

For LonWorks, we can have access to the entire drive parameter.

To do that we have 2 solutions

- **LonWorks network variable**

These variables are the SNVT. They are located inside the LonWorks card and link to a real drive parameter. There is nothing to program.

Example: LonWorks parameter nviRelay1

This variable enables the command of relay 1 of the drive if it is not assigned.

Name	nviRelay1
SNVT reference	SNVT_switch
SNVT index	95
Definition	Command of relay 1

This LonWorks network variable is linked to the drive parameter:
Logic input map (0L1r) (5212 = 16#145C) bit 0.

The entire list of LonWorks network variable is located inside the LonWorks manual.

- **Other Drive parameters**

The others drive parameters (not list inside the LonWorks manual), can be also read or write via LonWorks, but some configuration is necessary.

- Use LonWorks networks variable called : nviParamCmd or nvoParamResp

This function is like a messaging function. You define in these parameters, the logical address to read or write (logical address describe in the ATV212 Modbus file)

Parameter access

nviParamCmd, nvoParamResp

A controller node can monitor or modify any drive parameter by supporting the Parameter access command and the Parameter access response functions. These functions allow a controller complete access to the features of the drive and the ability to configure drives with predefined settings, using the network variables nviParamCmd and nvoParamResp.

Name	nviParamCmd
SNVT reference	SNVT_preset
SNVT index	94
Format	Structure, 14 bytes
Definition	Parameter access command

Name	nvoParamResp
SNVT reference	SNVT_preset
SNVT index	94
Format	Structure, 14 bytes
Definition	Parameter access response

The following definitions describe how the fields of SNVT_preset are used by the LONWORKS card of the drive:

Learn

This field contains the function code for the ATV212. The values for this field are:

Value	Element	Action
3	LN_REPORT_VALUE	Read command
2	LN_LEARN_VALUE	Write command (to the EEPROM)

Any other value in this field will result in an error message in the Parameter access response.

Selector

This field contains the drive parameter communication number, written in decimal notation, that is to be written or read. Requests for undefined parameters will result in an error message in the Parameter access response.

The controlling device should compare the parameter address of the response message to the requested parameter address to determine that the information received is the requested information and not a response to another controller or from another drive.

The drive parameters are described in the Altivar 212 programming manual and Modbus communication manual, with their logic address and possible values.

Value

This array contains the parameter information to and from the drive. All drive parameters use INT or UINT (16 bit words signed or unsigned).

The most significant byte of data will be stored in value [2] and the least significant byte of data will be stored in value [3].

In the event of an error message, the drive will send 0xFF in value [0] and an error code in value [3].

Error codes

Code	Meaning
1	Illegal function for the addressed node
2	Illegal parameter address
3	Illegal data value
4	Illegal access (writing prohibited)

Day, Hour, Minute, Second, Millisecond

The time fields are not supported by the LONWORKS card. The drive will respond to parameter access requests as soon as they are received. Any values in the time fields of the Parameter access command will be ignored. All time fields will be set to "0" in the Parameter access response.

Example 1: Read access

A controller node reads the value of Trip code (address **FC90**). Now, **DL** trip (trip code is 13 decimal) occurs. The value is 000D hex. The controller node sends/receives the following data.

Field	Send (nviParamCmd)	Receive (nviParamResp)
learn	LN_REPORT_VALUE	LN_REPORT_VALUE
selector	FC90 hex	FC90 hex
value[0]	N/A	00 hex
value[1]	N/A	00 hex
value[2]	N/A	00 hex
value[3]	N/A	0D hex
day ,hour, minute, second, millisecond	N/A	0

Example in your case for Motor power (Output power)

- Inside the Modbus manual you will find the parameter address

Power and energy

Parameter	Modbus address	Unit
Input power (FE 29)	65065 16#FE29	kW
Output power (FE 30)	65072 16#FE30	kW
Input energy (FE 76)	65142 16#FE76	kWh
Output energys (FE 77)	65143 16#FE77	kWh

It will give:

Field	Send (nviParamCmd)	Receive (nviParamResp)
Learn	LN_REPORT_VALUE	LN_REPORT_VALUE
Selector	FE30 (hex)	FE30 (hex)
Value[0]	-	0
Value[1]	-	0
Value[2]	-	MSB answer
Value[3]	-	LSB answer
day ,hour, minute, second, millisecond	-	0

With this function you can have access to all drive parameters.