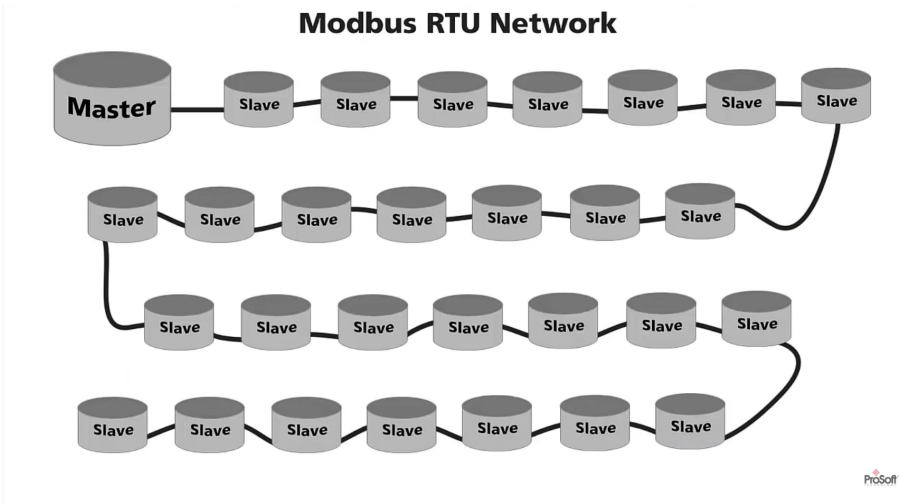


ModBus RTU



Specifications

Specifications	Details
Masters Nodes	only 1
Slave Nodes	max 247 (each with a unique slave Id)
Max Devices	RS-485 - Max 32 devices
Speed/Baud Rate	9600-19200 (Typical)
Network	Daisy Chain
Byte Order	Byte order for registers is not defined in the protocol. Some vendors will store the higher byte first...

Tables

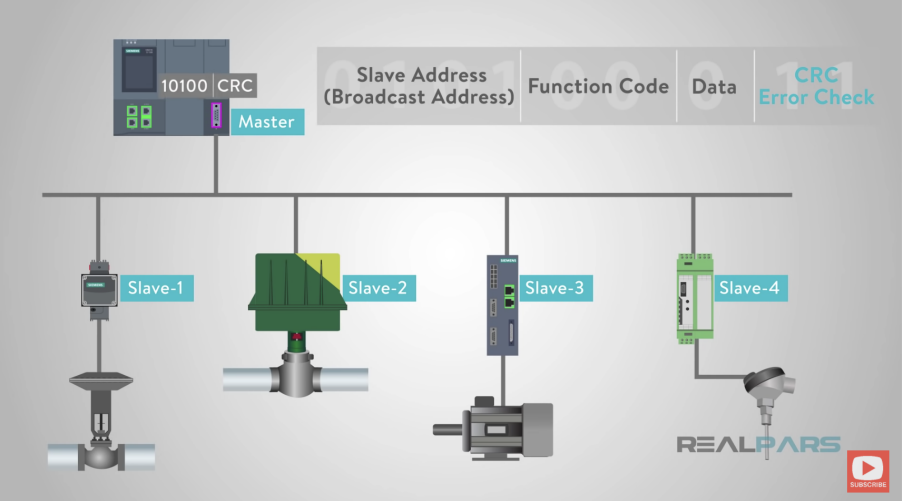
Address - Start	Stop	Table	Read/Write	Data Type
00001	09999	Coils	read/write	1 bit representing a bool or on/off
10001	19999	Discrete Inputs	read only	1 bit representing a bool or on/off
30001	39999	Input Registers	read only	16 bits / 2 bytes (Int)
40001	49999	Holding Registers	read/write	16 bits / 2 bytes (Int)

Function Codes

Function Code	Action
1	Read Coil Status
2	Read Input Status
3	Read Holding Register
4	Read Input Register
5	Write Single Coil Status

6	Write Single Register
15	Multiple Coil Write
16	Multiple Register Write

Message

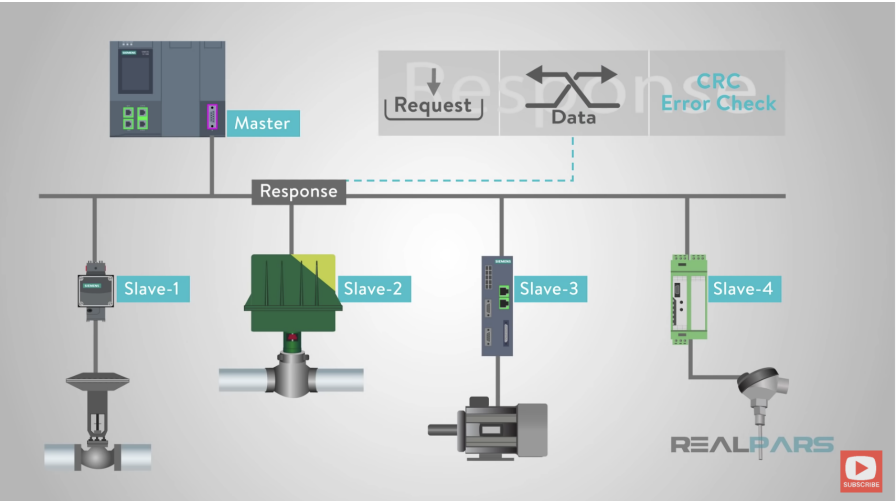


Slave Address/ID	Function Code	Data	CRC
------------------	---------------	------	-----

CRC - Cyclic Redundancy Check

<https://crccalc.com/>

Response



References

Reference	URL
-----------	-----

Understanding Modbus Serial and TCP/IP	https://www.youtube.com/watch?v=k993tAFRLSE&t=327s
What is Modbus and How does it Work?	https://www.youtube.com/watch?v=txi2p5_OjKU
Modbus RTU	https://en.wikipedia.org/wiki/Modbus#Modbus_RTU_frame_format_(primarily_used_on_asynchronous_serial_data_lines_like_RS-485/EIA-485)
Modbus versus Memobus	eng01013 - Modbus vs Memobus.pdf
Metasys™ N2	https://www.yaskawa.com/products/drives/hvac-drives/building-automation-networks/metasys-n2