

Hazardous Locations Demand Superior Gas Detection!

Quasar 900 provides the most reliable gas detection in all weather conditions!

The SafEye Quasar 900 Series is the very latest open path IR technology and detects a wide range of hydrocarbon gases – including alkanes (methane to hexane) and ethylene.

Path lengths can be up to 660ft (200m). Quasar 900 models can be tailored to protect your high-risk installation.

Reliability and performance is key and is assured with SIL2 approval and successful 3rd party FM performance / function testing to FM and EN standards

Why Open Path Gas Detectors?

Spectrex invented the xenon flash lamp design that revolutionized the open-path gas detection market, which, until then, was plagued by false alarms due to the drawbacks of the previous designs. Now, Open path detectors complement the use of individual point detectors, take executive action and offer many significant benefits including:

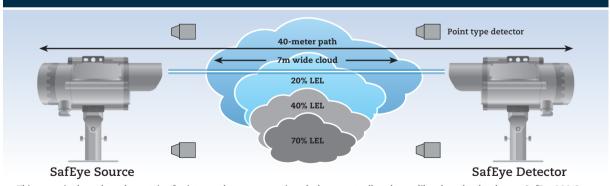
- Wider area coverage
- Most likely method to pick up any leak
- Very high speed of response
- No unrevealed failure modes
- Beam block warning
- Detector location is less critical
- Size of gas hazard indicated

From the Arctic Circle to Middle Eastern Deserts

Applications include:

- Offshore platforms & FPSOs
- Petrochemical plants
- Chemical processing plants
- Gas filling and distribution terminals
- Gas transport and pipelines
- Large storage areas & buildings
- Perimeter monitoring

Gas leak can be picked up by Open Path Detectors that point detectors miss!



This scenario shows how the matrix of point type detectors can miss a leak or eventually only see diluted gas levels whereas SafEye 900 Open-Path will, in this case, measure 20% LEL x 7m = 1.4 LEL.m - well above 1 LEL.m alarm level



1 LEL meter (1 LEL.m) = a cloud of 100% LEL methane gas that is

1 meter wide

1 LEL meter (1 LEL.m) = a cloud of 5% LEL methane gas that is



Don't just take our word for it!

We had Factory Mutual (FM) independently test Quasar 900 to recognized worldwide Function and Performance standards for openpath gas detectors (FM6325 and EN60079-29-4). Guess what – we passed with flying colors!

Why do we do this?

(apart from anything else, it costs a lot). Well, its to give you the assurance that what we say about Quasar 900 is true – and in safety, that's important!

IMMUNITY TO FALSE ALARMS

Quasar 900 is totally immune to interference from sunlight or any other sources of radiation such as flare stacks, arc welding or lightning.

PERFORMANCE IN ALL WEATHERS

The Quasars 900's high power xenon lamp will compensate for changing weather conditions, including rain, fog, mist, snow and makes it immune to influences from solar radiation, arcwelding, stack flares or vibration from machinery.

The optical lenses are thermostacically heated to prevent the formation of ice and build up of snow on the optics even under severe weather conditions. It also eliminates build up of condensation on the lenses.

Quasar is rated for operation over a very wide temperature range from -67°F to + 149°F (-55°C to + 65°C) - a truly worldwide product

RELIABILITY

Quasar 900 is approved to SIL2 (IEC61508), equipped with heated optics and tolerates a very wide temperature range to provide reliable detection

FAILSAFE

No unrevealed failures. In normal operation, the output signal is 4 to 20 mA, depending on the measured gas concentration. Sub-4mA signals includes indications for beam blockage (2mA), a fault (1mA). In addition, a continuous self-test of the Quasar 900 will issue a pre-warning signal (3mA) where the detector is still operational but requires some attention – for example when the transmitter or receiver is misaligned or if there is a deposit build-up on the optics. Maintenance without downtime!

BUILT-IN DATA LOGGER

An internal data-logger keeps a detailed record of the previous 100 events

GAS LIBRARY

The detectors can be calibrated to methane, propane or ethylene. The calibration selection must be determined when ordering.

MINIMUM DETECTABLE LEVEL

Due to Quasar 900's inherent stability and sensitivity, the minimum detectable level is 0.15 LEL.m

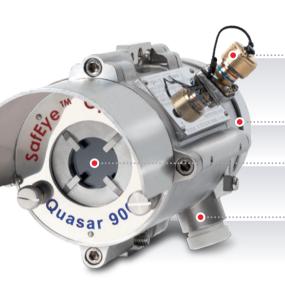
SIMPLE TO ALIGN AND COMMISSION

One person can easily align and commission the system without the need for special training or skills. After an initial coarse adjustment by eye, a telescope is fitted allowing fine adjustment to optimized the adjustment for maximum signal strength.

Installation Options

QUASAR OFFERS OPTIONS FOR YOUR INSTALLATION:

- 0-20mA analog output with HART capability
- RS485 Modbus, where up to 256 detectors can be linked.



Worldwide Approvals

- Hazardous area (Zone 1) FM/FMC, ATEX, IECEx, GOST R Inmetro
- Performance (3rd party):
 FM 6325 approved by FM
 EN60079-29-4 tested by FM
- Reliability: SIL2 (TUV)

I.S. approved conection port for hand held terminal in field or safe area

316L Stainless Steel housing

Heated optics

Electrical entries (x2) 3/4" NPT or M25

HART

HART capabilities within the Quasar 900 can provide digital communications between the field and the safe area. This can provide real time information on the status of an individual detector as well as configuration and historical data of each device, without the need for extra cable cores.

A key feature of HART is that digital signals are transmitted on the same two wires as the 0-20mA current signal.

Useful and useable information available via HART includes:

- Display set-up
- Reconfigure set-up such as heater control, address
- Display detector status and definition
- Perform detector diagnostics
- Troubleshooting
- View Event Log





Complete Access in the Field or Safe Area

The unique, intrinsically safe approved connection port on the Quasar 900 receiver allows simple connection of various types of handheld unit that will communicate with Quasar 900 in the hazardous area. These handheld devices allow user to check alignment, zero, perform configuration changes, view event log, perform diagnostic functions, in conjunction with Spectrex software.

The handheld units are robust weather-proof devices, certified intrinsically safe for use in a hazardous, classified area.

Two options are available, both able to connect to the intrinsically safe approved connection port on the Quasar 900 receiver.

- HART handheld
- RS485 handheld

For work in a safe area / workshop, other options are available, still connected via the I.S. port. for your convenience.

These take the form of cable harnesses to connect with our Mini Laptop kit (p/n 777820-1) or to your own PC/laptop, using free Spectrex software







Actaction Banga	Model 901 902 903 904								
etection Range	Feet	23-66	902 50-132	115-330	265-660				
	Meters	7-20	15-40	35-100	80-200				
etected Gas	C1-C8								
esponse Time	3 sec.								
nmunity to False Alarm	Not influenced by solar radiation, hydrocarbon flames and other external IR radiation sources.								
ensitivity Range	0-5 LEL.m methane and propane								
	0-8 LEL.m ethylene								
pectral Response	2.0 - 3.0μm								
isplacement/Misalignment	±0.5°								
olerance rift	±7 E0/ of the rea	ading or ±40/ of the fu	II aaala (whiahayar i	a aroator)					
inimum Detectable Level	±7.5% of the reading or ±4% of the full scale (whichever is greater) 0.15 LEL.m								
emperature Range	-67°F (-55°C) to 149°F (65°C)								
umidity	Up to 95% non-condensing (withstands up to 100% RH for short periods)								
eated Optics	To eliminate condensation and icing on the window								
arranty .	Safety system – 3 years								
-	Flash source bulb – 10 years								
ELECTRICAL SPECIA	ZIC ATIONS								
ELECTRICAL SPECIA	CICATIONS								
ower Supply	24VDC nominal (18-32 VDC)								
ower Consumption	Detector: 250mA (300mA Peak)								
eak includes heated optics)	Source: 250mA (300mA Peak)								
/arm Up Time	30 sec for transmitter and receiver 2 x 3/4" - 14NPT conduits								
lectrical Connection (specify)									
lectrical Input Protection	or 2 x M25 x 1.								
lectrical input Protection	per MIL-STD-12	ted per EN50270							
<u> </u>	, ,	ted per ENSOZ70							
OUTPUTS – INTERI	FACES								
20mA Current Output	Sink (source on	tion) configuration - n	avimum load of 500	ohm at 19 22 VDC	,				
Zonia Current Output	Gas reading	4-20mA	Obscuration/b						
	Normal, zero re		Zero calibratio						
	Maintenance ca		Fault	OmA					
	Misalignment	2.5mA		0					
S-485 Interface – Modbus		ut/output provides c	omplete data informa	ation to a PC and recei	ves control				
ompatible									
ART	HART communications on 0-20mA analog current (FSK) – used for maintenance and asset								
	management								
isual Status Indicator	3 color LED: Gre	een – Power on, Yello	w – Fault, Red – Aları	m					
MECHANICAL SPEC	IFICATIONS								
azardous Area Approval	,	Approved per	110 T4 O1						
		Ex d e ib [ib Gb] IIB + Ex tb IIIC T135°C Db	H2 14 GD						
			o unite havo a combi	nation of approvals. E	ach is a single				
				ear terminal section (l					
				nal in-situ connection t					
		Diagnostic unit.	, data port for exteri	iai iii oita ooiiiiootioii t	o mana mola				
		Approved per							
	,	Class I Div 1 Groups	3, C and D						
	(Class II,III Div 1 Grou	os E, F and G						
		Approved per							
		Ex d e ib [ib Gb] IIB+F							
erformance		M6325 and tested by	FM per EN60079-29	9-4					
eliability	SIL2 per IEC61508 (TUV) The source and detector housings are stainless steel 316L with electro polish finish. The source and detector housings are stainless steel 316L with electro polish finish. The source and detector housings are stainless steel 316L with electro polish finish.								
nclosure		_							
	stainless steel		ntected from mechan	ical vibrations. The til	mount is also				
imensions	Detector/Source		nch (267 x 130 x 13	20mm)					
illelisiolis	Tilt Mount	4.7 x 4.7 x 5.5 in	,	,					
/eight	Detector/Source		(120 X 120 X 1	3611111)					
oig.it	Tilt Mount	4.2lb (1.9kg)							
ater and Dust Tight	IP66 and IP68	11210 (1101(8)							
	NEMA 250 6P								
nvironmental	Meets MIL-STD-	-810C for Humidity, S	alt and Fog, Vibration	n, Mechanical Shock,	High and Low				
	Temperature	3,	<u>.</u>	,	-				
ACCECCODIEC									
ACCESSORIES									
It Mount	P/N 888270	HART Harness K	t	P/N 888815					
ole Mount (U-bolt 5 inch)	P/N 799225			P/N 794079-8					
•	P/N 888247	Mini Laptop Kit		P/N 777820-1					
ommissioning Kit	.,	min mapeop inc		.,					

Accessories



COMMISSIONING KIT

P/N 888247

The Commissioning/Alignment Kit is required for commissioning and maintenance checks. Only one kit is required per site, Includes: Alignment Telescope, Magnetic Mode Selector, Function Check Filters (2) and set of Socket keys for access to units

SUNSHADE, STAINLESS STEEL

P/N 888263

TILT MOUNT

P/N 888270

POLE MOUNT (U-Bolt, 5 inch)

P/N 799225

Communication, Diagnostics, Set-up

Commissioning, maintenance and diagnostics tools for the Quasar 900 Series, which provides verification, status and instructions for changing detector parameters.





HART HAND-HELD DIAGNOSTIC UNIT

P/N 888810

and connects to I.S. port on 900.

MINI LAPTOP KIT

P/N 777820-1

Certified I.S. (EExia) for use in the hazardous area Preloaded with Spectrex software. For use in Safe area only. Connects, for convenience, to port on 900 or RS 485 terminals.

If, instead, user wishes to use their own HART handheld or PC / laptop in safe area, we offer:

HART HARNESS KIT

P/N 888815

For standard HART Hand-Held (I.S.) to connect between the Hand-Held and the I.S. Port on 900, including a harness.

USB RS485 HARNESS CONVERTER KIT

P/N 794079-8

With RS485/USB converter, kit is used with Spectrex Host software, enables the user to connect to any available PC or laptop. For use in safe area only. Connects, for convenience, to connection port on 900 or RS485 terminals

Q-900, February 2017

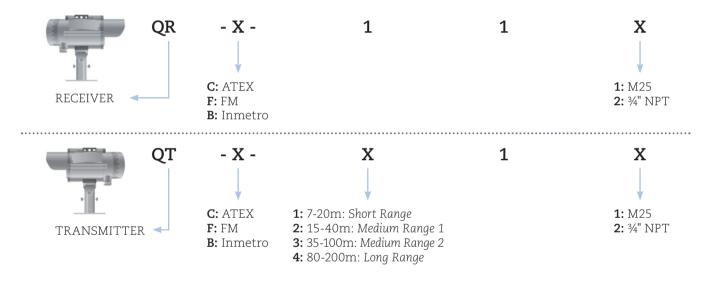
How to choose your new

Quasar 900

Quasar 900 Part numbers

Model	=	Receiver	+	Transmitter	Installation Distance
901		QR-X-11X	+	QT-X-11X	23-66 ft / 7-20m
902		QR-X-11X	+	QT-X-21X	50-132 ft / 15-40m
903		QR-X-11X	+	QT-X-31X	115-330 ft / 35-100m
904		QR-X-11X	+	QT-X-41X	265-660 ft / 80-200m

Part no. code for specific requirements





For more information view manual or website www.spectrex.net

For all technical assistance or support, contact a Spectrex office or your local distributor listed online. Specifications subject to change



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