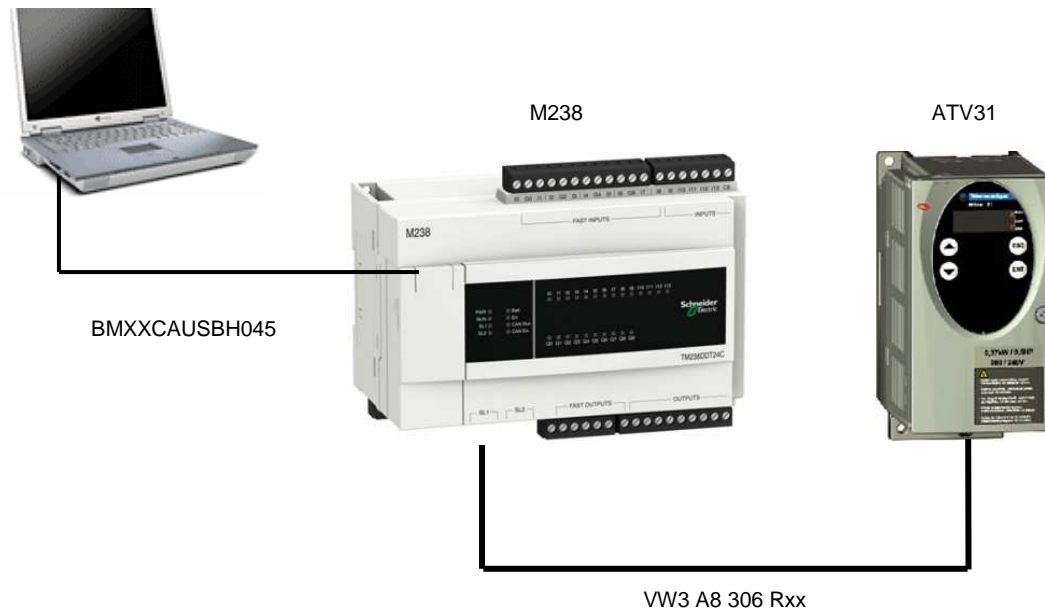


M238 - MODBUS COMMUNICATION

Example of Modbus communication between ATV31 and M238

1) Scheme of the application :



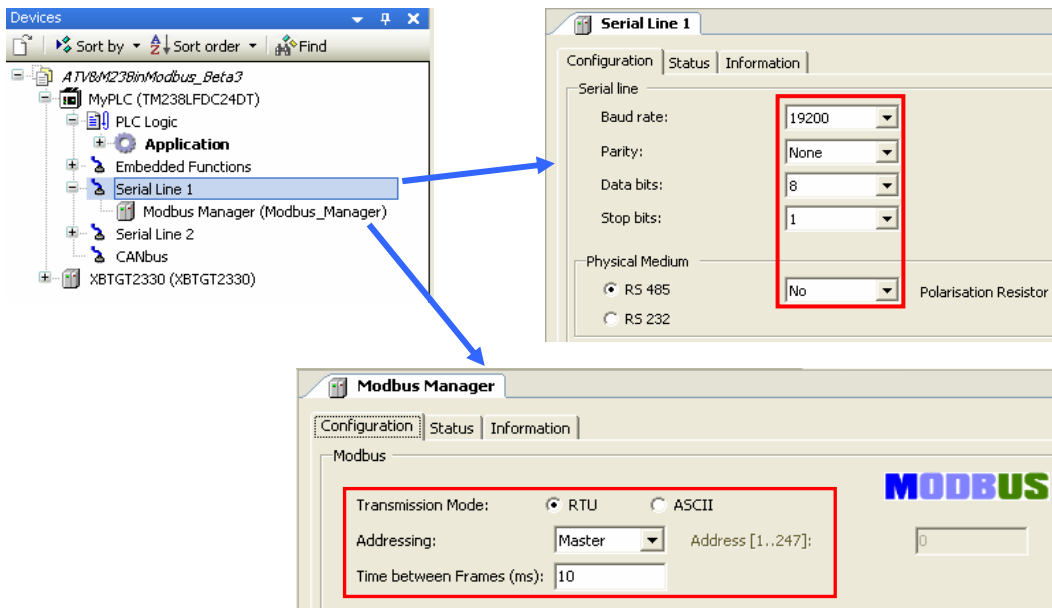
2) Configuration of the Modbus Serial Line :

Configuration of the Serial Line side ATV31:

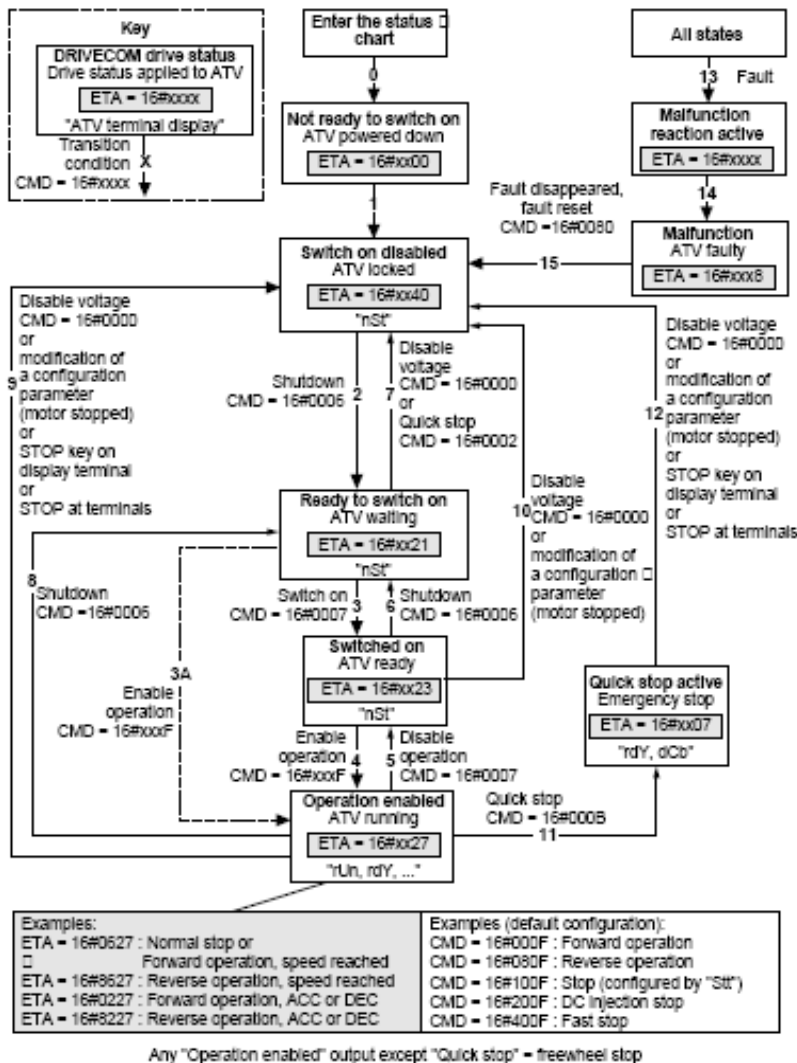
The configuration of the serial line parameters is accessible from the communication menu: **COM**

Parameters	Possible values	Terminal display	Setting for the application
Address ADD	1 to 247	001 to 247	2
Speed tbr	4800 bps 9600 bps 19200 bps	4.8 9.6 19.2	19200 bps
Format tFO	8 data bits, odd parity, 1 stop bit 8 data bits, even parity, 1 stop bit 8 data bits, no parity, 1 stop bit 8 data bits, no parity, 2 stop bit	8O1 8E1 8N1 8N2	8N1

Configuration of the Serial Line side M238:



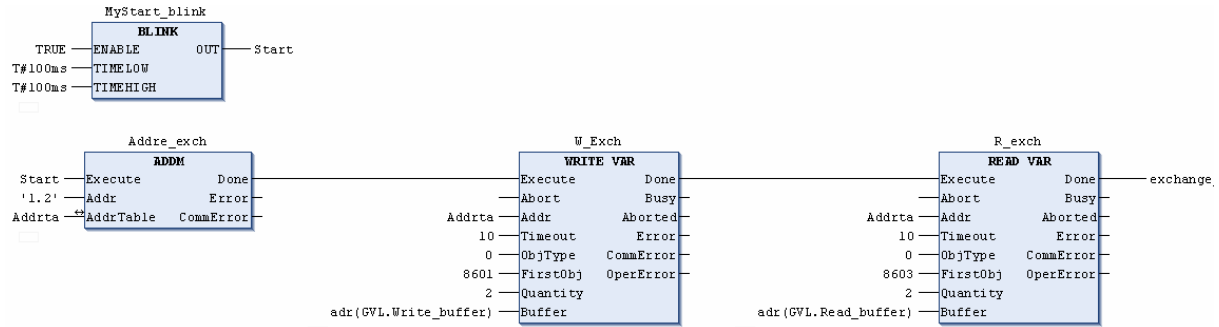
3) **DRIVECOM Status chart to control the ATV31 in LINE mode:** (cf: ATV31 communication variable user manual)



4) Description of the program exemple:

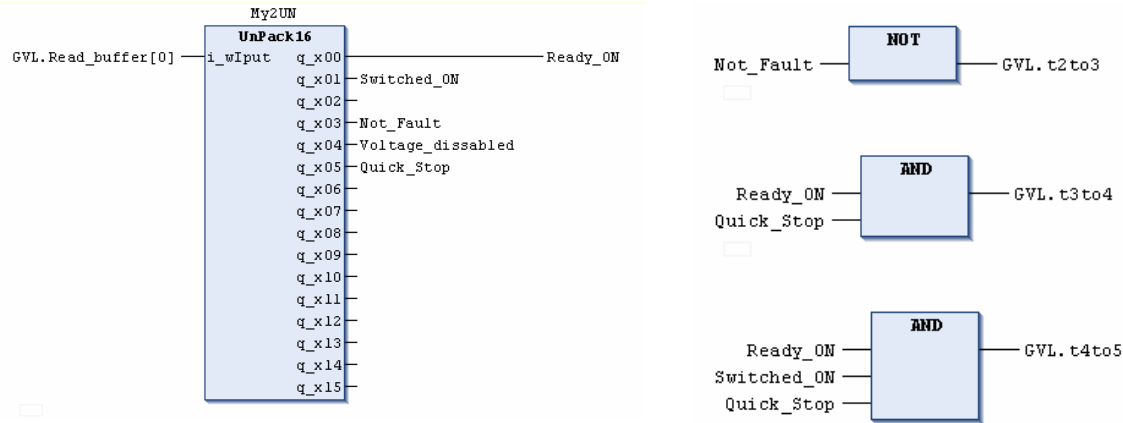
In this application, in the POU “**Exchange_managment**”, we use a Read_Var and Write_Var function block in order to make on I/O scanner to read and write the following parameters each 200ms.

Name	Code	Modbus address (dec)	Read/Write
Drivcom control word	CMDD	8601	Write
Speed reference	LFRD	8602	Write
Drivcom status word	ETAD	8603	Read
Output speed	RFRD	8604	Read



The second part of the POU “**Exchange_managment**” allows to manage the ATV31 status word (ETAD), in order to determine transition to control the ATV31 following the DRIVECOM Status chart.

NOTE : In this exemple, we doesn't follow all the step of the DRIVECOM Status chart. The Goal of this document is to provide a sample exemple but not a full application.



Variable name	Variable type	Description
GVL.Read_buffer[0]	Word (GVL)	Value of the ATV Status word (word)
Ready_ON	BOOL	ATV status word (bit 0)
Not_Fault	BOOL	ATV status word (bit 3)
Switched_ON	BOOL	ATV status word (bit 1)
Voltage_dissabled	BOOL	ATV status word (bit 4)
Quick_Stop	BOOL	ATV status word (bit 5)
GVL.t2to3	BOOL (GVL)	Transition for SFC step (Step 2 to Step 3)
GVL.t3to4	BOOL (GVL)	Transition for SFC step (Step 3 to Step 4)
GVL.t4to5	BOOL (GVL)	Transition for SFC step (Step 4 to Step 5)

All details about the ATV31 are available in the documentations “ATV31 user Manual communication variable”. Please, refer to the attached file.

The second POU “ATV_Managment”, allows to manage the initialisation and the operation mode of the ATV31.

Variables use:

Variable name	Variable type	Description
Run_MyAppli	BOOL	Start the application
Start_init	BOOL	Start the initialization phase
RunMode	BOOL	Allow to select the Reverse/Forward mode
Start_Order	BOOL	Operation enable

