

The ES53 high voltage power supplies are power supply units for the Eltex discharge elements, operated in hazardous area.

The power supplies must be assembled outside the explosion hazard zone.

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

The power supplies comply with the requirements of the EX discharge bar approval and features the following characteristics:

- 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

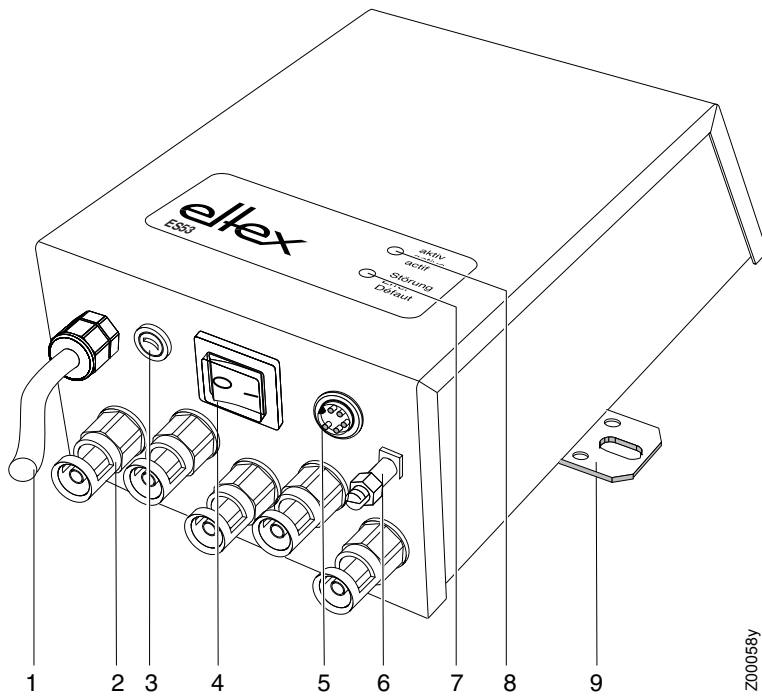


F01061y

Series ES53 Power Supplies Series ES53US Power Supplies for supplying Ex -AC-discharge bars and ion blower heads

TI-en-2018-1808





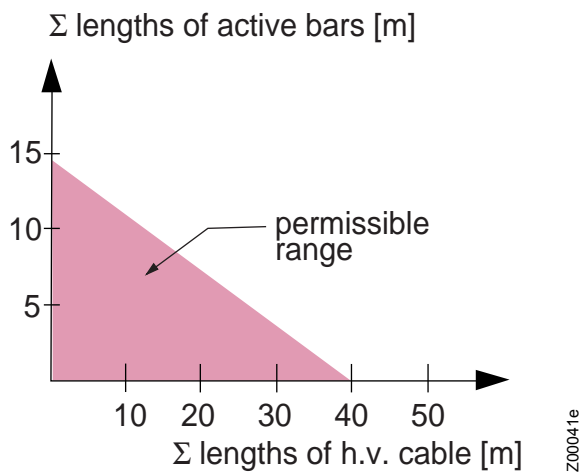
Power supply ES53

- 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 ES53 High Voltage Supply



Z00041e

Loading capacity of the power supply

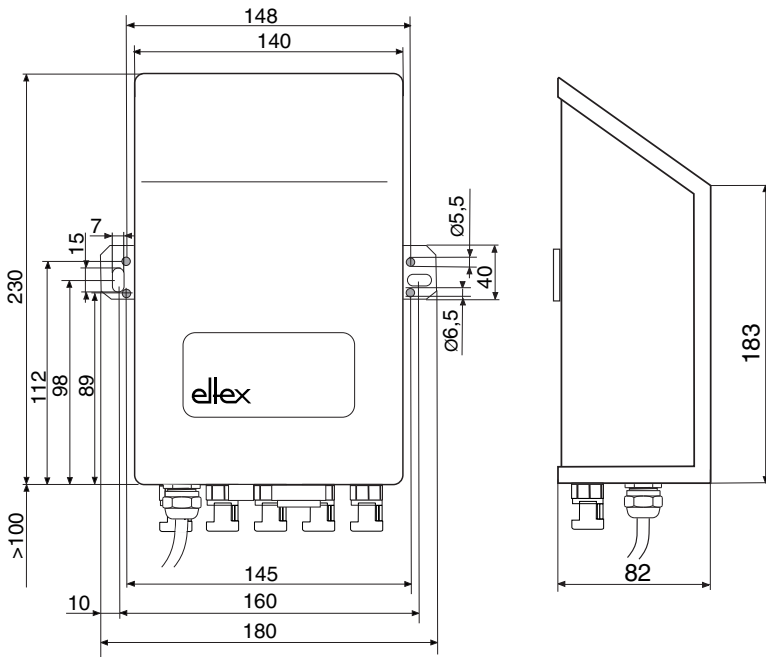
Both the lengths of the high voltage cable and of the active bars are limited. The shielded high voltage cables cause a capacitive load on the transformer inside the power supply. The maximum loading capacity is a result of the function of the total active bar length and the total length of all on power supply connected high voltage cables. The illustration opposite demonstrates this principle for the discharge bars R5_.

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 ES53 / ES53US

Supply voltage	230 V AC 50/60 Hz, 115 V AC 50/60 Hz
Power input	80 VA maximum
Output voltage	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	ES53: 0...+60°C (+32...+140°F); ES53US: 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	5 pcs., 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
EX approval	complying with the requirements of the power supplies for Ex discharge bar approval EXR5C/EXR50: BAS98ATEX2179X, and for protective resistor EXRV55 of ion blower head EXR55 and of ion blower pistol EXPR55: PTB00ATEX2071X, and for Ex discharge bar EXR5N: TÜV10ATEX7872X and TÜV10ATEX7937X and for ion blower pistol EXPR50: TÜV10ATEX7873X in connection with the power supplies ES53/G, ES53/H and ES53/I.
UL approval (ES53US)	File No. E227156



Z00040y + Z00042y

Dimensions ES53

as shown on
appliance
marking:



Eltex offices and agencies

The addresses of all
Eltex agencies can be
found on our website at
www.eltex.com



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