METAL SHARK® FL

Flat sensor for conveyor installation below or above conveyed material

Typically, the FL types are used in fleece, textile and foil production and provide highest performance in detecting magnetic and non-magnetic metals.

Specifications

Type	METAL SHARK® FL							
Installation	Conveyor installation below or above conveyed material typical horizontal, but each angle is applicable							
Sensing Width	200 – 4000 mm (4 in – 13.2 ft)							
Best Sensitivity (depending on product effects and proper installation)								
	Sensing Width 200 – 1000 mm							
	Height Above Sensor mm 10.0	20.0	30.0	40.0	50.0	60.0	70.0	80.0
	Ferrous Ball Ø mm 0.8	1.0	1.8	2.2	2.5	3.8	5.0	6.0
	Sensing Width 1000 – 4000 mm							
	Height above sensor mm 10.0	20.0	30.0	40.0	50.0	60.0	70.0	80.0
	Ferrous ball Ø mm 1.0	1.5	2.2	3.0	3.4	5.5	7.0	8.0
Metal Free Zone	fix metal = 250 mm							
Before/After Detector	moving/vibrating metal = 500 mm							
Degree of Protection	controller IP65 (Nema 4 x, 12), Sensor IP67 (Nema 6P, 12)							
Sensor Head	stainless steel housing							
Conveyor Speed	25 – 4000 mm/sek. (1"–13,2 feet/sec.)							
Controller	METAL SHARK® for wall mounting							

CASSEL

METAL SHARK® Controller
Digital Control Box for All METAL SHARK® Types

No Maintenance

■ The *automatic balance and calibration control* ensures many years of reliable performance. The requirement for costly routine manufacturer actions is eliminated. Once set, the METAL SHARK® does not require any manufacturer adjustment at all. Therefore implementing the METAL SHARK® will help to save your service budget.

■ By using *SMD technology* all circuits have been miniaturized and housed on just one multilayer main board. In the unlikely case of a malfunction, most factory electricians should be able to replace the board.

Intuitive Operation

■ The display shows solely necessary information, which is really required. The software is self-explanatory. *Reduction to the essentials* results in easy, clear and transparent operation.

■ *Teaching menu* – product features are captured and taught automatically by pushing one single button.

■ *Product library* – features of 120 different products can easily be stored and recalled.

■ *Automatic self-control* – if a malfunction occurs it will be displayed on a separate output contact.

■ *Password protection* prevents any unauthorized operation of the metal detector.

Outstanding Sensitivity and Stability

■ The METAL SHARK® provides outstanding sensitivity, accuracy, stability and precise compensation of product effects.

■ *Auto calibration* – enables easy and fast teaching of product features, which allows the compensation of product effects. Due to the selectable pre-set features DRY, WET, SALTY and MEAT it is exceptionally effortless to set the metal detector for new products.

■ *Phase Tracking* – product effects are compensated and readjusted in an intelligent way.

■ *Precise metal detection at highest level* – digital noise filters eliminate any undesired signals.

■ *Multi-channel technology* for the optimum detection of all kinds of metal: ferrous, non-ferrous (like aluminum or copper) and stainless steel.

■ *Highest endurance* – the extra sturdy construction of the sensor is designed to operate in extreme and harsh applications, in which other brands fail. The sensor head is encapsulated entirely in a solid epoxy block, sealing and protecting the aperture long-term. This qualifies the METAL SHARK® perfectly even for wet and most challenging environments.

Specifications

Model	METAL SHARK® BD
Housing	stainless steel, rust-proof
Control Electronics	digital signal processor, digital noise filter, digital balance control, digital frequency control with synthesizer, digital temperature shift control continuous self monitoring, maintenance-free, no need for calibration, self calibration of all circuits, PowerDrive circuit
Output Signal	metal alarm with potential-free changeover contact, metal alarm for 24 V SPS activation, metal alarm for activation of 24 V pusher magnetic valve, operating state/disturbance with potential-free changeover contact (230 V/5 A), performance validation upon request, visual and acoustic alarm
Input Signal	(all 24 V DC) reject trigger, e.g. photo sensor, monitoring of compressed air, reject affirmation, metal alarm confirmation, keyboard interlock, conveyor belt control, change of product, teaching mode
Measuring Method	inductive, multi channel operation, balanced receiver coil
Metal Detection	ferrous, non-ferrous (e.g. aluminum or copper) and stainless steel
Product Library	120 storage spaces
Product Compensation	performed automatically, with teaching mode
Protection Type	IP65, with option LPW = IP66, with option HPW = IP67
Ambience	temperature -10 to + 50 °C, humidity 30 to 85%
Product Temperature	-10 to + 80 °C
Power Supply	one phase 85 ~ 264 V AC, 50/60 Hz, 100 Watt
Interface	RS232, RS485, provides documentation according to HACCP and IFS standards

Metal Detection, X-Ray and Weighing-Systems

METAL SHARK® GF Gravity Feed

METAL SHARK® Checkweigher

METAL SHARK® IN MEAT

METAL SHARK® PH Pharma

METAL SHARK® IN Liquid

METAL SHARK® X-Ray

As a manufacturer Cassel is committed to highest standards of quality. For more than ten years our goal has been to ensure the quality of your products. Our reputation has been earned by protecting yours. We supply customers in different industries worldwide such as Foods, Plastics, Pharmaceuticals, Textile, Timber and Mining.

Our headquarters and state of the art manufacturing facility are located near Hannover in the heart of Germany. Each year we manufacture and deliver over 1000 metal detection systems. Approximately 80% of the production is heading for export markets. To ensure you get the very best of service and support wherever on the globe you are using our metal detectors, we have a worldwide network of partner agents.