

## THRUBEAMS

### General Purpose L30/P30 Series

#### Features:

- Rated Separation: 3 to 24 in.
- Beam Diameter: .09 to .12 in.
- Smallest Detectable Object: .02 to .04 in.
- Plastic lens
- Small size
- Interchangeability within series



#### Description:

The L30/P30 Series is a family of compatible general purpose thrubeams. Any L30 light source may be used with any P30 photodetector. The units offer similar performance in a variety of body sizes, styles and materials. All units have metal housings, lenses and epoxy sealing.

Several L30/P30 Series models are available with several options such as protective sheathing and/or filters which block visible light.

Engineering specifications will vary with the models actually used; refer to Model Selection Guide.

#### Typical Applications:

- Parts counting
- Edge control
- Detection of small parts
- Web break

#### Specifications: (at 25°C)

##### LIGHT SOURCE—LAMP

Input 5.0 VDC, 115 mA

##### LIGHT SOURCE—LED

Input 100 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 1 A max., 10% duty cycle at 1 kHz min.

Reverse Voltage 2 V max.

Spectral Emission 940 nm peak

BODY Stainless steel or brass; see Model Selection Guide

TEMPERATURE Operating: 0° to 70°C  
Storage: -40° to 70°C

LEADS 2 cond. 24 AWG., teflon covered cable, 6 ft. long. Type A

##### PHOTODETECTOR

Operating Voltage 20 VDC max.

Response Time See Response Time Chart under Technical Information

Spectral Response 910 nm peak

BODY Brass

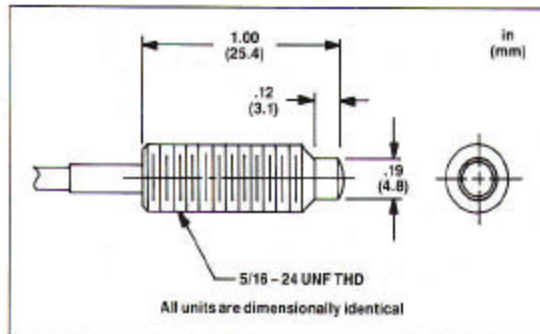
FILTER (optional) Transmits less than 5% at 750 nm and less than 0.1% at 700 nm

TEMPERATURE Operating: 0° to 50°C—standard units  
Storage: -40° to 50°C

LEADS 2 cond. 26 AWG., teflon covered cable with shield, 6 ft. long. Type B

## L30/P30 Series

### Dimensions:



### Compatibility With Controls:

The L30/P30 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 LED light source utilizes a 100 mA Light Emitting Diode. A 39 ohm, 1 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 and R43/T43, no current limiting resistor is used.

### Model Selection Guide:

#### LIGHT SOURCE

Part #	Light Source	Body	Rated* Separation	Beam Diameter	Smallest Detectable Object
L32001	Lamp	Brass	24"	.12"	.04"
L32004	LED	Stainless	3-10"***	.09"	.03"

\*When used with P30 Photodetectors and Skan-A-Matic electronic controls.

\*\*L32004 will operate with P32011 and P32013 photodetectors at 10" and with the P30011, P31011, P34021 and P34071 at 3".

#### PHOTODETECTOR

Part #	Operating Voltage	Body	Filter	Beam Diameter	Smallest Detectable Object
P32011	20 VDC max.	Brass	No	.12"	.04"
P32013	20 VDC max.	Brass	Yes	.12"	.04"

### Variations:

#### LEADS

Extra lead lengths available. See pg. 129.

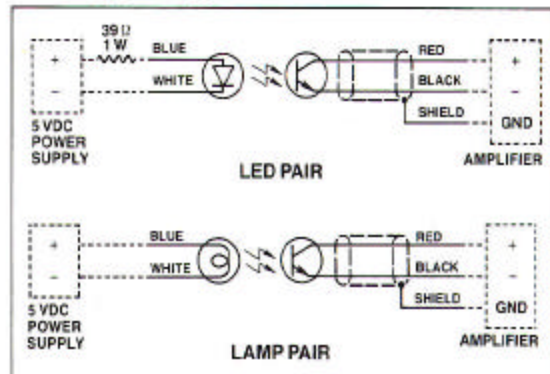
#### Options:

##### PROTECTIVE SHEATH

Can be factory installed over the standard teflon covered leads by adding a suffix as follows:

- M For square locked galvanized steel with black PVC jacket, 9/32" O.D. Example: L32001-M
- S For armor, square locked stainless steel, 3/16" O.D. Example: L32001-S

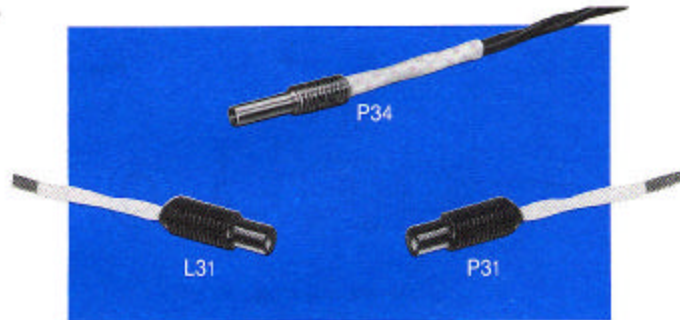
### Wiring Diagram:



## L30/P30 Series (Continued)

### Features:

- Rated Separation: 10 to 24 in.
- Beam Diameter: .06 to .12 in.
- Smallest Detectable Object: .02 to .04 in.
- Small size
- Interchangeability within series



### Description:

The L30/P30 Series is a family of compatible general purpose thrubeams. Any L30 light source may be used with any P30 photodetector. The units offer similar performance in a variety of body sizes, styles and materials. All units have metal housings, lenses and epoxy sealing.

Several L30/P30 Series models are available with several options such as protective sheathing and/or filters which block visible light.

Engineering specifications will vary with the models actually used; refer to Model Selection Guide.

### Typical Applications:

- Parts counting
- Edge control
- Detection of small parts
- Web break

### 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

**BODY** Black anodized aluminum

**TEMPERATURE** Operating: 0° to 50°C  
Storage: -40° to 50°C

**LEADS** 2 cond. 24 AWG., teflon covered cable, 6 ft. long. Type A

#### PHOTODECTOR

**Operating Voltage** 30 VDC max.

**Response Time** See Response Time Chart under *Technical Information*

**Spectral Response** 910 nm peak

**BODY** Black anodized aluminum or stainless steel; see Model Selection Guide

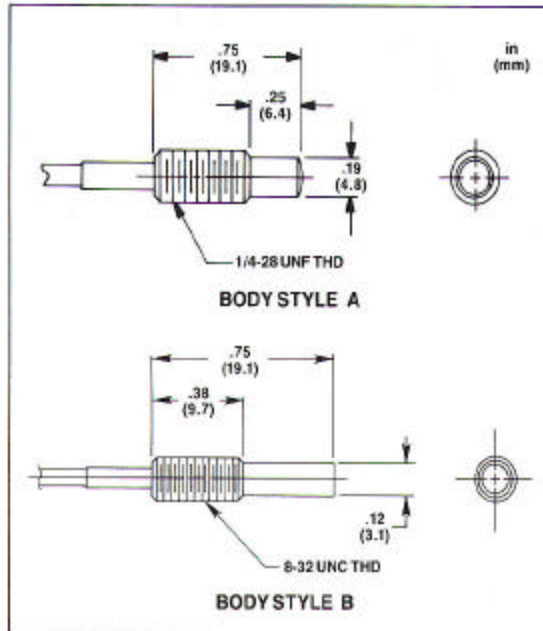
**FILTER (optional)** Transmits less than 5% at 750 nm and less than 0.1% at 700 nm

**TEMPERATURE** Operating: 0° to 50°C  
Storage: -40° to 50°C

**LEADS** 2 cond. 26 AWG., teflon covered cable with shield, 6 ft. long, Type B

## L30/P30 Series

### Dimensions:



### Compatibility With Controls:

The L30/P30 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 LED light source utilizes 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 and R43/T43, a 27 ohm, 1/4 W current limiting resistor must be used.

### Model Selection Guide:

#### LIGHT SOURCE

Part #	Light Source	Body Style	Rated* Separation	Beam Diameter	Smallest Detectable Object
L31011	Lamp	A	15"	.120"	.04"
L31014	LED	A	5"	.120"	.04"

\*When used with P30 Photodetectors and Skan-A-Matic electronic controls.

### PHOTODETECTOR

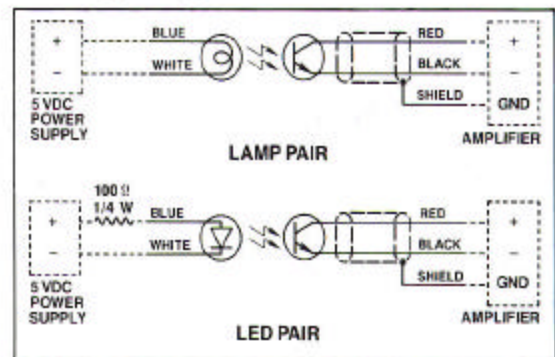
Part #	Body	Body Style	Filter	Beam Diameter	Smallest Detectable Object
P31011	Anodized Aluminum	A	No	.08"	.03"
P31013	Anodized Aluminum	A	Yes	.08"	.03"
P34021	Stainless	B	No	.06"	.02"
P34023	Stainless	B	Yes	.06"	.02"

### Variations:

#### LEADS

Extra lead lengths available. See pg. 129.

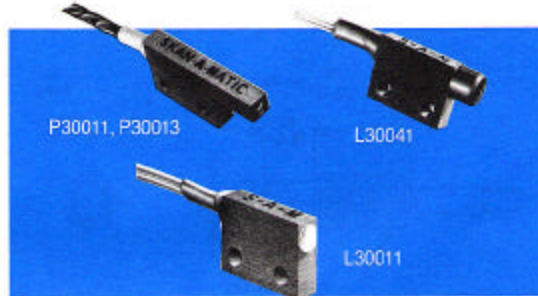
### Wiring Diagram:



## L30/P30 Series (Continued)

### Features:

- Rated Separation: 10 to 15 in.
- Beam Diameter: .06 to .12 in.
- Smallest Detectable Object: .02 to .04 in.
- Small size
- Interchangeability within series



### Description:

The L30/P30 Series is a family of compatible general purpose thrubeams. Any L30 light source may be used with any P30 photodetector. The units offer similar performance in a variety of body sizes, styles and materials. All units have metal housings, lenses and epoxy sealing.

Several L30/P30 Series models are available with several options such as protective sheathing and/or filters which block visible light.

Engineering specification will vary with the models actually used; refer to Model Selection Guide.

### Typical Applications:

- Parts counting
- Edge control
- Detection of small parts
- Web break

### Specifications: (at 25°C)

#### LIGHT SOURCE—LAMP

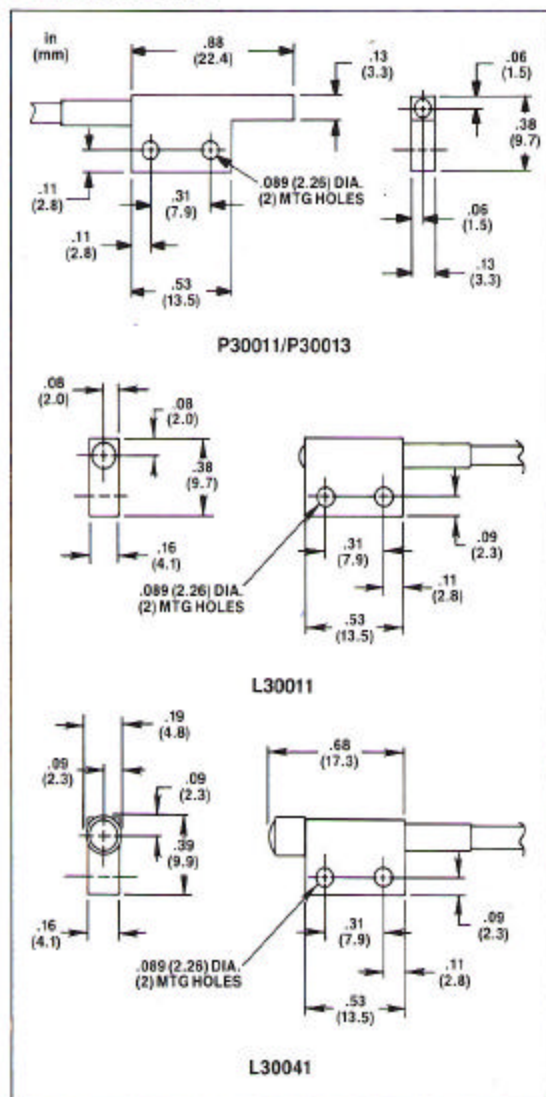
<b>Input</b>	5.0 VDC, 115 mA
<b>BODY</b>	Gold anodized aluminum
<b>TEMPERATURE</b>	Operating: 0° to 50°C Storage: -40° to 50°C
<b>LEADS</b>	2 cond. 24 AWG., teflon covered cable, 6 ft. long. Type A

#### PHOTODETECTOR

<b>Operating Voltage</b>	30 VDC max.
<b>Response Time</b>	See Response Time Chart under <i>Technical Information</i>
<b>Spectral Response</b>	910 nm peak
<b>FILTER (optional)</b>	Transmits less than 5% at 750 nm and less than 0.1% at 700 nm
<b>BODY</b>	Gold anodized aluminum
<b>TEMPERATURE</b>	Operating: 0° to 50°C Storage: -40° to 50°C
<b>LEADS</b>	2 cond. 26 AWG., teflon covered cable with shield, 6 ft. long. Type B

## L30/P30 Series

### Dimensions:



### Model Selection Guide:

#### LIGHT SOURCE

Part #	Rated* Separation	Beam Diameter	Smallest Detectable Object
L30011	10"	.12"	.04"
L30041	15"	.12"	.04"

\*When used with P30 Photodetectors and Skan-A-Matic electronic controls.

#### PHOTODETECTOR

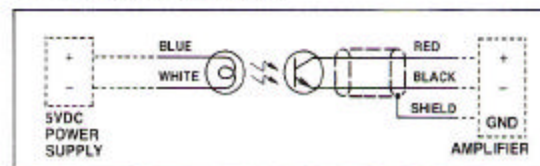
Part #	Filter	Beam Diameter	Smallest Detectable Object
P30011	No	.06"	.02"
P30013	Yes	.06"	.02"

#### Variations:

##### LEADS

Extra lead lengths available. See pg. 129.

### Wiring Diagram:



### Compatibility With Controls:

The L30/P30 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.