

# Technical Specification

## Flame Scanner - ITS 967X7179M372

Valid from 2020.07.01



### KEY SPECIFICATIONS

- Designed to detect the ultraviolet radiation emitted by a hydrocarbon flame.
- Based on a programmable threshold setting, the control system is able to determine whether there is flame or not.
- Designed and manufactured for a life of not less than 2 (two) years or 16,000 (sixteen thousand) operating hours.
- Designed for safe operation of General Electric gas turbine frames 5, 6, 7 and 9.

The advantages of our products are:

Higher sensitivity	Larger spectral region	Longer life time
Low maintenance	No mounting modifications required	No changes in the controls required
Short delivery lead time		

### Installation Instructions

The flame scanner is intended to be connected to a conduit system. A certified conduit stopping box (a type of protective flameproof enclosure „d“) shall be fitted immediately at the entrance of the enclosure. The stopping box must be suitable for the ambient temperature range and should be installed correctly. For external earthing or bonding connection the cable lug shall be used in such a manner that the conductor is secured against loosening and twisting and that contact pressure is permanently secured. For technical details please consult our installation instruction.

### Shelf Life

The flame scanner will be working within the design values stated in this specification without adjustments or replacements of parts after an unused period of 12 months, preconditioned that the flame scanner had been prepared for storage and was stored in a manner that is at least equal to that of the original packaging by ITS. The Purchaser shall evaluate, review and approve each and every packaging received by ITS.

PRODUCT SPECIFICATIONS		Response Time	<200ms
Physical Parameter		Recommended Operating Volt Range	260 - 350VDC amplifier, recommended 325VDC $\pm$ 25VDC
Sensor	UV Flame Scanner	Pulse Output (3)	Pulse 275 sec <sup>-1</sup> $\pm$ 25 sec <sup>-1</sup> , continuous flame > 15Hz
Housing	1.4571 Stainless Steel	Sensor Vibration	Continuous vibration of up to 0.7 in/sec @ 200 Hz and up to .35 in/sec @ 500 Hz or equivalent of 2.5 g acceleration
Window	Fused Silica		
Mounting	3/4" internal NPT		
Working Temperature	-40°C (-40°F) to 177°C (350°F)		
Pressure Sealing	Against 21 bar (300 psi) at 316°C (600°F) continuously		
Cable Characteristics	Material: PTFE, cover color: orange Lead colors: GRN (GND), BLK (+), YEL (-)		
Lead length	4.9m (16 Ft $\pm$ 1 Ft)		
Average Spectral Sensitivity	190 - 290nm, 250cpm = 10-13W/cm <sup>2</sup> $\lambda$ :200nm		
Discharge Starting Voltage (1)	< 260VDC		
Background (2)	< 5 min <sup>-1</sup>		

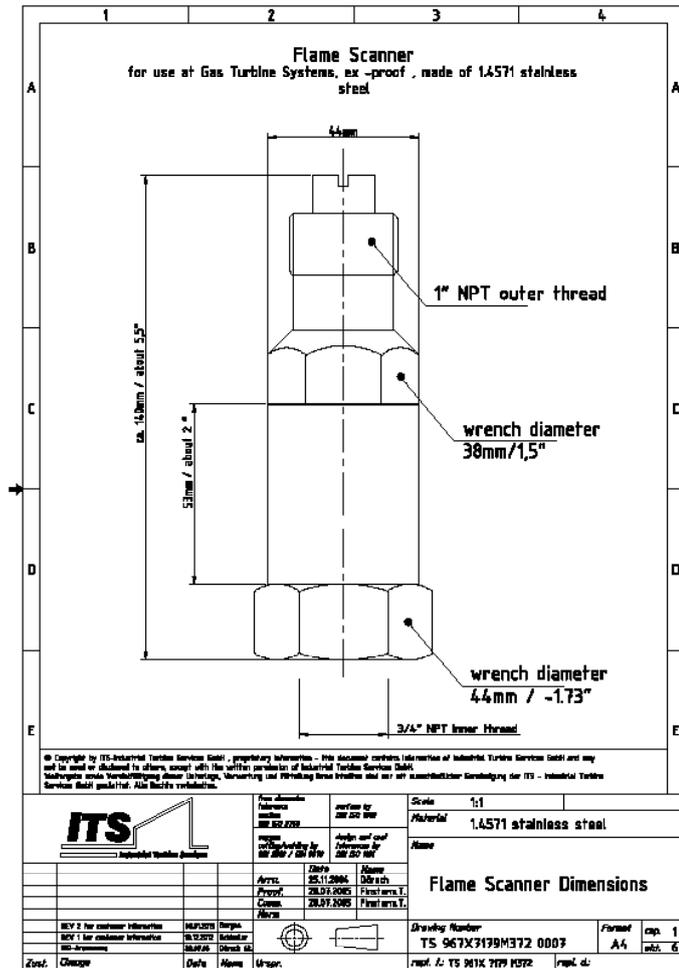
Packaging	
Max. Dimensions	Diameter 64mm (2.520in), Length 128mm (5.039in)
Weight	Approx 1.6kg (3.5lb) (Depending on the part number)
Packing Information	Foam, cardboard box, 235x110x107mm (9.252x4.331x4.213in), 0.1kg (0.22lb), sealed

Manufacturer	
Manufacturer	ITS - Industrial Turbine Services GmbH
Country of Origin	Austria, Europe
Country of Manufacture	Austria, Europe
HS Code	84119900

STANDARDS	
Certification	
Manufacturer Certifications	EN ISO 9001, SCC*, ISO 45001
Environment Protection	ROHS
Safety Approvals	CE, ATEX
	CE II 3 G Ex d IIC T3 Gc
EMC Standards	EN 1127-1, EN60079-0, EN 60079-1, EN 61000-6-2, EN 61326-1, EN 61326-2-3, EN 61000-6-4

Note: Continuous product development may make it necessary to change these details without notice

- (1) Discharge Starting Voltage - Voltage where the sensor just starts its discharge under UV radiation.
- (2) Background - Output count that is measured under room illuminations (approximately 500 lx) at recommended operating voltage
- (3) Pulse Output - Flame intensity in counts/sec measured with a pulse counter.



Further information on [www.turbineservices.at](http://www.turbineservices.at)

All information in this document was examined with due care, nevertheless no guarantee of the correctness and accuracy is given. Any claims or remedies, regardless of the legal theory they are based upon, shall be excluded.