

Viewing Heads S70X/S80X

Single channel Viewing Heads available in UV or IR sensors used for gas or oil fired burners.

Overview



Model S70X/S80X viewing heads are used with 700, P531 or P532 signal processors and are ideal for single-fuel applications where a high level of discrimination is not required. The UV Viewing Heads use an UV sensing tube with pulse technology making them ideal for low NOx burners where there are small and slow moving flames.

Features & Benefits:

- Multiple models (IR or UV) offer application flexibility
- All models include electronic check (no mechanical shutter) for self-check of the system
- S702, S702PF, S706 and S706PF models are 1.48 barrel diameter and are made of aluminum
- S802 and S806 models are 1.14 barrel diameter and are made of stainless steel
- Quick disconnect cable includes two LED's to assist in setup and self checking of the viewing head. PF models have a factory installed cable

Specifications

MEASUREMENT & SENSING CHARACTERISTICS

Minimum/Maximum Viewing Distance

- Determined by sighting; typical count rates 12-22 recommended (Signal Processor displays 00-29).

IGNITION, FLAME & SUPERVISION SPECIFICATIONS

Electrical Isolation Requirement

- Must be isolated from burner front using Ultem nipples or couplers.

STANDARDS & CERTIFICATIONS

Hazardous Location Approvals

- CSA Class I, Div 2, Groups A, B, C, D, T4A; IECEx Ex nA IIC T4/T5 Gc; NCC/Inmetro Ex ec IIC T4 Gc.

Approvals

- SIL 3 Capable (S702/S802 and S706/S806 families).

APPLICATIONS & COMPATIBILITY

Compatible Signal Processors

- Model 700ACSP, 700DCSP, 800, P531/P532.



ENVIRONMENTAL CONDITIONS

Ambient Temperature Range

- -40 to +185 deg F (-40 to +85 deg C) for standard models. (S70X/S80X)

Environmental Rating

- IP64 when connector ring is properly tightened and cable shielded.

AIR & COMBUSTION AIR SPECIFICATIONS

Purge Air Requirement

- 5 SCFM at ~1 in. above burner pressure to cool lens and clear viewing path. Air must be clean & dry.

MEASUREMENT, ACCURACY & SENSING

Optical Field of View

- IR Models: 1 deg angle of view (1.45 in at 6 ft)
- UV Models: 5 deg angle of view (1 in per foot)

Detector Type

- Two families available: IR/Flicker-sensitive (S702, S702PF, S802) and UV-sensitive (S706, S706PF, S806).

Sensor Type

- IR Models: Germanium photodiode, spectral response 950-1710 nm, peak at 1400 nm; high-pass filter at 33 Hz
- UV Models: UVTron sensor, spectral response 185-260 nm, peak at 210 nm

CONNECTIONS & INTERFACES

Cable Connection Type

- Pre-wired or field-wired connectors: ASY782, ASY785, ASY785-200, ASY786. Uses C330S cable (ITC/CIC rated).

Mounting Connection

- 1/2 in NPT-F for sighting pipe
- 1/4 in NPT-F for purge air

OPERATING LIMITS, DURABILITY & LIFECYCLE

Vibration Resistance

- Avoid high-vibration areas; anti-vibration mounts recommended.

ELECTRICAL SPECIFICATIONS

Maintenance Interval

- For UV models: UV tube lifetime 10,000-50,000 hrs depending on conditions; monthly sensitivity check recommended.

Proof Test Interval

- 1 to 5 years depending on safety system requirements.

Power Supply

- Powered directly by signal processor (24 VDC supplied from 700/800 SP).

PRESSURE SPECIFICATIONS

Pressure Ratings

- S70X: lens withstands 50 psi
- S80X: lens withstands 90 psi (with correct compression ring)

MATERIAL SPECIFICATIONS

Housing Material

- S70X: Aluminum body, secured with over-center latches
- S80X: Stainless steel body, locked via twist-lock mount



LED Indicator

- Green LED: flame pulses/ID pulses. (Not present on PF versions.) (Connector Series)
- Orange LED: processor self-check pulse

MECHANICAL DESIGN & HARDWARE DETAILS

Cable Rating

- C330S = 4-conductor shielded with drain; ITC/CIC approved for hazardous locations.

Filters

▼ CATEGORY

☒ Spare Part

☒ Base Part

▼ TYPE

☒ Viewing Head

☒ Mounting Adapter

☒ Cable Assembly

☒ Adapter

☒ Cable

☒ Cable Connector

☒ Connector

🔍 Search

Part Number	700ACC
Description	S70X COOLING CAN (REQ. VORTEX CLR)
Category	Spare Part
Type	Cooling Adapter
	Order Online
Part Number	700DA
Description	1/2" DELRIN ADAPTER (S70X). FNPT
Category	Spare Part
Type	Mounting Adapter
	Order Online
Part Number	700DA-1
Description	1" DELRIN ADAPTER (S70X). FNPT
Category	Spare Part
Type	Adapter
	Order Online
Part Number	700LTA
Description	LIQUID TIGHT CABLE ADPTR 3/8" S700/S800
Category	Spare Part
Type	Mounting Adapter
	Order Online
Part Number	700UA
Description	ULTEM HEAT INS. S700.1/2" VIEW-1/4" AIR
Category	Spare Part
Type	Insert
	Order Online



Part Number	800DA
Description	1/2" DELRIN ADAPTER S80X FNPT 1/2"
Category	Spare Part
Type	Mounting Adapter
	Order Online
Part Number	800UA
Description	1/2" ULTEM ADAPTER S80X FNPT 1/2"
Category	Spare Part
Type	Mounting Adapter
	Order Online
Part Number	ASY782
Description	CABLE W.LED & 15FT CABLE FOR S700/S800
Category	Spare Part
Type	Cable
	Order Online
Part Number	ASY784
Description	S700/S800 CONNECTOR KIT W/O CABLE
Category	Spare Part
Type	Connector Kit
	Order Online
Part Number	ASY785
Description	50FT 700/800 SERIES CABLE ASSEMBLY
Category	Spare Part
Type	Cable Assembly
	Order Online

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Product Number



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- 700ACC

S70X COOLING CAN (REQ. VORTEX CLR)
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S70X COOLING CAN (REQ. VORTEX CLR)
- 700DA

1/2" DELRIN ADAPTER (S70X). FNPT
- 700DA

1/2" DELRIN ADAPTER (S70X). FNPT
- 700DA-1

1" DELRIN ADAPTER (S70X). FNPT
- 700DA-1

1" DELRIN ADAPTER (S70X). FNPT
- 700LTA

LIQUID TIGHT CABLE ADPTR 3/8" S700/S800



700LTA

LIQUID TIGHT CABLE ADPTR 3/8" S700/S800

700UA

ULTEM HEAT INS. S700.1/2" VIEW-1/4" AIR

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ULTEM HEAT INS. S700.1/2" VIEW-1/4" AIR

800DA

1/2" DELRIN ADAPTER S80X FNPT 1/2"

800DA

1/2" DELRIN ADAPTER S80X FNPT 1/2"

800UA

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800UA

1/2" ULTEM ADAPTER S80X FNPT 1/2"

ASY782

CABLE W.LED & 15FT CABLE FOR S700/S800

ASY782

CABLE W.LED & 15FT CABLE FOR S700/S800

ASY784

S700/S800 CONNECTOR KIT W/O CABLE

ASY784

S700/S800 CONNECTOR KIT W/O CABLE

ASY785

50FT 700/800 SERIES CABLE ASSEMBLY

ASY785

50FT 700/800 SERIES CABLE ASSEMBLY