



METAL SHARK[®] BIG

Metal detector for machine protection



Features

- The BIG sensor head has an enclosure made of aluminum
- Rugged and weatherproof with short metal-free zone
- Optimal protection for wood choppers, shredders, chippers and OSB flakers
- Highest search performance and noise immunity 4-quadrant technology, Power Drive (booster) option
- Maintenance-free Automatic calibration and automatic balance control
- Easy installation and intuitive operation
- Remote control and remote maintenance (SHARKNET[®] option) with documentation of all settings, metal detection alerts, etc.

Advantages

- Standard tunnel width up to 2 m x 1.6 m (other sizes on request)
- Simple setup: TeachAssistant
- Simple operation: intuitive and multilingual
- Password protection including permission management
- Remote control and remote maintenance via the company network using SHARKNET[®] software (optional)
- Extended temperature range down to -40°C / -40°F with specially adapted sensor and specially equipped control unit (optional)





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Function

The METAL SHARK® BIG with its rectangular tunnel is specifically designed for large items such as logs, bales and recycled wood.

Thanks to its robust design, it is particularly suitable for industrial use on rough terrain commonly found in places such as timber yards. It is typically installed with a flat-belt trough conveyor or with a specially prepared vibrating feeder.

Using 3D detection technology, it detects magnetic and non-magnetic metal contaminants (iron, stainless steel, aluminium etc.) accurately and reliably even in challenging conditions.

Included

- BIG detection unit (sensor)
- Control unit electronic control cabinet with current METAL SHARK® electronics

Accessories & Extras

- Separate mounting of the control unit (wall mounting, up to 30 m connection cable to the sensor)
- Xenon flashing light
- Acoustic signaling devices
- SHARKNET® for remote control and remote maintenance and data recording
- Power Drive signal amplification for further improved search performance and for particularly challenging operating condition
- Extended temperature range to below -40°C / -40°F

Application

- Protection of processing machines from metal objects
- Monitoring of large items – particularly well-suited for monitoring tree trunks
- Monitoring of bulk materials such as wood chips
- For use preferably with trough conveyor belts

Industries

- Wood industry
- Recycling, reusable material processing
- Paper, cardboard
- Textiles, fabrics and fleece
- Plastics



CASSEL
INSPECTION



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Specifications

Electronics	Digital signal processor, digital frequency generation, digital balance control, automatic calibration, digital noise filters, integrated flexible control functions
Input	2 analog 0 ... 10 V DC (option: 4-20 mA) 8 freely configurable 24 V DC signals, e.g. for rotary encoders, product identification, pushbutton
Output	2 floating: "error" and "metal" 8 freely configurable 24 V DC signals, e.g. solenoid valve, visual/acoustic alarm
Inspection method	High-frequency magnetic field, multi-channel operation, balanced receiver coils
Metal detection	Ferrous, non-ferrous (e.g. tombac, brass, aluminium, lead etc.) and stainless steel
Product compensation	250 memory locations, TeachAssistant
Enclosure rating	IP 65
Environmental conditions	-30°C to +40°C / -22°F to +104°F UL version: -20°C to +40°C / -4°F to +104°F, Optional: -40°C / -40°F or +55°C / +131°F Rel. humidity 20% to 90%, non-condensing > 95% relative humidity (condensing) with control unit closed
Temperature of goods inspected	Up to 70°C / 158°F
Power supply	Single-phase 110-230 V AC +/- 5%, 20 W typical (60 W max.)
Interface	RS232, LAN (optional, for SHARKNET®), USB (optional)
Maintenance	Maintenance-free, self-calibrating sensors
Diagnostics	Integrated diagnostic software, automatic self-test

Sensitivities of METAL SHARK® BIG

Tunnel (mm)		Sensitivity FE (mm)	
Width	Height	Edges	Center
600	600	M3	M5
700	700	M4	M6
900	900	M4	M8
1,200	1,200	M4	M10
1,300	1,300	M5	M12
1,500	1,500	M6	M16
1,700	1,700	M8	M18
2,000	2,000	M10	M20

Disclaimer: Sensitivities largely depend on ambient conditions as well as on the properties and conditions of the goods to be inspected. The sensitivities listed above are provided for general indication only. Please note that these dimensions are not contractually guaranteed.





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Special version & optional extras

Material	Properties
SHARKNET®	The SHARKNET® software connects METAL SHARK® metal detectors to a central computer, providing central storage of all operating data as well as batch and alert documentation and remote control and remote maintenance via a PC
Fast Power Drive (FPD)	Significantly improves metal detection capability and reliability in industrial environments that do not meet electromagnetic compatibility standards. Various IP protection classes available, ATEX Zone 22 version optionally available
Temperature extension (cold)	Temperature range extended to -40°C / -40°F Resin seals remain elastic at very low temperatures. Special insulation, heated enclosure and other features
Temperature extension (hot)	Temperature range extended to +55°C / +131°F Adapted enclosure, additional thermal insulation, heat exchanger and/or active cooling units
Flashing light, XENON	Very bright and eye-catching alarm light, 24 V DC, IP 65, RB 10-100 V, 2 W, suitable for mounting on stand or wall mounting
Alarm horn	Emits a very loud alarm sound, 24 V DC Suitable for mounting on stand or wall mounting
Flashing light + horn on stand	Acoustic and visual alarm on stand, stainless steel, with bright red Xenon flashing light and horn for conveyor mounting

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