

brief features

The EMS3600 is a system ensures accurate and reliable emission data, enabling industries to maintain compliance with regulatory standards efficiently.

In the process, EMS3600 Emission Monitoring System, precise measurements are achieved through advanced sensors such as the O2 sensor and MICS6814 sensor. The O2 sensor monitors oxygen levels with high accuracy, crucial for emissions control. Meanwhile, the MICS6814 sensor detects various gases, providing comprehensive environmental monitoring capabilities. This system ensures reliable data collection for emission levels, supporting efficient regulatory compliance and environmental management.

One of the key advantages of the EMS3600 Emission Monitoring System is its capability to maintain consistent performance in diverse environmental conditions. From varying temperatures to different types of gasses like oxygen, carbon monoxide, or other gasses, this system excels in accuracy and reliability. Its versatility makes it ideal for a wide range of applications across industries including automotive, marine, and industrial sectors, ensuring dependable monitoring and compliance with emission regulations.

The intelligent EMS3600 use advanced dual core MCU and TFT color screen for display multiple parameters. Web enabled intuitive and easy-to-use menu for monitoring, configuration and diagnostics. Changing O2, CO, NOx and SOx parameters can be done from TFT color display. Modbus RS485 option can be used to connect with any PLC or SCADA

applications customers

APPLICATIONS

For application in industrial and commercial Emission Monitoring

- Compressed air dry
- Compressed air wet
- Nitrogen gas
- Natural gas
- Oxygen gas
- Synthetic Natural Gas (SNG)
- Air ducting (handling)

CUSTOMERS

Industrial and commercial sectors, such as:

- Chemical processing
- Textiles
- Power plants
- Steel rerolling mills
- Pharmaceuticals
- Gas distribution (supply organizations)
- Bulk customers (housing societies)
- Sub metering
- Hotels

technical specifications

DISPLAY

TFT color display: Display parameters: O₂, CO, SO_x, NO_x, Temperature, Meter ID.

OXYGEN

- ◆ Measuring range: 0-21 %
- ◆ Accuracy: ±1% of reading

CARBON MONOXIDE

- ◆ Measuring range: 0-250 ppm
- ◆ Accuracy: ±2% of reading

NO_x

- ◆ Measuring range: 0-5 ppm
- ◆ Accuracy: ±1% of reading

SO_x

- ◆ Measuring range: 0-100 ppm
- ◆ Accuracy: ±1% of reading

TEMPERATURE

- ◆ PT-100: 0~300 °C
- ◆ Accuracy: ±1% of reading

COMMUNICATION

- ◆ Wi-Fi: Web enable
- ◆ Master/Slave auto switching
- ◆ Modbus RS485

POWER SUPPLY

- ◆ SMPS 100-250 V AC
- ◆ 24 V DC, 2.5 A

SETUP

- ◆ Calibration, Configuration & OTA: From any web browser through smart phone or laptop Wi-Fi

MECHANICAL

CONTROL PANNEL

- ◆ Prewired
- ◆ Powder Coated
- ◆ Wall mounted or Floor standing
- ◆ Size: 30in X 26in X 10in
- ◆ Power supply 24 V DC
- ◆ Isolated Relay

AIR VACCUM (SAMPLE) PUMP

- ◆ Input Voltage: 220V AC
- ◆ Copper Winding
- ◆ Low Noise Level
- ◆ Adjustable Air Pressure Controller

AIR FILTER

- ◆ Compact size with effective air service
- ◆ Accurate and easy pressure setting
- ◆ Operating temperatures: 0~70 °C

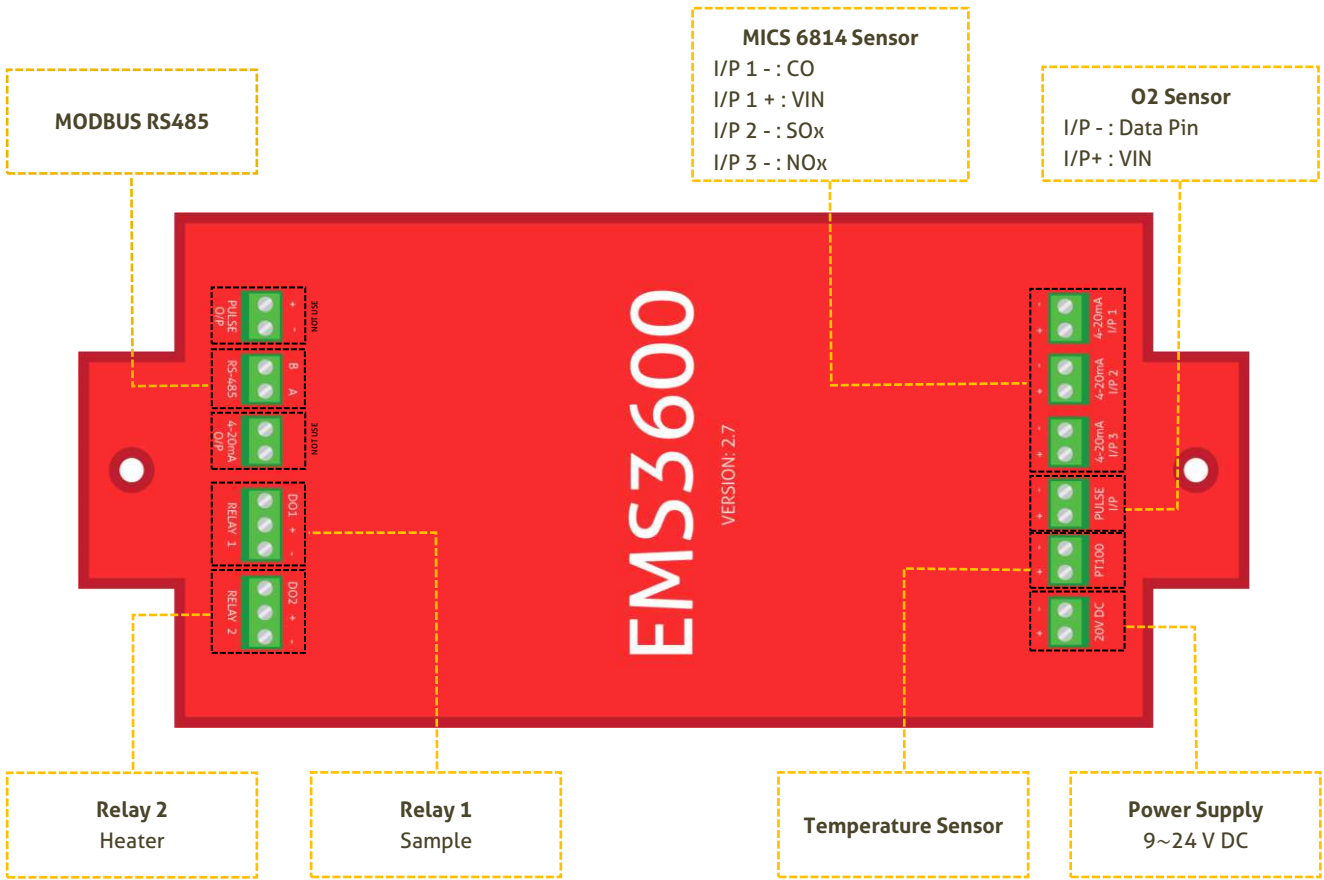
HEADER

- ◆ Material: Stainless Steel
- ◆ Length: 10 inch
- ◆ Diameter: 2 inch
- ◆ Anti-rust zinc coated

DISPLAY HOUSING

- ◆ Operating temperatures: 0~70 °C
- ◆ RH: 0~90%
- ◆ UPVC IP 65 water proof
- ◆ Size: 160mm X 80mm X 60mm
- ◆ Wall mounting with 2-brackets

wiring connections

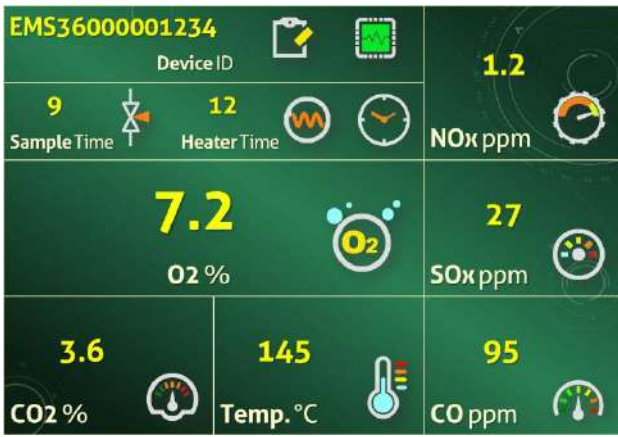


display screens

User friendly color Touch industrial grade display, which is displaying all important required parameters.



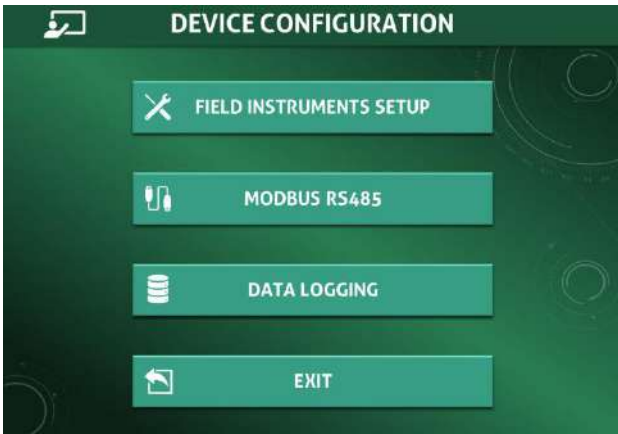
STARTUP SCREEN



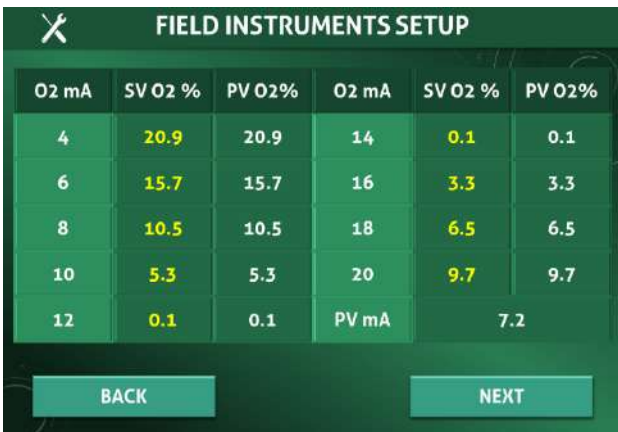
MAIN SCREEN
Display parameters:
 O2
 CO2
 NOx
 SOx
 CO
 Sample Timer
 Heater Timer



Login Screen
 Password: 77xx



Setting Screen
Display parameters:
 Field Instruments Setup
 Modbus RS485
 Data Logger



Field Instruments Setup Screen
Display parameters: (PV → Previous Value; SV → Set Value)
 O2 Curves

FIELD INSTRUMENTS SETUP			
NO _x SENSOR	SV NO _x ppm	PV NO _x ppm	PV mV
Zero (0 mV)	0.1	0.1	1170
Span (3000 mV)	5.0	5.0	
SO _x SENSOR	SV SO _x ppm	PV SO _x ppm	PV mV
Zero (0 mV)	1	1	1800
Span (3000 mV)	100	100	

BACK NEXT

Field Instruments Setup Screen
 Display parameters: (PV → Previous Value; SV → Set Value)
 NO_x Zero
 NO_x Span
 SO_x Zero
 SO_x Span

FIELD INSTRUMENTS SETUP			
CO SENSOR	SV CO ppm	PV CO ppm	PV mV
Zero (0 mV)	1	1	990
Span (3000 mV)	250	250	
PT1K SENSOR	SV TEMP. °C	PV TEMP. °C	PV mV
Zero (0 mV)	0	0	810
Span (3000 mV)	300	300	

BACK NEXT

Field Instruments Setup Screen
 Display parameters: (PV → Previous Value; SV → Set Value)
 CO Zero
 CO Span
 PT1k Zero
 PT1k Span

FIELD INSTRUMENTS SETUP		
HEATER	SV Seconds	PV Seconds
ON Time	7	7
OFF Time	9	9
SAMPLE	SV Seconds	PV Seconds
ON Time	12	12
OFF Time	3	3

BACK HOME

Field Instruments Setup Screen (Manual Mode)
 Display parameters: (PV → Previous Value; SV → Set Value)
 Heater ON Time
 Heater OFF Time
 Sample ON Time
 Sample OFF Time

MODBUS RS485		
PARAMETERS	SP	PV
DEVICE ID	2	2
BAUD RATE	9600	9600
PARITY	0	0
STOP BIT	1	1
SAMPLE RATE	1000	1000

BACK HOME

Modbus RS485 Screen
 Display parameters: (PV → Previous Value; SV → Set Value)
 Device ID
 Baud Rate
 Parity
 Stop Bit
 Sample Rate

communication Modbus tags

CONFIGURATION

EMS3600 has built-in Wi-Fi module. There is no need of any special data communication hardware or software, an end user can easily configure it by using Touch Screen Display.

DATA LOGGING

Furthermore, EMS3600 has comprehensive feature of data transferring of its tags to local or cloud server by using its built-in Wi-Fi module in Salve mode through HTTP/MQTT. By using feature end user can log the data to its local or remote server for online monitoring and reporting purpose.

MODBUS RS485

EMS3600 has built-in Modbus RS485 module, therefore, end user can get the data to PLC, DCS, SCADA, OPC server or any data communication module/software.

Standard Modbus tags detail is as under for communication.

DEFINE NAME	TYPE	ADDRESS	
Sox	Swapped long	0X02	Function code: 03 or 04 Register type: Holding register
Carbon Dioxide	Swapped long	0X04	
NOx	Swapped long	0X06	
Mili Ampere	Swapped long	0X08	
Oxygen	Swapped long	0X0A	
Carbon Monoxide	Swapped long	0X0C	
Purge Off Timer	Swapped long	0X0E	
Purge On Timer	Swapped long	0X10	
Heater Off Timer	Swapped long	0X12	
Heater On Timer	Swapped long	0X14	

mounting instructions

For proper reliable emission data, Emission Monitoring System should be installed properly.



forward thinking

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