

# PUV3402-LED Multiwave Process Photometer

Measurement made easy



## Introduction

### Usage

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.

### Description

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 Multiwave Process Photometer

## Physical

### PUV3402-LED

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:	254 mm W x 266.7 mm D x 342.9 mm H x 681.0 to 1665.0 mm L* (10.0 in. W x 10.5 in. D x 13.5 in. H 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: 1/4 " Standard Gyrolok (Swagelok optional) Material: 316SS, Monel, Hastelloy C
Purge Inlet & Outlet	Size: 1/4" NPT-F Gyrolok Material: 316 SS
Output Signals	
Analog	4 ea. 4-20 mA isolated into 600 ohms max.
Contact Closures:	2 each Relay, 3W at 0.25, 5 each Isolated solid state Both Relay and solid state contact closures N.O. or N.C.
Digital Outputs:	4 ea. 110VDC, 25 watts each
Digital Inputs:	8 ea. 2 ea. Are dedicated
Power:	
Size:	18 AWG, 3/4"Conduite Hub
Type:	3 conductors each

## Performance Specifications

Precision:	+ or – 1% of full scale
Noise:	+ or – 1% of full scale
Linearity:	+ or – 2% of full scale
Zero Drift:	+ or – 1% of full scale
Response Time:	Programmable
Ambient Electronic	
Stability:	+ or – 1% of full scale for 10C (18F) in 4 hours

## Operating Specifications

Wavelength Range: 235 nm to 800 nm

Ambient

Temperature Range: 0 to +45° C (32 to 113° F)

Electric Cell Heat:

Maximum Cell Heat: 150C (302F)

Power Consumption: 450 watts maximum

Sample Flow Rate:

Typical for Vapors: 20-500 cc/min

Typical for Liquids: 5-120 cc/min

Sample Pressure: 0-500 psig (0-34 bar)

Voltage Input

Variation: 10% fluctuation without causing an output 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] IIB+ H2 T4 to T2 (LCIE 03 ATEX 6007X)

## Power (Hot, Neutral, Ground)

Voltage: 100 – 240 VAC

Frequency: 45-66 Hz

Power Consumption: 150 Watts Maximum Power Consumption

600 Watts Maximum Power Consumption with Electric Cell Heat

## Purge Gases

Instrument Air for

Enclosure Purge: 1/4 inch tube, minimum

Supply Pressure: 40-80 psi (3-6 bars)

Flow Rate: 0.5 CFM (15 LPM)

Optical Purge: Typically Nitrogen

Supply Pressure: 15-30 psi (1-2 bars)

Flow Rate: 10-15 cc/min

Specifications subject to change without notice.

# Contact us

## **ABB Inc.**

### **Process Automation Analytical Measurements**

843 N. Jefferson Street  
Lewisburg  
WV 24901  
USA

Tel.: 1 304 647 4358  
Fax: 1 304 645 4236  
analyzeit@us.abb.com

## **ABB Limited**

### **Process Automation**

Oldends Lane  
Stonehouse  
Gloucestershire GL10 3TA  
UK

Tel.: +44 1453 826 661  
Fax: +44 1453 829 671  
instrumentation@gb.abb.com

## **ABB (China) Limited**

### **Process Automation**

Universal Plaza  
10 Jiuxianqiao Lu  
Chaoyang District  
Beijing 100016  
P.R. China  
Tel.: +86 10 8456 6688  
Fax: +86 10 8456 7613  
china.instrumentation@cn.abb.com

**www.abb.com**

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