

Multi Monitoring system VSD and Magelis HMI

What is the purpose

Multi monitoring system using animation and touch screen feature

What units are effected

1. ATV series
2. Magelis HMI
3. Vijeo Designer

Details

This application is divided into several parts

Section	Title
1	Parts List
2	Step by step setup
3	Online Testing
4	Remarks

Section 1: Parts list

Parts List table

Items used in the test

Items	Part numbers	Description
ATV series	TM221ME16T	PLC Hardware
Software HMI		Software Vijeo Designer

Continued on next page

Section 1: Parts liststep by step

Step by step configuration software on Vijeo Designer :

Software Configuration:

HMI setting

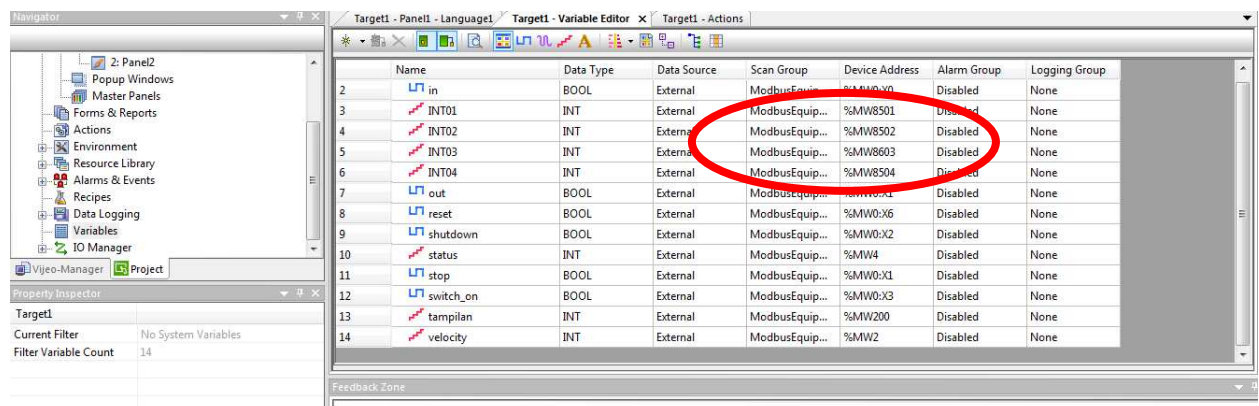
1. Define The address Of Command and Frequency of Modbus parameters ATV

Command address = %MW8501

Frequency address =%MW8502

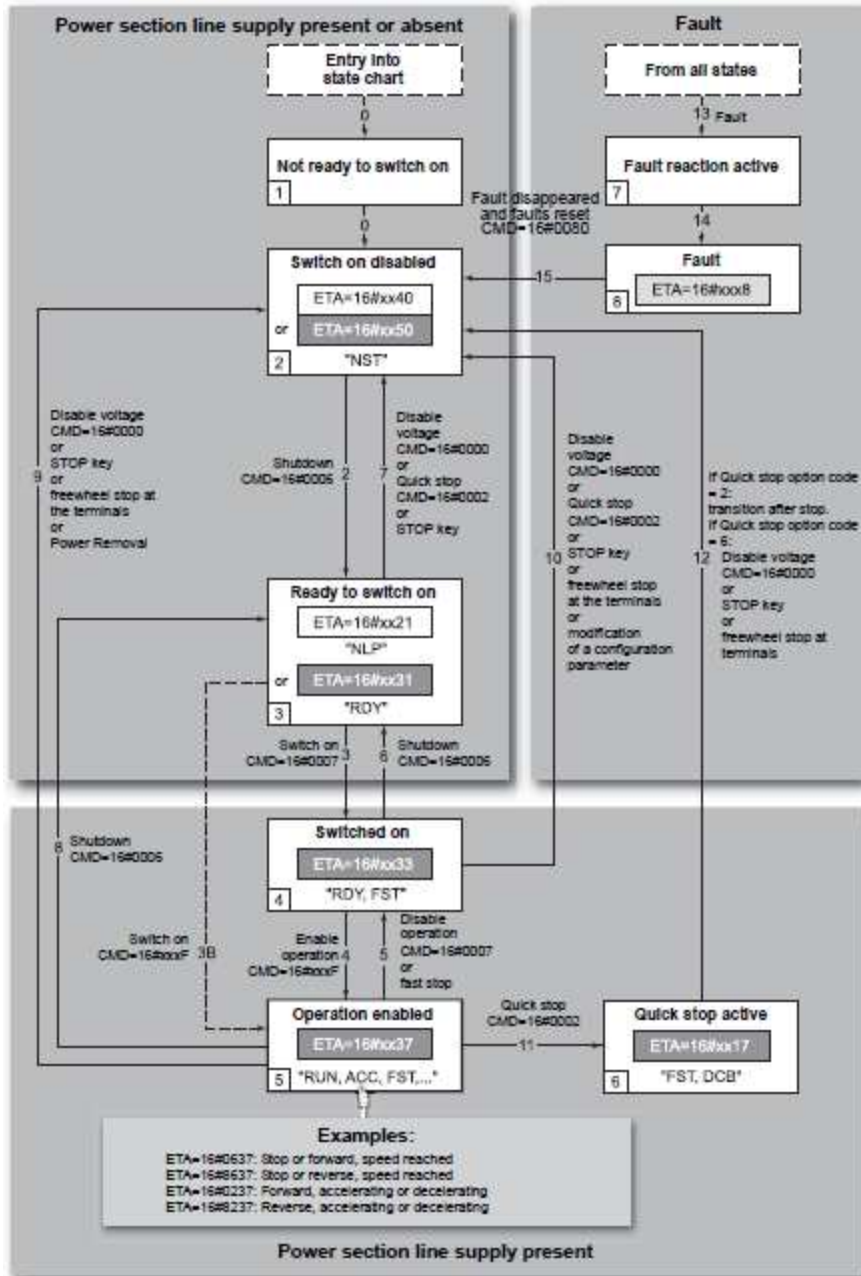
Status address =%MW8603

2. Configure the tags for addressing purpose

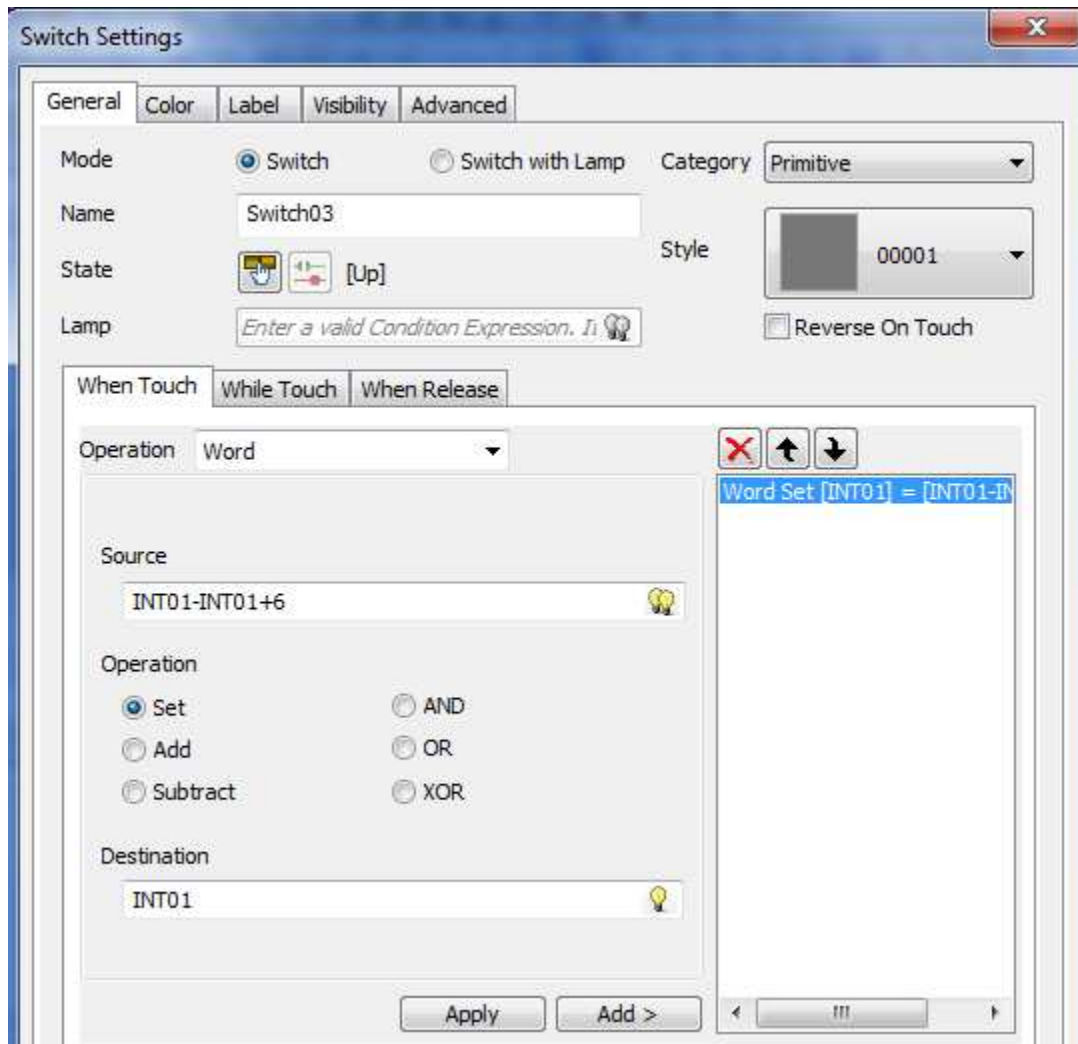


Name	Data Type	Data Source	Scan Group	Device Address	Alarm Group	Logging Group
in	BOOL	External	ModbusEquip...	%MW0:X0	Disabled	None
INT01	INT	External	ModbusEquip...	%MW8501	Disabled	None
INT02	INT	External	ModbusEquip...	%MW8502	Disabled	None
INT03	INT	External	ModbusEquip...	%MW8603	Disabled	None
INT04	INT	External	ModbusEquip...	%MW8504	Disabled	None
out	BOOL	External	ModbusEquip...	%MW0:X1	Disabled	None
reset	BOOL	External	ModbusEquip...	%MW0:X6	Disabled	None
shutdown	BOOL	External	ModbusEquip...	%MW0:X2	Disabled	None
status	INT	External	ModbusEquip...	%MW4	Disabled	None
stop	BOOL	External	ModbusEquip...	%MW0:X1	Disabled	None
switch_on	BOOL	External	ModbusEquip...	%MW0:X3	Disabled	None
tampilan	INT	External	ModbusEquip...	%MW200	Disabled	None
velocity	INT	External	ModbusEquip...	%MW2	Disabled	None

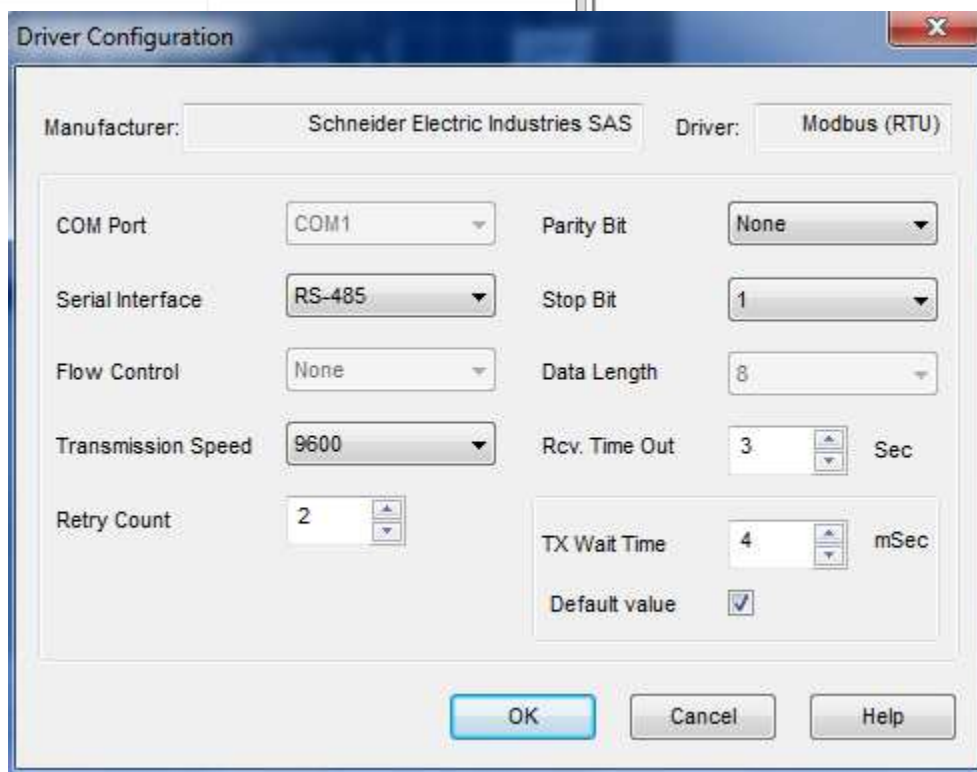
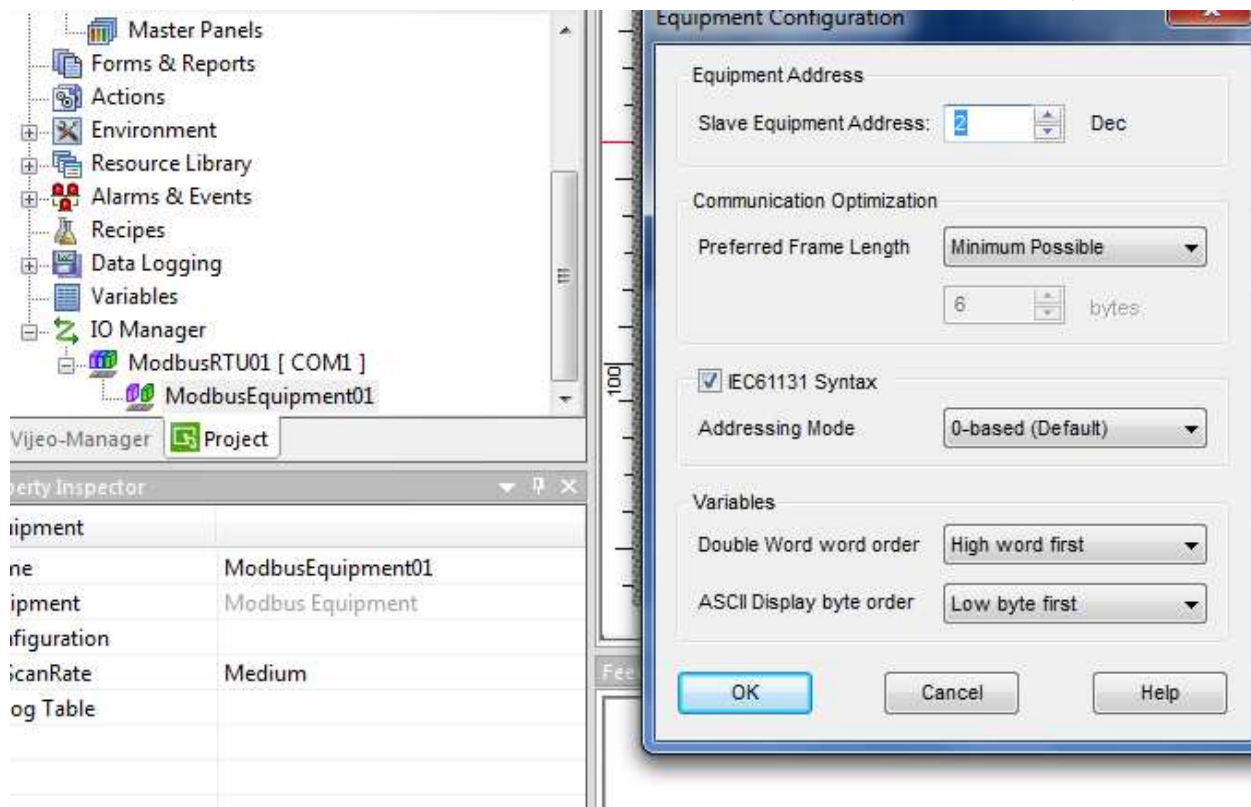
3. Use the flowchart table of “ATV parameters manual” to start command and fill the frequency reference, when touch command of button can be used to make the ATV in RUN condition by follow the step



- Make a button or expression in Vijeo Designer to follow the no 3 steps



5. Configure the equipment address to set the Slave address, baud rate, stop bits, parity of modbus protocol and enable the IEC 61131 syntax



ATV setting :

1. Configure the modbus address,baudrate,parity of ATV

Code	Name/Description	Adjustment range	Factory setting
nd2-	■ [MODBUS HMI] Communication with the graphic display terminal		
tbr2	☐ [HMI baud rate] 9.6 or 19.2 kbps via the integrated display terminal. 9600 or 19200 bauds via the graphic display terminal. The graphic display terminal only operates if [HMI baud rate] (tbr2) = 19200 bauds (19.2 kbps). In order for any change in the assignment of [HMI baud rate] (tbr2) to be taken into account you must: - Provide confirmation in a confirmation window if using the graphic display terminal - Press the ENT key for 2 s if using the integrated display terminal		19.2 kbps
tfd2	☐ [HMI format] Read-only parameter, cannot be modified.		8E1
nd1-	■ [MODBUS NETWORK]		
add	☐ [Modbus Address] OFF to 247		OFF
anora	☐ [Modbus add Prg C.] Modbus address of the Controller Inside card OFF at 247 The parameter can be accessed if the Controller Inside card has been inserted and depending on its configuration (please consult the specific documentation).		OFF
anoc	☐ [Modbus add Com.C.] Modbus address of the communication card OFF to 247 The parameter can be accessed if a communication card has been inserted and depending on its configuration (please consult the specific documentation).		OFF
tbr	☐ [Modbus baud rate] 4.8 - 9.6 - 19.2 - 38.4 kbps on the integrated display terminal. 4800, 9600, 19200 or 38400 bauds on the graphic display terminal.		19.2 kbps
tfd	☐ [Modbus format] 801 - 8E1 - 8n1, 8n2		8E1
ttd	☐ [Modbus time out] 0.1 to 30 s		10.0 s

2. Set the communication command and reference from modbus, not separate IO profile

Code	Name/Description	Adjustment range	Factory setting
Fr 1 A 11 A 12 A 13 A 14 LCC Modb CAN Com. card C.Insid. card RP PG	[Ref.1 channel] ☐ [AI1] (AI1): Analog input ☐ [AI2] (AI2): Analog input ☐ [AI3] (AI3): Analog input, if VW3A3202 extension card has been inserted ☐ [AI4] (AI4): Analog input, if VW3A3202 extension card has been inserted ☐ [HMI] (LCC): Graphic display terminal ☐ [Modbus] (Modb): Integrated Modbus ☐ [CANopen] (CAN): Integrated CANopen ☐ [Com. card] (nEt): Communication card (if inserted) ☐ [C.Insid. card] (APP): Controller Inside card (if inserted) ☐ [RP] (PI): Frequency input, if VW3A3202 extension card has been inserted, ☐ [Encoder] (PG): Encoder input, if encoder card has been inserted		[AI1] (AI1)
r In nO YES	[RV Inhibition] ☐ [No] (nO) ☐ [Yes] (YES) Inhibition of movement in reverse direction, does not apply to direction requests sent by logic inputs. - Reverse direction requests sent by logic inputs are taken into account. - Reverse direction requests sent by the graphic display terminal are not taken into account. - Reverse direction requests sent by the line are not taken into account. - Any reverse speed reference originating from the PID, summing input, etc., is interpreted as a zero reference (0 Hz).		[No] (nO)
PSt nO YES	[Stop Key priority] ☐ [No] (nO) ☐ [Yes] (YES): Gives priority to the STOP key on the graphic display terminal when the graphic display terminal is not enabled as the command channel. Press and hold down ENT for 2 seconds in order for any change in the assignment of [Stop Key priority] (PSt) to be taken into account. This will be a freewheel stop. If the active command channel is the graphic display terminal, the stop will be performed according to the [Type of stop] (Stt) page 140 irrespective of the configuration of [Stop Key priority] (PSt).		[Yes] (YES)
CHCF SEB S (I) SEP IO	[Profile] ☐ [8 serie] (SE8): ATV58 interchangeability (see Migration Manual). The [8 serie] (SE8) configuration is used to load, via PowerSuite, for example, an ATV58 drive configuration in an ATV71 that has already been set to this configuration. This assignment cannot be accessed if a Controller Inside card has been inserted.  Note: Modifications to the configuration of the ATV71 must only be made using PowerSuite when it is in this configuration, otherwise operation cannot be guaranteed. ☐ [Not separ.] (SIM): Reference and command, not separate ☐ [Separate] (SEP): Separate reference and command. This assignment cannot be accessed in [I/O profile] (IO). ☐ [I/O profile] (IO): I/O profile		[Not separ.] (SIM)

Section 3: Online Testing

Online testing :

1. Download the Vijeo Designer Program to HMI
 2. Configured the ATV
 3. Test the program by connect the HMI and ATV with recommended cable
 4. If connection success, the ATV can be run and changed the frequency from one single touch screen display
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Section 5: Remark

This features to meet customer expectations regarding multi monitoring and control of several ATVs in one monitoring system, use the recommended cable to avoid the broken ports from error connection caused own-solder cable
