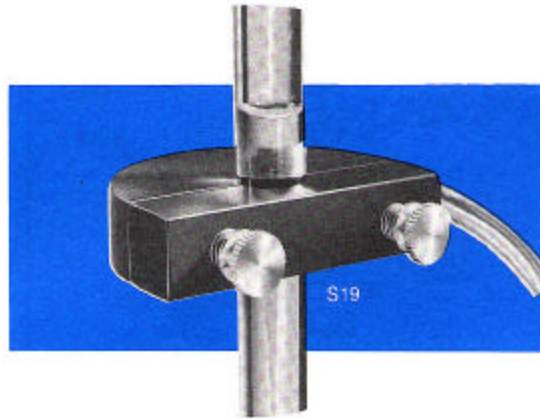


SPECIAL PURPOSE SENSORS

Liquid Level Detection S19 Series SIGHT GLASS SKANNER

Features:

- Detects liquid level in sight glass tubes
- Works with any liquid
- Works with any clear tubing
- Standard models available up to 1 inch diameter
- Replaceable light source and photodetector



Description:

The S19 Series Sight Glass Skanners contain a light source and photodetector mounted in a rugged aluminum housing. The housing clamps onto the sight glass tube with two thumb screws with tension springs for easy positioning. Both the light source and photodetector are field replaceable.

It has applications in metering systems of virtually any liquid from water to chemicals. The photodetector sees reflected light when there is no liquid present.

Typical Applications:

- High/low level alarms
- Liquid level control

Specifications: (at 25°C)

LIGHT SOURCE—LAMP

Input 5.0 VDC, 115 mA

LIGHT SOURCE—LED

Input 40 mA max. with resultant voltage drop of 1.1 to 1.7 VDC; derate at 1 mA per degree above 25°C ambient

Modulated Input 80 mA max., 50% duty cycle at 1 kHz min.

Reverse Voltage 2 V max.

Spectral Emission 940 nm peak

PHOTODETECTOR

Operating Voltage 30 VDC max.

Response Time See Response Time Chart under *Technical Information*

Spectral Response 910 nm peak

BODY

Black anodized aluminum

TEMPERATURE

Operating: 0° to 50°C

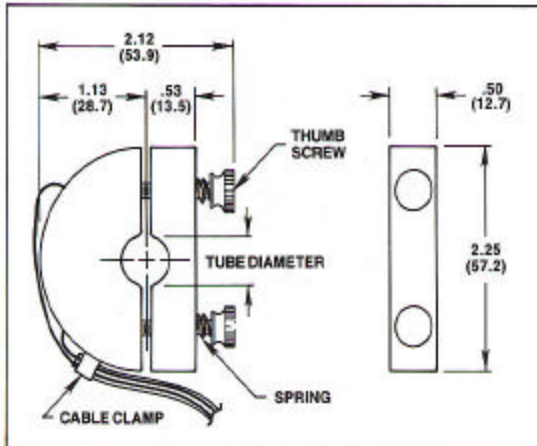
Storage: -40° to 50°C

LEADS

Two 2 cond. 24/26 AWG., teflon covered cables with overall PVC jacket, 6 ft. long

S19 Series

Dimensions:



Performance Data:

With clear water and clear glass tube:
 I_c (with no liquid) 50 microamps min.
 250 microamps max.
 I_c (with liquid) 1/10 of I_c

Compatibility With Controls:

The S19 Series is compatible with all Skan-A-Matic controls except modulating controls which are used with LED light sources only. For high speed operation use the T41300 High Speed Amplifier.

The IR LED versions utilize a 40 mA Light Emitting Diode. A 100 ohm, 1/4 W current limiting resistor is supplied and must be used with Skan-A-Matic controls furnishing 5 VDC for light source power. With modulating controls such as our R42/T42, a 27 ohm, 1/4 W current limiting resistor must be used. The S19 Series is not compatible with the R43/T43 modulating controls.

Model Selection Guide:

Part #	Light Source	Tube O.D.	Tube Wall Thickness	
			Min.	Max.
S19051	Lamp	1/4"	.04"	.08"
S19054	IR LED	1/4"	.04"	.08"
S19081	Lamp	3/8"	.05"	.09"
S19084	IR LED	3/8"	.05"	.09"
S19101	Lamp	1/2"	.06"	.10"
S19104	IR LED	1/2"	.06"	.10"
S19111	Lamp	5/8"	.06"	.11"
S19114	IR LED	5/8"	.06"	.11"
S19121	Lamp	3/4"	.06"	.13"
S19124	IR LED	3/4"	.06"	.13"
S19141	Lamp	1"	.10"	.20"
S19144	IR LED	1"	.10"	.20"

The skanners above are designed to operate with sight glass tubes having outer diameters and wall thicknesses as shown. If a tube varies from these dimensions, a sample should be sent to the Application Engineering Department. If major modification or a special skanner is required, additional charges and shipment time will be quoted.

Variations:

Extra lead lengths available. See pg. 129.

Options:

CONNECTOR

The S19 Series skanners are available with connector installed. The mating half is furnished for field connection. Order by adding a suffix as follows:

- P For connector pair with in-line receptacle. Example: S19101-P
- F For connector pair with flanged, panel-mount receptacle. Example: S19101-F

See *Options* for a more detailed description.

REPLACEMENT PARTS

- L01044 Replacement Lamp
- P01044 Replacement Photodetector

Wiring Diagram:

