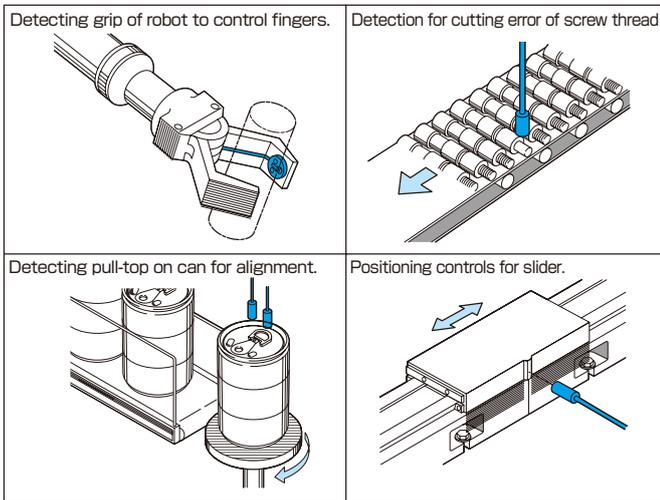


Mini power relay type

- Disconnection detection featured
Many outputs featured.
- Extremely small size
(H-20) 10 other models sensor head can be used embedded in the metal minimum $\phi 2.8$. (Shield type)
- High precision
high accuracy $2\mu\text{m}$ (H-30) Low temperature drift.



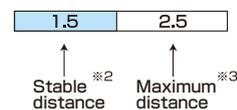
CONTROLLER SPECIFICATIONS

SPEC	SENSOR	MS-110B
FUNCTION		Sensor head with disconnection alarm
POWER SUPPLY		DC12-24V ripple 10% or less
CURRENT CONSUMPTION		20mA or less
PROTECTIONS		Power protection & Surge killer
OUTPUT	CIRCUIT	NPN open-collector×3
	ACTION	Detection output: NC,NO Sensor head with disconnection function:NO
	CAPACITY	40VDC 100mA, Max.
RESPONSE		1 ms or less
SENSITIVITY ADJ.		15 turn pot.
TARGET		Ferrous materials : Fe, Al, Stainless steel, Cu etc.
MATERIALS		Cover : ABS resin Terminal : Phenol resin
DETECTION		LED(red) turns on
OPERATING TEMPERATURE		-10~60°C
OPERATING HUMIDITY		85%RH or less, non-condensing
SOCKET		Socket (PYF08A, HJ2-SFD, SM2S-05B, or equivalent) shall be purchased separately.

SENSOR HEAD SPECIFICATIONS

ITEM MODEL	TYPE	OUTSIDE DIAMETER OF FACE (MM)	DISTANCE (MM) ※1	Hysteresis DISTANCE (μM)※4	REPEATABILITY (μM)※5	AVAILABILITY OF EMBEDDING	WORKING TEMPERATURE (°C)
CYLINDRICAL TYPE	H-20	$\phi 2.8$	0.6 1.8	20	3	○	-10 ~60
	H-30	$\phi 3.6$	1.2 2.2	50	2	○	
	H-50	$\phi 5.4$	1.5 2.5	50	2	○	
	H-80	$\phi 8.0$	2.5 5	40	5	○	
SCREW TYPE	H-101	M10	2.5 5	40	5	○	
	H-141	M14	5 8	50	5	○	
	H-162	M16	6 10	50	6	×	
	H-182	M18	7 16	80	10	×	
	H-222	$\phi 22$	8 18	100	10	×	
	H-302	$\phi 30$	12 25	120	10	×	
THIN TYPE	H-225	4.5t	5 8	50	5	○	

※1 How to read "DISTANCE"
Example : In case of H-50



Distance coefficient

SS400	1.0
SUS430	approx. 0.9
SUS304	approx. 0.8
Brass	approx. 0.6
Aluminium	approx. 0.4
Copper	approx. 0.4

※2 Stable distance: satisfying accurate detection range

※3 Maximum distance : longest range that sensor can detect for the ideal target(SS400, $\phi 90, t=5$) without accuracy assurance.

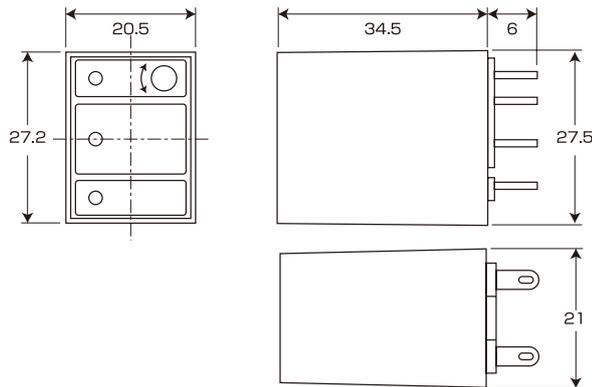
※4 Hysteresis distance : the difference distance between the return operation and detection operation.

※5 Repeatability is the range of actual positions the sensor takes while being repeatedly commanded to the same location under identical conditions.

※Specification applies to using the standard cable (3m). Extension cable make the distance shorter.

CONTROLLER DIMENSIONS

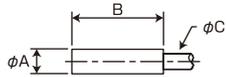
● Controller



SENSOR-HEAD DIMENSIONS

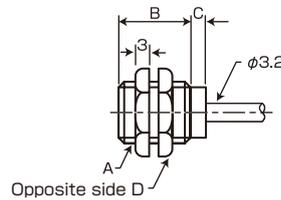
● Sensor Head

H-20~80



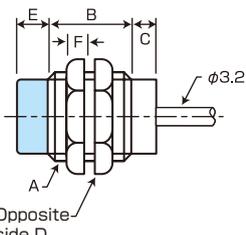
MARK	A	B	C
H-20	2.8	15	1.9
H-30	3.6	15	2.6
H-50	5.4	15	3.2
H-80	8	15	3.2

H-101,141



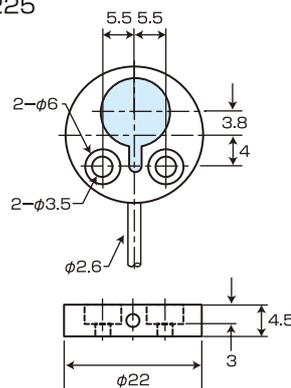
MARK	A	B	C	D
H-101	M10,P=1.0	12	3	14
H-141	M14,P=1.0	15	5	19

H-162,182

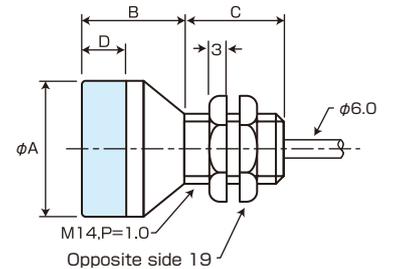


MARK	A	B	C	D	E	F
H-162	M16,P=1.0	14	5	21	6	3
H-182	M18,P=1.0	17	5	24	8	4

H-225



H-222,302

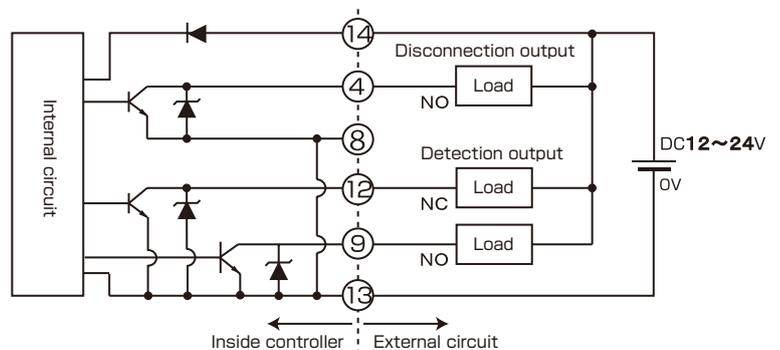
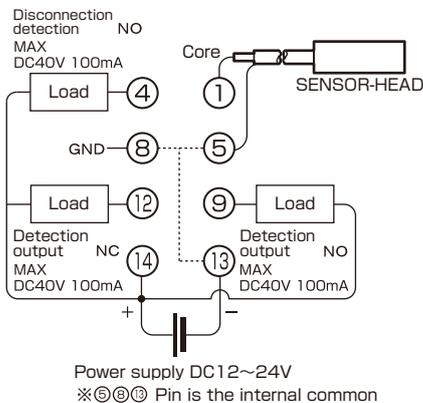


MARK	A	B	C	D
H-222	22	18	14	8
H-302	30	24	14	10

3m coaxial cable (standard cable)

WIRING CONNECTIONS OUTPUT

MS-110B



The meaning of (A), (B) are channel (a) and channel (B).

(BOTTOM VIEW)

