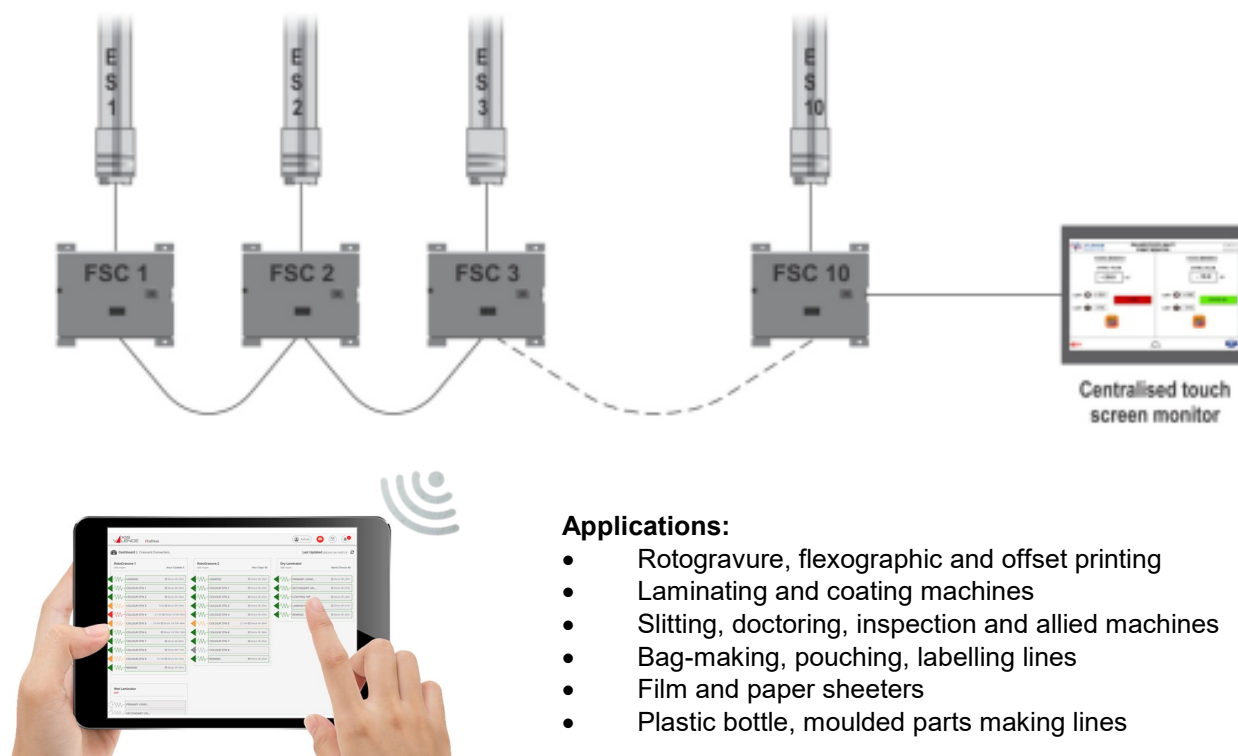


## SM20 real-time static charge monitoring system

The **Valstat® SM20** series real-time PLC based electrostatic charge monitoring system continually measures, displays and records surface voltage on charged moving objects. It is an extremely useful safety and preventive maintenance device that finds use in many industrial applications. Cloud based IoT - **iValstat** - can be optionally enabled.



### Applications:

- Rotogravure, flexographic and offset printing
- Laminating and coating machines
- Slitting, doctoring, inspection and allied machines
- Bag-making, pouching, labelling lines
- Film and paper sheeters
- Plastic bottle, moulded parts making lines

The Valstat® electrostatic sensor is fixed at the non hazardous location where the charge level on a moving target is to be monitored. Each sensor is connected to respective Valstat® field station controller, which in turn are connected to a common touch panel. Depending on the needed sensing points, the application, and requirements of the user, the common touch panel is suitably located for monitoring and control purpose.

The output signal from one to a maximum of eighteen Valstat® SM20 online electrostatic charge sensors can be connected to a colour touch panel for remote or local continuous monitoring and analytics. Data collected from these sensors can be used for raising an alarm when the measured value exceeds the optimal measurement range or a pre-set safety level. In addition, it is possible to store, retrieve and analyse data that is collected.

The discharge or neutralising effect of the installed static charge eliminator may also be efficiently monitored for continuous safety, preventive maintenance, etc. Expensive man-hours for inspection, testing and validation are also effectively reduced.

This system is distinct from a handheld static charge meter which is periodically used, and thus variations in measurement due to different operators, location and distance from the charged object are totally eliminated. A real-time, accurate and continuous signal proportional to the electrostatic charge is available for further analysis and diagnosis.

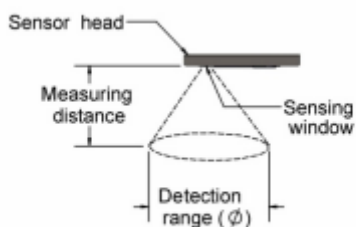
### Electrostatic sensor

- Measuring range -20kV to +20kV at 50mm
- Distance range 25 to 75mm, depending on the application
- Compact and easily mountable
- Current consumption < 40mA
- 5m length pre-wired cable
- Operating temperature 0 to 50°C
- Humidity 35 to 85% RH, non condensing



### Measuring distance and detection range

The relationship between the electrostatic sensor's installation distance and the detection range is as follows:



Measuring Distance (mm)	Detection Range Ø (mm)
25	100
30	120
40	150
50	180
60	205
70	225
75	235

### Field station controller

- Input supply : 230 V AC  $\pm 10\%$ , 50/60 Hz
- Operating temperature : 0 to 50°C
- Humidity : 10 to 85% RH, non condensing
- Communication ports : MODBUS RTU
- Relay output for alarm/indications

### Touch screen monitor

- Touch screen 4.3" to 10.1" depending on application
- Display of real-time electrostatic charges
- Normal / High static charge level indication
- System calibration
- Alarm display
- Data logging with optional cloud-based IoT feature
- Real time and historical trends

