HYPERION™
A Meech Innovation

November 2020

SmartControl™ Touch Launch Pack

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SmartControl™ Touch Introduction

The Hyperion SmartControl Touch is the latest innovation from Meech designed to meet the needs of modern automated industries and the growth of Industry 4.0 to achieve maximum productivity and quality of output.

SmartControl Touch allows the user to monitor, control and adjust the performance of multiple connected Hyperion ionising bars and sensors via the integrated touch-screen or remotely via a mobile phone, tablet, or remote desktop. The ionising equipment's performance is easily tracked by the SmartControl Touch, which uses Meech's Ion Current Monitoring Technology allowing the user to monitor the ionising performance.

SmartControl Touch unit has the capacity for up to six devices to be connected. An additional 12 devices can be connected using an expansion unit, with a maximum of 2 expansion units per SmartControl Touch.

This means that a single SmartControl Touch unit can be used to monitor and control up to 30 devices.

SmartControl Touch and Industry 4.0

The term Industry 4.0 refers to the latest phase in the Industrial Revolution. It focuses heavily on interconnectivity, automation, machine learning, and real-time data. Industry 4.0 is also sometimes referred to as Smart Manufacturing or IIoT (Industrial Internet of Things).

Industry 4.0 unites production and operations with smart digital technology and machine learning and big data for better connected and more holistic manufacturing and supply chain management.

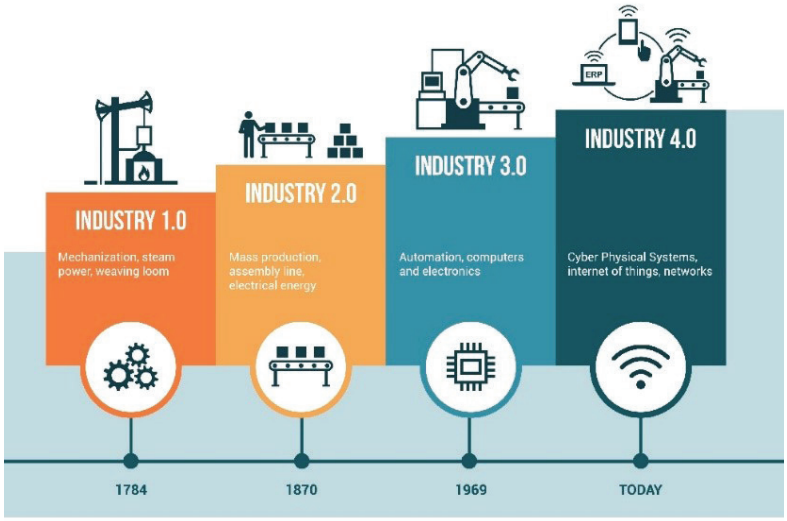


Image by Aberdeen Group

SmartControl Touch installed on production equipment is designed to harness Industry 4.0 to provide optimal ionisation. This is achieved by use of real time monitoring, data logging, automatic adjustment of connected ionising bars through use of connected sensors and interconnection with PLC (coming soon).

Surveys of manufacturers who have implemented Industry 4.0 into their manufacturing report a number of benefits, including:

- Reduced costs
- Improved equipment uptime and availability
- Increased operations speed
- Improved Product Quality
- Improved Safety

Product Development and Versions

The SmartControl Touch has been developed from the original SmartControl unit and through user trials and evaluations. The new SmartControl Touch has several additional features which include:

- 10” Integrated touch-screen
- Data logging
- Compatibility with Meech voltage and distance sensors
- Ability to connect up to 30 devices via extension boxes

Note: the original SmartControl is replaced by SmartControl Touch and will no longer be available.

SmartControl Touch versions:

Depending on requirements the user will be able to choose between two versions of SmartControl Touch. Both versions have identical specification except for the network connectivity.

Local Area Network (LAN) Version

LAN version which includes remote access to SmartControl Touch through the LAN Ethernet connection and the SmartControl Touch IP address. Remote access via the IP address allows the SmartControl interface to be accessed on a remote screen provided it is on the same local network. Examples include mobile phones, tablets, desktop computers, monitors etc.

Meech2PLC - PLC Connection Version (Not yet available - First Quarter 2021)

For customers wishing to integrate SmartControl Touch with their existing PLC’s. The SmartControl Touch is available with the option of an integrated industrial network module (Meech2PLC). The module is available for the most popular industrial network protocols, including Profinet, EtherNet/IP, Profibus DPV1, Modbus-TCP, and EtherCAT industrial networks.

Note: When SmartControl Touch is connected and controlled by the PLC via the industrial Network, connector adjustments can no longer be made using the touch-screen on the unit.

	Touch Screen	**LAN Connectivity** for remote access on mobile phone, tablet, desktop monitor etc.	**PLC connectivity** via industrial networks e.g. Profinet, EtherNet/IP, Profibus DPV1, Modbus-TCP, EtherCAT	**Data Logging**	**1-6 devices can be connected**	**More than 6 devices can be connected** (Up to additional 24 devices can be connected using max. 2 extension units)	**Compatible with Meech voltage and distance sensors**
SmartControl Touch	✓	✓	-	✓	✓	-	✓
SmartControl Touch plus extension unit	✓	✓	-	✓	✓	✓	✓
SmartControl Touch with Meech2PLC†	✓	✓	✓	✓	✓	-	✓
SmartControl Touch with Meech2PLC† plus extension unit	✓	✓	✓	✓	✓	✓	✓

** When SmartControl Touch is connected to a PLC the user will not be able to change the settings via the LAN, but will only be able to view the screen.*

† Meech2PLC option for SmartControl Touch not yet available. Expected during 1st quarter 2021.

How SmartControl Touch Works

1. Meech Hyperion ionising bars and sensors are connected directly to the SmartControl Touch unit using the standard 4 Pole M8 connector. The SmartControl Touch unit also powers the connected device.

2. Operating performance and status information is displayed on the touchscreen or displayed remotely via the LAN Ethernet connection on a selected local display unit, such as a mobile phone, tablet, touch screen or monitor.

3. The operator can access the performance and status information and amend the operating parameters to achieve maximum productivity and quality output.

4. Data is logged by the SmartControl Touch of all parameters of connected devices. Data logs can be viewed on the touch-screen or remotely. Data log can also be downloaded as a Comma-Separated Values format (csv) format for additional analysis.

NOTE: SmartControl Touch requires that the latest Meech software is installed on connected Hyperion ionising bars. Therefore when ordering a SmartControl Touch the required connected ionising bars must also be ordered. Hyperion Ionising bars that do not have the latest software designed for use with SmartControl Touch will have restricted usability and are therefore not compatible with the SmartControl.

**All ionising bars will be compatible with SmartControl Touch from the available to ship date.*

Key Features and Benefits

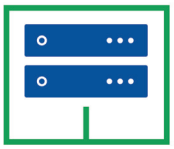
SmartControl Touch has been designed with key features to benefit busy industrial environments:

Touch-screen with User Friendly Interface

- Incorporated touchscreen which is clear and easy to use
- Requires minimal training

Monitoring and Control

- Make quick and easy changes to connected devices
- Increased productivity and quality control on production lines through fast, accessible monitoring
- Remote monitoring and control via LAN Ethernet connection – allowing increased flexibility to monitor and control the system



PLC Industrial Network Integration (optional)

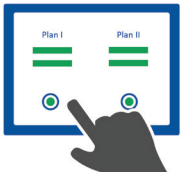
- Protocols including Profinet, EtherNet/IP, Profibus DPV1, Modbus-TCP, EtherCAT
- Plug-and-Play - for fast and easy installation

Connections

- Only one SmartControl Touch is needed for the central control of six devices
- In total up to thirty Hyperion devices can be connected via expansion units.

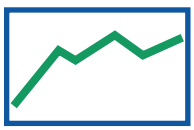
Sensor and Voltage Compatibility

- The SmartControl Touch will be voltage and distance sensor compatible - For more accurate neutralisation of all charges on the material.



Two Configurations

- Two configurations are available: the SmartControl Touch with LAN or SmartControl Touch with industrial network connectivity (Meech2PLC).



Data Logging

- Data monitored by SmartControl Touch can be viewed on screen in graphical format or exported in CSV format for additional analysis.

Alarm Output

- Contact free alarm output to signal alarm status e.g. for use with alarm sounder, beacon or for connection to PLC.

User Interface

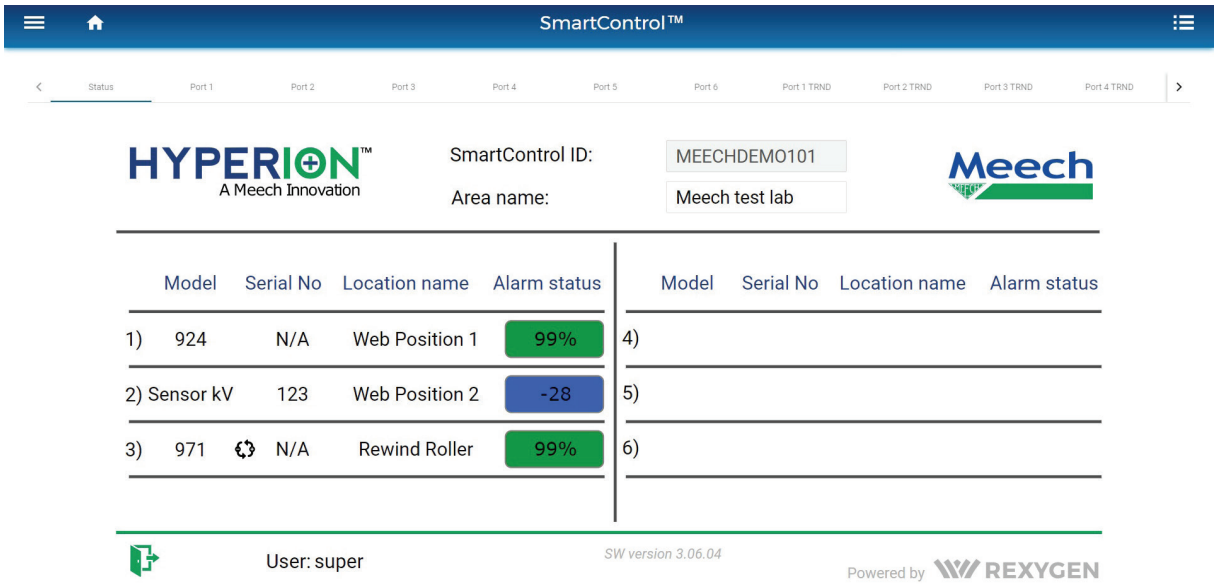
SmartControl Touch is designed to enable the user to be able to quickly view the status of connected devices and make adjustments as required.

Below are some examples of the main screens and the information that can be viewed and adjusted.

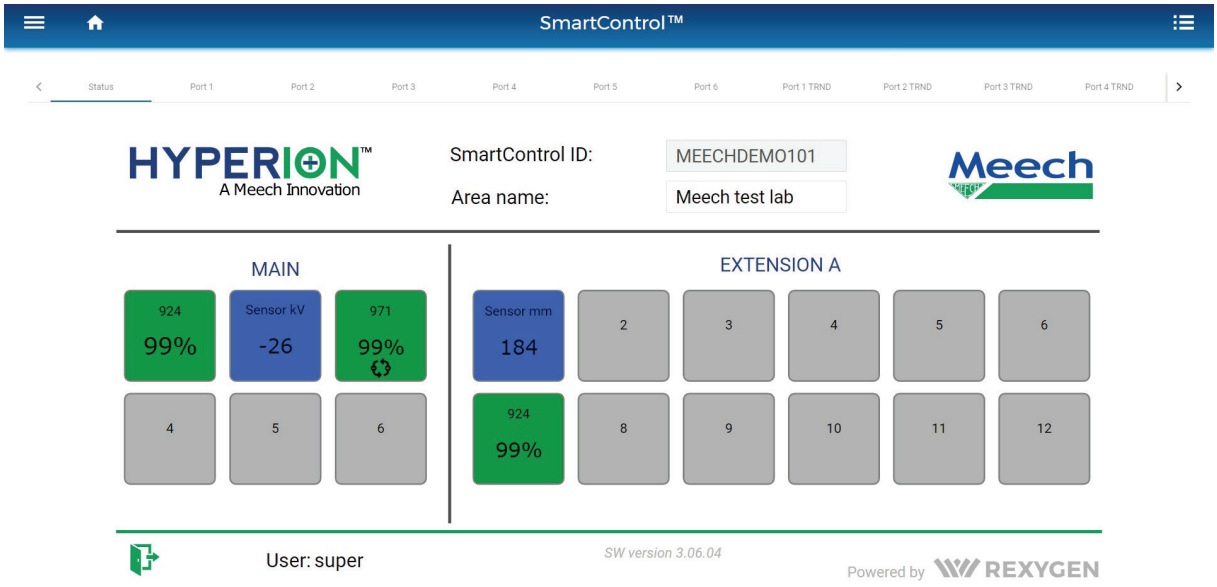
Status Screen

The main screen is the status screen which shows the connected devices and the status of connected ports.

Green = Port OK; Blue = Sensor OK; Amber = Port ATTENTION; Red = Port ERROR/CRITICAL.
Each port can be selected as per port page example below, where you can view and adjust the settings of individual devices.

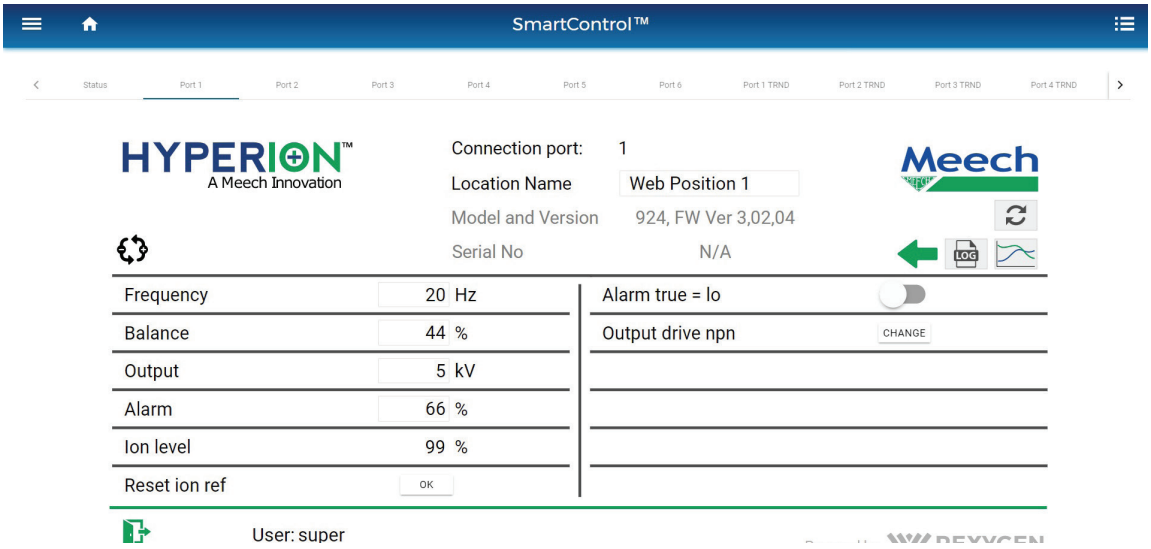


Status Screen when optional extension box is attached



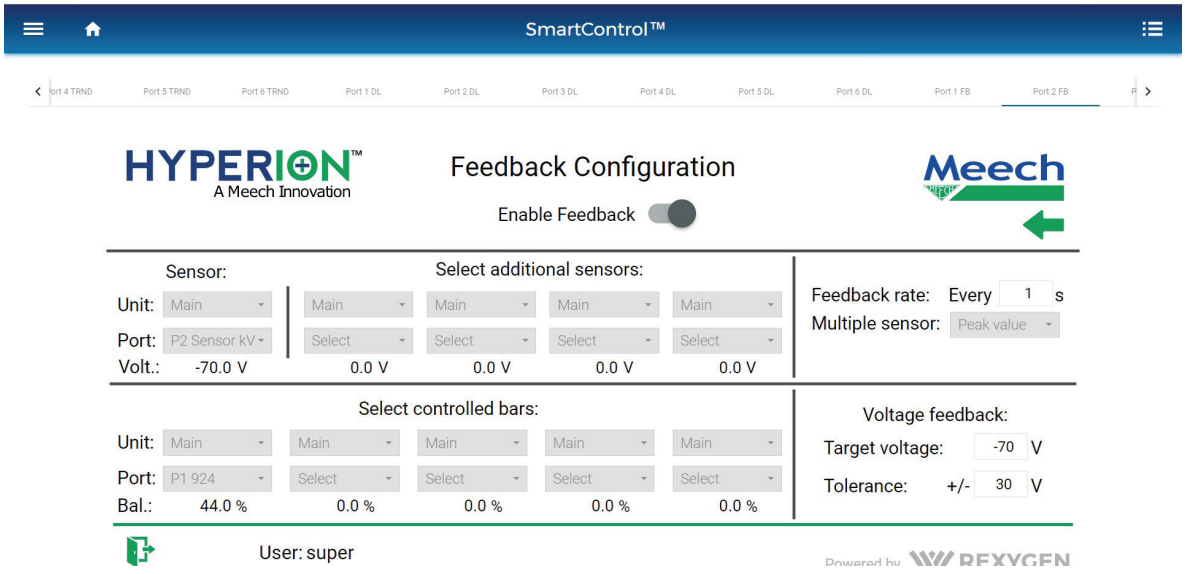
Port Page

This screen shows the current settings and allows the user to make adjustments.



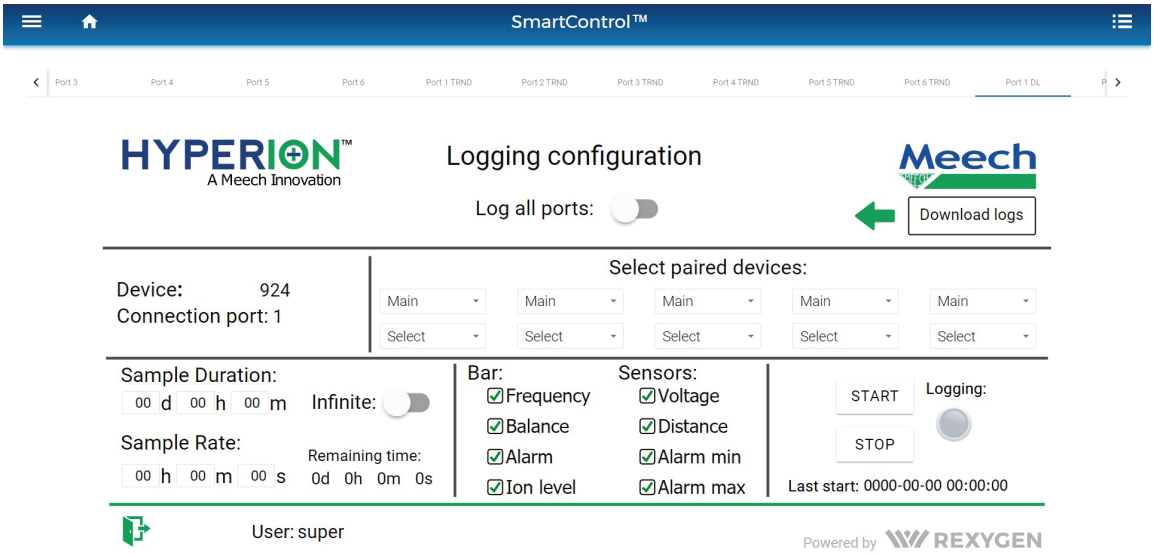
Voltage Sensor Page

This screen shows how sensors can be paired with a Hyperion bar connected to one of the other ports for closed loop feedback.



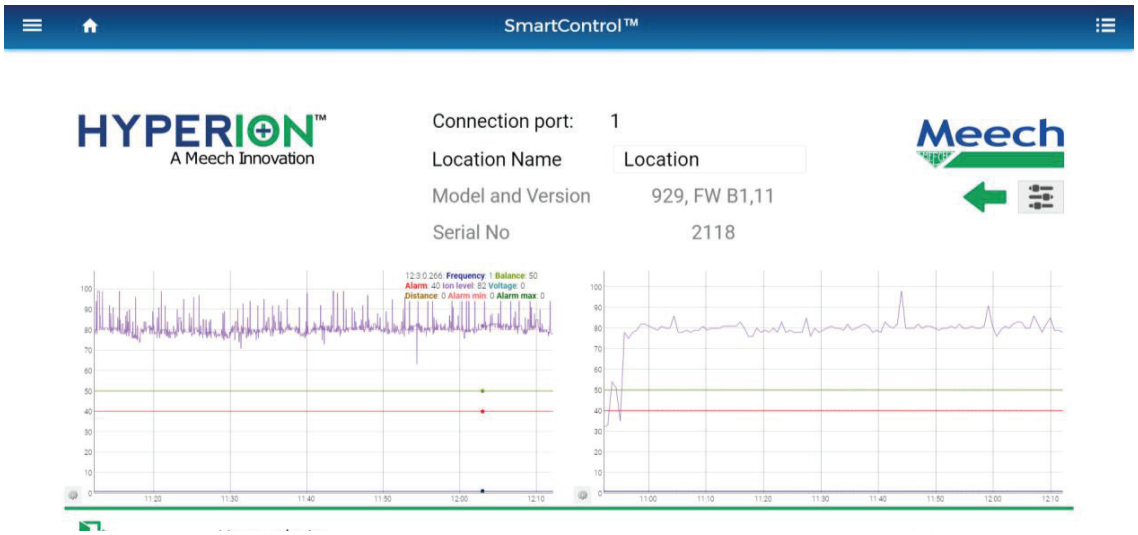
Data Logging Setup Page

This screen shows the options and settings for data logging.



Trend Plot Page

This screen shows trend plot for a selected port so that the user can assess the status of the connected device in a graphical format over a chosen time frame.



Target Market

The target market for SmartControl Touch is typically larger OEMS's and end users where multiple bars and sensors are installed and where the process control and monitoring is critical.

SmartControl Touch will be suitable for both new and existing customers. Existing customers will benefit from the simplified monitoring and control features that in the past have typically required each ioniser to be individually connected to a BarMaster remote programmer. Whilst new customers will benefit from the SmartControl Touch when they install their Hyperion ionising bars. In both cases it will allow them to monitor and control the performance and make adjustments as necessary; ultimately allowing all Hyperion devices to be run at their optimum level.

Please note: Existing customers will need to purchase new Hyperion ionising bars to work with SmartControl Touch. This is because the ionising bars require the latest software revision designed to integrate with SmartControl Touch. Hyperion Ionising bars that do not have the latest software designed for use with SmartControl Touch will have restricted usability and are therefore not compatible with the SmartControl.

**All ionising bars will be compatible with SmartControl Touch from the available to ship date.*

Example Applications

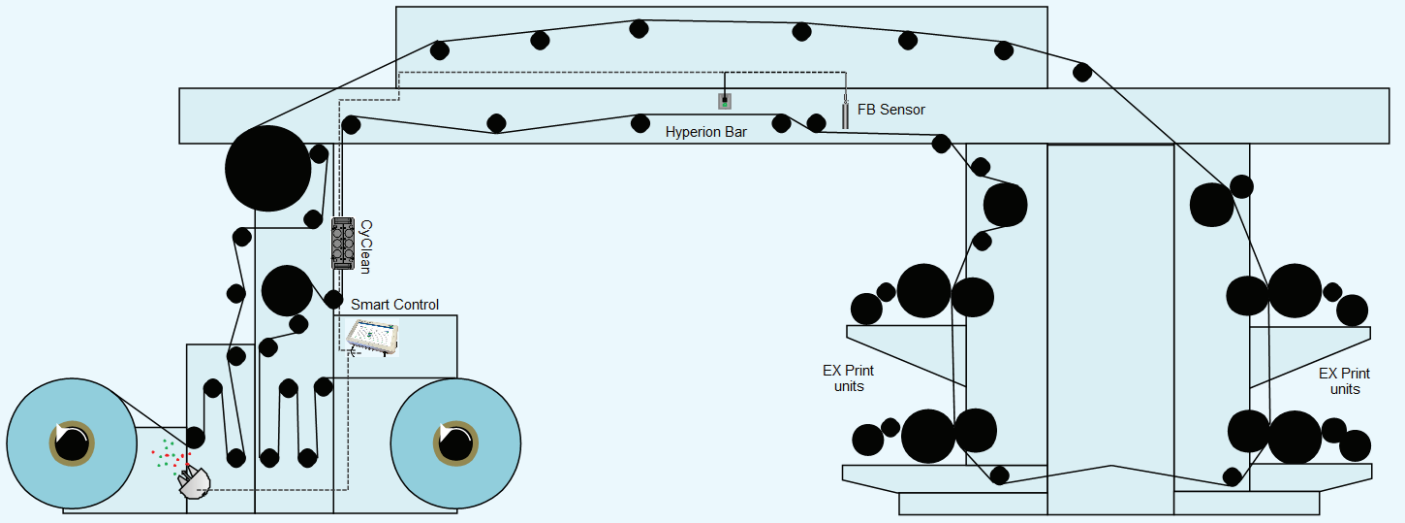
SmartControl Touch is particularly suited to applications where process control is critical to optimise productivity.

Some examples of applications where SmartControl Touch may be used are shown below.

Flexoprinting

Controlling the static charges on the web prior to it entering an EX zone, is key to preventing fires.

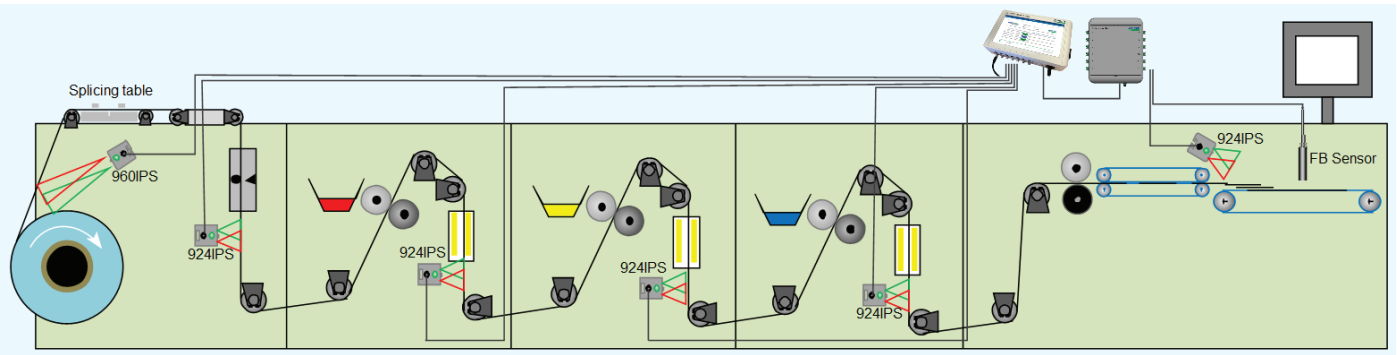
In this example, a SmartControl Touch is used to monitor residual static charges on the web after passing the ionising bar, automatically adjusting the bar to compensate for any charges measured. The residual static charges are data logged, providing a permanent record. Note that it is possible to set the minimum and maximum target offset voltage for a bar. SmartControl Touch will be able to be interlinked to the PLC allowing for alarms or auto shut-down of the press, in the event that charge exceeds a safe working level.



Offset Label Press

Controlling static charges on a narrow web printing press is beneficial in improving print & product quality. Failure to control static charge can result is the attraction of contamination to the web, which transfers to print plates producing poor product quality and customer complaints.

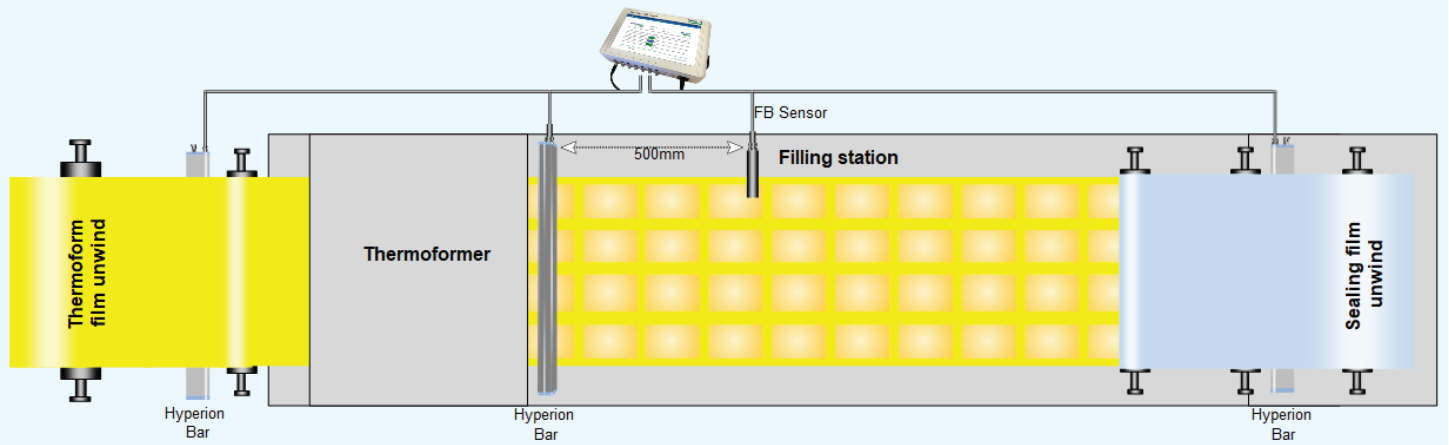
In the example below, a SmartControl Touch and expansion unit is being used to monitor the ionising bar performance through the print process. A voltage sensor installed at the end on the print process, monitors, data logs & auto adjusts the last bar, control residual levels of charge in the finished product, reducing the risk of customer complaints.



Food and Beverage Packaging

Food and beverage packaging is susceptible to electrostatic attraction of contamination, operator shocks during handling, and automated stacking problems.

It is important that static charges are controlled during the production process. The ability to record the level of static charge on the finished product gives customer confidence and manufacturing security. Knowing the ionising system is performing at optimum, will maximise productivity, profit and customer satisfaction.



Product Compatibility

The table below shows a list of Hyperion products that are compatible with SmartControl Touch.
**All ionising bars will be compatible with SmartControl Touch from the available to ship date.*

Model Number	Benefits
924IPSV2	Powered by 24V DC the Hyperion 924IPSV2 is the most compact pulsed DC bar available on the market. The bar can be optimised for specific applications, including very sensitive applications such as RFID.
929IPS	Compact Mid-Range pulsed DC ionising bar with Integrated Power Supply (IPS). Powered by 24VDC.
960IPS	Compact pulsed DC ionising bar with Integrated Power Supply (IPS). Powered by 24VDC, the 960IPS delivers powerful ionisation for close to midrange applications. The 960IPS is the latest development, replacing the 929IPS and 971IPS-15kV.
971IPS-15	Powered by a +/- 15kV 24V DC Integrated Power Supply (IPS), the 971IPS-15 provides excellent long range ionisation. Designed to be easily installed, the 971IPS-15 eliminates the need for high voltage cabling.
971IPS-30	Long-Range Pulsed DC Ionising Bar powered by a +/- 30kV 24V DC Integrated Power Supply (IPS), making it the most powerful ionising bar in the Meech range. The 971IPS-30 suits long-range applications with operating distance 450mm-1500mm.
959IPS	Versatile ionising air curtain providing is an extremely versatile product that provides effective static neutralisation and dust removal for a wide range of industrial applications. The unitC comprises a Hyperion 924IPS mounted on a Meech energy saving air curtain. Combined for a they provide a high speed laminar sheet of ionised air.

Available with future SmartControl Touch update (date TBC)

Model Number	Benefits
233V4	Compact and powerful 15kV Pulsed DC Controller, designed with the ability to di-rectly power two Meech pulsed DC ionisers. If additional ionisers are required, these can be connected via splitters. The versatility and flexibility of the 233v4 make it suitable to use in a wide range of industries, with the advantage of a simple installation and controller set-up procedure.
994CG	The Hyperion 994CG Compact IML Generator was developed for the In Mould La-belling (IML) market, Meech has designed the 994CG to meet the growing demand for a compact, lightweight generator to fit on the end of a robot arm. The 994CG is the only generator to feature 4 x 25kV outlets, allowing the coupling of Meech Hy-dras without the need for a splitter. Powered by a 21-30V DC supply it is one of the most powerful compact IML Generators available.
IonCharge30 (15W)	IonCharge30 uses advanced high voltage technology and software for a controlled static charge via our range of static generator bars and pinning heads. The static charge is used to impart temporary bonding between materials. The IonCharge30 provides independently selectable voltage and current and the inclusion of a colour touchscreen interface provides simple adjustment and clear display of settings.
IonCharge50 (75W)	IonCharge50 (75W) static generator is designed for a range of applications. It uses advanced high voltage technology and software for a controlled static charge via our range of static generator bars and pinning heads. The IonCharge50 provides independently selectable voltage and current and the inclusion of a colour touchscreen interface provides simple adjustment and clear display of settings.

SmartControl Touch: Comparison with Simco IQ Manager (USA) / Manager IQ Easy (Europe & ROW)

		Simco
Device Connection Ports		
Number of Equipment (per unit)	6	6
Expansion Module	Yes (Up to 30 devices)	Yes (Up to 30 devices)
LAN (Ethernet)	Yes: 1x RJ45 8-pin connector	Yes: 1x RJ45 8-pin connector
USB port	3	3
Supply Voltage	24VDC	100 – 240 V AC nom. (90 – 305 V AC) 24 V DC 3/+10%
Protection Class	IP20	IP52
Weight	1.2kg	5,5 kg (100 – 240 V AC version) 3,9 kg (24 V DC version)
Design		
Extrusion	ASA, Polycarbonate	-
Dimensions	280mm x 59mm x 179.2mm	300mm x 150mm x 233mm
Mounting	4 x Case Mounts	“Universal” Mounting
Features		
Touch screen control	Yes- Inbuilt 10”	Yes- Inbuilt 7”
Data logging	Yes	Yes
PLC Connection	Yes (option)	Yes (option)

Key benefits of SmartControl Touch compared to Simco - IQ Easy Platform

- The Simco product and SmartControl Touch have touchscreen control and have a LAN connection meaning they can be monitored either at the machine or other areas of a company. However, the SmartControl Touch has a significantly larger screen that allows more information on status of connected devices to be displayed and has customisable data logging views.

SmartControl Touch Technical Data

Dimensions (WxHxD)	280mm x 170mm x 60mm
Weight	Approx. 1.2KG
Input Connection	4 pole M8 Murr
Device Output Ports	x6, 4 pole M8
Alarm Output Port	x1, 3 pole M8. Contact free
Housing Material	ASA + PC + FR
Input Voltage	24V DC
Input Power	96W required. Note: the number and length of connected bars is limited to maximum current draw of 3.5A.
Operating Environment	Industrial
Connectivity	USB, RJ45, Plus optional Industrial Network Connectivity
Mounting	4x Case Mounts
Password Protection	Yes

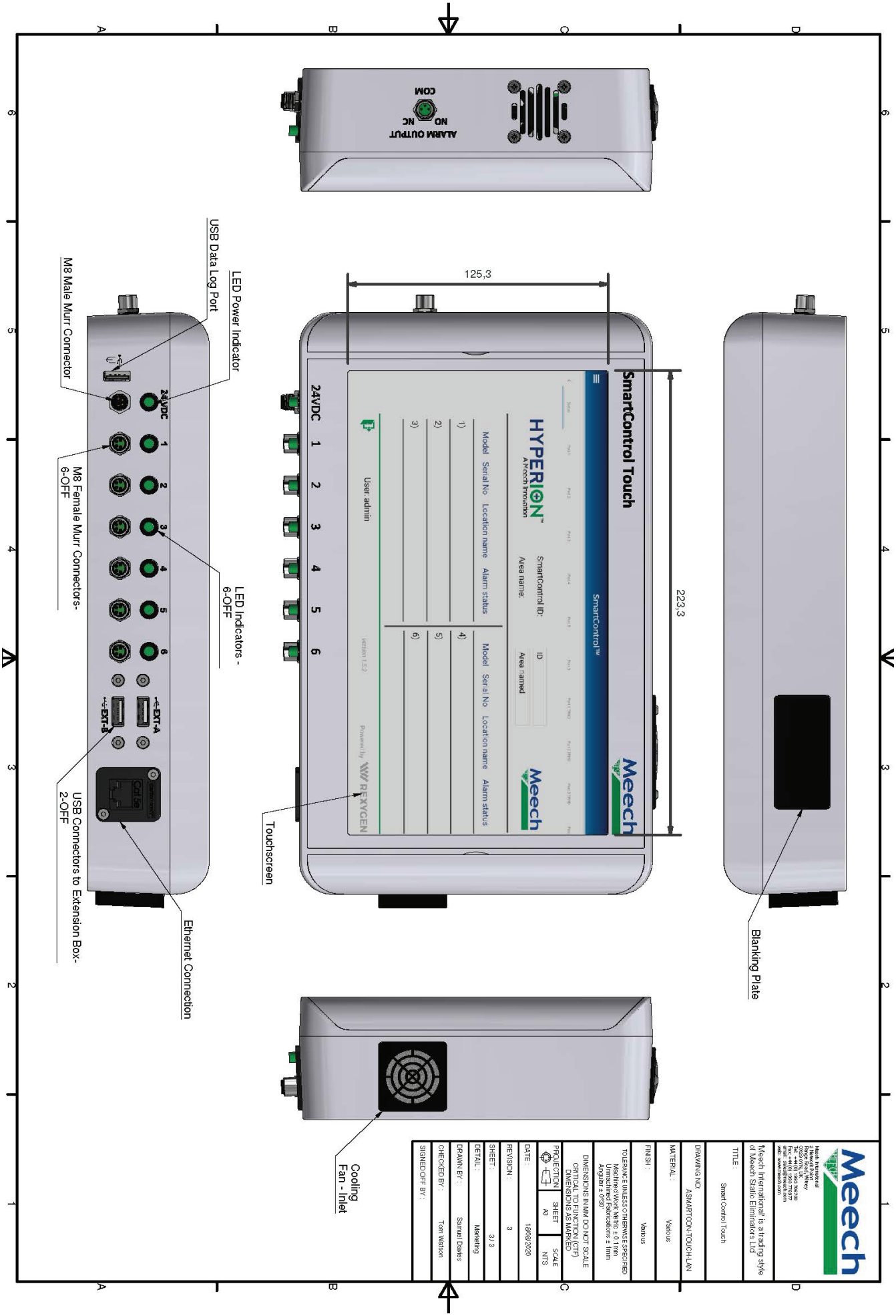
Pricing

Offering	Version	Price
SmartControl Touch	Local Area Network (LAN)	Refer to Static Control 2021 Price List
	Meech2PLC PLC Connection (Integrated) for protocols Profinet, EtherNet/IP, Profibus DPV1, Modbus-TCP, EtherCAT	
Extension unit (For extra 12 connected devices)	N/A	

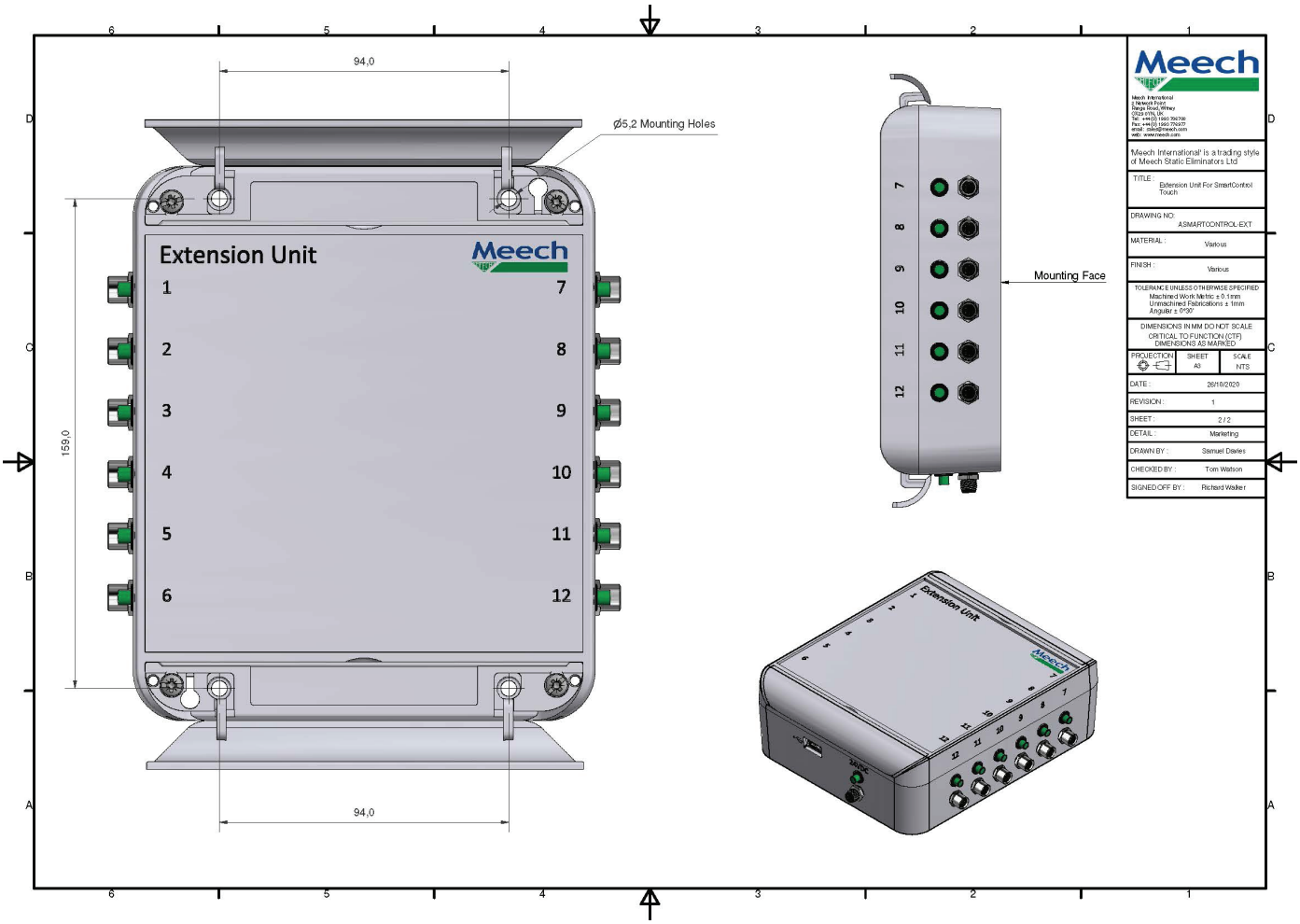
Launch, Availability and Demonstration

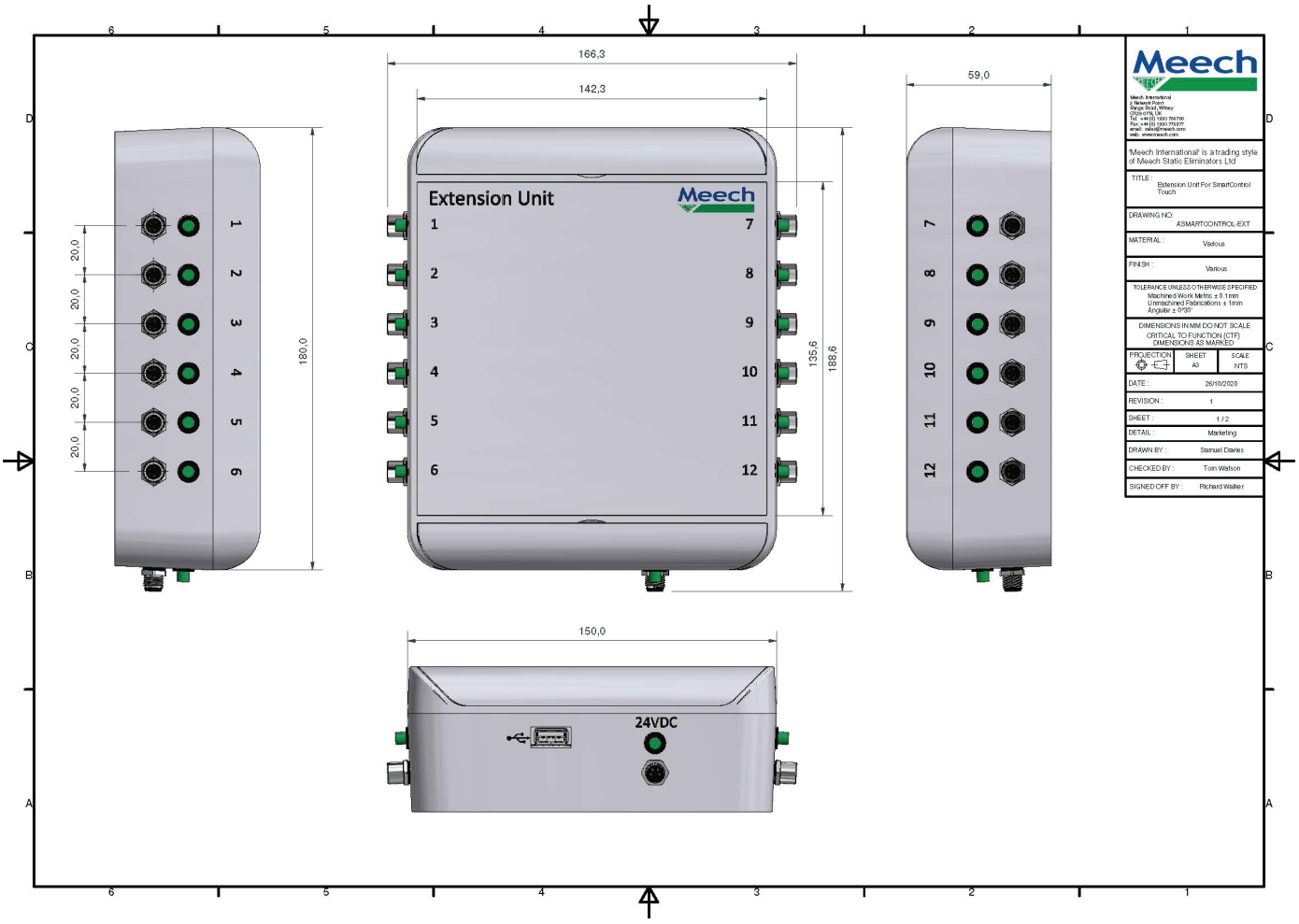
Available to order from: 9th November 2020
Available to ship: From 7th December 2020 - **All bars ordered after this time will be SmartControl compatible*
Lead time: 3 weeks from date of order

SmartControl Touch Technical Drawing



Technical Drawing for Extension Unit (optional)





All you need, from the best in the business

Meech is also a leading provider of:

- **Industrial Static Control Systems –** Eliminating unwanted static or creating a controlled static charge in industrial processes can increase productivity, reduce waste and enhance quality.
- **Web Cleaning Systems** – Typically used within the printing and packaging industries to remove contamination, improve print quality and increase productivity.
- **MAT Air Technology Equipment** - Industrial compressed air products that are energy efficient, reduce noise levels, cut costs and provide efficient cooling.
- **Surface Cleaning Systems** - IonWash, IonRinse and JetStream Air Knife Systems – Energy efficient 3D surface cleaning systems that are used for contamination and surface moisture removal.

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