

FLAT METAL DETECTOR



FEATURES

- Flat metal detector adopted advanced medium frequency fixed amplitude magnetic field technology, integrated digital control circuit, miniaturized size of metal detector and stronger the functions, good stability with good anti-disturbance ability, higher sensitivity, performances is much better than imported similar products.
- Flat metal detector can work with belt conveyor together, it can detect all kinds of metal impurities mixed in materials including iron, bronze, aluminium, stainless steel etc.
- Flat metal detector is easy to install and don't need debug the sensor. Novel design,
- Advanced micro computer control to finish detection online, display metal alarm.
- Self Diagnosis for stoppage, stoppage will be alarmed and display, detection signals have automatically adjustment function.
- Sensitivity of metal detector can be continued adjusted and it has auto reset and manual reset functions.
- Eliminate function of false alarm of conveyor start

APPLICATION

- Used for online detect whether materials mixed with metal impurities or not, so it can ensure that product's quality and protect equipment with people safety
- Used in wooden, rubber, plastic, food, pharmaceutical, tobacco and airport security inspection industries.

TECHNICAL DATASHEET

- Power Supply: AC220V \pm 15%; 50 \pm 1Hz; 1P
- Consumed Power: \leq 25VA
- Environment Temperature: $-10^{\circ}\text{C} \sim 60^{\circ}\text{C}$
- Environment Humidity: 20 \sim 85%RH (40 $^{\circ}\text{C}$)

- Signals Output: Relay 2 normally-closed contact, 2 normally-open contact, rated capacity of contact is $V_{max}=250V$, $I_{max}=3A$
- Conveyor Belt Speed: 3~30m/min. (The best speed range is 15~30m/min. to avoid sensitivity decrease)

WORKING FREQUENCY

If there are other metal detector installed in your factory, user should declare it when order machine. Our engineer will choose a suitable working frequency for you, under this circumstance, it can decrease the environment disturbance and product effect at the most.

SENSITIVITY

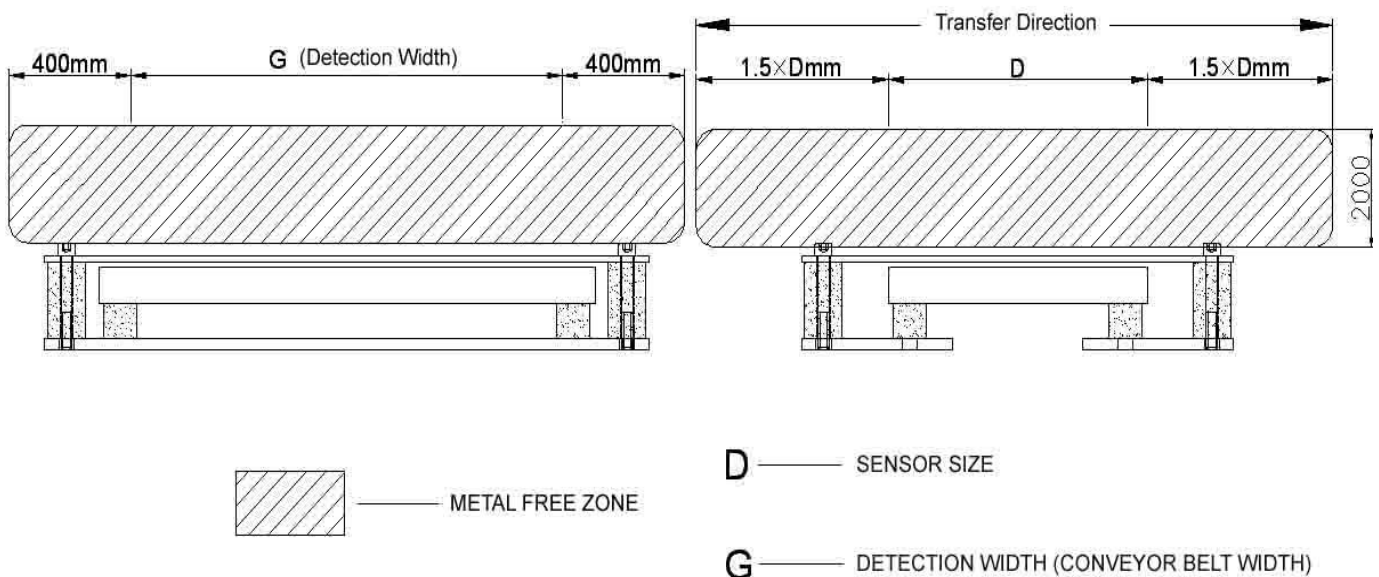
Sensitivity of flat metal detector is detected minimum size of metal ball, which based on specific height from sensor surface (the best sensitive area is on the surface of sensor). Below form show you sensitivity results were detected via standard metal ball under normal circumstance.

Height from sensor surface(H)	Sensitivity(Diameter of Fe-ball)	Sensitivity(Diameter of SUS-ball)
10-20mm	2mm	3mm
21-30mm	3mm	5mm
31-40mm	4mm	6mm
41-50mm	5mm	7mm
51-80mm	7mm	9mm

Remark: All the above sensitivity results were detected on conveyor belt without any metal pollution.

SENSOR SIZE AND METAL FREE ZONE

If metal detector isolated with strong mechanical vibration and obey the rules of METAL FREE ZONE (Never Moving Metals), installation of flat metal detector will become very convenient. The size of METAL FREE ZONE (Never Moving Metals) has a function relationship between sensor size (D) and detection width (G) [See below picture]. Moving metal (Metal rollers etc.) must be far away to metal detector sensor (Minimum distance must be 500mm far away to the side of sensor). The diameter of metal carrier roller and its installation distance design should be reasonable, if not, it will affect flat metal detector sensitivity and reliability. If user has higher sensitivity requirement or conveyor is compacted design, we advise add shielding steel plate below sensor. Regarding to how to design shielding steel plate, please consult with our engineer.

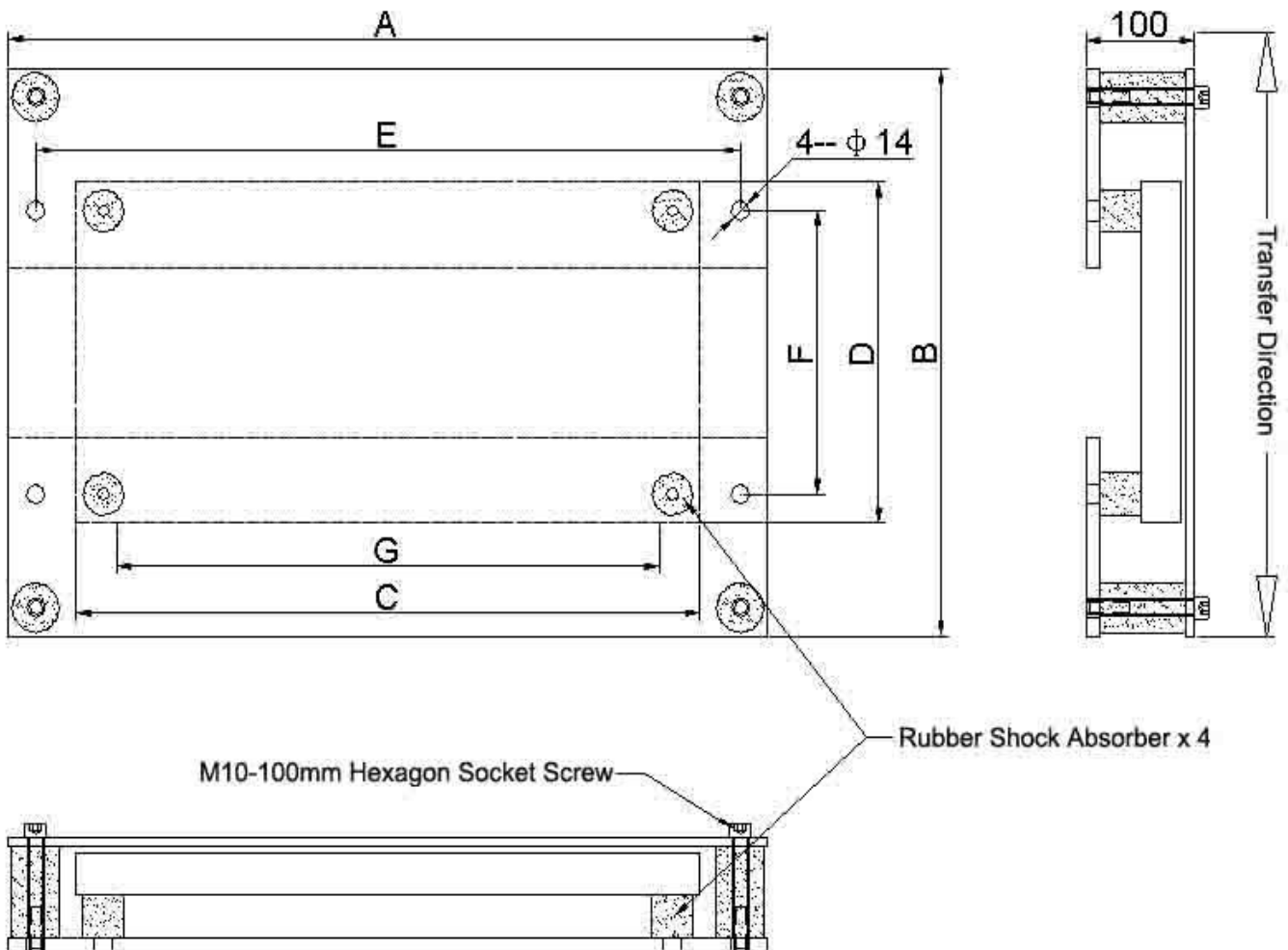


SPECIFICATION

Model No.	Detection Width (Belt Width) G	Frame Size		Sensor Size		Installation Size	
		A	B	C	D	E	F
F5-100	100mm	260mm	400mm	160mm	240mm	220mm	200mm
F5-200	200mm	360mm		260mm		320mm	
F5-300	300mm	460mm		360mm		420mm	
F5-400	400mm	560mm		460mm		520mm	
F5-500	500mm	660mm		560mm		620mm	
F5-600	600mm	760mm	490mm	660mm	330mm	720mm	290mm
F5-700	700mm	860mm		760mm		820mm	
F5-800	800mm	960mm		860mm		920mm	
F5-900	900mm	1060mm		960mm		1020mm	
F5-1000	1000mm	1160mm		1060mm		1120mm	
F5-1100	1100mm	1260mm		1160mm		1220mm	
F5-1200	1200mm	1360mm		1260mm		1320mm	

Remark: If you need other size of flat metal detector, please consult with us.

DRAWING OF SENSOR AND INSTALLATION SIZE



Sensor has four rubber shock absorber, installation plate has four install holes, user can refer operation manual to install it.

CONTROL UNIT

Below picture show you control unit size and we will offer 4 metres long cables.

