

PHOTOELECTRIC MISFEED SENSOR UNITS

① Misfeed pin

P	P _{≥2.00}	P<2.00
Y	3	2
G	15°	10°

② Switch bar GSB

③ Spring WL

④ Screw plug GM

⑤ Photoelectric device EE-SX670

⑥ Connector EE-1001 How to use P.636

Detection position characteristic

[Normal operation] The sensor receives light from the light emitting unit and remains OFF.

[Misfeed] When a workpiece misfeed occurs, the switch bar is pushed up and blocks the light from light emitting unit, causing the sensor to turn ON.

Part No.	Name	Catalog No.	Material	Part No.	Name	Catalog No.	Material
①	Misfeed pin	MGAS MGAL MGAX	M Equivalent to SKD11 H 60~63HRC	④	Screw plug	GM	M S45C H 34~43HRC
②	Switch bar	GSB	M SK4 S Black oxide	⑤	Photoelectric element	EE-SX670	Made by OMRON Output: OFF when receiving light
③	Spring for misfeed pin	WL	P.1401	⑥	Connector	EE-1001	Made by OMRON

D	ℓ	③ WL Spring constant 1N/mm (0.1kgf/mm)														D ₁	M×P	φ D ₂					
		WL25		WL30		WL35		WL40		WL45		WL50		WL55					WL60		WL65		WL70
	d	max.F	d	max.F	d	max.F	d	max.F	d	max.F	d	max.F	d	max.F	d	max.F	d	max.F	d	max.F	d	max.F	
5																							
6	0.65	10	0.7	12	0.7	14	0.7	16	0.75	18	0.75	20	0.75	22	0.8	24	0.8	26	0.85	28	6	10	7
8																						12	10
10																						14	12

Spring load (N) = Spring constant (N/mm) × deflection F (mm) {N} = kgf × 9.80665

① Misfeed pin

B	Catalog No.		L						P	Base unit price	Volume discount unit price			
	Type	D	5	6	7	8	9	10	0.01mm increments	1~4 pieces	5~9	10~19	20~50	
10	MGAS	5	50	60	70	80	90	100	2.00~4.97					
15		6	50	60	70	80	90	100	2.00~5.97					
		8	50	60	70	80	90	100	3.00~7.97					
15	MGAL	5	60	70	80	90	100		2.00~4.97					
21		6	60	70	80	90	100		2.00~5.97					
		8	60	70	80	90	100		3.00~7.97					
		10	60	70	80	90	100	110	3.00~9.97					
27	MGAX	5	60	70	80	90	100		2.00~4.97					
		6	60	70	80	90	100		2.00~5.97					
32		8	70	80	90	100		3.00~7.97						
		10	70	80	90	100	110		3.00~9.97					

Order **Catalog No. MGAS 6 - 70 - P4.97**

Days to Ship **Quotation**

Alterations **Catalog No. MGAS 6 - LC65.0 - P4.97**

Alteration	Code	Spec.	1Code
	PC	Tip diameter change PC _≥ P _{min.} 0.01mm increments	Quotation
	BC	Tip length change Y+2 _≤ BC _≤ B _{max.} BC _≤ L(C)-30 0.1mm increments	Quotation
	LC	L dimension change 0.1mm increments If difference between L dimension and tip length is 30 or less, tip length is adjusted to L-30.	Quotation

Alteration	Code	Spec.	1Code
	HC	Head diameter change D _≤ HC<D+2 0.1mm increments	Quotation
	NTC	Elimination of tip taper	Quotation
	PKC	Tip diameter tolerance change P ₀ +0.01 ₀ → +0.005 ₀	Quotation

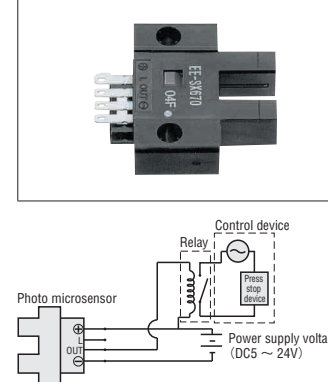
② Sensor units (②③④⑤⑥)

Catalog No.	③		ℓ				Base unit price	Volume discount unit price			
	Type	D	25	30	35	40	45	1~4 sets	5~9	10~19	20~50
MFG	WL	5	25	30	35	40	45				
		6	50	55	60	65	70				
		8									
		10									

Order **Catalog No. MFG 6 - WL 50**

Days to Ship **Quotation**

Photoelectric misfeed sensor unit MFG



How to use

The photoelectric misfeed sensor unit uses a photo microsensor (with built-in amplifier) in the switch. When an object blocks the light beam, the sensor turns ON and an electric current flows. This electric current activates the relay to stop the press machine. However, unlike ordinary switches, this sensor can not directly open or close a circuit. It therefore cannot be used to control a unit directly.

Wiring

Wire the unit as shown in the left figure. The power supply voltage for the photo microsensor is DC5~24V. Connect the power supply wires to the ⊕ and ⊖ terminals of the sensor. Then connect the ⊕ and ⊖ terminals of the sensor to the relay input terminals. (Use a relay with a current consumption of 100mA or less) However, it is difficult to obtain a DC power supply at a press working site. This photoelectric microsensor can be easily installed by using a commercially available press-safety device.

Instructions for proper use

- Be sure to use a relay with a current consumption of 100mA or less for the output.
- Keep the sensor unit away from high voltage lines and power lines wherever possible. Otherwise induction may cause the unit to malfunction, resulting in machine damage.
- If there are devices generating high surges (motors, welders and other spark-generating devices), be sure to connect a surge absorber in the surge source.
- Because the sensor is a photoelectric device, it may be affected by reflected external light. Avoid installing in environments where such light is present wherever possible.
- Because the photoelectric microsensor is activated by light, keep the light emitting and receiving faces clean by wiping them with a dry cloth.
- To attach the photo microsensor, use M3.0 screws and control the tightening torque to 5.5kg·cm or less.
- Be sure to use an EE-1001 connector.

Component parts (individual parts)

Part No.	Name	Misfeed pin	Catalog No.		Base unit price	Volume discount unit price			
			Type	D ₂ ·M	1~4 pieces	5~9	10~19	20~50	
②	Switch bar	D 5	GSB	7					
		D 6		8					
		D 8		10					
		D10		12					
④	Screw plug	D 5	GM	10					
		D 6		12					
		D 8		14					
		D10		14					
⑤	Photoelectric element	—	EE-SX670						
⑥	Connector	—	EE-1001						

Order **Catalog No. EE-SX670**

Days to Ship **Quotation**

For details of spring for misfeed pin WL (③), refer to P.1401.