WIRELESS SOLUTIONS

Machine to Machine Interface [M2M] 200 – M2M

SBEM

INTRODUCTION

M2M is an intelligent active GPRS Remote Terminal with Data logger and highly integrated, stand-alone solution for M2M applications. It features a GSM/GPRS module, 4 digital/pulse inputs, 4 Analog Inputs, 1 RS 485 port and 1 RS232 for configuration.It can be used in M2M application fields to transfer the local I/O and Modbus device's data via GPRS at the defined intervals. It is supplied with easy-to-use configuration utility that helps reduce complexity, freeing system integrators from dealing with complex communication protocols of GPRS and the Internet. M2M is used to transfer field data parameters (Flow, Level, Temp. Pressure, Mass etc) to a central system / server with a fixed/static IP by using GPRS technology.In addition to this M2M is capable of recording data gathered from field devices interfaced, after the set interval.The digital data can be retrieved in flash drive or host PC through USB port.

SPECIFICATIONS

- Power Supply – Universal 85 to 260VAC, 50~60 Hz
- Commincation-GSM/GPRS850/900/1800/1900MHz
- 6 nos LED Indication for Network Strength and Power Supplies
- Temperature –0 to +55°C
- Enclosure Protection – Weatherproof IP67, Alumunium (W120mm X L220mm X H91mm)
- Transmitter Supply O/P – 24VDC @ 200mA
- Cable Entries - 9 X PG9, 2 X PG11
- USB Port for data retrieval on flash drive or host PC.

FIELD DEVICE INPUTS

RS485-2Wire
- Max 8 MODBUS RTU slave device
- Baud rates-2400/4800/9600/19200
- Parity- None/Odd/Even Data bits : 8
- Recommended Cable 0.5 mm^2 Twisted pair Shielded

Analog Input
- Nos of Channels – 4 with Built-in Current loop protection
- I/P Impedance: 27 ohm + 2V Protector Drop

Digital/Pulse Input
- Potential free
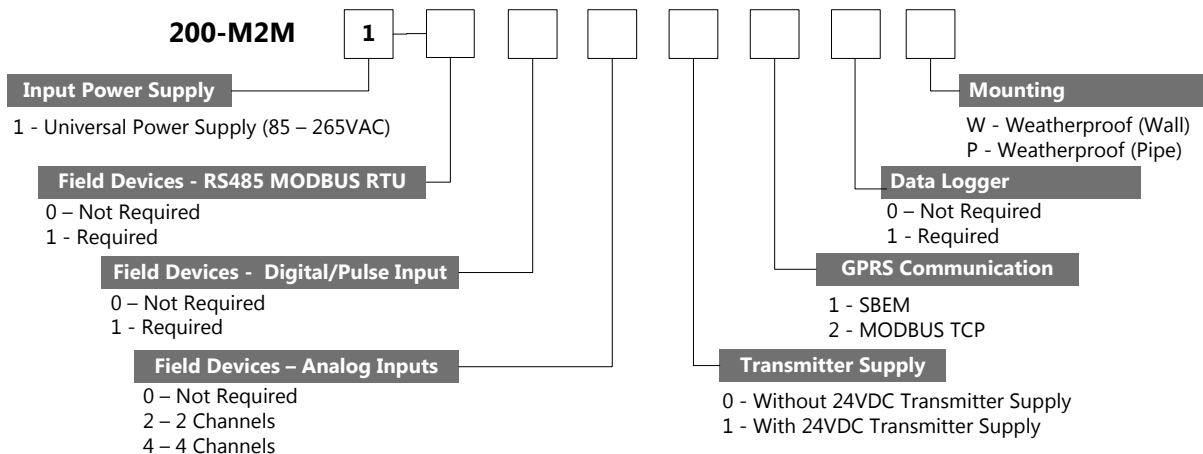- Pulse counter:10 digit with max freq: 500Hz

APPLICATION AREAS

Various applications in monitoring for several industries like PHE, water treatment, Power, Cement, Chemical and others
- Water monitoring applications in distribution & treatment
- Tank level Monitoring
- Remote Monitoring
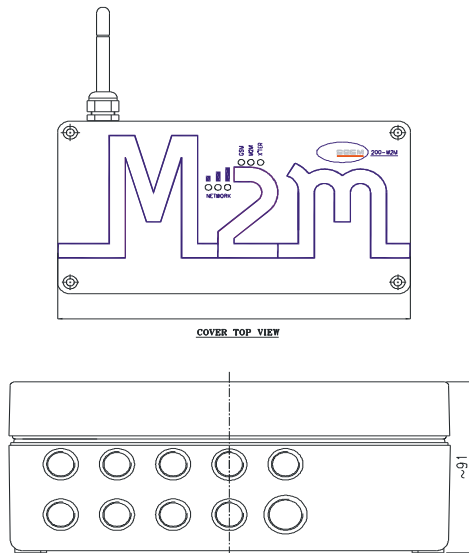- Automatic Meter reading

FEATURES

- Upto 16 Field devices (8 Modbus, 4 Analog & 4 Digital)
- 24 VDC Transmitter supply (Optional)
- Weatherproof IP67 as per IS/IEC 60529
- Alarm Monitoring – Programmable low and high alarms
- Smart diagnostics
  - MODBUS communication errors notification
  - Analog over and under current notification
- Support for all data types in MODBUS RTU communication
- Support for upto 32 registers/parameters
- Seamless integration with SCADA using MODBUS TCP or SBEM proprietary protocols
- M2M Config Utility - Easy to use GUI for quick setup
- SMS Feature
  - Periodic data SMS and Alarm,error alert
  - Min to max interval: 5 min to 31 days
  - Max mobile no users: 10
- Built in Data logger
  - Min to max interval: 5min to 31 days
  - Min-max no of parameters enabled: (1 - 40)
  - Max-min no of records stored: (34K - 2K)

ORDERING CODE

200-M2M **1**

Input Power Supply
1 - Universal Power Supply (85 – 265VAC)

Field Devices - RS485 MODBUS RTU
0 – Not Required
1 - Required

Field Devices - Digital/Pulse Input
0 – Not Required
1 - Required

Field Devices – Analog Inputs
0 – Not Required
2 – 2 Channels
4 – 4 Channels

Mounting
W - Weatherproof (Wall)
P - Weatherproof (Pipe)

Data Logger
0 – Not Required
1 - Required

GPRS Communication
1 - SBEM
2 - MODBUS TCP

Transmitter Supply
0 - Without 24VDC Transmitter Supply
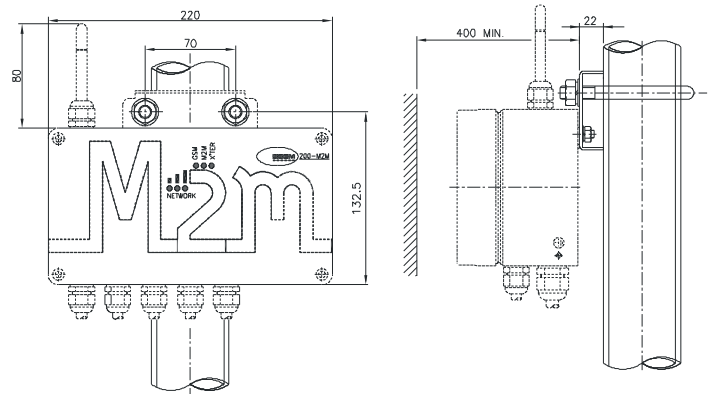1 - With 24VDC Transmitter Supply

Typical ordering Code 200- M2M 1 1 1 2 1 2 0 W - The above model code specifies that M2M is required to have input supply of 85-230VAC and collect data from MODBUS RTU Slave(s), 4 Digital or pulse inputs, 2 nos two wire 4-20 mA transmitters with supply from M2M, The GPRS output should be MODBUS TCP and the unit should be wall mounted
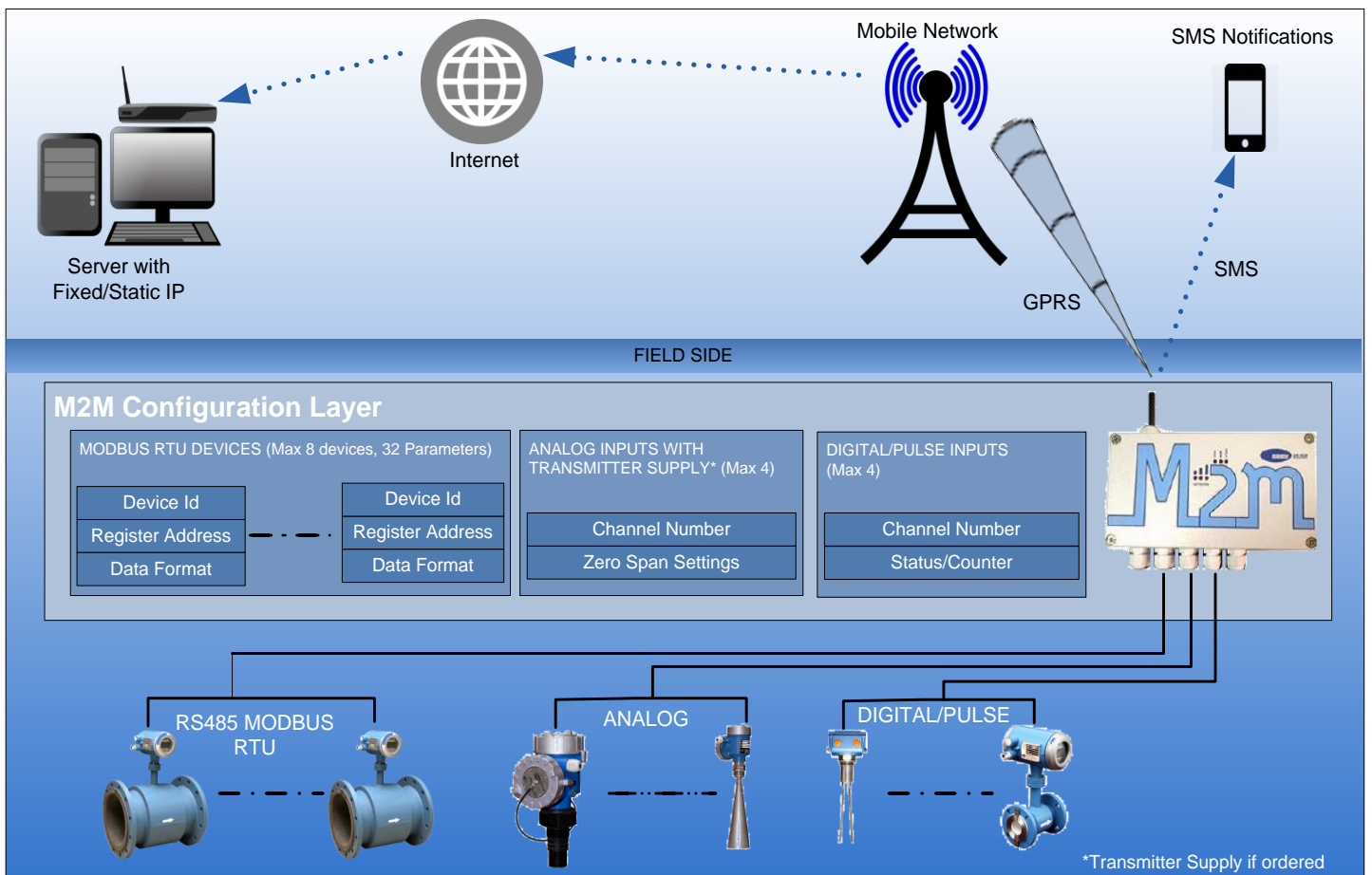
MECHANICAL DIMENSIONAL

COVER TOP VIEW

~91

MOUNTING ARRANGEMENT

220
70
80
132.5
400 MIN.
22

TYPICAL M2M BASED MONITORING SYSTEM

Mobile Network

SMS Notifications

Internet

Server with
Fixed/Static IP

GPRS

SMS

FIELD SIDE

M2M Configuration Layer

MODBUS RTU DEVICES (Max 8 devices, 32 Parameters)		ANALOG INPUTS WITH TRANSMITTER SUPPLY* (Max 4)	DIGITAL/PULSE INPUTS (Max 4)
Device Id	Device Id	Channel Number	Channel Number
Register Address	Register Address	Zero Span Settings	Status/Counter
Data Format	Data Format		

RS485 MODBUS
RTU

ANALOG

DIGITAL/PULSE

*Transmitter Supply if ordered