

UV4SH

COMPACT HI-SENSITIVITY UV FLAME DETECTOR

TECHNICAL DATA

▪ Spectral response	185÷260 nm
▪ Operating voltage	200÷280 VAc
▪ Discharge current	1 mA
▪ Peak discharge current	30 mA
▪ Recovery time	20 μS @ 10% DUTY CYCLE
▪ Operating temperature	-25÷125 °C
▪ Peepsight maximum temperature	125 °C
▪ Max Vibration allowed	0,5 G
▪ Relative humidity	NON CONDENSING 10÷90 %
▪ Thermal insulating case	∅ 35 x 80 mm
▪ Protection class	EN60529 IP65
▪ Electrical connection	DIN43650 - A/ISO4400 3 pole socket
▪ Wire gauge	2 x 1,5 mm ²
▪ Mechanical connection	3/4" GAS
▪ Optional cooling connection	1/4" GAS
▪ Mounting position	Any
▪ Weight	150 g MAX
▪ Operating life	>10.000 hours @ 50°C/1mA

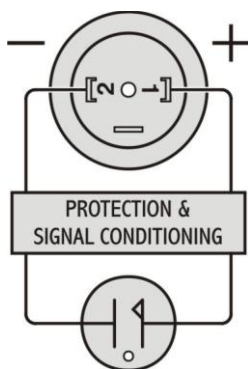
UP TO 100.000 HOURS @ 25°C AND COUPLED WITH CONTRIVE DEVICES

§ Avoid vertical top mounting when combustion products can fill the volume in front of the phototube producing malfunctions.



DVGW type certification No. CE-0085BM0346
Certified by Gosstandart pursuant to GOST-R

WIRING



1 POSITIVE TERMINAL
USUALLY CONNECTED TO GROUND

2 NEGATIVE TERMINAL
USUALLY CONNECTED TO AMPLIFIER INPUT

CONNECTION WITH REVERSED POLARITY DOES NOT DAMAGE THE DETECTOR BUT PRODUCES NO USEFUL FLAME SIGNAL

CLASS II DEVICE
NO CONNECTION TO PROTECTION GROUND REQUIRED

APPLICATION

UV4SH is an high performance selected UV detector that can be used for flame detection in gas, oil and mixed burners together with suitable Burner Control Unit or Flame Amplifier Device.

The core component is a glass bulb filled with gas, containing two electrodes.

When appropriate voltage is applied between electrodes, if an ultraviolet electromagnetic radiation hits the phototube, electrons emitted by negative biased electrode can be captured by positive biased electrode, starting an ionization process leading an electric discharge between electrodes producing a current flow.

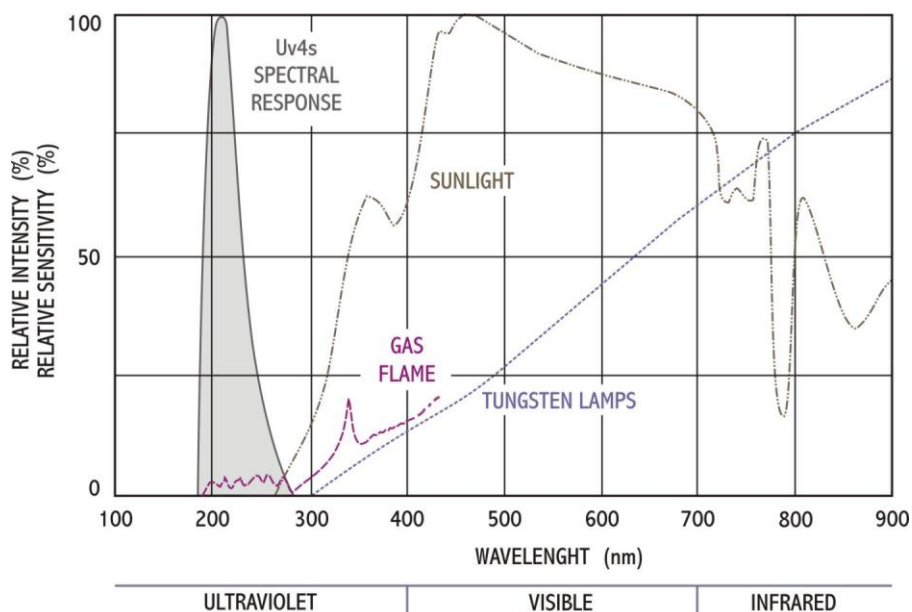
UV4s is a compact unit for industrial use, the body is made by thermal isolating material to avoid sensor overheating when applied on the burner head.

When the temperature at peepsight exceed 70°C it's advisable to apply a cooling air flow to the special connection provided on the side of the probe.

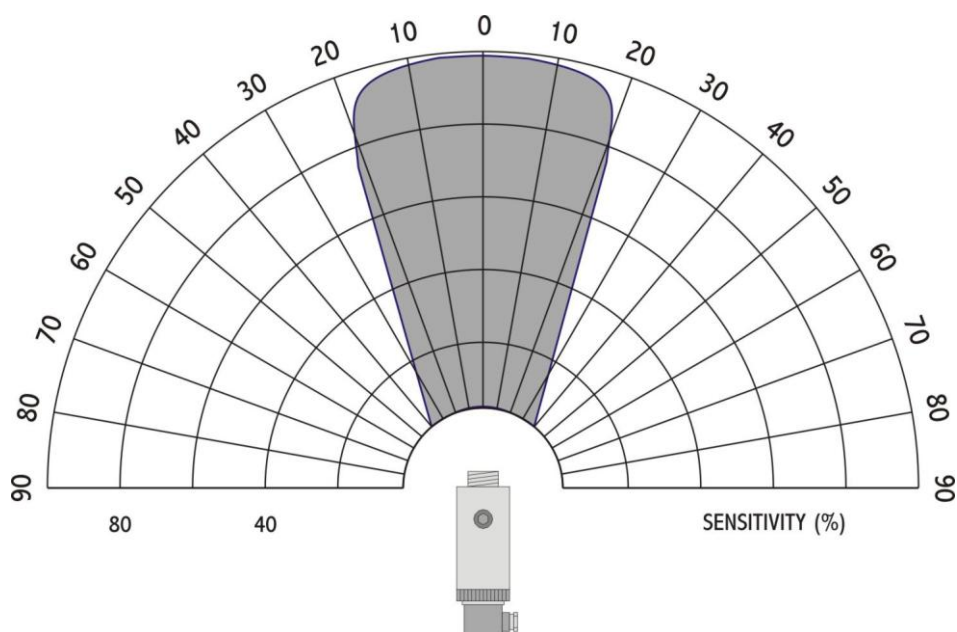
Although UV4SH is blind to sunlight, some discharge lamps produces UV emission that can be detected by the phototube.

SPECTRAL RESPONSE vs. LIGHT SOURCES

UV4SH sensitivity is restricted to a very narrow region of ultraviolet rays, and exhibits no response at all in the visible region. Gas and oil flames produces radiation that can be easily detected by UV4SH. The following diagram shows spectral response of UV4s and spectral emission for flames, sunlight and lamps.



ANGULAR SENSITIVITY (VERTICAL DIRECTIVITY)



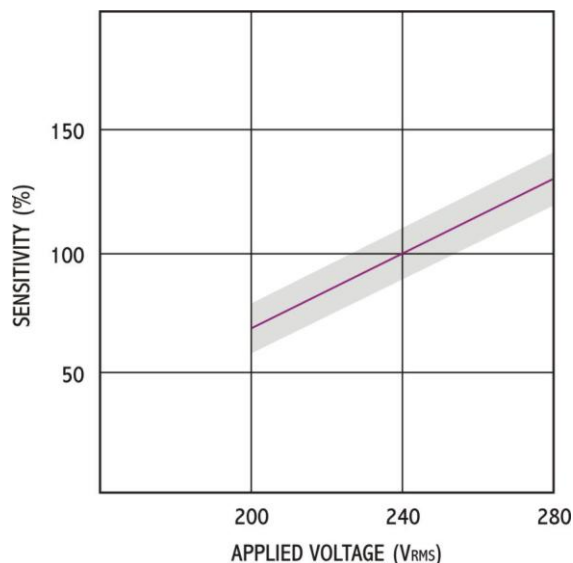
Minimum angular sensitivity for the complete assembly, when installed without limitation on sight window.

NOTICE

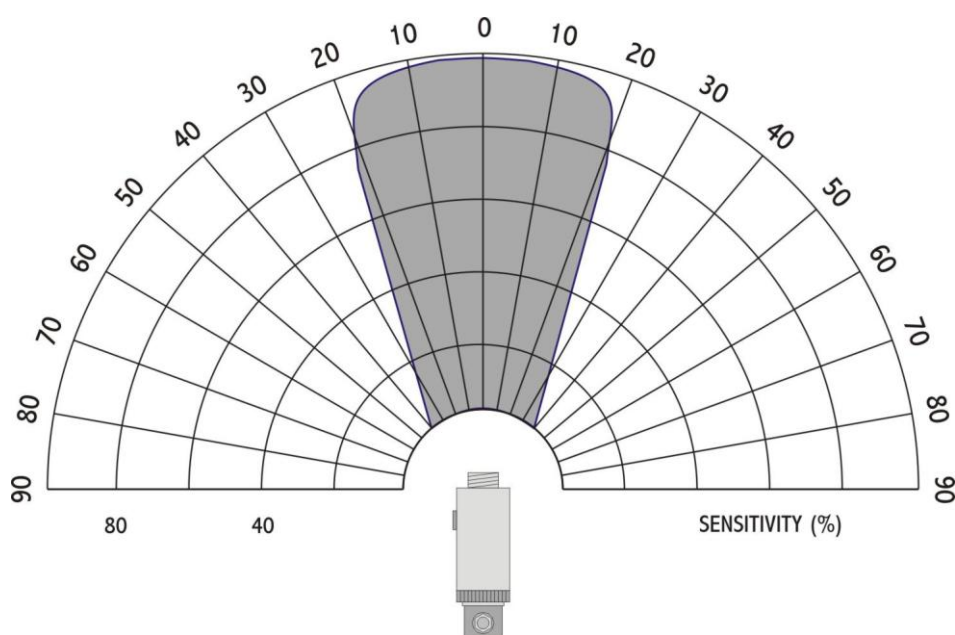
When Contrive products are combined with equipment manufactured by others and/or integrated into systems designed or manufactured by others, the Contrive warranty pertains only to Contrive products and not to any other equipment or to the combined system or its overall performance. Certification could be invalid or not applicable in such cases.

SENSITIVITY vs. SUPPLY VOLTAGE

The flame detector increase his sensitivity with higher operating voltages, the relationship is shown in the above diagram. It's very important to keep the applied voltage within the recommended range to avoid malfunctions and damages.



ANGULAR SENSITIVITY (HORIZONTAL DIRECTIVITY)

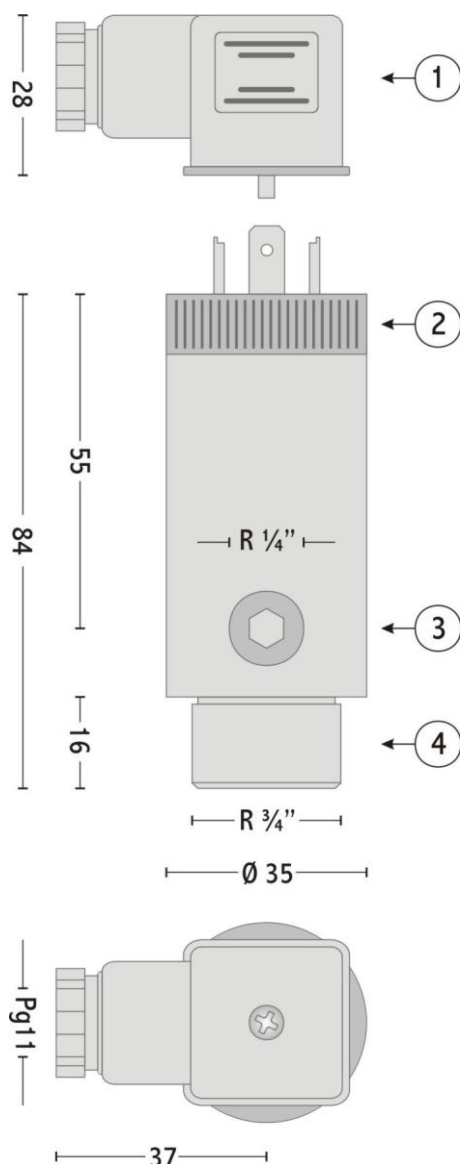


Minimum angular sensitivity for the complete assembly, when installed without limitation on sight window.

WARRANTIES

Contrive guarantees for two years from the date of manufacture of its product to replace, or, at its option, to repair any product or part thereof (except fuses and with some limitations for tubes and photocells) which is found defective in material or workmanship or which otherwise fails to conform to the description of its sales order. Contrive makes no warranty of merchantability or any other warranty express or implied. In no event shall Contrive be liable for consequential or special damages of any nature which may arise in connection with such products.

DIMENSIONS



1	DIN 43650 - ISO 4400 CONNECTOR 2 POLE + EARTH - Pg11
2	DIN 43650 - ISO 4400 SOCKET 2 POLE + EARTH
3	OPTIONAL COOLING CONNECTION 1/4"
4	BURNER HEAD CONNECTION 3/4"

DIMENSIONS [mm]

ORDERING GUIDE

UV4sh	COMPLETE DETECTOR
C18211N21	SPARE CONNECTOR 2 POLE + EARTH WITH Pg11 CABLE GLAND

SPECIAL CUSTOM PROCESSING AVAILABLE ON QUANTITY BASIS.



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SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE