

The ES51 high voltage power supplies are power supply units for the series R5x AC discharge bars.

The discharge bars and the ES51 power supply are used mainly in cases where disruptive static charges on fast-moving material webs impair production processes and need to be eliminated.

The ES51 power supply features the following characteristics:

- 5 plug-type high voltage outputs
- stable 5 kV AC output voltage
- small dimensions
- easy installation
- protection class IP 54 design
- function and pollution monitoring of the bars with floating signal contacts (optional)

Technical Information

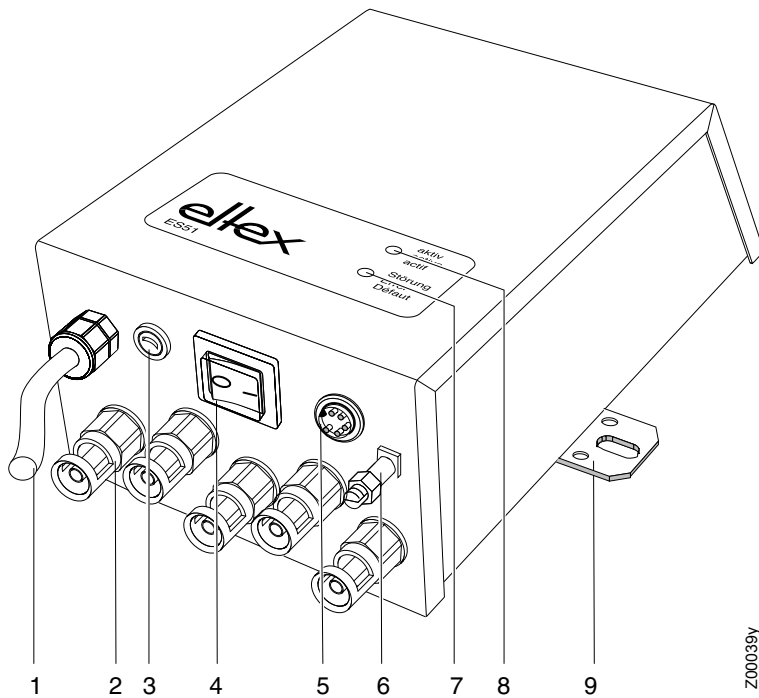


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Series ES51 Power Supplies **Series ES51US Power Supplies** for connection to AC discharge bars

TI-en-2014-1808





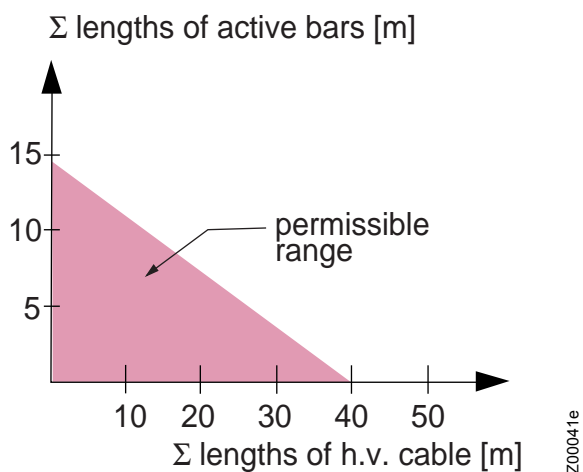
Power supply ES51

- 1 Power supply lead
- 2 5 high voltage terminals
- 3 Fuse
- 4 ON/OFF switch (ON = illuminated)
- 5 Plug for function and malfunction signals*
- 6 Grounding terminal
- 7 LED red, error signal*
- 8 LED green, high voltage active*
- 9 Mounting bracket

* only with function and pollution monitoring

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Function elements of the ES51 High Voltage Supply



Z00041e

Loading capacity of the power supply

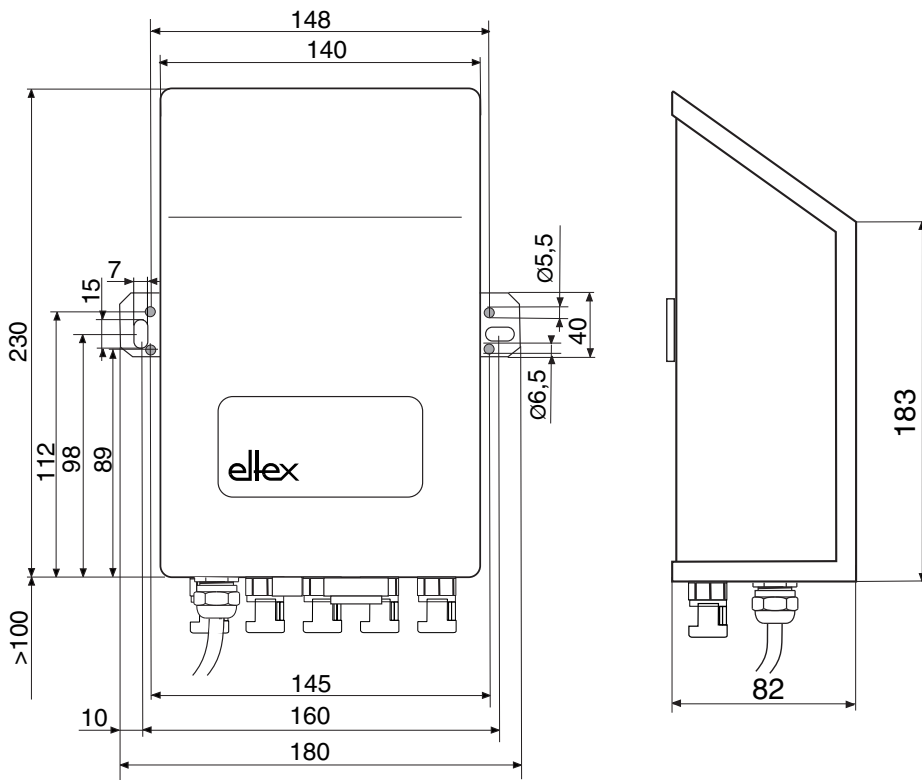
Both the lengths of the high voltage cable and of the active bars are limited. The shielded high voltage cables cause a capacitive load on the transformer inside the power supply. The maximum loading capacity is a result of the function of the total active bar length and the total length of all on power supply connected high voltage cables. The illustration opposite demonstrates this principle for the discharge bars R5x.

Loading capacity of the power supply as factor of bar length and length of high voltage cable.

Example: The maximum permissible total cable length with a 3 meter active bar length is 32 meters.

Technical specifications ES51 / ES51US

Supply voltage	230 V AC 50/60 Hz; 115 V AC 50/60 Hz
Power input	80 VA maximum
Output voltage	5 kV AC; ES51/K: 3.5 kV AC
Loading capacity	depending on length of bar and length of high voltage cable
Output current	max. 6.2 mA at 5 kV
Operating ambient temperature	ES51: 0...+60°C (+32...+140°F); ES51US: 0...+40°C (+32...+104°F)
Storage temperature	-20...+80°C (-4...+176°F)
Ambient humidity	max. 80% r.h., non-dewing
Function and malfunction signals (optional)	2 floating contacts, max. 250 V AC/1 A or 24 V DC/0.5 A loading capacity green (high voltage active) or red (malfunction) LED in front
Mains power cable	approx. 2.5 meters with earthing-pin plug, national version
Fuse (primary circuit)	see name plate
Ground link	grounding terminal on housing
High voltage connections	5x, plug-type
Enclosure	sheet metal steel with wall bracket
Protection class	IP 54, EN 60529
Dimensions	230 x 140 x 82 mm (H x W x D) (see Fig.)
Weight	approx. 4 kg
UL approval	File No. E227156



as shown on
appliance
marking:



Z00040y + Z00042y

Dimensions ES51

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The addresses of all
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