SensorShield-1600™ Spec Sheet

Version 1.0

SensorShield-1600™ follows the same self-cleaning principles as the ToughEye-1700™ line of cameras, providing industry-leading, zero maintenance, self-cleaning operation for rear-mounted optical sensors and cameras, suitable for any industrial application where a clear view is critical to the success of the operation. It continues to incorporate a rugged single-piece design, equipped with our field-proven and innovative ClearSight™ technology. One can simply integrate this shield into a sensor enclosure by replicating the indicated panel cutout and the hole pattern.
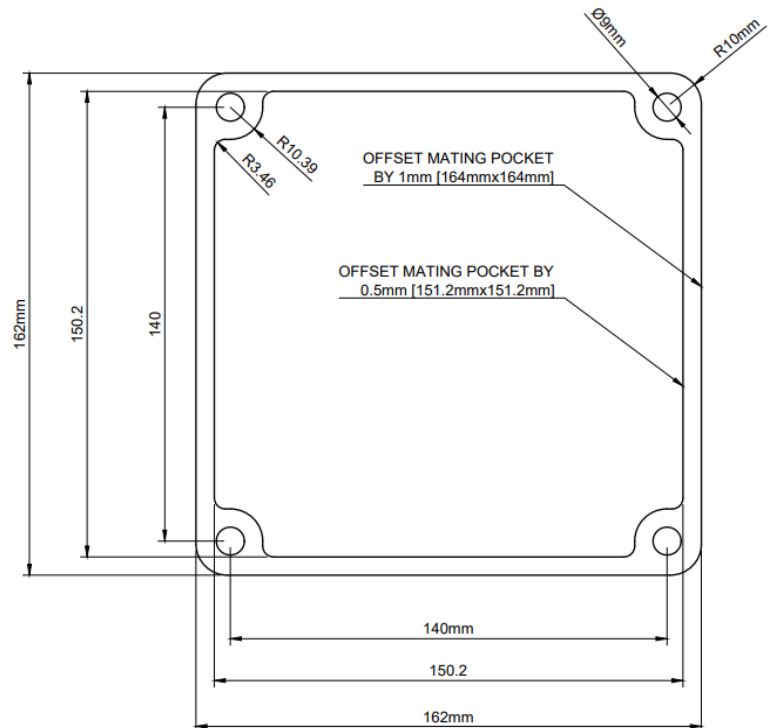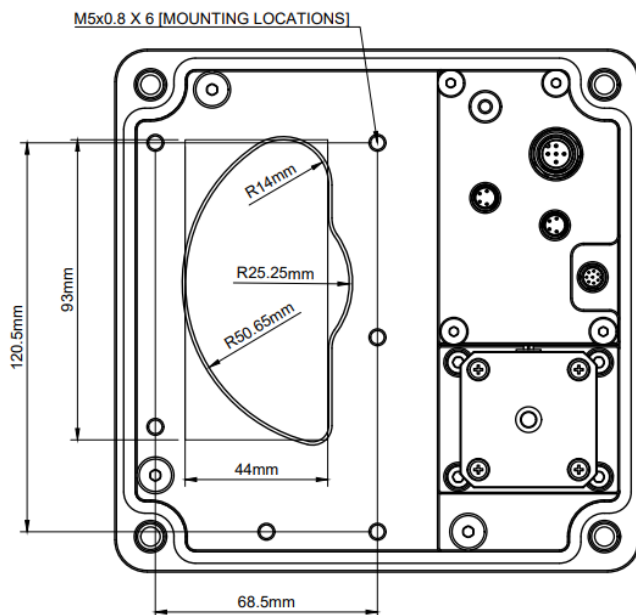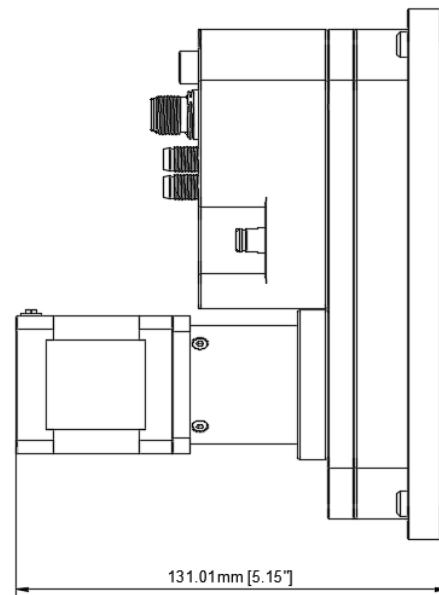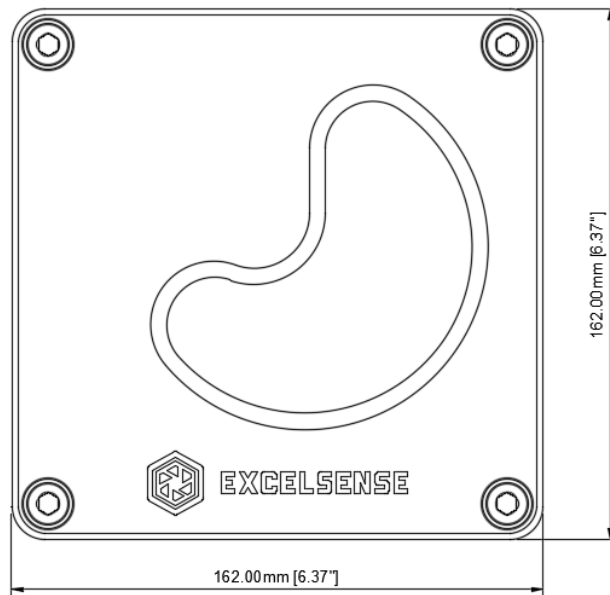
The SensorShield™ family of optical shields excels at three things: **reliability, zero-maintenance operation** and **clarity.**

ExcelSense can customize SensorShield-1600™ installations for almost any application. Please inquire with info@excelsensetechnologies.com.
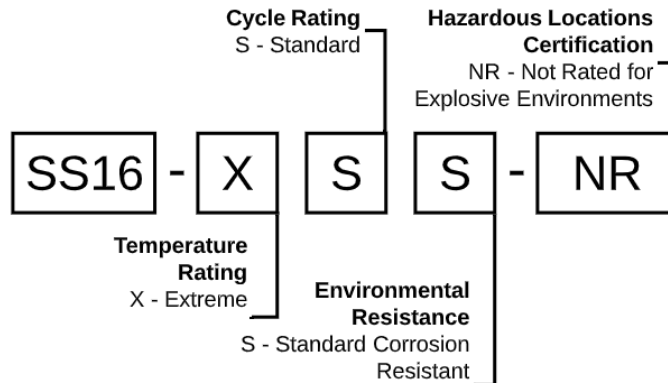
SPECIFICATIONS

Interruption-Free View	View uninterrupted during cleaning
Dimensions	162mm width x 162mm height x 150mm depth [6.4" x 6.4" x 5.9"]
Weight	4.55Kg
Clean Cycle	Configurable Timer Based, Electrical Trigger (up to 24 VDC)
Max Wattage	40W
Input Voltage	24-48 VDC
Temperature Range	-40°C to 60°C (All Versions)
IP Rating	IP69
Vibration	11g
Sensor Mounting Holes	M5 x 0.8
External Mounting Holes	M8 x 1.0

MECHANICAL DRAWING

162.00mm [6.37"]

162.00mm [6.37"]

131.01mm [5.15"]

M5x0.8 X 6 [MOUNTING LOCATIONS]

R14mm

R25.25mm

R50.65mm

120.5mm

93mm

44mm

68.5mm

Ø9mm

R10mm

R10.39

R3.46

OFFSET MATING POCKET
BY 1mm [164mmx164mm]

OFFSET MATING POCKET BY
0.5mm [151.2mmx151.2mm]

162mm

150.2

140

140mm

150.2

162mm

Panel Cut Out Pattern to Integrate SensorShield-1600

ORDERING OPTIONS

SS16 - SensorShield-1600™

Temperature Rating
X - Extreme: -40ºC to 60ºC

Environmental Resistance
S - Standard Corrosion Resistant

Cycle Rating
S - Standard Cycle Rating 40,000 cycles

Hazardous Locations Certification
NR - Not Rated for Explosive Environments

ACCESSORIES

All SensorShield-1600™ cables on one end connect to the corresponding connector on the SensorShield-1600™, with the other end terminating in flying wires to facilitate flexible integration into your system.

Power Cable PC16-SC-1M-X
Power cable provides power to your sensor shield, and is the minimum requirement to operate SensorShield-1600™.
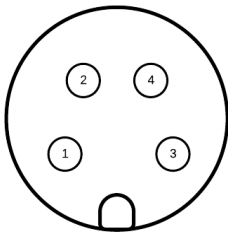
RS/232 Cable CC16-SC-1M-X
Serial communication cable enables connection to the Modbus RTU service. Through this service it is possible to change the self-cleaning frequency, read the number of cleaning cycles performed and read other diagnostic data.

DI/DO Cable DC16-SC-1M-X
Digital input/output cable enables digital triggering of a self-cleaning cycle via a 24V signal. Additionally, the health status of the system is exposed via a digital signal.
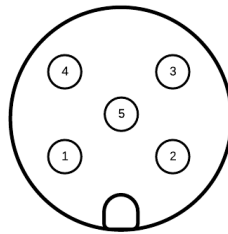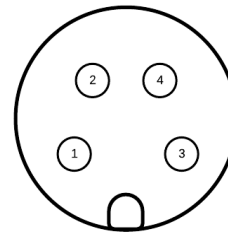
RS-232 PORT

PANEL-MOUNT CONNECTOR
EXTERNAL VIEW (PINS)

POWER PORT

PANEL-MOUNT CONNECTOR
EXTERNAL VIEW (PINS)

DI / DO PORT

PANEL-MOUNT CONNECTOR
EXTERNAL VIEW (PINS)

PIN	COLOUR	SIGNAL
1	Brown	24V_COMM_ISO*
2	White	GND_COMM_ISO**
3	Blue	TXD_232_ISO***
4	Black	RXD_232_ISO***

PIN	COLOUR	SIGNAL
1	Brown	24V_SYS_ISO
2	White	24V_SYS_ISO
3	Blue	0V_SYS_ISO
4	Black	0V_SYS_ISO
5	Gray	DTR_232_ISO^

PIN	COLOUR	SIGNAL
1	Brown	24V_COMM_ISO*
2	White	GND_COMM_ISO**
3	Blue	CLEAN_TRIG_ISO***
4	Black	HEALTH_STAT_ISO***

Notes:
* 24V_COMM_ISO signals internally connected to one another
** GND_COMM_ISO signals internally connected to one another
*** Signals referenced to GND_COMM_ISO
^ Developer signal not used in normal operation. Used to upload firmware through the serial interface.