AWG, ¼ in. conduit hub

---

**Performance**

Precision
- ± 1% of full scale

Noise
- ± 1% of full scale

Linearity
- ± 2% of full scale

Zero drift
- ± 1% of full scale

Response time
- Programmable

Ambient electronic stability
- ± 1% of full scale for 10 °C (18 °F) in 4 hours
Operating specification

Wavelength range
280 nm to 800 nm

Ambient temperature range
0 to +45 °C (32 to 113 °F)

Electronic cell heat maximum cell heat
150 °C (302 °F)

Power consumption
450 W maximum

Sample flow rate
  - Typical for vapors: 20 to 500 cc/min
  - Typical for liquids: 5 to 120 cc/min

Sample pressure
  - 0 to 500 psig (0 to 34 bar)

Voltage input variation
  - 10% fluctuation without causing an output of variation of 0.05% of full scale

Safety area classification

NEC/NRTL
  - Class I, Division 2; Gas Groups B, C, D without enclosure purge
  - Class I, Division 1; Gas Groups B, C, D with Y type enclosure purge

CSA
  - Class I, Division 2; Gas Groups B, C, D with Z type enclosure purge
  - Class I, Division 1; Gas Groups B, C, D with X type enclosure purge

ATEX
  - CE Zone 2: II3G, EEx pz IIIB+H2 T4 to T2
  - CE Zone 1 : II2G, EEx pd[ib] IIIB+ H2 T4 to T2
    (LCIE 03 ATEX 6007X)

Power

Voltage
  - 100 to 240 V AC

Frequency
  - 45 to 66 Hz

Power consumption
  - 150 W maximum power consumption
  - 600 W Maximum power consumption with electric cell heat

Purge gases

Instrument air for enclosure purge
  - ¼ in. tube, minimum

Supply pressure
  - 40 to 80 psi (3 to 6 bar)

Flow rate
  - 0.5 CFM (15 LPM)

Optical purge
  - Typically Nitrogen

Supply pressure
  - 15 to 30 psi (1 to 2 bar)

Flow rate
  - 10 to 15 cc/min