

# Valstat®

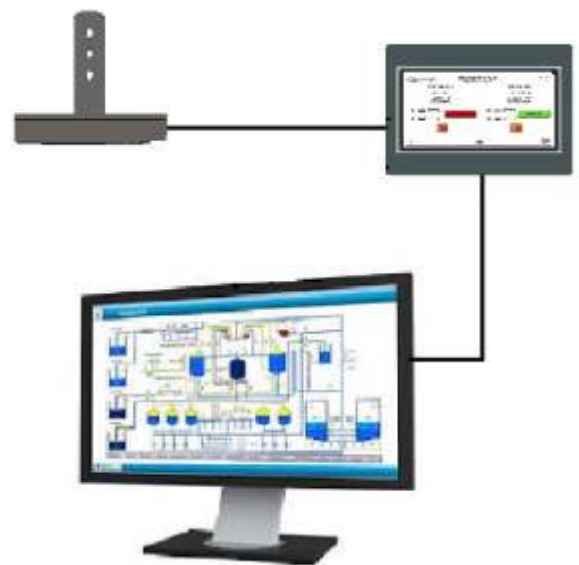
## REAL-TIME ELECTROSTATIC CHARGE MONITOR

The **Valstat® SM20** is a real-time electrostatic charge sensor which continually monitors surface voltage on charged moving objects. It is an extremely useful safety and preventive maintenance device that find use in many industrial applications.

### Applications

- Rotogravure, flexographic and offset printing presses
- 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
- FFS, other filling and overwrapping lines

Distinct from a handheld meter that is used to periodically measure static charges, the **Valstat® SM20** is permanently fixed on the location where the target is to be monitored. Hence, variations in measurement due to different operators, location and distance are totally eliminated and a real-time, accurate and continuous signal proportional to the static charge is made available for further analytics and diagnostics. The discharge or neutralising effect of the static charge eliminator is efficiently monitored for continual safety, preventive maintenance, etc. Expensive man-hours for inspection, testing and validation are thus effectively reduced.



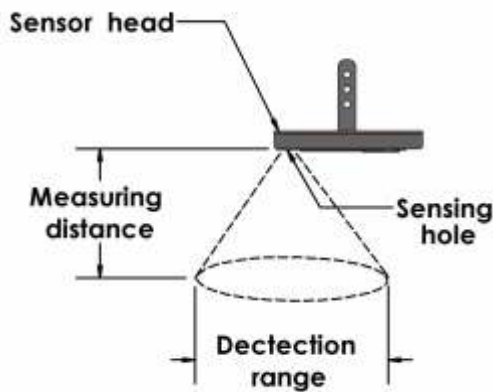
### Valstat® SM20 sensor features

- Measuring range -20kV to +20kV at 50mm
- Measuring distance range 25 to 75 mm, depending on the application (refer chart below)
- Compact and easy to mount
- Operates on 24VDC  $\pm 10\%$
- Current consumption < 40 mA
- RS485, 2 wire MODBUS slave protocols
- Operating temperature 0 to 50°C
- Humidity 35 to 85% RH, with no condensation



## 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

The output signal from one to a maximum of eighteen **Valstat® SM20** online electrostatic charge sensors can be connected to one or more colour touch panel HMIs for remote or local continuous monitoring and analytics.

Data collected from these sensors can be used for giving an alarm when the measured value exceeds the measurement range or a pre-set safety level, etc. In addition, it is possible to store, retrieve and analyse data that is collected.

## Touch screen monitor functions

- Touch screen in different sizes 4.3" to 12.1" depending on number of sensors used.
- Display of real-time static charges
- Normal / High static charge level indication
- Measuring distance selection
- Alarm display
- Switching digital output for alarm/warning
- Data logging, storage and analytics
- Real time and historical trends
- Data download facility



## Controller specifications

Power	24V DC ±15%, 6W Max.
Enclosure	IP66 protected touch screen
Operating temperature	0 to 50°C
Storage temperature	-20 to 80°C
Humidity	10 to 85% (noncondensing)
Communication ports	MODBUS RTU or Ethernet
Digital output for alarm / indications	PNP/NPN & relay
Data logging / saving	20MB (internal) & 32 GB (optional external SD card)