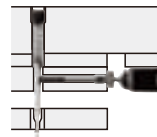
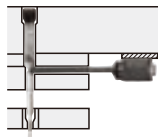
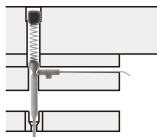


COMPONENTS FOR MISFEED SENSORS

COMPONENTS FOR MISFEED SENSORS



Product name Catalog No.	CONTACT TYPE MISFEED SENSOR UNITS	CONTACT TYPE MISFEED SENSOR UNITS		MICROSWITCH MISFEED SENSOR UNITS	
	MFSF	MFL	SMA□	—GROOVE FEED TYPE—	—HOLE FEED TYPE—
Page	528	529		531	533

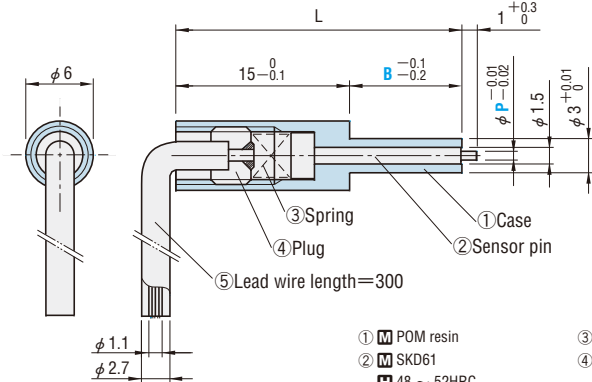


PHOTOELECTRIC MISFEED SENSOR UNITS		BRACKETS FOR SENSORS		BRACKETS FOR SENSORS		MISFEED SENSOR UNITS
MFG	MGA□	SNB	SNB—D	SNBA	SNBA—D	OKJS
535		537		537		538

CONTACT TYPE MISFEED SENSOR UNITS

RoHS

MFSF



L	Catalog No.	B	P	Base unit price
23	MFSF	8	0.4 ~ 1.5	1 ~ 4 pieces
25		10		
28		13		



Order

Catalog No. — B — P
MFSF — 10 — P1.0



Days to Ship

Quotation



Price

Quotation

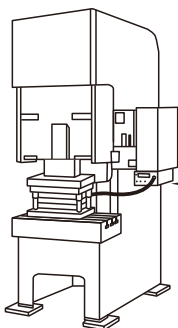


Alterations

Catalog No. — B(BC) — P — (LHC·LX)
MFSF — BC6 — P0.8 — LHC—LX

Alteration	Code	Spec.	1Code
	BC	B dimension change $0 \leq BC < B$ 1mm increments ⚠ Standard L is shortened by (B-BC).	Quotation
	LHC	Addition of groove for lead wire in case	
	LX	Change of lead wire length from 300mm to 600mm	

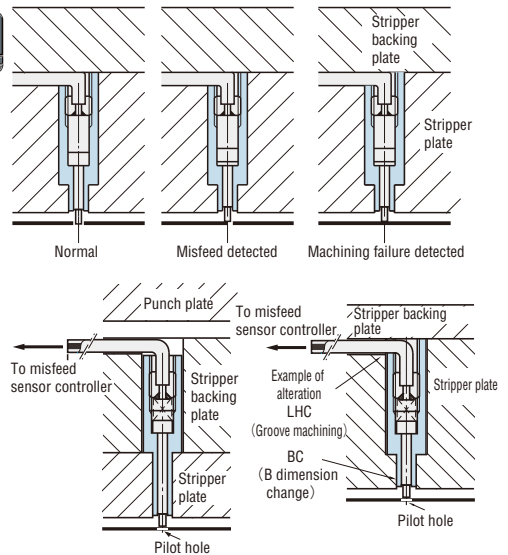
How to connect



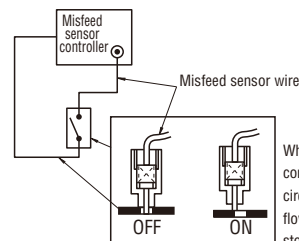
Connect the misfeed sensor lead wires to the sensor input terminals (contact type) of the misfeed sensor controller.

Features

- Because the sensor pin is light, the sensing point is not shifted by pin vibrations even during high speed operation, ensuring stable sensing.
- When the workpiece contacts the sensor pin due to misfeed, the sensor circuit closes and an electric signal flows. Connect the lead wire to the contact sensing terminal of the misfeed sensor controller. (This unit can be used for conductive workpieces only.)
- Compared with other misfeed sensors, this sensor unit can reduce the total cost because the sensor structure is simple and the mounting hole can be made easily.
- Unlike microswitch or photoelectric misfeed sensors that react to movement of the pilot punch, the contact type misfeed sensor MFSF reacts just when it contacts the workpiece, allowing the press machine to stop promptly.



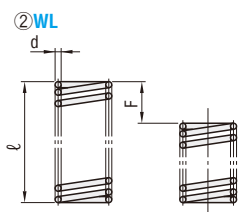
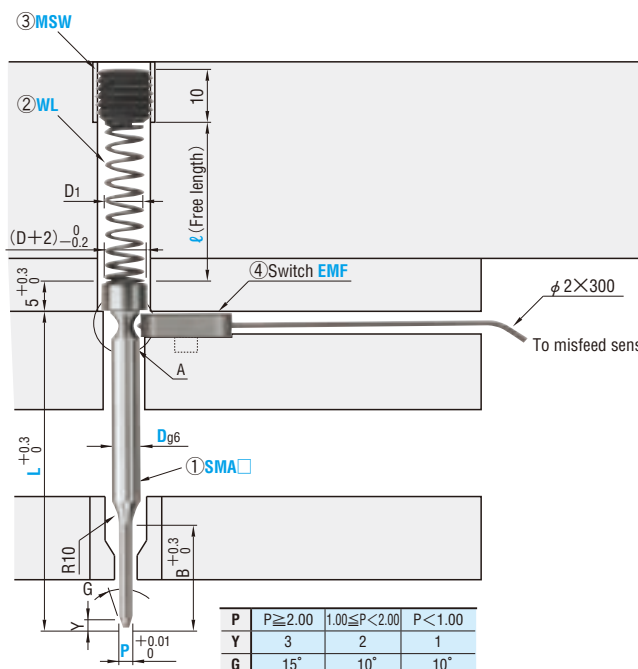
- Install the sensor onto the stripper plate by light press fit or bonding.
- ⚠ If the sensor is installed onto the lower die, care should be taken to prevent potential malfunctions caused by oil or metallic dust.



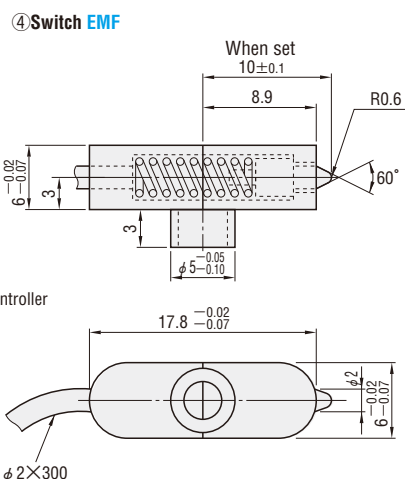
When a conductive workpiece contacts the sensor pin, the sensor circuit closes and an electric signal flows, causing the press machine to stop.

CONTACT TYPE MISFEED SENSOR UNITS

RoHS



P	$P \geq 2.00$	$1.00 \leq P < 2.00$	$P < 1.00$
Y	3	2	1
G	15°	10°	10°

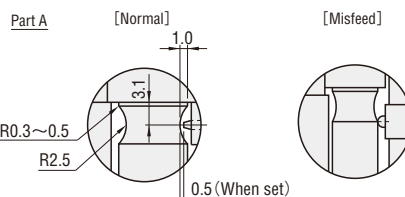


- **How to connect**

Connect the lead wire to the sensor input terminal (contact type) of a commercially available misfeed sensor controller. (Refer to the MFSF connection instructions on P.528.)

- Working voltage

Use the sensor within a range of 5~15V.



Part No.	Name	Catalog No.	M H	Part No.	Name	Catalog No.	M H
①	Misfeed pin	SMAS SMAL SMAX	M H Equivalent to SKD11 60 ~ 63HRC	③	Screw plug	MSW	 P.687
②	Spring for misfeed pin	WL	 P.996	④	Switch	EMF	M Polycarbonate

		WL Spring constant 1N/mm (0.1kgf/mm)									
①		D4		D5		D6		D8		D10	
φ D ₁		6		6		8		10		10	
Type	ℓ	d	max.F	d	max.F	d	max.F	d	max.F	d	max.F
②WL	25	0.65	10	0.65	10	0.75	10	0.9	10	0.9	10
	30	0.7	12	0.7	12	0.8	12	0.9	12	0.9	12
	35	0.7	14	0.7	14	0.8	14	0.9	14	0.9	14
	40	0.7	16	0.7	16	0.8	16	0.9	16	0.9	16
	45	0.75	18	0.75	18	0.85	18	1.0	18	1.0	18
	50	0.75	20	0.75	20	0.85	20	1.0	20	1.0	20
	55	0.75	22	0.75	22	0.85	22	1.0	22	1.0	22
	60	0.8	24	0.8	24	0.9	24	1.0	24	1.0	24
	65	0.8	26	0.8	26	0.9	26	1.1	26	1.1	26
70	0.85	28	0.85	28	1.0	28	1.1	28	1.1	28	
③MSW		M8×P1.25		M10×P1.5		M10×P1.5		M12×P1.5		M14×P1.5	

$$\text{Spring load (N)} = \text{Spring constant (N/mm)} \times \text{deflection } F \text{ (mm)} \quad \{N\} = \text{kgf} \times 9.80665$$

① Misfeed pin

B	Catalog No.		L							P 0.01mm increments	Base unit price	Volume discount unit price		
	Type	D									1~4 pieces	5~9	10~19	20~50
10	SMAS	4	50	60	70	80				1.00~3.97	Quotation			
		5	50	60	70	80	90	100		2.00~4.97				
		6	50	60	70	80	90	100		2.00~5.97				
15	8	50	60	70	80	90	100		3.00~7.97					
15	SMAL	4		60	70	80				1.00~3.97				
		5		60	70	80	90	100		2.00~4.97				
		6		60	70	80	90	100		2.00~5.97				
		8		60	70	80	90	100		3.00~7.97				
21		10		60	70	80	90	100	110	3.00~9.97				
21	SMAX	4		60	70	80				1.20~3.97				
5			60	70	80	90	100		2.00~4.97					
6			60	70	80	90	100		2.00~5.97					
8			70	80	90	100		3.00~7.97						
32		10		70	80	90	100	110	3.00~9.97					



Order

Catalog No. — L — P
SMAS 6 — 80 — P3.00



Days to Ship

Quotation



Alterations

Catalog No. — L(LC) — P(PC) — (BC·HC·NTC·PKC)
SMAS 8 — LC79 — PC2.50

Alteration	Code	Spec.	1Code
	PC	Tip diameter change $PC \geq \frac{P_{min}}{2} \geq 0.50$ 0.01mm increments	Quotation
	BC	Tip length change $Y + 2 \leq BC \leq B_{max}$ $BC \leq L(LC) - 30$ 0.1mm increments	
	LC	L dimension change $(B) + 30 \leq LC < L$ 0.1mm increments If difference between L dimension and tip length is 30 or less, tip length is adjusted to L-30.	

Alteration	Code	Spec.	1Code
	HC	Head diameter change $D \leq HC < D + 2$ 0.1mm increments	Quotation
	NTC	Elimination of tip taper	
	PKC	Tip diameter tolerance change $p + 0.01 \begin{matrix} \rightarrow \\ 0 \end{matrix} + 0.005 \begin{matrix} \rightarrow \\ 0 \end{matrix}$	

②③④ Sensor units

Catalog No.		②										Base unit price	Volume discount unit price			
Type	D	Type	ℓ										1~4 sets	5~9	10~19	20~50
MFL	4	WL	25 30 35 40 45 50 55 60 65 70										Quotation			
	5															
	6															
	8															
	10															



Order

Catalog No. — ②Type·ℓ
MFL 6 — WL 60



Days to Ship

Quotation

④ Component parts (individual parts)

Part No.	Name	Catalog No.	Base unit price	Volume discount unit price			
			1~4 pieces	5~9	10~19	20~50	
④	Switch	EMF		Quotation			



Order

Catalog No.
EMF



Days to Ship

Quotation

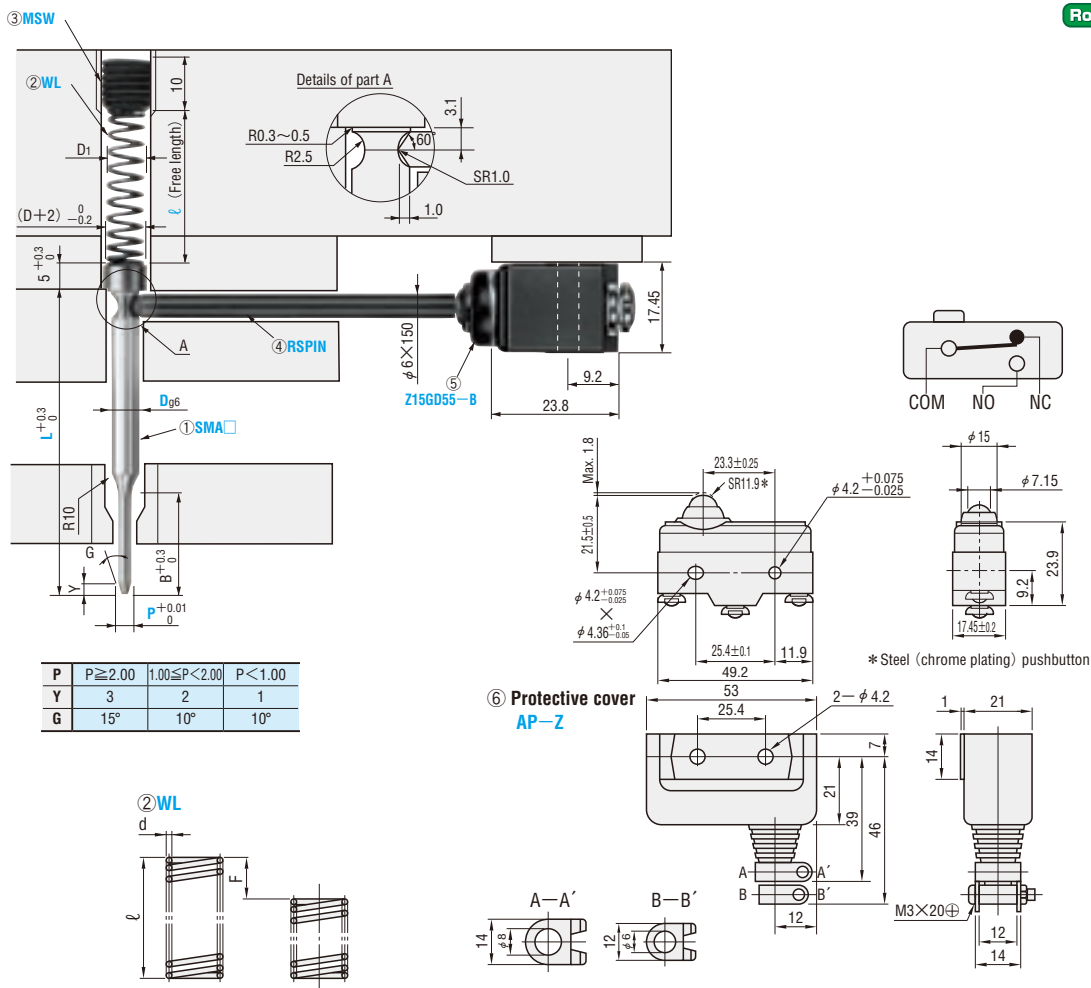
Refer to the corresponding pages for details of the following components.

Part No.	Name	Catalog No.	Page
②	Spring for misfeed pin	WL	P.996
③	Screw plug	MSW	P.687

—GROOVE FEED TYPE—

RoHS

❗ The groove feed type requires machining of a groove on the punch plate for installing the relation pin ④.



Part No.	Name	Catalog No.	M H	Part No.	Name	Catalog No.	M H
①	Misfeed pin	SMAS SMAL SMAX	M Equivalent to SKD11 H 60~63HRC	④	Relation pin	RSPIN	M SK4 S Black oxide (Fe ₃ O ₄)
②	Spring for misfeed pin	WL	 P.996	⑤	Microswitch	Z—15GD55—B	Made by OMRON
③	Screw plug	MSW	 P.687	⑥	Protective cover	AP—Z	Made by OMRON

		WL Spring constant 1N/mm (0.1kgf/mm)										⑤ Microswitch (Z-15GD55-B)
①		D4		D5		D6		D8		D10		
ϕD_1		6		6		8		10		10		
Type	ℓ	d	max.F	d	max.F	d	max.F	d	max.F	d	max.F	
② WL	25	0.65	10	0.65	10	0.75	10	0.9	10	0.9	10	• Operation force OF 540g • Return force RF: Min.114g • Movement before operation PT: Max. 1.8mm • Movement after operation OT: Min. 1.6mm • Movement differential (hysteresis) MD: Max. 0.06mm • Operating position OP: 21.5±0.5mm • Service temperature range: -15 ~ 80°C
	30	0.7	12	0.7	12	0.8	12	0.9	12	0.9	12	
	35	0.7	14	0.7	14	0.8	14	0.9	14	0.9	14	
	40	0.7	16	0.7	16	0.8	16	0.9	16	0.9	16	
	45	0.75	18	0.75	18	0.85	18	1.0	18	1.0	18	
	50	0.75	20	0.75	20	0.85	20	1.0	20	1.0	20	
	55	0.75	22	0.75	22	0.85	22	1.0	22	1.0	22	
	60	0.8	24	0.8	24	0.9	24	1.0	24	1.0	24	
	65	0.8	26	0.8	26	0.9	26	1.1	26	1.1	26	
③ MSW	70	0.85	28	0.85	28	1.0	28	1.1	28	1.1	28	
		M8 × P1.25	M10 × P1.5	M10 × P1.5	M12 × P1.5	M14 × P1.5						

$$\text{Spring load (N)} = \text{Spring constant (N/mm)} \times \text{deflection } F \text{ (mm)} \quad \{ \text{N} \} = \text{kgf} \times 9.80665$$

① Misfeed pin

B	Catalog No. Type	D	L	P	Base unit price 0.01mm increments 1~4 pieces	Volume discount unit price 5~9	10~19	20~50
10	SMAS	4	50 60 70 80		1.00~3.97			
		5	50 60 70 80 90 100		2.00~4.97			
		6	50 60 70 80 90 100		2.00~5.97			
15		8	50 60 70 80 90 100		3.00~7.97			
	SMAL	4	60 70 80		1.00~3.97			
		5	60 70 80 90 100		2.00~4.97			
		6	60 70 80 90 100		2.00~5.97			
		8	60 70 80 90 100		3.00~7.97			
21	SMAX	10	60 70 80 90 100 110		3.00~9.97			
		4	60 70 80		1.20~3.97			
		5	60 70 80 90 100		2.00~4.97			
		6	60 70 80 90 100		2.00~5.97			
27		8	70 80 90 100		3.00~7.97			
32		10	70 80 90 100 110		3.00~9.97			



Catalog No. — L — P
SMAS 6 — 80 — P3.00



Days to Ship **Quotation**



Alterations



Catalog No. — L (LC) — P (PC) — (BC·HC·NTC·PKC)
SMAS 8 — LC79 — PC2.50

Alteration	Code	Spec.	1Code
	PC	Tip diameter change $PC \geq \frac{P_{min}}{2} \geq 0.50$ 0.01mm increments	Depending on the selected PC dimension, B dimension may be shortened. P Bmax. 0.50~0.99 10 1.00~1.99 20 2.00~3.99 35 4.00~5.99 45 6.00~ 60
	BC	Tip length change $Y+2 \leq BC \leq B_{max}$ $BC \leq L (LC) - 30$ 0.1mm increments	
	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.	

Alteration	Code	Spec.	1Code
	HC	Head diameter change $D \leq HC < D+2$ 0.1mm increments	
	NTC	Elimination of tip taper	
	PKC	Tip diameter tolerance change $P + 0.01 \rightarrow +0.005$ 0 0	

■ Sensor units (②③④⑤⑥)

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



Catalog No. — ② Type-ℓ
MFD 6 — WL 60



Days to Ship **Quotation**

■ Component parts (Individual parts)

Part No.	Name	Catalog No.	Base unit price 1~4 pieces	Volume discount unit price 5~9	10~19	20~50
④	Relation pin	RSPIN				
⑤	Microswitch	Z-15GD55-B				
⑥	Protective cover	AP-Z				

Refer to the corresponding pages for details of the following components.

Part No.	Name	Catalog No.	Page
②	Spring for misfeed pin	WL	P.996
③	Screw plug	MSW	P.687



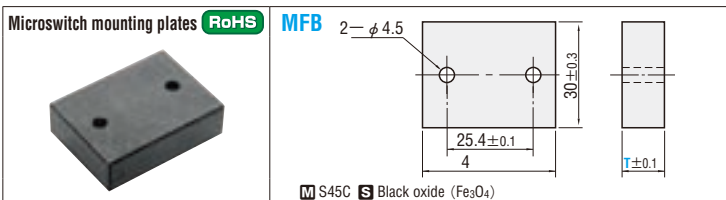
Order

Catalog No.
Z-15GD55-B



Days to Ship

Quotation



■ Standard for selecting thickness (T) of microswitch mounting plate

- The plate thickness must be decided assuming the use of a protective cover.

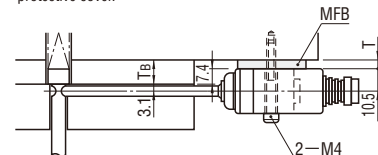


Plate thickness (T) = Backing plate thickness (Tg) — 7.4

Backing plate thickness (Tg)	Mounting plate thickness (T)
10	2.6
13	5.6
16	8.6
20	12.6

- MFB8.2, 11.2, 14.2 and 18.2 are specifications available for side hole types (P.533).

Catalog No. Type	T	Base unit price 1~4 pieces	Volume discount unit price 5~9	10~19	20~50
MFB	2.6				
	5.6				
	8.2				
	8.6				
	11.2				
	12.6				
	14.2				
	18.2				



Order

Catalog No.
MFB 11.2

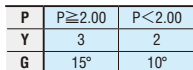


Days to Ship

Quotation

—HOLE FEED TYPE—

RoHS



Part No.	Name	Catalog No.	M H	Part No.	Name	Catalog No.	M H
①	Misfeed pin	MFAS MFAL MFAx	M Equivalent to SKD11 H 60~63HRC	⑤	Spring for relation pin	WF	 P.995
②	Spring for misfeed pin	WL	 P.996	⑥	Plug for relation pin	NB	M S45C H 34~43HRC
③	Screw plug	MSW	 P.687	⑦	Microswitch	Z-15GD55-B	Made by OMRON
④	Relation pin	RB-N	M S SK4 S Black oxide	⑧	Protective cover	AP-Z	Made by OMRON

		WL Spring constant 1N/mm {0.1kgf/mm}								WF Spring constant 0.5N/mm {0.05kgf/mm}				⑦ Microswitch (Z-15GD55-B)
①		D5		D6		D8		D10		Type	ℓ ₁	d	max.F	
Type ℓ	d-max	d	max.F	d	max.F	d	max.F	d	max.F					
② WL	25	0.65	10	0.75	10	0.9	10	0.9	10	⑤ WF	10*	0.35	4.5	• Operation force OF: 540g • Return force RF: Min.114g • Movement before operation PT: 1.8mm • Movement after operation OT: Min. 1.6mm • Movement differential (hysteresis) MD: Max. 0.06mm • Operating position OP: 21.5±0.5mm • Service temperature range: —15～80°C
	30	0.7	12	0.8	12	0.9	12	0.9	12		15*	0.4	6.7	
	35	0.7	14	0.8	14	0.9	14	0.9	14		20*	0.4	9	
	40	0.7	16	0.8	16	0.9	16	0.9	16		25*	0.45	11.2	
	45	0.75	18	0.85	18	1.0	18	1.0	18		30*	0.45	13.5	
	50	0.75	20	0.85	20	1.0	20	1.0	20		35	0.5	15.7	
	55	0.75	22	0.85	22	1.0	22	1.0	22		40	0.5	18	
	60	0.8	24	0.9	24	1.0	24	1.0	24		45	0.5	20	
	65	0.8	26	0.9	26	1.1	26	1.1	26		50	0.5	22.5	
	70	0.85	28	1.0	28	1.1	28	1.1	28		50	0.5	27	
φ D ₁		6		8		10		10						
③ MSW		M10×P1.5		M10×P1.5		M12×P1.5		M14×P1.5						

533

① Misfeed pin

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



Order

Catalog No. — L — P
MFAL 10 — 80 — P6.00



Days to Ship

Quotation



Alterations



Catalog No. — L (LC) — P (PC) — (BC·HC·NTC·PKC)
MFAL 10 — LC79 — P6.00

Alteration	Code	Spec.	1Code
	PC	Tip diameter change PC ≥ 0.50 (D=5) PC ≥ $\frac{P_{min}}{2}$ (D=6~10) 0.01mm increments	Quotation
	BC	Tip length change Y+2 ≤ BC ≤ Bmax. BC ≤ L (LC) - 30 0.1mm increments	Quotation
	LC	L dimension change (B) + 30 ≤ LC < L 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 $P + \begin{smallmatrix} 0.01 \\ 0 \end{smallmatrix} \rightarrow \begin{smallmatrix} 0.005 \\ 0 \end{smallmatrix}$	Quotation

■ Sensor units (②③④⑤⑥⑦⑧)

Catalog No.		②		⑤		Base unit price	Volume discount unit price			
Type	D	Type	ℓ	Type	ℓ ₁	1~4 sets	5~9	10~19	20~50	
MF	5	WL	25 30 35 40	WF	10 15 20 25					
	6		45 50 55 60		30 35 40 45					
	8		65 70		50 60					
	10									
Quotation										



Order

Catalog No. — ② Type · ℓ — ⑤ Type · ℓ₁
MF 10 — WL 30 — WF 30



Days to Ship

Quotation

■ Component parts (Individual parts)

Part No.	Name	Catalog No.	Base unit price	Volume discount unit price
			1~4 pieces	5~9 10~19 20~50
④	Relation pin	RB—N		
⑥	Plug for relation pin	NB		
⑦	Microswitch	Z—15GD55—B		
⑧	Protective cover	AP—Z		

Refer to the corresponding pages for details of the following components.

Part No.	Name	Catalog No.	Page
②	Spring for misfeed pin	WL	P.996
③	Screw plug	MSW	P.687
⑤	Spring for relation pin	WF	P.995



Order

Catalog No.

RB—N

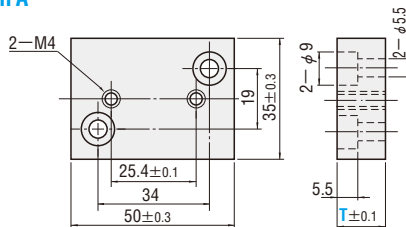


Days to Ship

Quotation

Microswitch mounting plates RoHS

MFA



M S45C S Black oxide (Fe₃O₄)

Catalog No.	Base unit price	Volume discount unit price
Type	T	1~4 pieces 5~9 10~19 20~50
MF	8.2	
	11.2	
	12.1	
	14.2	
	18.2	



Order

Catalog No.

MFA 8.2



Days to Ship

Quotation

■ Standard for selecting thickness (T) of the microswitch mounting plate

- The plate thickness must be decided assuming the use of a protective cover.

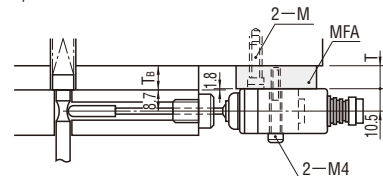
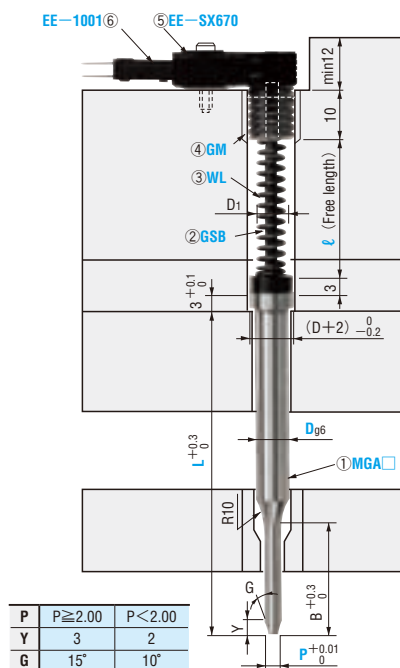


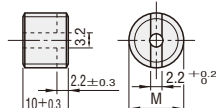
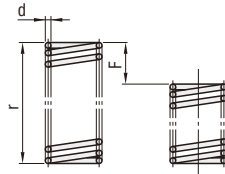
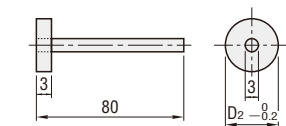
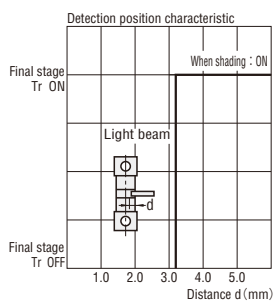
Plate thickness (T) = Backing plate thickness (T_B) - 1.8

Backing plate thickness (T _B)	Mounting plate thickness (T)
10	8.2
13	11.2
16	14.2
20	18.2

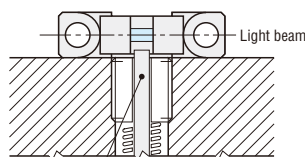
PHOTOELECTRIC MISFEED SENSOR UNITS



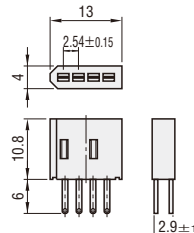
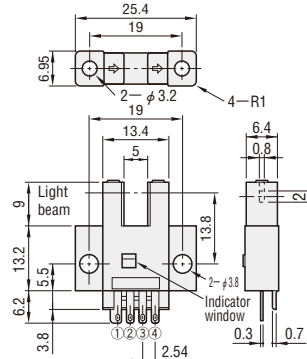
P	$P \geq 2.00$	$P < 2.00$
Y	3	2
G	15°	10°



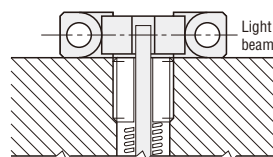
[Normal operation] The sensor receives light from the light emitting unit and remains OFF.



②Switch bar GSB



[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.	M H	Part No.	Name	Catalog No.	M H
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.996	⑥	Connector	EE—1001	Made by OMRON

③ WL Spring constant 1N/mm {0.1kgf/mm}																	④		②					
ℓ dmaxF	WL25		WL30		WL35		WL40		WL45		WL50		WL55		WL60		WL65		WL70		D ₁	M×P		φ D ₂
D	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	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	1.5	7
6																						10		8
8																						12		10
10																						14		12

$$\text{Spring load (N)} = \text{Spring constant (N/mm)} \times \text{deflection } F \text{ (mm)} \quad \{N\} = \text{kgf} \times 9.80665$$

① Misfeed pin

B	Catalog No.		L								P	Base unit price	Volume discount unit price			
	Type	D									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						
		6	50	60	70	80	90	100		2.00~5.97						
15		8	50	60	70	80	90	100		3.00~7.97						
15	MGAL	5		60	70	80	90	100		2.00~4.97						
		6		60	70	80	90	100		2.00~5.97						
21		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. — L — P
MGAS 6 — 70 — P4.97



Days to Ship

Quotation



Alterations



Catalog No. — L(C) — P(C) — (BC·HC·NTC·PKC)
MGAS 6 — LC65.0 — P4.97

Alteration	Code	Spec.	1Code
	PC	Tip diameter change $PC \leq \frac{P_{min}}{2}$ 0.01mm increments	Quotation
	BC	Tip length change $Y+2 \leq BC \leq B_{max}$ $BC \leq L(C) - 30$ 0.1mm increments	Quotation
	LC	L dimension change (B) + 30 ≤ LC < L 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 $D \leq HC < D+2$ 0.1mm increments	Quotation
	NTC	Elimination of tip taper	Quotation
	PKC	Tip diameter tolerance change $P + 0.01 \rightarrow +0.005$ 0	Quotation

■ Sensor units (②③④⑤⑥)

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



Order

Catalog No. — ③Type - ℓ
MFG 6 — WL 50



Days to Ship

Quotation

Photoelectric misfeed sensor unit MFG

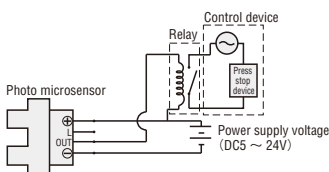


● How to use

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 OUT 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 ①	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		Quotation		
		D 6		12				
		D 8		14				
		D10						
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.996.

BRACKETS FOR SENSORS

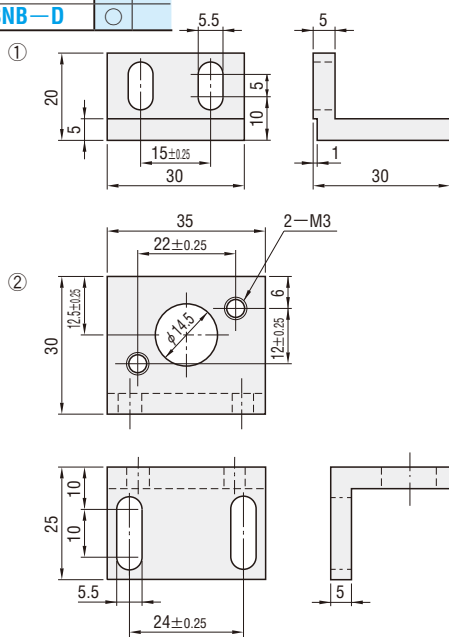
RoHS



RoHS

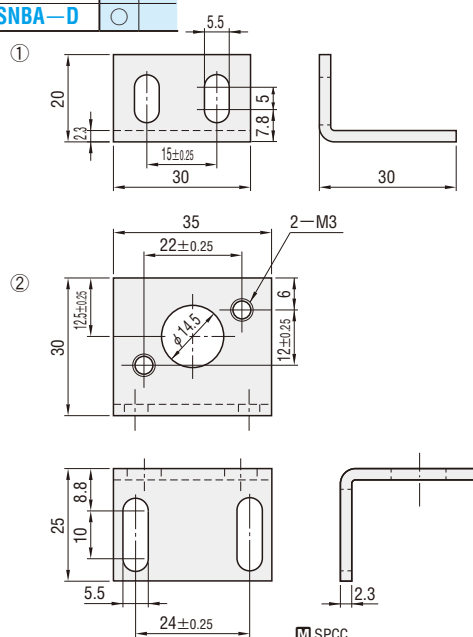


Catalog No.	①	②
SNB	○	○
SNB—D	○	○



M SS400
 A 4 pcs. of CB5—20
 For SNB—D, 2 pcs. of CB5—20 are attached.

Catalog No.	①	②
SNBA	○	○
SNBA—D	○	○



M SPCC
 S Bright chrome
 A 4 pcs. of CB5—20
 For SNBA—D, 2 pcs. of CB5—20 are attached.



Order

Catalog No.

SNB



Example



Days to Ship

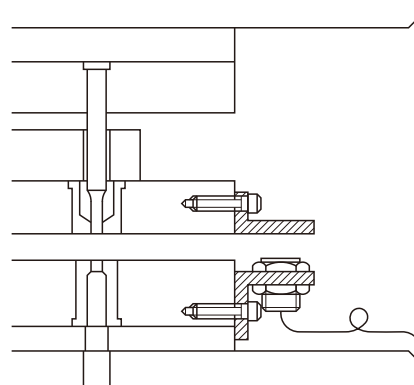
Quotation



Price

Catalog No.	Base unit price	Volume discount unit price
	1~4 sets	5~9 10~19 20~50
SNB		
SNB—D		
SNBA		
SNBA—D		

Quotation



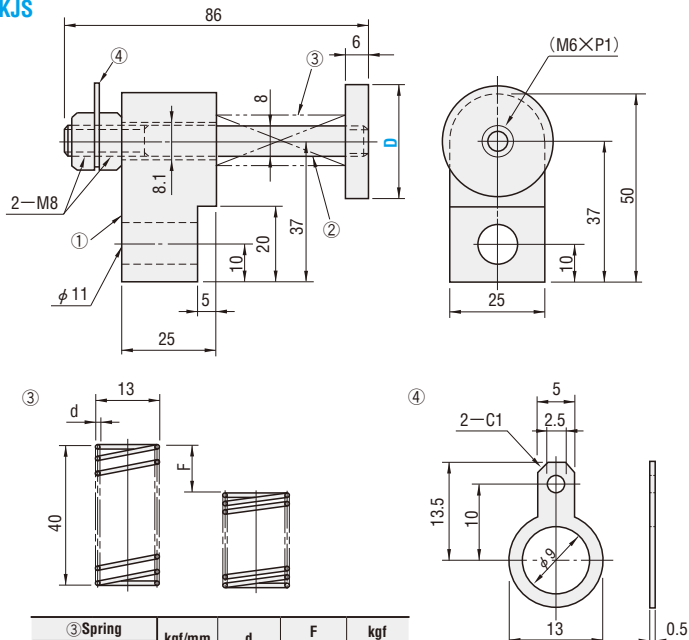
Use these brackets for mounting sensors RS833H (made by RIKEN KEIKI Co.,LTD.) or PH114 (made by KEYENCE Co.).

MISFEED SENSOR UNITS

— CONTACT TYPE —

RoHS

OKJS



- ① M PF (phenol resin)
- ② M S45C
- ③ S Black oxide (Fe_3O_4)
- ④ M SWP—A
- ⑤ M SPPC
- ⑥ M8 nut

⚠ Bolts (M10) for mounting the unit are not included.

③ Spring		kgf/mm	d	F max.	kgf max.
Type	D—L				
WF	13—40	0.05	1.0	18	0.9
WL	13—40	0.1	1.1	16	1.6
WM	13—40	0.3	1.4	14	4.2

Spring load (kgf) = Spring constant (kgf/mm) × Deflection F (mm)
(N) = kgf × 9.80665

Catalog No.		③ Spring	Base unit price	Volume discount unit price		
Type	D		1~4 pieces	5~9	10~19	20~50
OKJS	16	WF				
	20	WL				
	30	WM				

Quotation



Order

Catalog No.

OKJS 16

③ Spring

WL

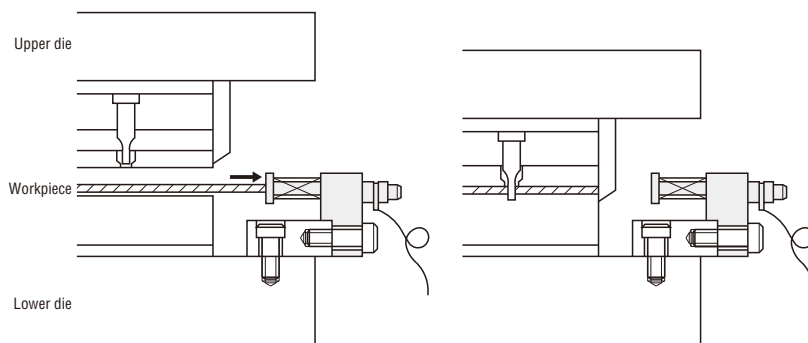


Days to Ship

Quotation



Example



● Current flows through the workpiece, causing the sensor to turn ON when it contacts the workpiece.

● When the workpiece is cut, the sensor turns OFF.