SE-DCB-90 Pulsed DC Antistatic Bar – 9 kV

Compact 9 kV pulsed DC static elimination — no HV transformer, 24 V DC supply, up to 200 mm range



KEY DATA

Ionization output voltage
9 kV pulsed DC
Ionization range
25 – 200 mm
Ordering length
300 – 4500 mm

Overview

The FÖGE SE-DCB-90 is a compact, high-efficiency 9 kV pulsed DC antistatic bar designed for reliable static elimination in industrial production — without an external high-voltage power unit. The bar operates from a standard 24 V DC supply (SE-PSU-24-C-M12, sold separately) and generates its 9 kV ionization voltage internally. This eliminates HV transformers, high-voltage cabling and the associated safety zones, making the SE-DCB-90 straightforward to integrate into new machines, existing lines and robotic systems. It neutralises static at 25 – 200 mm from the bar on non-conductive materials including plastic parts, film, glass and packaging.

Key features

- 9 kV pulsed DC ionization — generated internally from 24 V DC; no external HV transformer or HV cabling
- Ionization range 25 – 200 mm — for conveyors, 3D parts, packaging and short-to-medium standoff installations
- Orderable in any length from 300 mm to 4500 mm
- 24 V DC supply — connects to the SE-PSU-24-C-M12 adapter (sold separately)
- No compressed air required — passive ionizing bar
- Shockless design — tungsten emitter pins, safe for operators
- Balanced alternating pulsed DC — fast, complete neutralisation of positive and negative charges
- Integrated LED status indicator — power, ionization and fault status
- M12 connector for a 4-pin M12 cable — cable ordered separately
- Industrial-grade, impact-resistant housing for continuous-duty production

Technical specifications

Product code	SE-DCB-90-xxxx (length in mm, e.g. SE-DCB-90-0600 = 600 mm)
Power supply (sold separately)	SE-PSU-24-C-M12 (220 V AC to 24 V DC)
Ionization type	Pulsed DC — shockless
Pin current (safety)	< 250 µA
Ionization output voltage	9 kV pulsed DC
Operating voltage	24 V DC (21 – 28 V) · 0.5 A max.
Ionization range	25 – 200 mm *

Ordering length	300 – 4500 mm (custom lengths on request)
Emitter pin material	Tungsten — extremely long lifetime
Polarity	Alternating pulsed DC — balanced ion output
Connector	M12 — use a 4-pin M12 cable (order separately)
Status indicator	Integrated LED — power, ionization and fault status
Operating temperature	0 – 50 °C
Max. humidity	70 % rH, non-condensing
Protection class	IP65 (with connector)
Housing	Industrial-grade, impact-resistant
EMC compliance	2014/30/EU — EMC Directive
Electrical safety	2014/35/EU — Low Voltage Directive

* Ionization range measured under standard conditions (20 °C, 50 % rH). Effective range may vary with ambient humidity, temperature and line speed.

Which product to choose — SE-DCB-90, SE-DCA-110 or SE-ACB-80

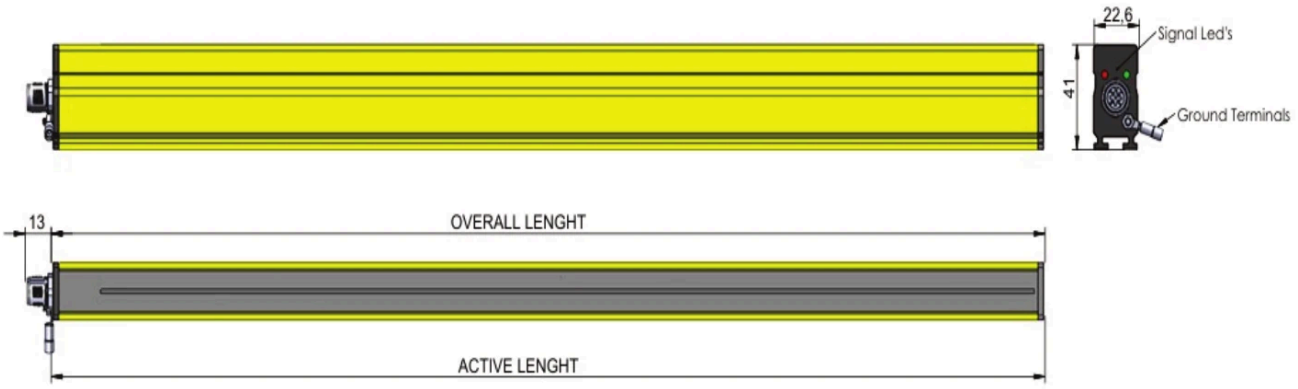
	SE-DCB-90	SE-DCA-110	SE-ACB-80
Technology	9 kV pulsed DC	11 kV pulsed DC + compressed air	8 kV AC — requires SE-PAC-80
Ionization range	25 – 200 mm	Up to 1000 mm	Up to 250 mm
Air required	No	Yes — min. 2 bar, ⌀ 8 mm hose	No
Power supply	24 V DC (SE-PSU-24-C-M12)	24 V DC (SE-PSU-24-C-M12)	SE-PAC-80 HV power unit
Connector	M12 (4-pin cable)	M12 (4-pin cable)	HV plug-and-play connector
Length range	300 – 4500 mm	300 – 2000 mm	100 – 4500 mm
Best for	Conveyors, robotics, bins, printing and packaging — medium range, no air	Winding systems, moulds, conveyors — long range where air is available	High-speed film and web lines requiring AC ionization

Electrical connection — M12

Pin	Function
1	+24 V DC
2	Not used
3	24 V– (GND)
4	Fault output

Use a 4-pin M12 cable. The device connector has 5 pins; the centre pin is reserved for factory programming and is not used by the 4-pin cable. Pin 2 is not used. Pin 4 provides a fault output signal for external fault indication. Do not connect or disconnect while power is applied.

Dimensional drawing

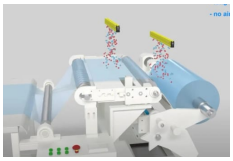


Dimensional drawing of the SE-DCB-90 pulsed DC antistatic bar: profile 22.6 × 41 mm, 13 mm connector end, signal LEDs and ground terminal, overall and active length

Complete system — what you need

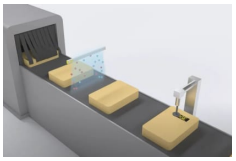
SE-DCB-90 bar (specify length)	Order in required length (300 – 4500 mm). Example: SE-DCB-90-0600 = 600 mm
SE-PSU-24-C-M12 power supply	220 V AC to 24 V DC adapter, M12 version — required · sold separately
4-pin M12 cable	Industrial M12 connection cable — length to suit installation · sold separately
Mounting brackets (optional)	Standard and custom brackets — contact FÖGE for options
Maintenance kit (optional)	FÖGE Antistatic Maintenance Kit — cleaning tools and spare tungsten emitter pins

Application examples



Slitter-Rewinder (Rewind Section)

High-speed winding, slitting, and rewinding of continuous plastic film, paper, or textile webs into safe, static-free rolls.



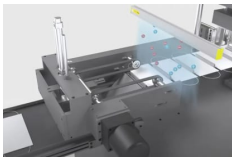
Inkjet Coding / Marking Conveyor Line

High-speed inkjet printing of barcodes, QR codes, expiration dates, or lot numbers onto individual products, lids, or packaging.



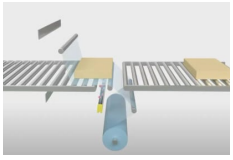
Vertical Form Fill Seal (VFFS) Machine / Vertical Bagging Machine

Automatically forming, filling (with loose solids, powders, or liquids), and sealing flexible packaging bags in high-speed production lines.



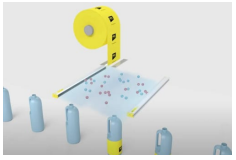
Automated Face Mask Production (Medical Industry)

High-speed automated production of surgical masks, N95 respirators, and medical-grade protective apparel.



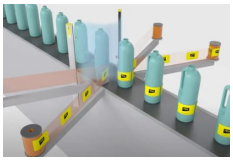
Sleeve Wrapper / Shrink Bundling Machine

Automatically wrapping individual boxes, trays, or bundled products in plastic film (often before they pass through a heat shrink tunnel).



Roll-Fed Wrap-Around Labeling Machine

Once neutralized, the label can be accurately controlled (often via vacuum belts or transfer drums, which are not pictured here for simplicity) and wrapped around the circumference of the moving plastic bottles.



Front and Back Labeling Machine (Double-Sided Labeler)

Automatically applying pressure-sensitive labels to one or both sides of plastic bottles or containers as they move along a high-speed conveyor.

Product information and ordering: sales@fogegmbh.com · +49 9372 9809477 · foge-antistatic.com