



C

Color sensor

M

Metal sensor

N

NIR sensor

SORTING SYSTEMS

VARISORT+ WEEE

The high-end sorting system for
metal & electrical scrap recycling

High-end sorting of metal and electrical scrap

The VARISORT+ WEEE was specially developed for use in electrical/electronic scrap recycling. By combining various sensors, the innovative sorting system recovers valuable secondary raw materials while reliably sorting out unwanted materials. The VARISORT+ WEEE is based on a modular concept where, depending on the sorting requirement, all existing sensors can be combined within one machine.



Color sensor

Color and shape detection with incident light unit

- For simple color sorting requirements (copper-aluminum separation)
- Low maintenance requirements
- Low light and background impairments



Metal sensor

Inductive metal sensors for identification/detection of all types of metal

- Detection from 1 mm
- Easy to operate
- Simple sensitivity settings
- M – Detection of all metal types
- M+ – Identification of stainless steel



NIR sensor

In addition to the standard differentiations of all known polymer types, various special applications can be fulfilled with the Sesotec NIR Cam:

- For the recovery of engineering plastics
- For separation of off-colors and plastic types
- Differentiation of different material types (e.g. injection molding or foamed material)

Possible sensors composition



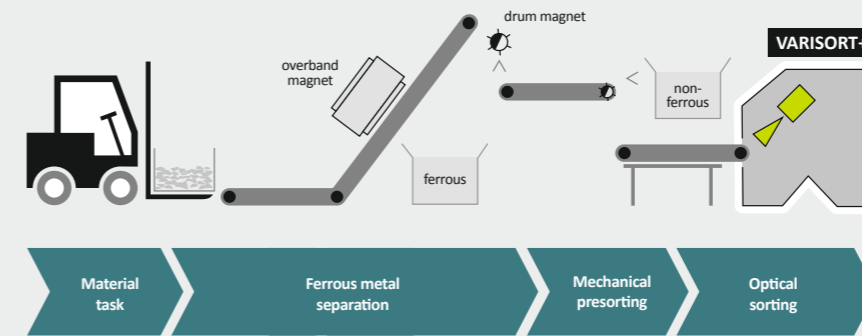
Application areas

Sensor combination/application	M	M+	C	CM(+)	CN	CM(+N)
Metal detection	+++	+++	+	+++	+	+++
Non-metal detection				+++	+	+++
Cable detection	+	+	++	+++	++	+++
Stainless steel detection		+++		(+++)		(+++)
Copper-aluminum distinction			++	+++	++	+++
Circuit board detection		+		++		++
Zorba factions upgrade			+	+++	+	+++
Processing of engineering plastics				+	++	+++

Inverse sorting technology

One of the special features of the VARISORT+ WEEE is inverse sorting. The combination of camera and metal sensors enables very high degrees of purity in the sorting of e-waste while optimizing energy and compressed air consumption.

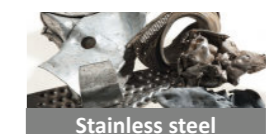
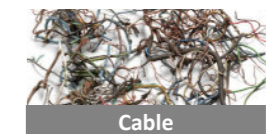
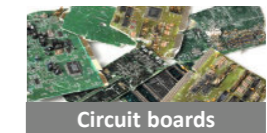
Simplified recycling process



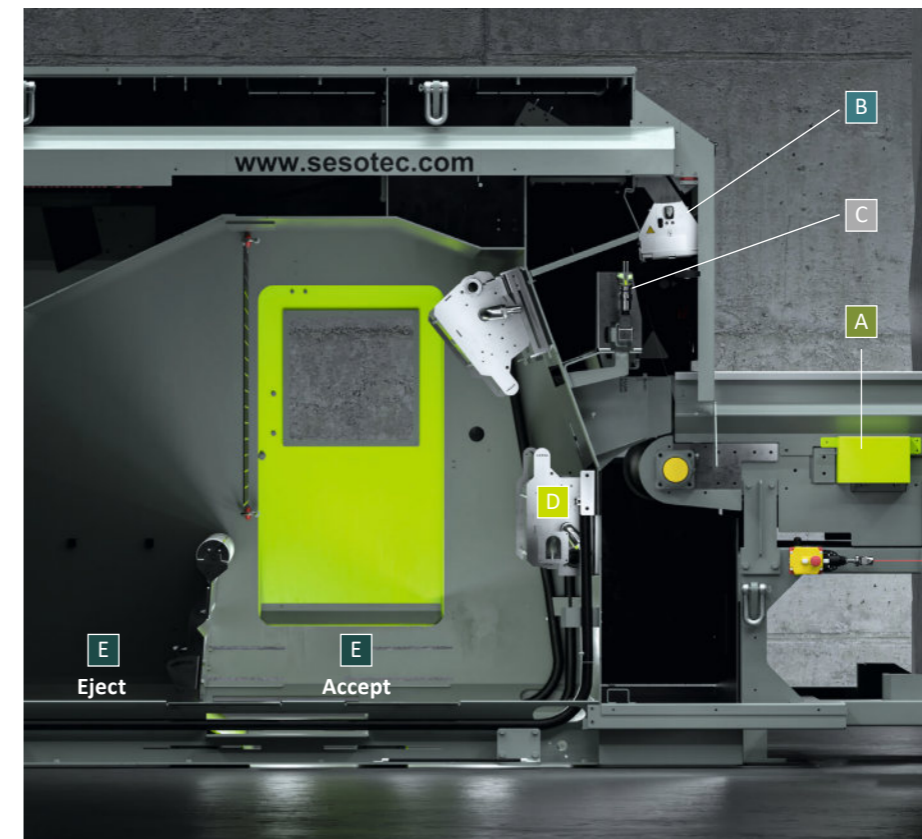
Simplified process layout for e-scrap applications

Clean sort separation

- Electric and electronic scrap
- Car shredder
- Cable
- Printed circuit boards
- Stainless steel
- Technical plastics
- and many other applications



Functional diagram



The system has the following components:

- A** Metal sensor: for the detection of smallest metal impurities
- B** Near-infrared sensor: for the detection of a wide range of materials and material combinations
- C** Color sensor: for the detection of objects and a wide variety of colors, as well as detection of black objects
- D** Blow-out system: with various nozzles for the separation of foreign bodies with precise timing and positioning
- E** Reject systems: the two-chute design enables sorting of two material fractions simultaneously



The VARISORT+ Family

In addition to the VARISORT+ WEEE, there is the VARISORT+ for plastics recycling and the VARISORT+ FLEX – the flexible sensor technology in plastics and light packaging recycling.

Free consultation

<https://www.sesotec.com/emea/en/contact-form>



VISUDESK – Visualization software

To improve product quality and the efficiency of sorting and recycling plants, process data is essential for operators. With the VISUDESK visualization software, this data can be easily and clearly displayed on all Sesotec equipment. displayed on all Sesotec equipment. Based on this data, they can derive targeted measures to increase efficiency and effectiveness on the one hand and minimize downtimes on the other.

The OPC UA-based machine communication model is available on both implemented both on the devices and on a server, thus enabling both stationary and mobile access to the application.

Service

Remote Access

For troubleshooting, our service technicians can access your machine via Ethernet.

Remote Support with Augmented Reality

For troubleshooting via video support, simply download a free app and send us the access data.

Service Hotline Sorting

+49 (0) 8554 - 308 129
service.sorting@sesotec.com

Technical data

Working width [mm]	1024	1536	1920	2816
Throughput up to [t/h]	3	4.5	6	8
Number of valves	128	192	240	320
Valve pitch [mm]	8	8	8	8.8
Suitable grain sizes [mm]	10–250			
Power [max. KVA]	4–8			
Temperature range	+5°C up to +40°C			
Protection class	IP 54			

Options

Device division	For parallel sorting of two different material streams or for 2-stage sorting
Conveyor belt length	4.4 m or 6.2 m conveyor belt with a speed of up to 4 m/s for optimum distribution and separation of the elements in the material flow to increase throughput
Valve grid	Alternative valve pitch possible for certain sorting applications
Sensor upgrade	Pre-wiring for possible sensor upgrade
M+: selective metal sensor	Selective inductive multi-channel detection coil for detection of stainless steel, steel and non-ferrous metal
Vibratory feeder chute	Vibratory feeder for optimal distribution and separation of the elements of the material flow
Roll vertex	Roll vertex on the separator plate to avoid material accumulation
Film chute	Foil chute between conveyor belt and separator housing for separation of light material
Belt cleaner	Rotating brush under the conveyor belt for cleaning the belt