Freefall metal detection system Vistus® RS

For space saving integration into a production system

⚠ Benefits

- Safe detection of metallic foreign objects with the highest detection sensitivity
- Exceptionally space saving
- Simple installation and operation
- Reduces defective product quality and customer complaints
- Robust and long-lasting design

> *The freefall metal detection system Vistus® RS is an electromagnetic sensor which reliably detects even the minutest metallic partials during production flow. Its extremely compact design allows for easy integration into your existing production line.*

Increased product quality and safety during production process

⚠ Free and enclosed foreign objects made from ferrous and non-ferrous metals, light alloys such as aluminium, and stainless steel are all reliably detected.

⚠ The compact design allows for easy integration in existing systems.

⚠ The user benefits from the intuitive user interface of the Vistus® range and numerous of connection options.

⚠ Robust stainless steel housing protects against dust and moisture, as per IP65.

The right solution for all of these applications:

Foreign object detection   Statistics   Statistical process control
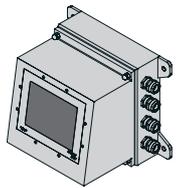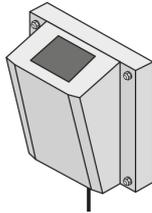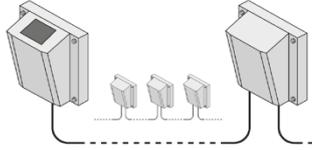
Technical specifications

Freefall metal detection system Vistus® RS

Supply voltage	90–260 V
Voltage frequency	47–63 Hz
Energy consumption	Up to 100 VA
Product speed	0.02–20 m/s
Product temperature	–30 to +55°C
Ambient temperature	Operation: –10 to +55°C Storage: –10 to +70 °C
Relative air humidity	Operation: < 58% at +55°C Storage: < 30 % at +70 °C
Housing	1.4301 stainless steel (AISI 304)
Protection class	IP65
Search tunnel material	PVC
Additional technical features	– Signal analysis over two channels – Suppression of the product effect – Adaptive digital filter – System monitoring – Test mode/function

Vistus® RS search coil basic sensitivity

Search coil nominal width	100	120	150	170
Ferrous metals (FE) Stainless steel (VA)	0.4 mm 0.9 mm	0.5 mm 0.9 mm	0.6 mm 0.9 mm	0.8 mm 1.2 mm

During the falling product flow, the Vistus® RS reliably detects free and enclosed foreign objects made from ferrous and non-ferrous metals, light alloys and stainless steels.

The indicated basic sensitivity is the metal detector's maximum reachable sensitivity with the exclusion of any environmental interferences. The indicated values are calculated and serve as guide values. An indication of the existing product sensitivity in use is only possible after measurement in our test centre with the final product in the metal detector.

Operator terminal options

|	Vistus® ES (Not available in Europe)	Vistus® ERS	Vistus® T + Vistus® ERSI
	The most important functions with the smallest footprint.	The efficient solution with all options and interfaces.	For special conditions with more search coils or larger distances.
User interface	145 mm (5.7") touchscreen	145 mm (5.7") touchscreen	145 mm (5.7") touchscreen
Relay outputs (isolated)	1 × metal 1 × error	4 (1 × error + 3 × freely programmable)	4 (1 × error + 3 × freely programmable)
Freely programmable outputs	None	4	4
Number of search coils	1	1	3
Max. cable length between coil and terminal (see image)	5 m	5 m	35 m
Housing	1.4301 stainless steel (AISI 304)	1.4301 stainless steel (AISI 304)	1.4301 stainless steel (AISI 304)
Protection class	IP65	IP65	IP65
Weight	Up to 6 kg	Up to 7 kg	Up to 7 kg per component

Technical diagrams

Vistus® ERS operator terminal dimensional drawing
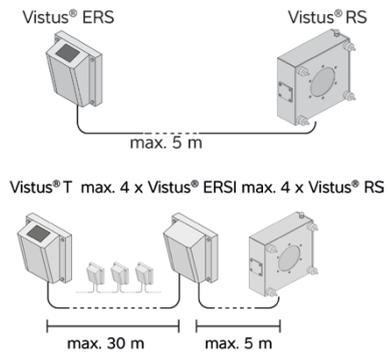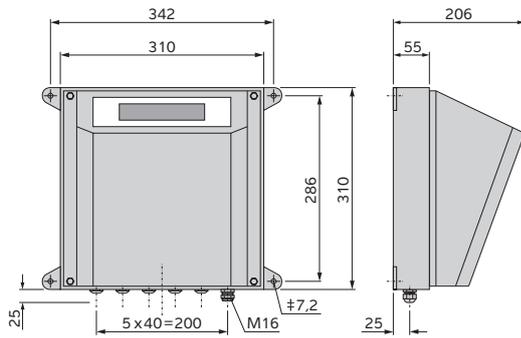
Vistus® ES operator terminal dimensional drawing
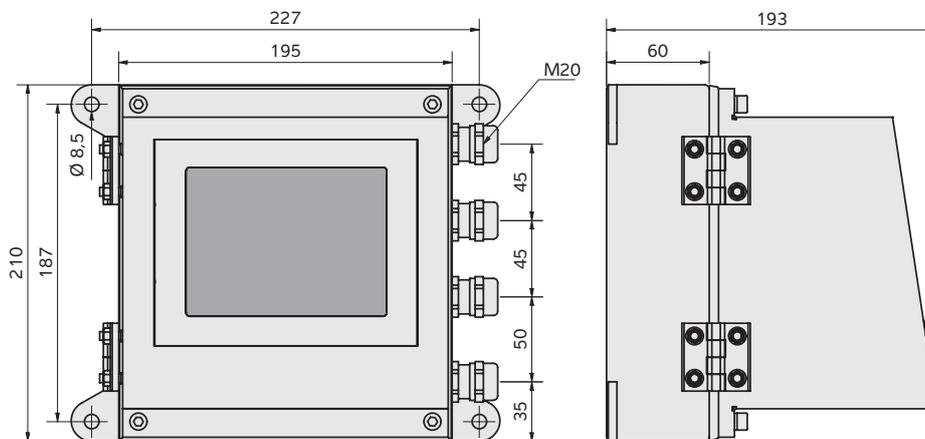
Vistus® RS search coil dimensional drawing
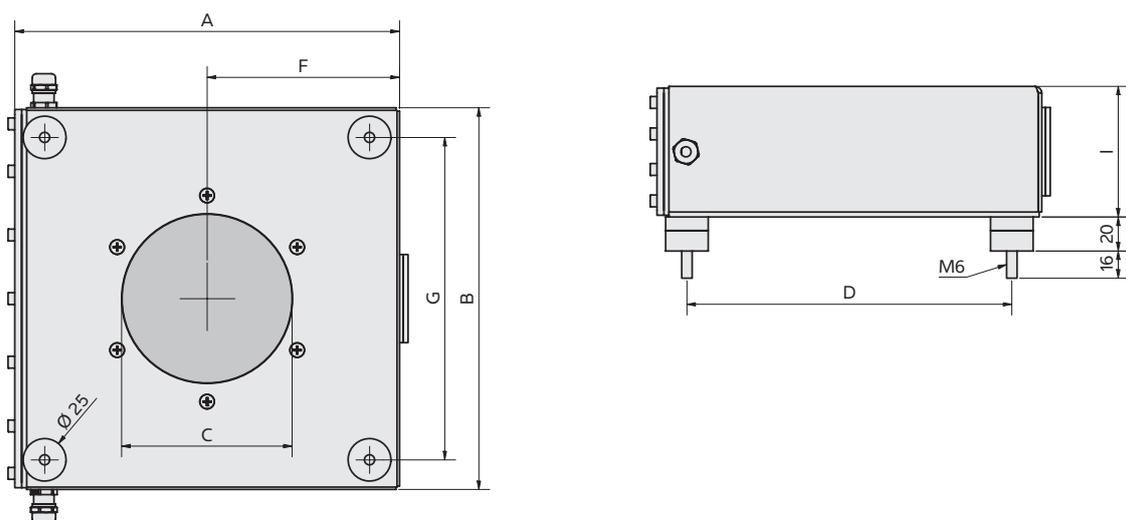
| Nominal width	A	B	C	D	F	G	I	Weight in kg
100	225	225	100	190	112.5	190	77	Approx. 6
120	295	295	150	260	147.5	260	129.5	Approx. 16
150	295	295	150	260	147.5	260	129.5	Approx. 15
170	295	295	150	260	147.5	260	129.5	Approx. 14

All measurements (A–I) in millimetres. All information excludes any optional devices which may have been installed.

Vistus® RS search coil metal-free zone

Metal detection disturbances can lead to separation errors or a deterioration in sensitivity, therefore it is important to observe the search coil´s 'metal-free zone'.
Examples of potential disruptive factors in this zone include:

- Large metal objects such as housing, frames or tables
- Movable metal objects such as oscillating scaffolding or screwed-on freefall pipe fittings
- Cross-connections of the supporting structure forming short circuit coils
- Metal objects worn by employees (e.g. keys, glasses, jewellery, mobile phone)
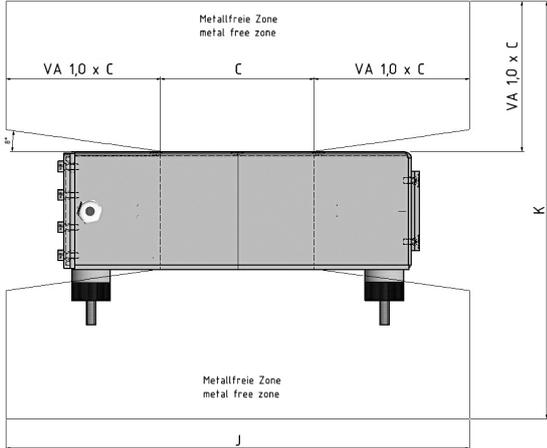
Nominal width C	Magnetic steel (FE)		Non-magnetic steel (VA)	
	J	K	J	K
100	400	377	300	277
120	480	445	360	325
150	600	580	450	430
170	680	630	510	460

All measurements (A–I) are approximate values in millimetres.
All information excludes any optional devices which may have been installed.

The size of the metal-free zone depends on the nominal width of the metal detector as well as the type of metal. The following information serves as minimal guide values and can strongly deviate depending on installation location.

Options

A wide range of options increase your possibilities

- Signal lights & signal horn
- Fingerprint sensor

Interfaces available (only for Vistus® ERS/T/ERSI)

- RS 232, RS 422, TCP-IP XML server/client, Profibus, USB printing, remote control, SPC@Enterprise

Test piece case with test sphere or alternative test rod available.
Other optional variants are available.

The products and solutions presented in this data sheet make major contributions in the following sectors:

Food and beverages

Chemistry

Cosmetics

Plastics