

Title: How to use M200 to control ATV303 via Modbus RTU?

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Apply to:

SoMachine Basic 1.3 SP1 EL build 44557

TM200CE40T, ATV303

Summary:

This document is a quick guide to show you how to use M200 to control ATV303 via Modbus RTU. Including parameter setup, cable connection, and program introduction.

Solution:

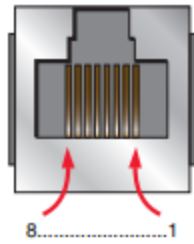
### 1. ATV303 setup

Code	Name	Setting	Function description
401	Reference channel 1	[164]Modbus	Reference channel 1 by Modbus
406	Channel configuration	01	Combined mode
701	Modbus address	4	OFF to 247
702	Modbus baud rate	[32]* 19.2 kbps	[24] 4.8 kbps [28] 9.6 kbps [32]19.2 kbps [36] 38.4 kbps
703	Modbus format	[03]* 8E1	[02]8O1 [03]8E1 [04]8n1 [05]8n2
704	Modbus time out	10s	The drive detects a Modbus fault if the drive does not receive a Modbus request within a predefined time period

### 2. Connect Cable

#### Pin out of the ATV303 RJ45 Connector

View from underneath



Pin	Signal
1	-
2	-
3	-
4	D1 (1)
5	D0 (1)
6	-
7	VP (2)
8	Common (1)

#### M200 PLC



### 3. M200 PLC Setup

#### Serial line configuration

##### Physical Settings

Device:

Init command:

Baud rate:

Parity:

Data bits:

Stop bits:

Physical medium:

☒ RS-485 ☐ RS-232

Polarization:

##### Protocol Settings

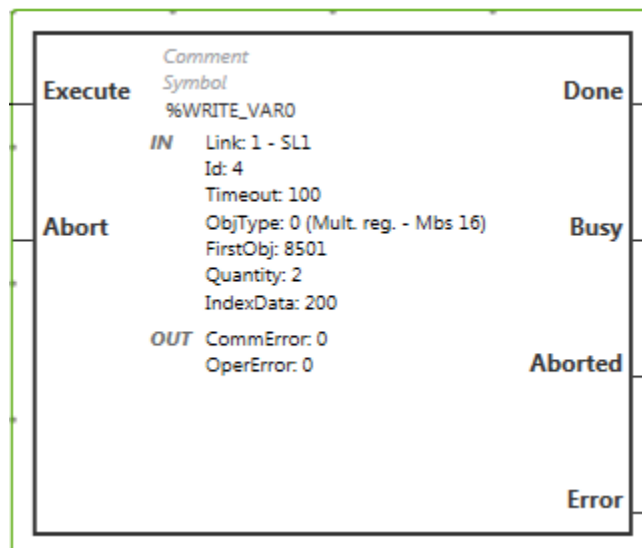
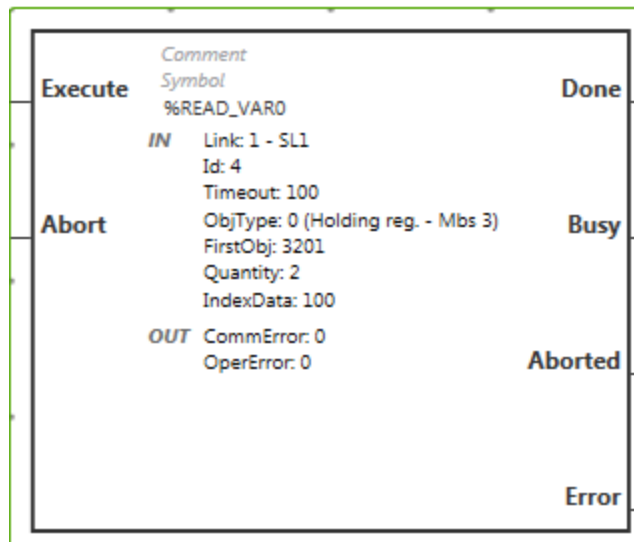
Protocol:

Addressing: ☐ Slave ☒ Master

Response timeout (× 100 ms):

Time between frames (ms):

### 4. M200 PLC Program Introduction



CMD=%MW200, Frequency Reference=%MW201, ETA=%MW100

Switch on drive, no fault, ETA=16#0250, drive display NST

Execute CMD=16#0006, ETA=16#0231, drive display RDY

Execute CMD=16#0007, ETA=16#0233, drive display RDY

Execute CMD=16#000F, %MW201=10#0500(50 Hz), ETA=16#0237, drive run

Execute CMD=16#0002, ETA=16#xx17, quick stop active