

Manufactures Declaration

Factory testing of VLT® Frequency Converters

The test sequence on the next page is used for the factory testing of all types of

VLT® HVAC Drive series FC-101 (FC-101P15KT2 - FC-101P45KT2)
VLT® HVAC Drive series FC-101 (FC-101P22KT4 - FC-101P90KT4)
VLT® HVAC Drive series FC-101 (FC-101P2K2T6 - FC-101P90KT6)
VLT® HVAC Drive series FC-102 (FC-102P1K1T2 - FC-102P45KT2)
VLT® HVAC Drive series FC-102 (FC-102P1K1T4 - FC-102P90KT4)
VLT® HVAC Drive series FC-102 (FC-102P1K1T6 - FC-102P90KT6)
VLT® AQUA Drive series FC-202 (FC-202P1K1S2 - FC-202P22KS2)
VLT® AQUA Drive series FC-202 (FC-202P7K5S4 - FC-202P37KS4)
VLT® AQUA Drive series FC-202 (FC-202PK25T2 - FC-202P45KT2)
VLT® AQUA Drive series FC-202 (FC-202PK37T4 - FC-202P90KT4)
VLT® AQUA Drive series FC-202 (FC-202PK75T6 - FC-202P90KT6)
VLT® AQUA Drive series FC-202 (FC-202P11KT7 - FC-202P90KT7)
VLT® AutomationDrive series FC-301 (FC-301PK25T2 - FC-301P37KT2)
VLT® AutomationDrive series FC-301 (FC-301PK37T4 - FC-301P75KT4)
VLT® AutomationDrive series FC-302 (FC-302PK25T2 - FC-302P37KT2)
VLT® AutomationDrive series FC-302 (FC-302PK37T5 - FC-302P75KT5)
VLT® AutomationDrive series FC-302 (FC-302PK75T6 - FC-302P75KT6)
VLT® AutomationDrive series FC-302 (FC-302P11KT7 - FC-302P75KT7)
VLT® Automation VT Drive series FC-322 (FC-322P1K1S2 - FC-322P22KS2)
VLT® Automation VT Drive series FC-322 (FC-322P7K5S4 - FC-322P37KS4)
VLT® Automation VT Drive series FC-322 (FC-322PK25T2 - FC-322P45KT2)
VLT® Automation VT Drive series FC-322 (FC-322PK37T4 - FC-322P90KT4)
VLT® Automation VT Drive series FC-322 (FC-322PK75T6 - FC-322P90KT6)
VLT® Automation VT Drive series FC-322 (FC-322P11KT7 - FC-322P90KT7)

The tests ensure that the drives are in compliance with our specifications which can be documented.

Final UNIT test: Insulation, Initial, Function, Burn-in, Final test and Factory setting:

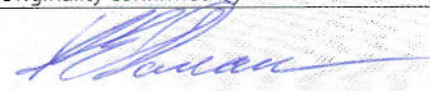
Test	Test no.	Description	Remarks
Insulation test	1	Insulation test at input/output terminals	2150 V DC for 1 second
Initial test I	2	Alive test – 24V or 10V test* ¹	Load on +24V
	3	Alive test- Fan check	Check if fans are connected
	4	Verification- Control Card software ver. check	Read software version (P15-43) and implement new software if asked for.
	5	Verification- Type code check (There are no type code) * ¹	Read type code in Control Card (P15-45)
	6	Verification- Language update	Check country code. Only if update is necessary
	7	Control Card and parameter setup	Parameter test at special parameter set up
	Initial test II	8a	Rev/Fwd / and test of thermal sensors
8b		Current measurement	Current measurement at 0% load and 100% load
9		2 phase short circuit	FC must enter Short circuit TRIP lock mode (Alarm 16)
10		Ground fault	FC must enter Earth fault TRIP lock mode.
Function test	11	Heating of thermal foil* ¹	Temperature measurement.
	12	Current limit test* ¹	The FC may run in torque limit
	13	Brake* ¹	Measuring brake current and function
	14	Mains drop out	The FC must operate after this test without reset
	15	Over voltage* ² , * ¹	Quick stop: The FC may trip
	16	Switching on output* ¹	The FC may trip during this test
Burn in test	17	Load test, is running repetitively during the burn-in test time.	Load \geq 100% of Inom. running with different speed references.
Final test and factory setting	18	Set frequency converter to factory initialization at next power-up.	Update to parameter 14-29 (Servicemode enable) Update 1 to parameter 14-28 (Master.reset) Power-down End of test

*¹ For FC-101 are the following deviations:

Test no.	Description
2	There is no approach to 24V or 10V test.
5	Current Type Code is not in the drive, but the driven's id no. becomes controller, and motoring display becomes controllert otherwise.
11	Are Removing from every test since no more is spent foil.
12	Is not implemented because it is just something we run on industrial drives. But the same is in principle also be done in Load Test PNK. 17
13	Is not implemented as fc-101 does not exist with brake.
15, 16	Not implemented because they have been based on the medium test where these points are removed.

*² Medium sizes

Test no.	Description
15	Removed, No failures were observed.

Test prepared by	Document prepared by	Originality confirmed by
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