

- Specially designed for the monitoring of wood, fibre boards and any wide but thin product
- AutoSens technology for automatic adjustment of the sensitivity to the mat height
- Maintenance-free with automatic balance and calibration control
- Durable aluminium design: particularly robust and easy to clean
- Highest sensitivity with 4-quadrant technology
- Autocalibration and TeachAssistant for intuitive control and easy installation



- Maximum search performance and high reliability in the entire detection area due to 4-quadrant technology
- Simple setup with Teach Assistant
- Memory for up to 250 products
- Easy to use with intuitive and multilingual menus
- 4-level password system, automatic log out after time lapse
- Aperture widths from 1 m to 5 m
- Documentation of all events and metal messages
- Cyclical function monitoring with Performance Validation System (PVS)
- Optional: Data transfer to USB interface or connection to the company network via SHARKNET® software
- Particularly resistant to environmental influences such as high and low temperatures



METAL SHARK BIG pba – perfect for use in the wood industry.

#### Function:

The METAL SHARK® BIG pba with rectangular opening at a rather low opening height is especially designed for monitoring fibre mats, MDF, OSC or chip-board as well as other panel materials.

It detects magnetic and non-magnetic metal contaminants (iron, stainless steel, aluminium etc.) precisely and reliably even under difficult conditions.

The typical installation takes place around a conveyor belt with flat belt.

#### Scope of Delivery:

- Detection unit (sensor) BIG pba
- Controller METAL SHARK® (in stainless steel housing)

#### Accessories & Extras:

- Xenon flashlight and acoustic signal generators
- AutoSens for automatic adjustment of the sensitivity to the panel height
- SHARKNET® access for perfect documentation and device monitoring from a PC
- Controller unit can be mounted separately (e.g. wall mounting)
- ATEX version possible



METAL SHARK BIG pba with Super Power Drive for more precise metal detection, belt seam detection to reduce false alarms.

#### Application:

- Protection of tools and machines from metal parts such as nails or screws
- Monitoring of particularly large, but flat products e.g. paper, cardboard, transformer boards

#### Industries:

- Wood industry
- Plastics
- Recycling, reusable material processing
- Paper, cardboard
- etc.



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 encoders, product recognition, buttons
Output	2 floating: "error" and "metal" 8 freely configurable 24 V DC signals, e.g. for optic/acoustic alarm
Measuring method	High-frequency magnetic field, multi-channel mode, balanced receiver coils
Metal detection	Ferrous, non-ferrous (e.g. aluminium or copper) and stainless steel
Product compensation	Memory for up to 250 products, compensation performed automatically, with TeachAssistant
Enclosure rating	IP 54
Environmental conditions	Standard: -10°C to +40°C (+14°F to +104°F) , Optionally: up to +55° C (140°F), rel. humidity 20% to 90% non-condensing, >95% relative humidity (condensing) with closed switch cabinet
Temperature of goods inspected	Up to +55°C / +131°F
Power supply	One phase I 110-240 VAC, 50/60 Hz, typ. consumption 20 W (max. 60 W)
Interface	RS232, provides documentation according to HACCP- and IFS-standard, USB- or ethernet option
Maintenance	Maintenance-free, selfcalibrating sensors
Diagnostics	Integrated diagnostic software, automatic self-test



Special versions & optional extras:

SHARKNET®	The SHARKNET® software connects METAL SHARK® metal detectors with a central computer, providing centralized storage of all operating data plus batch and alarm documentation for HACCP and IFS compliance.
Super Power Drive (SPD)	Improves metal detection by -0.5 to -1 mm in industrial environments that do not meet electromagnetic compatibility standards, with different IP protection classes and ATEX Zone 22 possible.
Temperature extension cold	Temperature range extended to -40°C / -40°F, resin seals remain elastic at 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, replaceable filter fan, heat exchanger and/or active cooling units.
High temperature extension for goods inspected	Goods temperature up to +120°C / +248°F max., this option provides IP54 grade enclosure for the sensor
AutoSens	Signal transfer of belt speed and mat height from the system control for automatic adjustment of the detector sensitivity
ATEX	ATEX zone 22 version possible

**Sensitivities:**

Height	Aperture (mm)		Sensitivities FE (mm)	
	Width		at 40 mm height	Center
75	2,400			1,3
100	1,300		1,0	1,5
150	2,800		1,8	3,0
200	2,800		2,5	3,5
250	3,650		3,0	5,0
300	3,150		2,5	4,0
400	3,250		3,0	4,5
500	3,350		3,7	5,5

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

**Accessories:**



Flashlight XENON red  
Very bright conspicuous optical alarm, 24V DC, IP 65  
RB 10-100V 2W Xenon beacon  
suitable for tripod or wall mounting



Alarm horn  
Alarm transmitter with very loud acoustic signal, 24 V/DC  
suitable for tripod or wall mounting



Flashlight + horn on stand  
Acoustic and optical alarm on stand, stainless steel,  
with bright xenon flashlight red and horn for conveyor belt mounting



Belt seam detection  
Prevents false alarms triggered by the belt seam

**The CASSEL quality promise:**

As a premier manufacturer, CASSEL is committed to the highest quality standards. For more than twenty-five years, our goal has been to ensure the uncompromising quality of your products. We supply customers worldwide in various industries, including food, plastics, pharmaceuticals, textiles, lumber and mining.

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