



# FICUS™

## Edge Series...

### Modbus Data Reader



# ProtoGate

## Modbus-Cloud Gateway (One-way Communication)

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## How it Works

The device has on-board hosted configuration webpage. It can be configured to connect with different types of industrial devices. Enter required details such as mapping tables for input current/voltage, server URLs, credentials, and other details in the configuration file. Upload the file and reboot the device. For more details, contact us.



## Industry

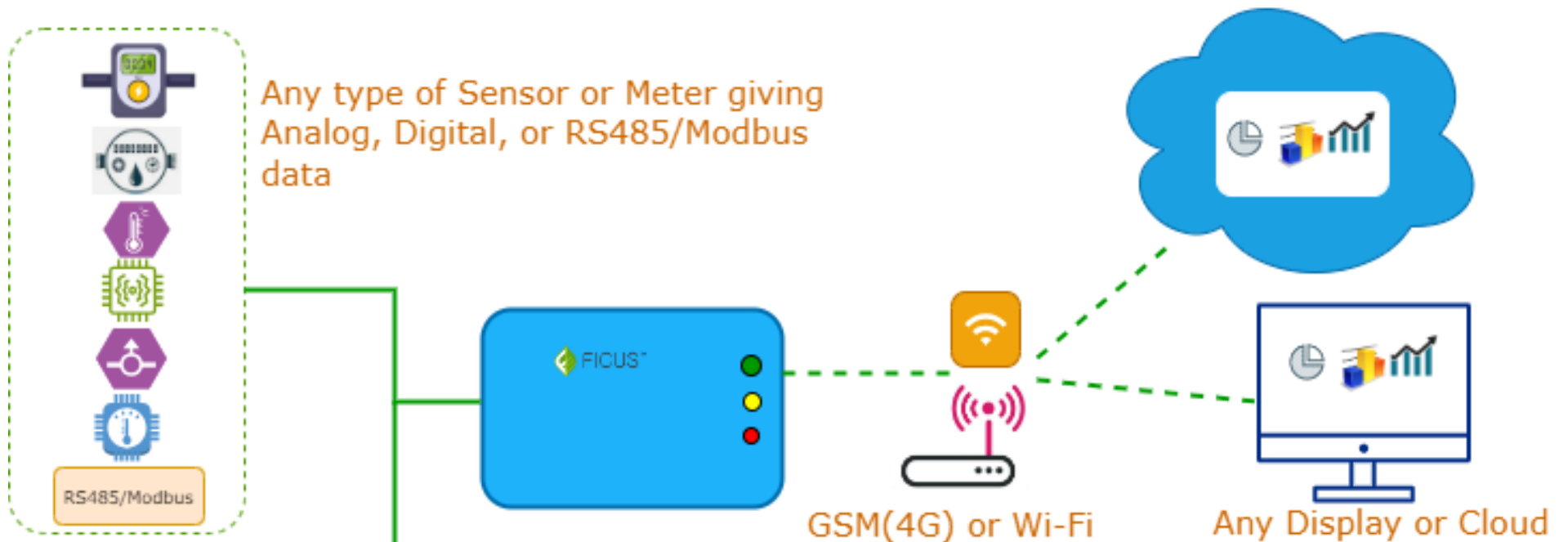
- Metering Energy, Water, Oil & Gas etc.)
- Manufacturing
- Others

## Applications

**Suitable for all use cases where you need to read Modbus data from Meters, Sensors, Industrial equipment and send it to cloud/server application.**

- Modbus/RS485 data reading from devices such as Energy Meter, Flow Meters, Level sensors etc.
- Cloud Gateway (One-way Communication).
- Data Logging.

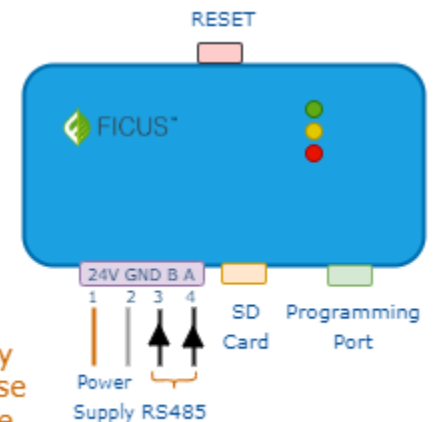
# Application Architecture



## Wiring Diagram

Note: Only for representation purpose.

Placement of connectors and number IOs may vary on different models. Please check data sheet for more details.



## IOs

- Modbus over RS485

## Local Storage

- Onboard SD card (8/16GB)
- Data logging on SD card

## Power

- DC Input: 24VDC

## Configuration

- Device hosted configuration web page  
(more details in next pages)

## Communication

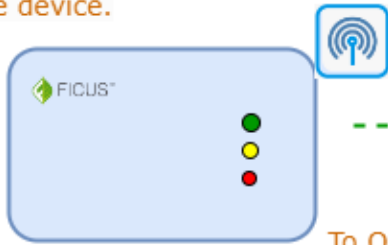
- Cloud Communication
  - Wi-Fi
  - GSM – Supports all types of 4G SIM
- Supports Modbus, MQTT, HTTP/S protocol

## Other Specifications

- RTC Support
- Server time/NTP time synchronization
- Configurable Time zone
- LED Indications: 3
- Operating Temp: From  $-10^{\circ}\text{C}$  to  $70^{\circ}\text{C}$
- Humidity: 0% - 90% non-condensing
- Mounting: DIN Rail & Wall mounting with Screw
- IP Protection: Two form factors,
  - IP 20
- Enclosure: Polycarbonate Transparent Cover and ABS Opaque Base
- Color: Light Grey (RAL 7035)

# Configuration Web Page

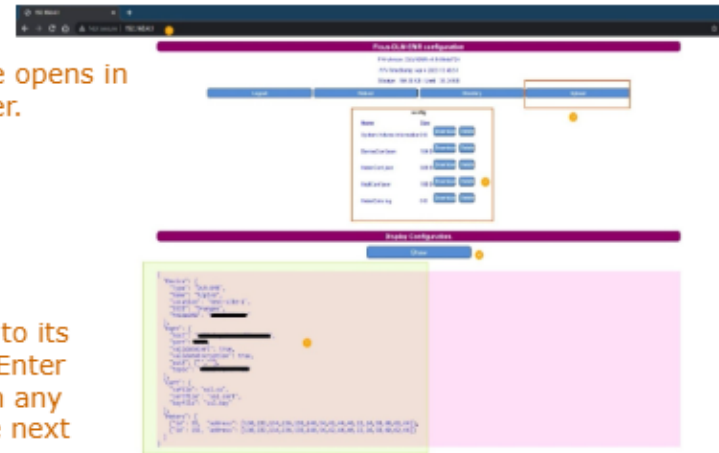
Configuration file and the log files can be accessed via Configuration Webpage hosted on the device.



To Open Configuration Web page of the device, connect to its WiFi Hotspot from a mobile, laptop or any other device. Enter credentials to connect to the Wi-Fi. Open 192.168.4.1 on any browser. The configuration web page opens shown in the next image.



Configuration Page opens in the browser.



Download Data/Log File from Configuration Webpage

Configuration File can be used for:

1. To configure device parameters such as set/trigger points, Mapping tables, program variables etc.
2. Download Data/Log files.

## Configuration File Template

```

1 DeviceType = "ELECTONICS CONTROLLER";
2 DeviceName = "REGULATION CONTROLLER";
3 DeviceLocation = "TRAIL 1";
4 Machine_model = "DM 500 M";
5 Machine_serial_number = "B07800313";
6 CRANK_TIME_SEC = 5;
7 LOGGING_FREQUENCY_SEC = 30;
8 LCD_CONTRAST = 3;
9 LOW_FRE_HIGH_FRE_EN = 1;
10 FULL_SCALE_A0 = 7;
11 FULL_SCALE_A1 = 40;
12 FULL_SCALE_A2 = 7;
13 FULL_SCALE_A3 = 7;
14 FULL_SCALE_A4 = 7;
15 FULL_SCALE_A5 = 7;
16 FULL_SCALE_A6 = 150;
17 FULL_SCALE_A7 = 7;
18 ALARM_DURATION_SEC = 30;
19 RPM_CHANGE_FACTOR = 0.25;
20 MAX_ADP = 20.0;
21 MAX_ARF = 2.50;
22 ADP_BLEED_RANGE = 1.0;
23 UPPER_RPM_LIMIT = 1900;
24 LOWER_RPM_LIMIT = 1250;
25 ENGINE_SHUTDOWN_LIMIT = 1000;
26 AVERAGE_SAMPLE_SIZE = 600;
27 ARF_TABLE_ROW_SIZE = 19;
28 ADP_TABLE_ROW_SIZE = 21;

```

	A	B	C	D	E	F	G	H	I	J	K	L
1	Date	RPM	oil_pre	cool	batt	ADP	ADT	operati	warning_a	total_fuel_consumed		
2	14:43:45;1	0	0	0	0	0	0	0	IGN_DET	0		
3	14:43:51;1	0	0	46	0	0.62	36.4	21.45	IGN_DET	0		
4	14:43:56;1	0	0	46	0	0.59	35.2	21.45	IGN_DET	0		
5	14:44:01;1	0	0.92	46	0	0.6	36.2	21.45	IGN_DET	0		
6	14:44:14;1	0	0	0	0	0	0	0	IGN_DET	0		
7	14:44:19;1	0	0	0	25	0.63	36.7	0	IGN_DET	0		
8	14:44:24;1	0	0	0	25	0.56	36.4	0	IGN_DET	0		
9	14:44:29;1	0	0	0	25	0.62	37.4	0	IGN_DET	0		
10	14:44:34;1	0	0.92	0	26	0.6	36.5	0	IGN_DET	0		
11	14:44:40;1	0	0.92	0	26	0.6	35.4	0	IGN_DET	0		
12	14:44:45;1	0	0.92	46	26	0.6	36.2	0	IGN_DET	0		
13	14:44:50;1	0	0.92	46	26	0.63	36	0	IGN_DET	0		