CONTENTS

GB

Preface

This manual describes the installation and usage of the anti-static systems
Performax IQ Easy and Performax IQ Easy Speed.
Where an anti-static bar is mentioned elsewhere in this user manual, this refers to the Performax IQ Easy or Performax IQ Easy Speed.

This manual must be available at all times to staff operating the equipment.
Read through the entire manual before installing and commissioning the product.
Follow the instructions set out in this manual to ensure proper operation of the product and to retain your entitlement under the guarantee. The terms of the guarantee are set out in the Simco-Ion Netherlands General Terms and Conditions of Sale.

Explanation of symbols

Warning
Indicates special information for preventing injury or significant damage to the product or the environment.

Note
Important information for efficient use and/or to prevent damage to the product or the environment.

[ **] If icons are between [ ], this means, depending on where you are in the menu, it may be necessary to first select the icons between [ ] before you can go to the desired page where the follow-up instruction can be given.**

With the  **buttons you can scroll through the various pages.**

1 Introduction

The Performax IQ Easy and Performax IQ Easy Speed are anti-static bars designed to neutralise electrostatically charged surfaces.
The most important difference between these two anti-static bars is the recommended usages of each.
The Performax IQ Easy is the standard version for regular applications, whereas the Performax IQ Easy Speed is optimised for high conveyor speeds with the anti-static bar close to the material to be discharged.
Both anti-static bars are supplied with a high voltage supply, emitters and two status LEDs.
The Performax IQ Easy and Performax IQ Easy Speed are supplied with a 24 V DC supply voltage via a standard M12 connector. The anti-static bars can be supplied directly by a 24 V power supply, but can also be connected to the IQ Easy platform. With this option the anti-static bar can be controlled and read out remotely and centrally, but it can also work together with a sensor IQ Easy, for example, to further reduce the residual charge. With the IQ Easy platform the status of the bar can be logged for easy quality registrations.

The Performax IQ Easy performs at its optimum between a distance of 100 and 500 mm material distance, at material speeds below 500 metres per minute and is available in effective lengths of 270 to 4770 mm, in increments of 180 mm.

For material speeds exceeding 500 m/minute and/or distances from 50 to 500 mm the Performax IQ Easy *Speed* is recommended, which is available in effective lengths of 210 to 4890 mm, in 60 mm increments.
The Performax IQ Easy as well as the Performax IQ Easy Speed can be supplied with compressed air support (Air). Because of this the anti static bar can be used at greater distances than the standard Performax IQ Easy.

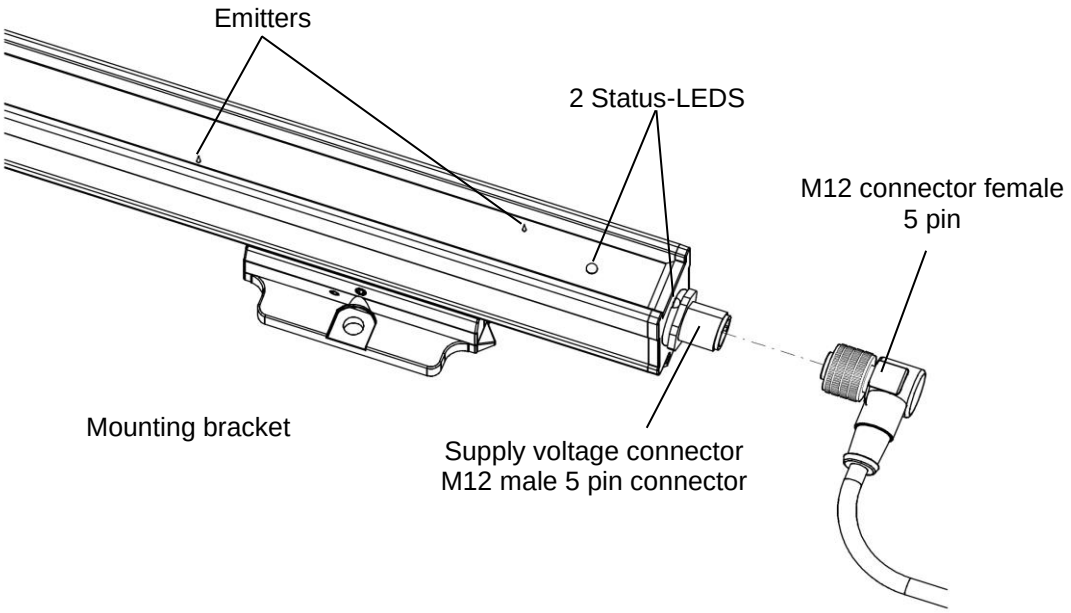
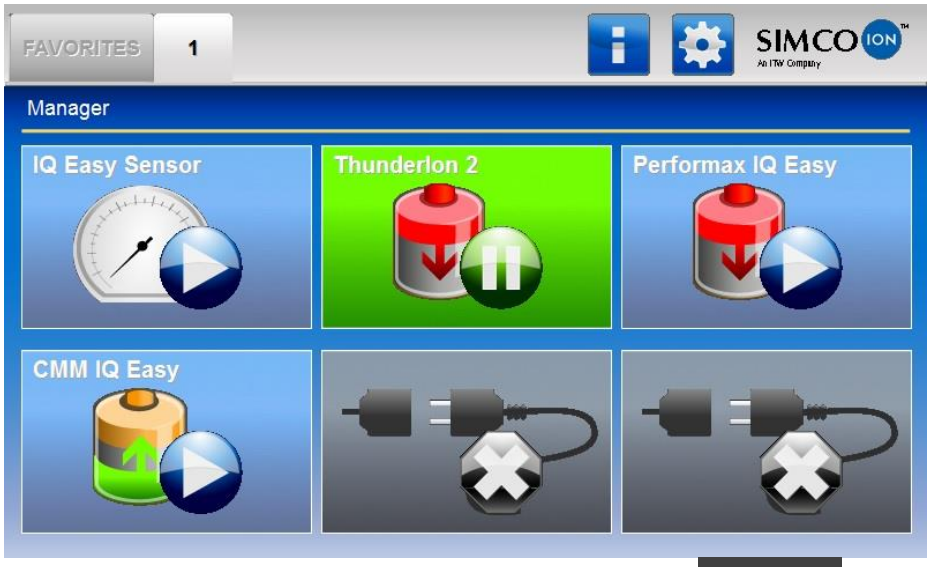


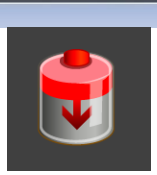
Figure 1: Connection side, Performax IQ Easy and Performax IQ Easy Speed

GB

2 Description and operation

The 24 V DC supply voltage is converted in the anti-static bar into a positive and negative high voltage. The high voltage generates an electrical field at the emitters of the anti-static bar, which causes the air molecules around the emitters to be converted into positive and negative ions. When an electrostatically charged material comes within operating distance of the anti-static bar, ions from the anti-static bar are exchanged with the charged material until the material is neutral.
You can tell from the status LEDs whether the anti-static bar is in operation, and whether it is overloaded.
In addition, various parameters, limit values and information on the operation can be displayed and logged with a Manager IQ Easy. Refer to the user manual of the Manager IQ Easy for this as well.



The background colour of the anti-static bar icon  displays the status of the sensor bar.


Inactive or no communication


Active and operating OK, without warnings or alarms


Standby, waiting for start command


Active, but with a warning


Active, but with an alarm

3 Safety

The following safety guidelines must be observed in order to prevent physical injury and damage to objects or to the anti-static bar itself.

 **Warning:**

- The anti-static bar is only designed for neutralising electrostatically charged surfaces.
- Electrical installation and repairs must be carried out by a skilled electrical engineer according to the applicable national and local regulations.
- The anti-static bar must only be powered by a Limited Power Source (LPS) or NEC Class 2 power supply.
- The equipment must be properly earthed. Earthing is required to ensure safe and proper operation and to prevent electrical shocks upon contact.
- Disconnect the power supply before carrying out work on the unit.
- The emitters are sharp and can cause physical injury.
- During the ionisation process a small amount of ozone is produced. The ozone concentration around the electrodes depends on a large number of factors, such as the amount of space around the anti-static bar and the air circulation. This means that no general value can be specified for the ozone concentration.
- The Performax IQ Easy and Performax IQ Easy Speed are not intended to be used as safety components in machines.

The high-voltage emitters (15 kV) are limited to a current of 90 µA, which means that they are electrically safe to touch and shockproof.

☞ **Note:**

- If changes, adjustments etc. are made without prior written consent or if repairs are carried out using non-original parts, the equipment's guarantee will no longer be valid.

4 Technical specifications

Required power supply

Supply voltage	21–27 V DC
Current consumption	Max. 0.5 A DC
Max. cable length	30 m x 0.34 mm^2
Connection	M12 connector, 5-pin

Power supply	24V DC ± 2%	24V DC ± 5%	24V DC ± 10%
Max. total cable length Standard Simco 5x 0,34 mm^2 &	3,125Ω	2,25Ω	0,75Ω
M12 Male-Female cable	62,5m	45m	15m
Type power supply	100-240 V AC Manager IQ Easy		
	100-200 V AC Extension IQ Easy	Simco Desktop Power supply	
	Simco Din-rail Power supplies		

Input

Standard	Full control and readout via IQ Easy platform with an RS 485 serial connection to standard voltage levels
Without IQ Easy platform	
Remote on/off	10 – 30 V (Ri >10k)
Starting time	30 ms
Performax IQ Easy Air compressed air	Eff. Lengths 270 – 1710: 1x ø8 mm plug-in coupling Eff. Lengths *Speed* 210 – 1830: 2x ø8 mm plug-in couplings Max. 7 bar (100 PSI) Air consumption 110 l/min (6,6m^3/h) per meter @ 1 bar

Output

Output voltage emitters	Max. 15 kV positive and negative
Current per emitter to earth	Max. 90 µA
IQ Easy platform	RS485 voltage levels
Without IQ Easy platform	
High voltage OK (HV OK)	Supply voltage -1 V, max. 50 mA

Environment

Use	Industrial, internal use	
Ingress protection class	IP66	
Temperature	0–55°C	
Material speed	Performax IQ Easy	0 – 500 m/min
	Performax IQ Easy *Speed*	>500 m/min
Operating distance	Performax IQ Easy	100 - 500 mm
	Performax IQ Easy *Speed*	50 – 500 mm
	Performax IQ Easy Air	100 – 1000 mm

Local signalling

2-colour LED's	Continuous	Flashing
Green	In operation	Standby
Red	Overload	HV OK overload

See Chapter 7 for all indications

Remote functions (with IQ Easy platform)

The bar can be monitored and controlled using the Manager IQ Easy (see also user manual Manager IQ Easy).

Remote functions
(without IQ Easy platform)

Remote on/off	Switches high voltage on and off	
	Control voltage:	max. 30 V DC, 25 mA min. 10 V DC, 10 mA
Output operation bar OK (HV OK)	Signals that the bar is operating properly (when high voltage is switched on) Uo= supply voltage -1 V, max. 50 mA	

Mechanical

Effective length	Performax IQ Easy	270 - 4770 mm
	Performax IQ Easy Air	270 – 3870 mm
	Performax IQ Easy *Speed*	210 - 4890 mm
	Performax IQ Easy Air *Speed*	210 – 3870 mm
Dimensions without mounting brackets	Length:	Effective length + 90 mm
	Width:	25,5 mm (Air 29 mm)
	Height:	49,5 mm
Weight	1,9 kg/m	
Housing	Glass fibre reinforced plastic	
Mounting material	Brackets	

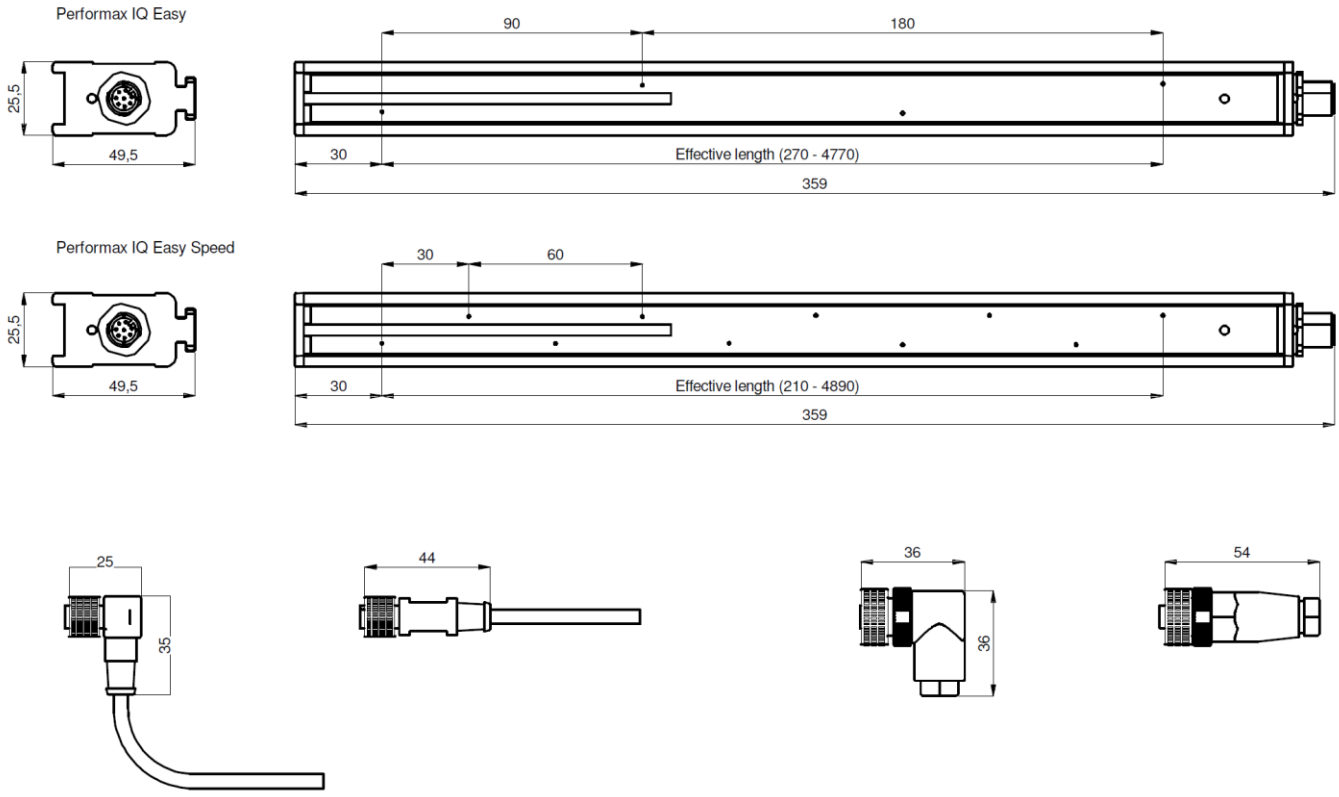


Figure 2: Performax IQ Easy/Performax IQ Easy Speed dimensions and optional connectors

GB

5 Installation

Warning:

- **Electrical installation and repairs must be carried out by a skilled electrical engineer according to the applicable national and local regulations.**
- **The equipment must be properly earthed. Earthing is required to ensure safe and proper operation and to prevent electrical shocks upon contact.**
- **Disconnect the power supply before carrying out work on the unit.**
- **When not using the IQ Easy Platform, the anti-static bar may only be supplied with a Limited Power Source (LPS) or a NEC class 2 power supply. A LPS certified power supply has a limited output capacity, generating a safe output voltage at all times.**
- **The 0 V of the power output must be earthed correctly (see section 5.6.3).**

The anti-static bar is supplied and controlled via the IQ Easy platform.
Without the IQ Easy platform the anti-static bar can be supplied by an already available 24 V DC power supply on the machine (which meets the requirements mentioned above) or by a desktop supply or DIN rail supply provided by Simco-Ion.
See the list with spare parts for the available power supplies.

5.1 Prior check

- Check that the equipment is undamaged and that you have received the correct version.
- Check that the details on the packing slip correspond to the details of the product received.

If you have any problems and/or doubts, please contact Simco-Ion Netherlands or the agent in your region.

5.2 Fitting the anti-static bar

Note:

- **Conductive machine parts in the vicinity of the anti-static bar have a negative influence on its operation.**
- **For optimum results, the anti-static bar must be fitted as per Figure 3.**

- Fit the anti-static bar:
  - Directly in front of the place where static electricity causes problems.
  - At an optimum distance from the material to be neutralised:
    - 100 - 500 mm (Performax IQ Easy)
    - 50 - 500 mm (Performax IQ Easy Speed)
  - With the emitters facing in the direction of the material to be neutralised.

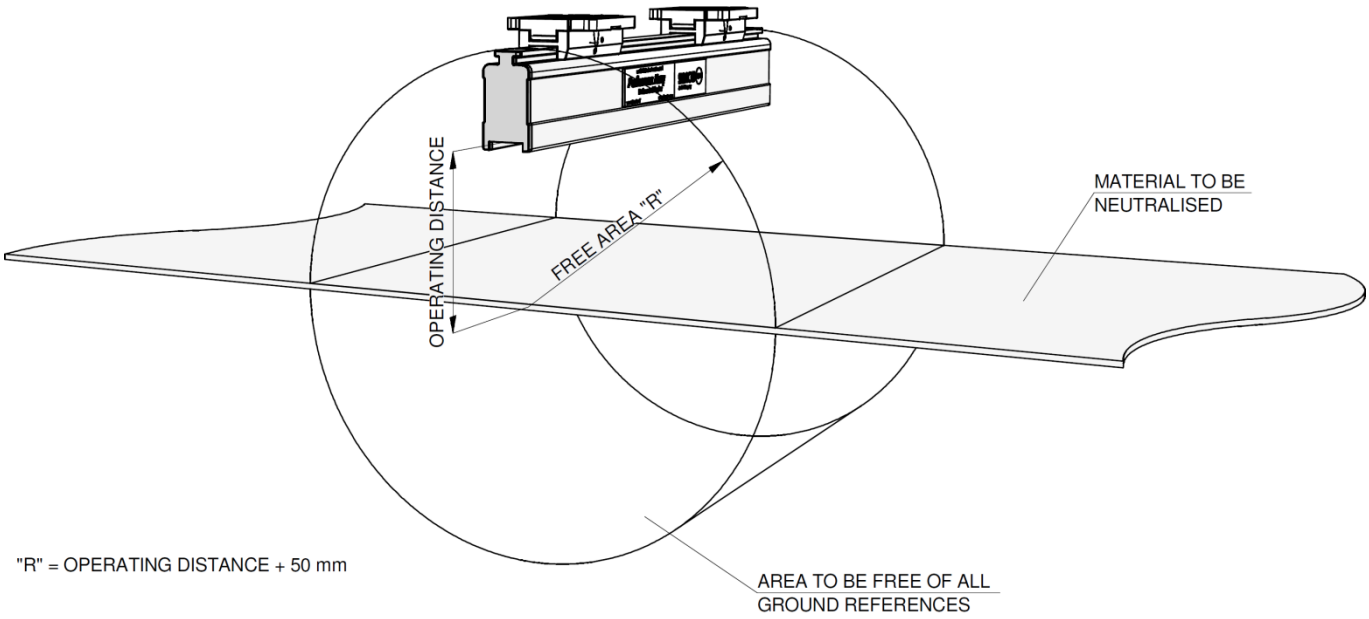


Figure 3: Optimal position Performax IQ Easy and Performax IQ Easy Speed and optional Sensor IQ Easy bar

"R" = Operating distance + 40 mm

GB

5.3 Mounting bracket (Mounting Bracket Bars)

The anti-static bar is supplied with at least two mounting brackets with which the anti-static bar can be mounted in various ways.

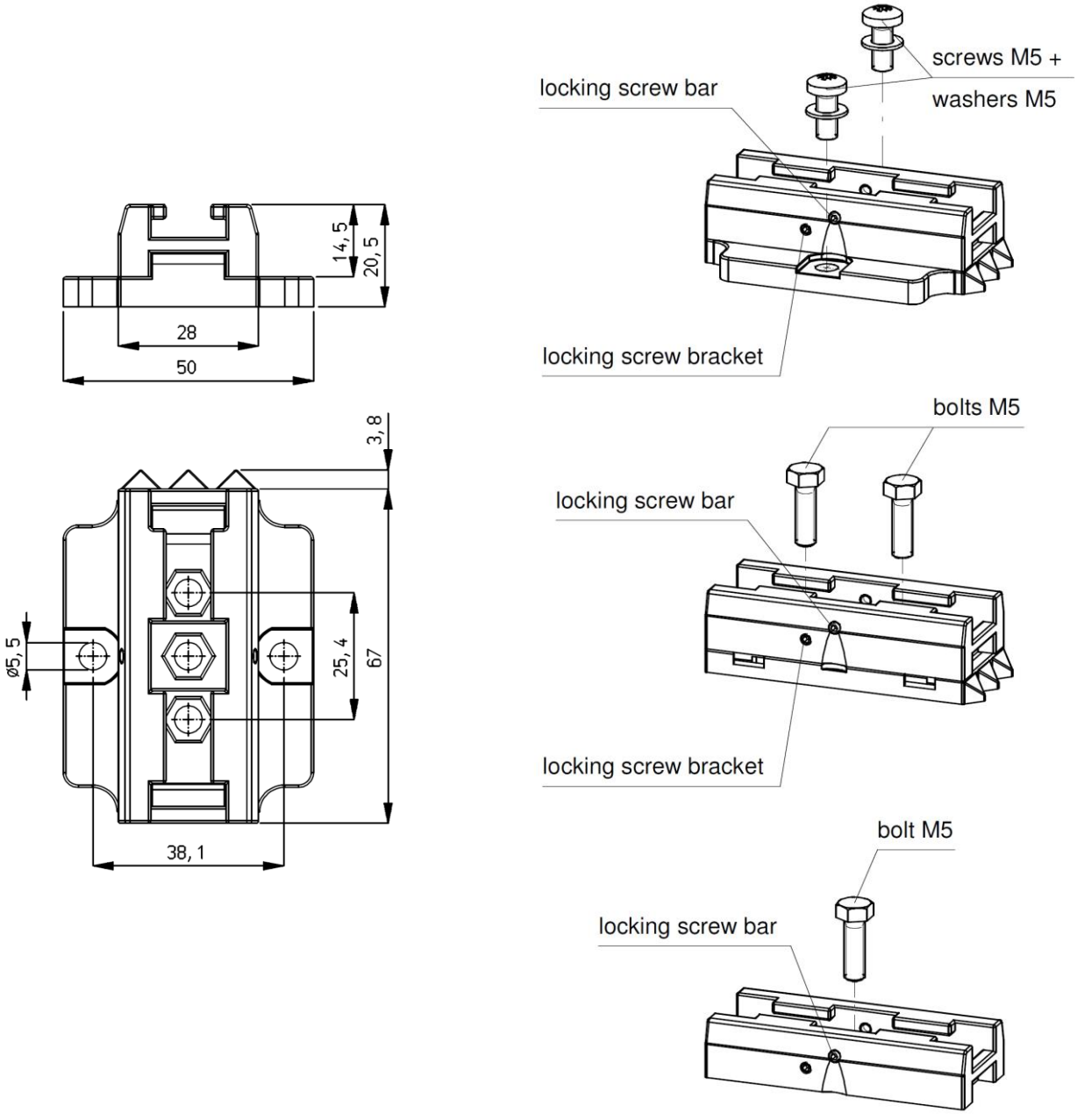


Figure 4: Mounting bracket dimensions and mounting options Performax IQ Easy and Performax IQ Easy Speed

5.4 Mounting Performax IQ Easy, Performax IQ Easy Speed (slide bracket)

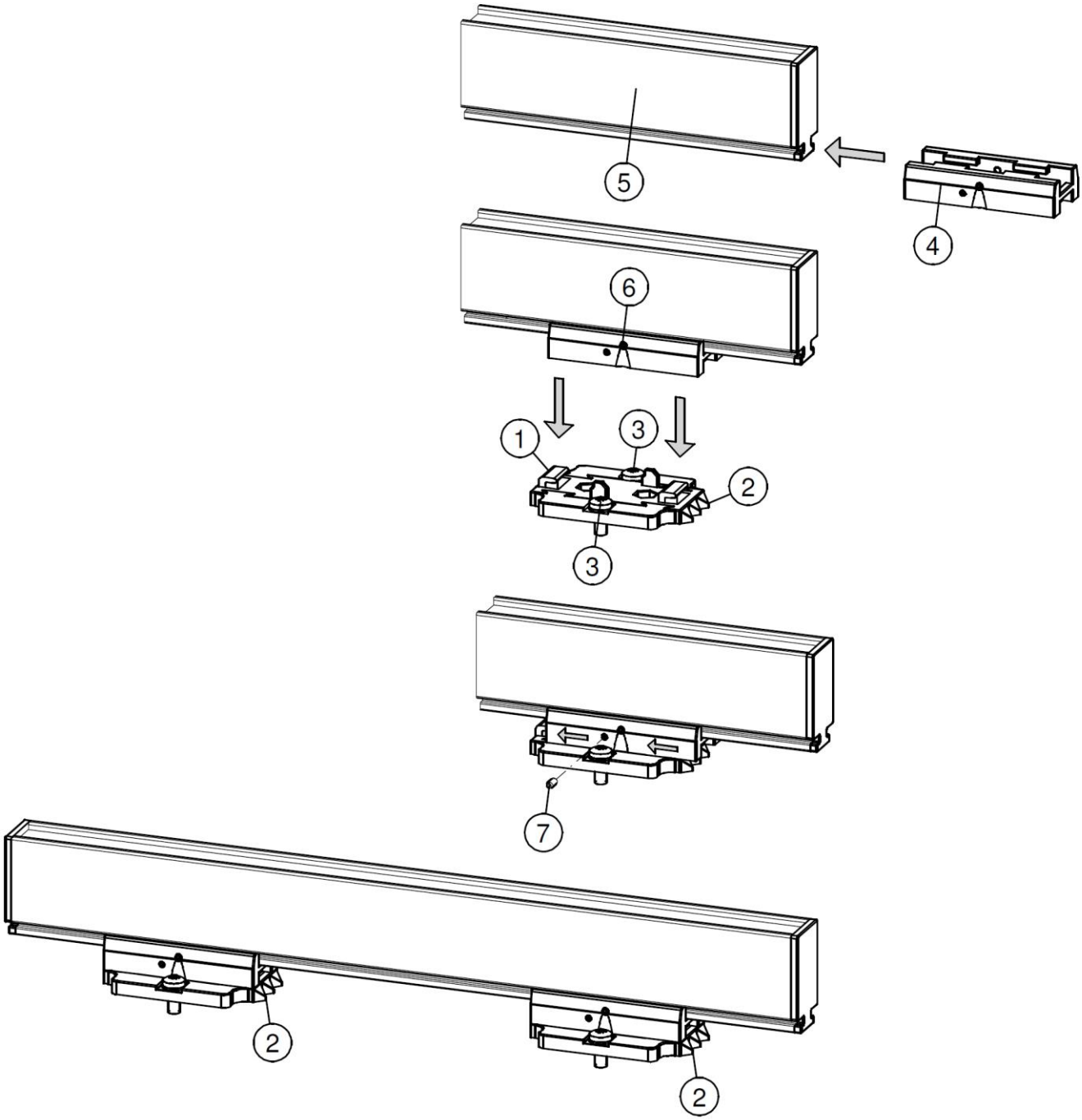


Figure 5: Fixing anti-static bar with mounting brackets

- Attach the mounting feet (1) to the machine. The triangles (2) have to point in the same direction. Use appropriate M5 mounting material (3) for mounting.
- Slide the brackets (4) onto the anti-static bar.
  Keep spacing(s) of the brackets (4) and mounting foot (1) equal and lock the bracket (2) with the set screw (6).
- Set the anti-static bar with the brackets onto the mounting feet and slide the entire device in the opposite direction of the three points.
- Lock the anti-static bar in the mounting feet by screwing the two adjusting screws (7) into the brackets. With more than two brackets, only the two outer brackets need to be locked.

GB

5.5 Dismounting Performax IQ Easy, Performax IQ Easy Speed (slide bracket)

- Disconnect the M12 connector from the anti-static bar.
- Unscrew the adjustable screws (nr.6) from the brackets. (see figure 5).
  Slide the anti-static bar with the brackets of the mounting feet in the direction of the three points (mounting method) until the stop; pull the anti-static bar off the mounting feet in a perpendicular manner.

5.6 Connecting the anti-static bar

Warning:

- **Note the warnings at the start of this chapter.**

5.6.1 Connecting the anti-static bar to the IQ Easy Platform

- Connect the anti-static bar to one of the outputs of the Manager IQ Easy or Extension IQ Easy, using an 1:1 M12 connection cable, Male-Female, 5 pins.
  The standard M12 connector can be connected during operation of the IQ Manager Easy. Hence, it doesn't need to be powered down.

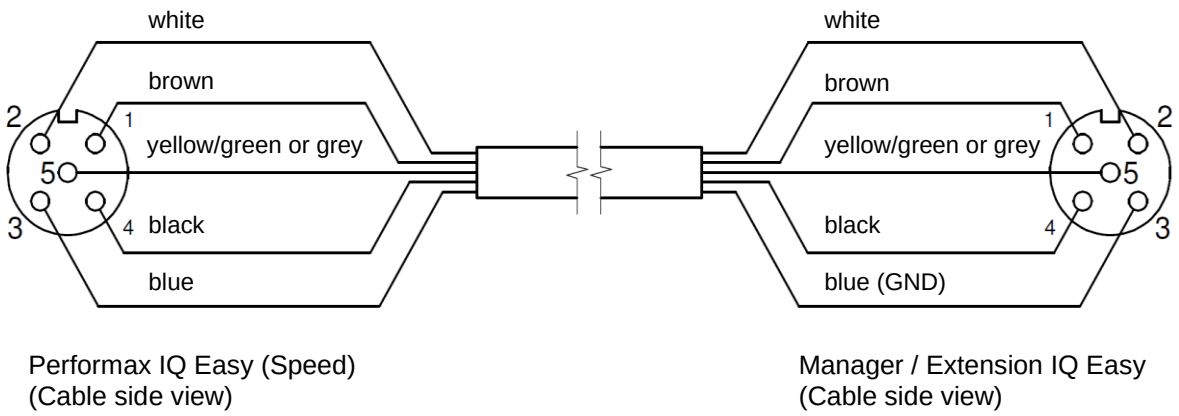


Figure 6: Wiring Performax IQ Easy to IQ Easy platform

5.6.2 Connecting the anti-static bar to the Simco-Ion desktop power supply

- Connect the external yellow/green wire from the desktop power supply to earth.
- Connect the cable with the M12 connector from the Desktop power supply to the anti-static bar.
- Connect the power cable.

5.6.3 Connecting the anti-static bar to the DIN rail power supply/external power supply

Warning:

- **For personal protection and to ensure proper functioning, the grey and the blue wire must ***both*** be connected to earth.**
- **In the Simco-Ion desktop power supply and in the IQ Easy platform, these connections are already established.**

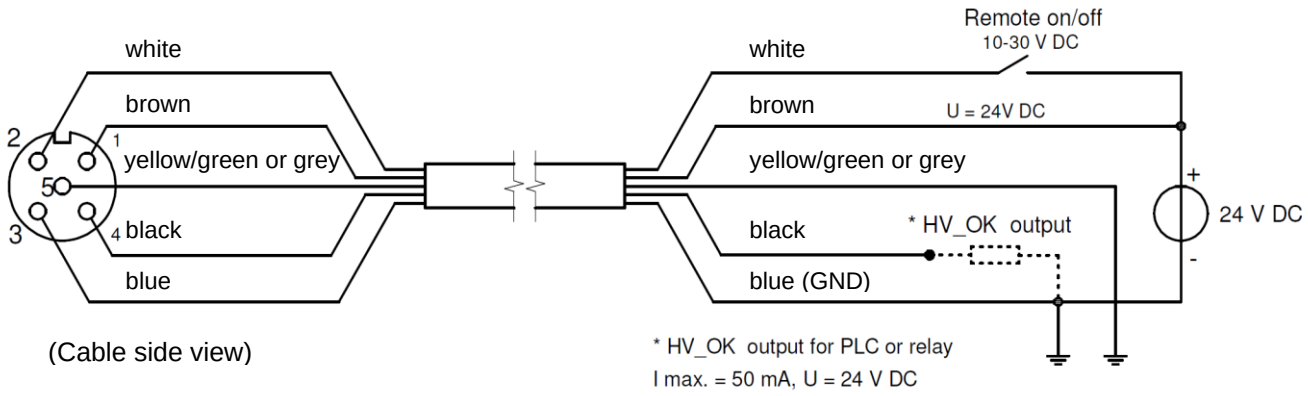


Figure 7: Wiring of the Performax IQ Easy and Performax IQ Easy Speed

- Use a connection cable with a M12 connector, female, 5 pins, for connecting the anti-static bar to the power supply.
- Connect the wiring as shown in figure 7.

5.6.4. Connecting Performax IQ Easy Air to compressed air

Depending on the effective length, the anti-static bar has 1 or 2 compressed air connections. These are standard equipped with a plug-in coupling for a compressed air hose with an outer diameter of 8 mm. Optionally, the plug-in coupling can be removed and replaced by, for example, an angled plug-in coupling.
Connect the Performax IQ Easy Air to compressed air with materials suitable for the compressed air to be used.

6 Commissioning

☞**Note:**

- **The anti-static bar does not work if the emitters are covered. The protection cover is meant to protect the emitters during transport and mounting.**
- **Performax IQ Easy (*Speed*) Air: provide compressed air to the anti-static bar.**

6.1 Commissioning the anti-static bar through the IQ Easy Platform

☞ If an "Undefined param" appears in the info screens of the bar on the Manager, the Manager must be supplied with the newest software.
Download the latest software version on www.simco-ion.co.uk/software
and follow the "Upgrade" instructions as described in the manual of the Manager.

- Remove the protective cap from the anti-static bar.
- When the M12 connection cable connects the anti-static bar and the IQ Easy platform, communication will be established automatically, which is indicated by flashing status LEDs. By default, the bar will activate after all information has been gathered by the Manager. This is indicated by the background colour of  changing to blue.
  Please refer to the Manager IQ Easy user manual for a general explanation.

GB

The bar will now ionise.

6.2 Selecting EXPERT mode for setting parameters or maintenance

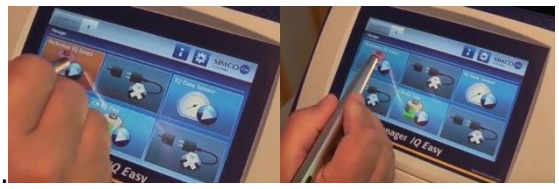
In order to set parameters and carry out maintenance, you need expert user privileges. A password may be required. For a detailed description, please refer to chapter 6.4 of the manual Manager IQ Easy.
Once logged in at this user level, you will remain on this level until selecting a new user level.

- Go to the main screen  , select settings  and choose expert.
- Enter the password and confirm with  or return directly to the system settings page of the Manager, if no password is required.
- Click  and go to the device to check and/or change the parameters by clicking  behind the parameter or desired action.
- By clicking  you will return to the main screen.

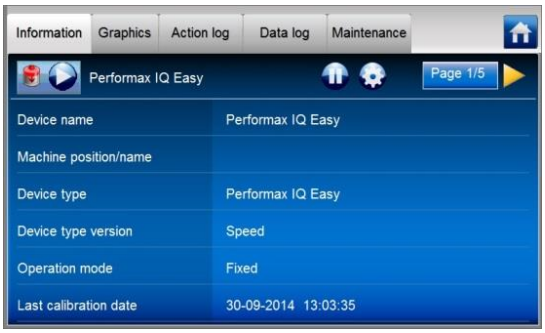
6.3 Calibrating the Performax Easy through the IQ Easy Platform

Bar calibration should be done in case of:
- The first commissioning,
- The position of the bar has been changed.

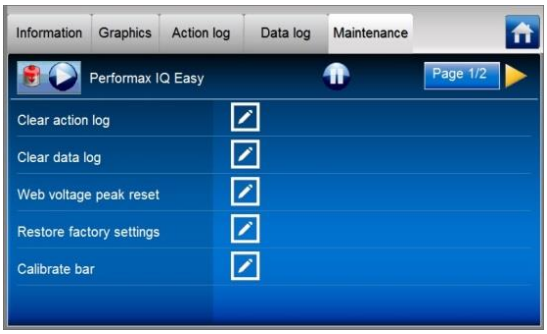
☞Note:
Make sure that the bar is mounted in the final position and that the conveyor or the object to be neutralised is in position but not moving (standing still).

- Go to user level expert, see section 6.2.
- Go to the device menu by clicking  . 

- Go to the *Maintenance* TAB

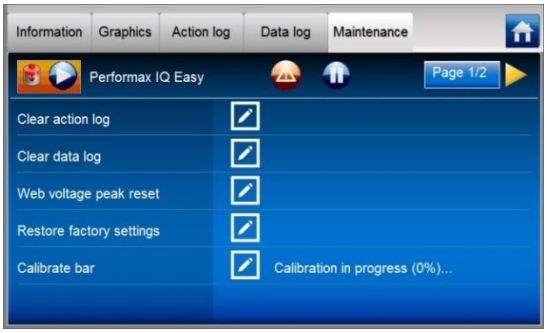


- Click *Calibrate bar* 



- Calibration is started,

  The status LEDs on the bar are flashing yellow and the status changes to a warning: 
  When the calibration is finished, the progress indication will disappear, the warning be cleared and the status LEDs on the bar light up green (continuous= ionisation on).
  It is not allowed to select other menu choices during calibration.
  After calibrating the date and time of the *Last calibration date* will be updated on the information page.



6.4 Operating modes (expert)

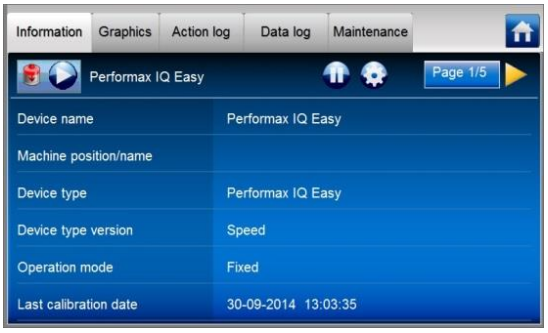
The bar has 4 operating modes:

1 Fixed
  The bar has a fixed ionisation. Ionisation works like a Performax Easy bar. A fixed number of positive and negative ions are produced. Depending on the application, the static charge will be neutralised and residual charge will remain.
2 Manual
  For test applications or very specific applications the ratio between positive and negative ions can be set manually. This is done by entering a ratio number. Usually, an even number of positive (+) and negative (-) ions will be produced = 50/50 (fixed).
  By entering a number other than 50, e. g. 60, 60 % positive and 40 % negative ions are produced.
3 CLFB (Closed Loop FeedBack)
  For this mode a Sensor bar IQ Easy bar has to be connected to the platform. After the film or object to be neutralised has passed the Performax IQ Easy, the sensor will measure the residual charge. This value is communicated to the ionisation bar which will regulate the ratio of positive and negative ions automatically, so that the residual charge will be as close to neutral (0) as possible.
4 Auto tune (not yet available)

GB

To select the different modes, go to expert mode 6.2 (if not selected earlier):

- Click on the *Information* tab of the Performax IQ Easy []



- Click on the settings button 

- Click on *Operation* mode 
- Select the desired operation mode (*Auto tune* is not available at this time)

6.4.1 Operation mode Manual

After *Manual mode* is selected, go to the parameter *Balance* using the next page  symbol.

- Click *Balance,* then  and enter the ratio of positive ionisation using a number 0-100.
- Confirm the selection by clicking  .
  The ionisation will now be continued with this setting.

6.4.2 Operating mode CLFB (Closed Loop FeedBack) with sensor IQ Easy

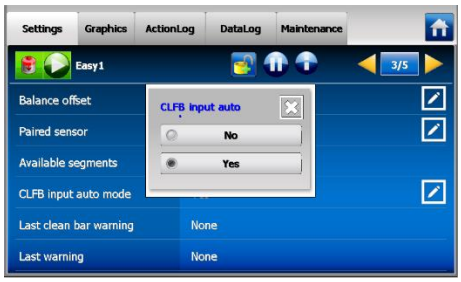
After CLFB mode is selected, go to the parameter *Paired* sensor using the next page symbol.
The sensor bar has to be connected to the Performax IQ bar now.

- Click *Paired sensor*

- Select the Sensor IQ Easy which will provide the anti-static bar with measurement values.

Segment selection can be done in several ways:-

Click behind *CLFB input auto mode* to chose *Yes* or *No*.



- At choice *Yes* all segments of the selected Sensor IQ Easy will be used.

- At choice *No* you can select which segments will be used.
  This may be necessary in case you are using a smaller conveyor and hence a segment of the sensor will be outside of the area of the conveyor. The anti-static bar will then calculate using the average measurement values of the active (enabled) segments.

- To disable a segment, click behind *Enabled segments*.

GB

- Select the segments to be disabled.
- Confirm the selection with 

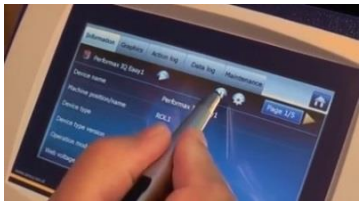
The anti-static bar will now use the average (avg) of the enabled segments to regulate ionisation.

6.5 Anti-static bar standby & active and set autorun

By default, the bar will become active once the Manager has gathered all the information, because the parameter autorun is set to *yes*.

On each tab, you can set the device to standby  or active  mode.

The status is indicated in the left upper corner by means of the background colour of the  icon:
Green = standby, blue = running, orange = warning, red = alarm.



If you do not want the bar to activate automatically after a power interruption or disconnection, the autorun parameter in expert mode (6.2) has to be set to no.

[ (n)x  *Autorun*  “No”]

6.6 Anti-static bar information parameters (expert mode)

If desired, various information parameters can be entered as required to make the different devices more recognisable.
If desired, adjust the parameters: Device name, Machine position, Mounting distance, Web width, Web speed. These are information parameters neither the bar or the Manager will use for calculations.

- Select the information page with the parameters to be changed by:
- [ (n)x  “parameter  “, enter name or value”, confirm with ]

6.7 Switching bar remotely on/off through the remote on/off input on the Manager or via fieldbus (expert mode)

If desired, the Manager can be switched on/off using the remote on/off input of the Manager or by means of an instruction of the optional Fieldbus (see user manual of the Manager).
Using this, one machine control can switch several selected devices on/off at the same time without any actions by the operator, including this bar.
For selecting this, the *Remote on/off source* parameter has to be changed from *Continuous* to *Remote* or *Fieldbus.*

- [ (n)x  “*Remote on/off source*”  select *Remote* or *Fieldbus*]

6.8 (De)activating Datalogging

If desired, the Manager can log data regarding the operation of the bar.
To (de)activate this data logging, the parameter *Datalogging* has to be changed.
For detailed information on datalogging, please refer to the manual Manager IQ Easy.

- [ (n)x  “*Data logging*”  select *On* or *Off*]

6.9 Setting clean bar warning level (expert mode)

After calibrating the bar (6.3), the IQ Easy bar will continuously monitor the effectiveness of the bar. Should the effectiveness get below the set *Clean bar warning* level due to dirt, covering or other cause, a warning (orange LEDs on the bar and orange background for the icon on the Manager) will be generated on the Manager.
By default, this level is set standard to 50 %, but it can be set to a different value in specific cases.

- [,  , (n)x  “*Clean bar warning level”*  slide slider or with  to the desired value and confirm with ]

6.10 Commissioning the anti-static bar with a 24 V power supply

If the bar is connected to a 24 V power supply without the Manager, the bar will not have IQ functionality. The bar can however be switched on/off remotely with the pin on the M12 connector and feedback will be provided on whether the high voltage is active on the corresponding pin of the M12 connector (see figure 7).

- Remove the protection cover of the anti-static bar.
- Switch on the power supply of the anti-static bar.
- Connect 24 V DC to the Remote On/Off input of the bar*.
- When 24 V DC supply voltage is connected and the Remote On/Off input is activated, the anti-static bar will be switched on.

* With a desktop power supply provided by Simco-Ion, the Remote on/off is already connected internally with the 24 V supply voltage. If this power supply is used, the bar will hence be activated as soon as the power supply is switched on.

GB

7 Functional check

7.1 Functional check via the LEDs (connected to the IQ Easy platform)

The colour of the status LEDs on the anti-static bar indicates the status of the anti-static bar.

Table 1, overview status indication anti-static bar

Display indication	LED indication	Status	High voltage
Green	Green flashing 1 Hz	Standby	Off
Blue	Green on	In operation	On
Orange	Orange	Clean bar	On/Off*
Red	Red on	High voltage overload	On
Grey	Red flashing 5 Hz	No communication (IQ)	On/Off*

* The high voltage can be on or off, depending whether the bar is/was active or on standby.

7.2 Functional check via the Manager IQ Easy

The display of the Manager IQ Easy displays information on the status of the anti-static bar.
On the main screen as well as on the device screens, the status of the bar can be viewed by means of the background colour behind the icon  :
Green = standby, blue = running OK, orange = warning, red = alarm.

Detailed information is provided on the *Information, Graphics, Action log* and *Data log* Tab.

7.2.1 Information tab

With the  buttons you can scroll through the various pages.
Information regarding the operation to be found here:

- *Ionisation Efficiency* xx%: indicates the effectiveness of the bar. Should the bar be dirty or covered, this value will drop. If the bar is set on standby, this value will be 0 %. The value between the brackets will indicate the most recent value, e. g. 0 % (98 %).
- *Ionisation current [uA]*: both the negative and the positive ionisation current the bar provides will be displayed here.
- *Balance offset* +40/60-
- *Last clean bar warning*: indicates if and when the last warning has been issued that the efficiency of the bar has dropped below the set *clean bar warning level*.

If a sensor bar is connected to the Performax IQ Easy bar, the display will also show:

- *Web voltage* [kV]: The current average (residual) charge measured of the active segments of the sensor bar.
- *Web voltage* peak [kV]: The maximum measured average negative & positive (residual) charge of the active segments of the sensor bar (during the last logfile refresh time). Every time the logfile is written, this value will be reset to 0.

7.2.2 *Graphics* tab

The *Graphics* tab graphically shows the operation as function of the time.

- Yellow: the positive and negative ion current.
- Blue: the efficiency of the bar

If coupled with a sensor bar:

- Green: the average (residual) charge measured by the sensor bar.

If the screen is clicked somewhere, the screen will “freeze”, and display *On hold.* Clicking the screen again will display the current value.

7.2.3 *Action log* tab

In the *Action log* tab, the changing status of the bar is logged step-by-step. This is indicated including the date and time the status change has occurred. Main messages:
- *HV OK*: the bar is turned on and is functioning properly
- *HV NOT OK*: the bar is turned off or the HV doesn’t function properly
- *CLEAN BAR*: the efficiency has dropped below the clean bar warning level.

7.2.4 *Data log* tab

In the *Data log* tab, all available measurement data of the bar is logged at fixed times.
If the parameter *Datalogging* is activated, these values will also be saved in the log file of the Manager. The interval between logging is determined by the setting in the Manager IQ Easy.
See user manual of the Manager in Chapter 6.6.3
Main measurement values:
- U- : the output voltage of the negative high-voltage.
- U+ : the output voltage of the positive high-voltage.
- I- : the output current of the negative high-voltage.
- I+ : the output current of the positive high-voltage.
- Eff: the efficiency of the bar

7.3 Functional check using the LEDs (connected to 24 V power supply (not IQ)

The colours of the status LEDs on the anti-static bar indicate the status of the anti-static bar.

Table 2, overview LED indication anti-static bar

LED indication	Status	High voltage	Signal HV OK
Green flashing 1 Hz	Standby	Off	Off
Green on	In operation	On	On
Orange	Clean bar	On/Off*	On/Off*
Red on	High-Voltage overload	regulated	Off
Red flashing 1 Hz	HV OK signal overload	On	Off

* The high voltage and signal HV OK can be on or off, depending whether the bar is active (Remote ON) or on standby (Remote OFF).

7.4 Causes for overloading

Causes for overloading of the high voltage may be:
- Fouling of the anti-static bar.
- Direct contact between conductive material and emitters.
  The anti-static bar is mounted too close to conductive (machine) parts.

Causes for overloading of the HV OK signal may be:
  Short circuit of the HV OK signal.
- Overload on the HV OK signal.

GB

8 Maintenance

 **Warning:**

- **Disconnect the power supply before carrying out work on the unit.**
- **The emitters are sharp and can cause injury.**

8.1 Regular cleaning of the anti-static bar

- Clean the emitters and the anti-static bar regularly with a hard, non-metallic brush.

8.2 Cleaning a heavily fouled anti-static bar

- Clean the anti-static bar using a suitable cleaning agent (such as isopropyl alcohol).
- Veconova 10 may also be used in the event of stubborn fouling (www.eco-nova.nl)
- Allow the anti-static bar to dry completely before using it again.
- If removing the anti-static bar for cleaning / replacement, see section 5.5.

9 Faults

Warning:

- **Disconnect the power supply before carrying out work on the unit.**
- **The electrical installation must be carried out by an electrical engineer with the relevant training and qualifications.**

Table 3, faults when connected to a IQ Manager

Signalling	Problem	Cause	Solution
LEDs on anti-static bar do not light up	No high voltage on the emitters	No supply voltage	Switch on Manager
		Wiring fault	Detect fault and repair, see 5.6
LEDs on anti-static bar flashing green 1 Hz	No high voltage on the emitters	Bar is in standby mode	Turn on the bar using the Manager
		No Remote on/off signal from Manager Remote on/off source= Remote input1	Send remote on signal on I/O connector of the Manager or select Remote on/off source = continuous
LEDs on anti-static bar light up red	Anti-static bar overload	Anti-static bar is dirty	Clean anti-static bar
		Anti-static bar mounted too close to conductive machine parts.	Move anti-static bar
LEDs on anti-static bar light up orange	No/poor ionisation, but high voltage on the emitters	Anti-static bar is dirty	Clean anti-static bar
		Emitters are damaged	Replace the anti-static bar
		Anti-static bar positioned incorrectly	Reposition anti-static bar, see section 5.2
		Emitters are covered	Remove cover
LEDs on anti-static bar flashing red (1 Hz) However, high voltage to the emitters.	High voltage not maximum	Supply voltage too low	Check 24 V DC Manager or increase diameter of connection cable or shorten the connection cable
		Internal temperature too high	Check for metal parts close to the bar.
LEDs on anti-static bar flashing red (5 Hz)	No communication with IQ Easy platform	If connected to outputs 5 or 6: these are configured for analog I/O	Select Serial mode in the Backplane of the Manager
		Wiring fault	Detect fault and repair, see 5.6.1

Table 4, faults when connected to a 24 V DC power supply

Signalling	Problem	Cause	Solution
LEDs on anti-static bar do not light up	No high voltage at emitters	No supply voltage	Switch on supply voltage
		Wiring fault	Locate fault and remedy, see 5.6
LEDs on anti-static bar flashing green	No high voltage at emitters	No remote on/off signal	Connect/activate remote on/off
		Wiring fault	Locate fault and remedy, see 5.6.3
LEDs on anti-static bar light up red	Anti-static bar overloaded	Anti-static bar fouled	Clean anti-static bar
		Anti-static bar fitted too close to conductive machine parts	Move anti-static bar
LEDs on anti-static bar light up green	No/poor ionisation, despite high voltage at the emitters	Anti-static bar fouled	Clean anti-static bar
		Emitters are damaged	Replace the anti-static bar
		Anti-static bar incorrectly positioned	Reposition the anti-static bar, see 5.2
		Emitters are covered	Remove the cover
LEDs on anti-static bar flashing red (1 Hz)	High voltage at the emitters, no HV OK signal	HV OK overloaded	Load HV OK differently
		Wiring fault	Locate fault and remedy, see 5.6.3
LED on anti-static bar flashes red (5 Hz)	No communication with IQ Easy platform	During power up the possibility of communication is checked	Ignore during power up

10 Repairs

Warning:

- **Disconnect the power supply before carrying out work on the unit.**
- **Electrical installation and repairs must be carried out by a skilled electrical engineer according to the applicable national and local regulations.**

Performax IQ Easy and Performax IQ Easy Speed parts cannot be repaired. To order parts, see the spares list.

If you have any problems or are unsure, please contact Simco-Ion or your regional agent.

Simco-Ion advises you to send the anti-static bar to Simco-Ion for repairs.
The RMA procedure can be used for returning a SIMCO-ION product.
An RMA number can be requested by running through the Internet form procedure which can be found at https://www.simco-ion.co.uk/repair/
Pack the Simco-ION product properly and mention the RMA number clearly on the outside of the package.

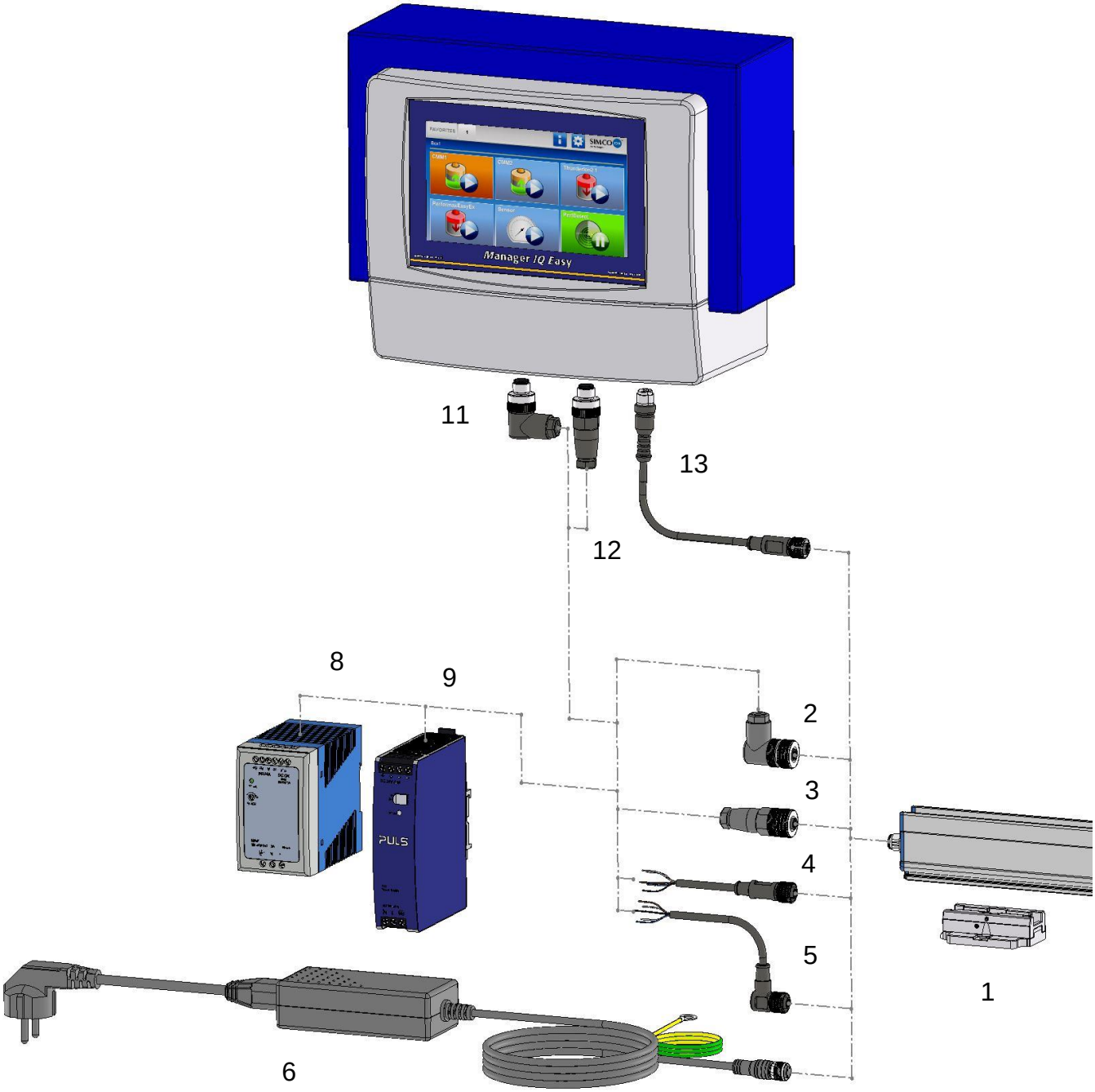
- Dismantling anti-static bar: see section 5.5

11 Disposal

Once the device has reached the end of its operating life, do not dispose of it in the garbage but return it back to one of the official collection centres. This will help protect the environment.

GB

Spare parts



No.	Part number	Description
1	4532000100	Mounting bracket (Bracket Bars)
2	7519020355	Connector device M12 female angled ø4-6 mm cables
	7519020356	Connector device M12 female angled ø6-8 mm cables
3	7519020350	Connector device M12 female straight ø4-6 mm cables
	7519020351	Connector device M12 female straight ø6-8 mm cables
4	7519020365	Cable device M12 female, straight 5 m
	7519020366	Cable device M12 female, straight 10 m
	7519020380	Cable device M12 female, straight 10 m shielded for cable carrier
5	7519020375	Cable device M12 female, angled 5 m
	7519020376	Cable device M12 female, angled 10 m
6	4524001200	Desktop power supply, 100 - 240 V AC to 24 V DC with 1 output
8	7519020425	DIN rail power supply, 100 - 240 V AC to 24 V DC 4 A

9	7519020430	DIN rail power supply, 100 - 240 V AC to 24 V DC 3,3 A (UL listed)
11	7519020357	Connector M12 male, angled ø4-6 mm cables
	7519020358	Connector M12 male angled ø6-8 mm cables
12	7519020352	Connector M12 male straight ø4-6 mm cables
	7519020353	Connector M12 male straight ø6-8 mm cables
13	7519020390	Cable device M12 female-male, straight 2 m
	7519020391	Cable device M12 female-male, straight 5 m
	7519020392	Cable device M12 female-male, straight 10 m
	7519020386	Cable device M12 female-male, straight 5 m for cable carrier
	7519020387	Cable device M12 female-male, straight 10 m for cable carrier
	7519020383	Cable device M12 female-male, straight 5 m shielded for cable carrier
	7519020384	Cable device M12 female-male, straight 10 m shielded for cable carrier

Note: **No. 8 and 9 are suitable for supplying power to a maximum of 4 Performax IQ Easy bars**

Spare parts can be obtained from the agent in your region or from SIMCO (Nederland) B.V.

SIMCO (Nederland) B.V.
Aalsvoort 74
NL-7241 MB Lochem
Telefoon +31-(0)573-288333
E-mail cs@simco-ion.nl
Internet http://www.simco-ion.nl

GB