

Instruction Bulletin

Altivar® 61

Addendum to ATV61 Variable Speed Drives Programming Manual

Retain for future use.

Introduction

This addendum contains important additions to the Altivar 61 Programming Manual. Please read the document carefully and store it with the Programming Manual for future reference.

To facilitate cross referencing, the section headings in this addendum are worded to match the section headings in the Programming Manual. Please consult the Contents of the Programming Manual for the page numbers.

Steps for setting up the drive

Change the section subtitle "Tips" to "Preliminary Recommendations." Read the recommendations and follow them while programming the drive controller.

Graphic display terminal/ Integrated display terminal

All Altivar 61 (ATV61) drive controllers come standard with a remote graphic display terminal. To order a drive controller with an integrated 7-segment display terminal instead, add a "Z" suffix to the drive controller catalog number. Refer to Table 1.

Table 1: ATV61 Catalog Numbers, with Remote Graphic Display and with Integrated 7-Segment Display

Input line voltage	Three Phase Motor Power		Continuous Output Current		Catalog Number	
	hp	kW	A	With Remote Graphic Display Terminal	With Integrated 7-Segment Display Terminal	
208/240 Vac Single Phase	0.5	0.37	3	ATV61H075M3	ATV61H075M3Z	
	1	0.75	4.8	ATV61HU15M3	ATV61HU15M3Z	
	2	1.5	8	ATV61HU22M3	ATV61HU22M3Z	
	3	2.2	11	ATV61HU30M3	ATV61HU30M3Z	
	4	3	13.7	ATV61HU40M3	ATV61HU40M3Z	
	5	4	17.5	ATV61HU55M3	ATV61HU55M3Z	
	7.5	5.5	27.5	ATV61HU75M3	ATV61HU75M3Z	
208/240 Vac Three Phase	1	0.75	4.8	ATV61H075M3	ATV61H075M3Z	
	2	1.5	8	ATV61HU15M3	ATV61HU15M3Z	
	3	2.2	11	ATV61HU22M3	ATV61HU22M3Z	
	4	3	13.7	ATV61HU30M3	ATV61HU30M3Z	
	5	4	17.5	ATV61HU40M3	ATV61HU40M3Z	
	7.5	5.5	27.5	ATV61HU55M3	ATV61HU55M3Z	
	10	7.5	33	ATV61HU75M3	ATV61HU75M3Z	
	15	11	54	ATV61HD11M3X	ATV61HD11M3XZ	
	20	15	66	ATV61HD15M3X	ATV61HD15M3XZ	
	25	18	75	ATV61HD18M3X	ATV61HD18M3XZ	
	30	22	88	ATV61HD22M3X	ATV61HD22M3XZ	
	40	30	120	ATV61HD30M3X	ATV61HD30M3XZ	
	50	37	144	ATV61HD37M3X	ATV61HD37M3XZ	

Table 1: ATV61 Catalog Numbers, with Remote Graphic Display and with Integrated 7-Segment Display *(continued)*

Input line voltage	Three Phase Motor Power	Continuous Output Current		Catalog Number	
	hp	kW	A	With Remote Graphic Display Terminal	With Integrated 7-Segment Display Terminal
208/240 Vac Three Phase	60	45	176	ATV61HD45M3X	ATV61HD45M3XZ
	75	55	221	ATV61HD55M3X	—
	100	75	285	ATV61HD75M3X	—
	125	90	359	ATV61HD90M3X	—
400/480 Vac Three Phase	1	0.75	2.3	ATV61H075N4	ATV61H075N4Z
	2	1.5	4.1	ATV61HU15N4	ATV61HU15N4Z
	3	2.2	5.8	ATV61HU22N4	ATV61HU22N4Z
	4	3	7.8	ATV61HU30N4	ATV61HU30N4Z
	5	4	10.5	ATV61HU40N4	ATV61HU40N4Z
	7.5	5.5	14.3	ATV61HU55N4	ATV61HU55N4Z
	10	7.5	17.6	ATV61HU75N4	ATV61HU75N4Z
	15	11	27.7	ATV61HD11N4	ATV61HD11N4Z
	20	15	33	ATV61HD15N4	ATV61HD15N4Z
	25	18	41	ATV61HD18N4	ATV61HD18N4Z
	30	22	48	ATV61HD22N4	ATV61HD22N4Z
	40	30	66	ATV61HD30N4	ATV61HD30N4Z
	50	37	79	ATV61HD37N4	ATV61HD37N4Z
	60	45	94	ATV61HD45N4	ATV61HD45N4Z
	75	55	116	ATV61HD55N4	ATV61HD55N4Z
	100	75	160	ATV61HD75N4	ATV61HD75N4Z
	125	90	179	ATV61HD90N4	—
	150	110	215	ATV61HC11N4	—
	200	130	259	ATV61HC13N4	—
	250	160	314	ATV61HC16N4	—
350	220	427	ATV61HC22N4	—	
400	250	481	ATV61HC25N4	—	
500	315	616	ATV71HC31N4	—	
600	400	759	ATV61HC40N4	—	
700	500	941	ATV71HC50N4	—	
900	630	1188	ATV61HC63N4	—	

Interdependence of parameter values

Replace the first sentence in this section with the following Warning message:

⚠ WARNING
UNINTENDED EQUIPMENT OPERATION
<ul style="list-style-type: none"> • The configuration of certain parameters modifies the adjustment range of other parameters. • Changing the value of certain parameters may result in the modification of a factory setting or value you have already selected. • Read and understand the ATV61 Programming Manual before configuring parameter values.
Failure to follow this instruction can result in death, serious injury, or equipment damage.

[1.1 SIMPLY START] (SIM-)

With integrated display terminal

Replace the last paragraph in this section with the following Warning message and text:

⚠ WARNING
UNINTENDED EQUIPMENT OPERATION
<ul style="list-style-type: none">• Changes to parameters in other menus may change the [1.1 SIMPLY START] (SIM-) parameter settings.• Read and understand the ATV61 Programming Manual before configuring parameter values.
Failure to follow this instruction can result in death, serious injury, or equipment damage.

The [1.1 SIMPLY START] (SIM-) menu can be used to quickly configure key parameters to get the drive controller and motor running.

Parameter modifications in other menus may modify the parameter settings in the [1.1 SIMPLY START] (SIM-) menu. As an example, configuration of motor parameters in [1.4 MOTOR CONTROL] (drC-) will be reflected in the [1.1 SIMPLY START] (SIM-) parameters.

[Auto tuning]

Add the following Danger and Caution messages to the [Auto tuning] section:

⚠ DANGER
HAZARD OF ELECTRIC SHOCK OR ARC FLASH
<ul style="list-style-type: none">• During auto tuning, the motor operates at rated current.• Do not service the motor during auto tuning.
Failure to follow this instruction will result in death or serious injury.

⚠ CAUTION
UNINTENDED EQUIPMENT OPERATION
<ul style="list-style-type: none">• The following motor parameters must be correctly configured before starting auto tuning: [Rated motor volt.] (UnS), [Rated motor freq.] (FrS), [Rated mot. current] (nCr), [Rated motor speed] (nSP), and [Rated motor power] (nPr).• If one or more of these parameters is modified after auto tuning has been performed, Auto tuning (tUn) will be set to [No] and the procedure must be repeated.
Failure to follow this instruction can result in injury or equipment damage.

[1.4 MOTOR CONTROL] (drC-)

[Auto tuning]

Add the following Warning and Caution messages to the [Auto tuning] section:

⚠ DANGER
HAZARD OF ELECTRIC SHOCK OR ARC FLASH
<ul style="list-style-type: none">• During auto tuning, the motor operates at rated current.• Do not service the motor during auto tuning.
Failure to follow this instruction will result in death or serious injury.

⚠ CAUTION
UNINTENDED EQUIPMENT OPERATION
<ul style="list-style-type: none">• The following motor parameters must be correctly configured before starting auto tuning: [Rated motor volt.] (UnS), [Rated motor freq.] (FrS), [Rated mot. current] (nCr), [Rated motor speed] (nSP), and [Rated motor power] (nPr).• If one or more of these parameters is modified after auto tuning has been performed, Auto tuning (tUn) will be set to [No] and the procedure must be repeated.
Failure to follow this instruction can result in injury or equipment damage.

[Automatic autotune]

Add the following Caution message to the [Automatic autotune] section:

⚠ CAUTION
UNINTENDED EQUIPMENT OPERATION
<ul style="list-style-type: none">• The following motor parameters must be correctly configured before starting auto tuning: [Rated motor volt.] (UnS), [Rated motor freq.] (FrS), [Rated mot. current] (nCr), [Rated motor speed] (nSP), and [Rated motor power] (nPr).• If one or more of these parameters is modified after auto tuning has been performed, Auto tuning (tUn) will be set to [No] and the procedure must be repeated.
Failure to follow this instruction can result in injury or equipment damage.

[Sinus filter]

Sinus filters are output line filters. Replace the note in the [Sinus filter] section with the following Warning message:

CAUTION
MOTOR OVERHEATING <ul style="list-style-type: none">• If [Sinus filter] is set to [Yes] and the maximum frequency exceeds 100 hz or the motor type is synchronous, then the motor can overheat and the drive controller will trip on an overtemperature fault.• Consult the motor manufacturer for the thermal capability of the motor when operating over the desired speed range. Failure to follow this instruction can result in equipment damage.

[1.5 INPUTS/OUTPUTS CFG] (I-O-)

[LI1 CONFIGURATION]

The logic inputs are not assigned from the [1.5 INPUTS/OUTPUTS CFG] (I-O-) menu. Instead, when you enable a function, such as [PRESET SPEEDS], you are given an option to assign a logic input from the function menu. Refer to "Index of Functions" in the ATV61 Programming Manual for a list of drive controller functions.

[1.6 COMMAND] (CTL-)

Assignment conditions for logic inputs and control bits

Add the following Warning message to Assignment conditions for logic inputs and control bits:

⚠ WARNING
LOSS OF CONTROL <ul style="list-style-type: none">• The designer of any control scheme must consider the potential failure modes of control paths and, for certain critical control functions, provide a means to achieve a safe state during and after a path failure.• Examples of critical control functions are Emergency Stop and Overtravel Stop.• Separate or redundant control paths must be provided for critical control functions. Failure to follow these instructions can result in death, serious injury, or equipment damage.

[Stop Key priority]

Add the following Warning message to the [Stop Key priority] section:

⚠ WARNING
UNINTENDED EQUIPMENT OPERATION <ul style="list-style-type: none">• The keypad stop key will be disabled if [Stop Priority] (PSt) is set to [No]. In this mode the motor will not stop if the stop key is pressed.• An external stop command source must be installed to stop the motor.• To retain the stop key functionality set [Stop Key Priority] to [Yes]. Failure to follow this instruction can result in death, serious injury, or equipment damage.

[1.7 APPLICATION FUNCT.] (FUn-)

Output contactor command

Add the following Warning messages to the Output contactor command section:

⚠ WARNING
NO HOLDING TORQUE <ul style="list-style-type: none">• DC injection braking does not provide holding torque at zero speed.• DC injection braking does not function during loss of power or drive controller fault.• When required, use a separate brake for holding torque. Failure to follow this instruction can result in death, serious injury, or equipment damage.

⚠ WARNING
EXCESSIVE DC INJECTION BRAKING <ul style="list-style-type: none">• Application of DC injection braking for long periods of time can cause motor overheating and damage.• Protect the motor from extended periods of DC injection braking. Failure to follow this instruction can result in death, serious injury, or equipment damage.

Parameter set switching
[PARAM. SET SWITCHING]

Add the following Warning message and text to the [PARAM. SET SWITCHING] section:

⚠ WARNING
UNINTENDED EQUIPMENT OPERATION <p>After switching to a parameter set, verify that the parameter assignments of the set are as intended for the motor selected.</p> Failure to follow this instruction can result in death, serious injury, or equipment damage.

To switch parameter sets:

1. Stop the motor.
2. Switch to the desired parameter set.
3. Verify that the parameter assignments of the selected set are as intended for the motor selected.

**Motor or configuration switching
[MULTIMOTORS/CONFIG.]**

Add the following Warning message to the [MULTIMOTORS/CONFIG.] section:

⚠ WARNING
UNINTENDED EQUIPMENT OPERATION
<ul style="list-style-type: none">• Motor or configuration switching can only take place when the drive controller is stopped.• If a switching request is sent during drive operation, it will not be executed until the next stop.
Failure to follow this instruction can result in death, serious injury, or equipment damage.

[AUTO TUNING BY LI]

Add the following Danger message to the [AUTO TUNING BY LI] section:

⚠ DANGER
HAZARD OF ELECTRIC SHOCK OR ARC FLASH
<ul style="list-style-type: none">• During auto tuning, the motor operates at rated current.• Do not service the motor during auto tuning.
Failure to follow this instruction will result in death or serious injury.

[1.8 FAULT MANAGEMENT] (FLt-)

[FAULT INHIBITION]

Add this Danger message to the [FAULT INHIBITION] section:

⚠ DANGER
LOSS OF PERSONNEL AND EQUIPMENT PROTECTION
<ul style="list-style-type: none">• Enabling the fault inhibition parameter (InH) will disable the drive controller protection features.• InH should not be enabled for typical applications of this equipment.• InH should be enabled only in extraordinary situations where a thorough risk analysis demonstrates that the presence of adjustable speed drive protection poses a greater risk than personnel injury or equipment damage.
Failure to follow this instruction will result in death or serious injury.

Faults – Causes – Remedies

- Apply this Danger message to the table listing information about “Faults, which cannot be reset automatically.”

⚠ DANGER

LOSS OF PERSONNEL AND EQUIPMENT PROTECTION

- Enabling the fault inhibition parameter (InH) will disable the drive controller protection features.
- InH should not be enabled for typical applications of this equipment.
- InH should be enabled only in extraordinary situations where a thorough risk analysis demonstrates that the presence of adjustable speed drive protection poses a greater risk than personnel injury or equipment damage.

Failure to follow this instruction will result in death or serious injury.

- Apply this Danger message to the table listing information about “Faults, which can be reset with the automatic restart function, after the cause has disappeared.”

⚠ DANGER

LOSS OF PERSONNEL AND EQUIPMENT PROTECTION

- Enabling the fault inhibition parameter (InH) will disable the drive controller protection features.
- InH should not be enabled for typical applications of this equipment.
- InH should be enabled only in extraordinary situations where a thorough risk analysis demonstrates that the presence of adjustable speed drive protection poses a greater risk than personnel injury or equipment damage.

Failure to follow this instruction will result in death or serious injury.

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