

Declaration on environmental compatibility in the fields of EMC¹⁾, climate and mechanical stress

RE 30139-U/04.08
Replaces: 06.07

1/4

Type VT-HNC100...3X

Digital axis control

Product types

– VT-HNC 100...3X according to data sheet RE 30139 and operating instructions RE 30139-B

Description of the product family

The digital axis control HNC100 is a programmable NC control for closed-loop controlled axes. It meets the specific requirements for controlling hydraulic axes.

¹⁾ In the sense of the EMC law of 30th August 1995 and Directive 89/336/EEC

The products comply with the following standards:**1. EMC** (electromagnetic compatibility)

Testing in accordance with generic standard EN 61000-6-2:2005, VDE 0839 part 6-2

EN 61000-4-2:1995 +A1:1998 +A2:2000 IEC 1000-4-2	VDE 0847-4-2	ESD (electrostatic discharge)	Air discharge: Severity 4 / assessment criterion A Contact discharge: Severity 4 / assessment criterion A
EN 61000-4-4:2004 IEC 1000-4-4	VDE 0847-4-4	BURST (transient discharge)	Repetition rate 5 kHz and 100 kHz Supply voltage: Severity 3 / assessment criterion A Data cables: Severity 4 / assessment criterion A
EN 61000-4-5:2006 IEC 1000-4-5	VDE 0847-4-5	SURGE (surge voltages)	Supply voltage: Severity 1 / assessment criterion A Data cables: ^{1) 2)} Unshielded, cable against ground Severity 2 / assessment criterion C Shielded, cable shield against ground Severity 2 / assessment criterion B
EN 61000-4-6:1996 +A1:2001 IEC 1000-4-6	VDE 0847-4-6	HF fields, conducted interference (immunity to interference)	Severity 3 / assessment criterion A 0.15...80...230 MHz
EN 61000-4-3:2006	VDE 0847-4-3	HF fields, radiated interference (immunity to interference)	80...1000 MHz Severity 3 / assessment criterion A 1...2.7 GHz Severity 3 / assessment criterion A

For footnotes, see page 3

The products comply with the following standards (continued):**1. EMC** (electromagnetic compatibility), continued

Testing in accordance with generic standard EN 61000-6-3:2007, VDE 0839 part 6-3 / EN 61000-6-4:2007, VDE 0839 part 6-4

IEC/CISPR16-2-3:2006-07	Emission Housing, radiated	Limit values to EN 61000-6-4:2007 30...230...1000 MHz Table 1 / line 1 ³⁾ Limit values to EN 61000-6-3:2007 30...230...1000 MHz Table 1 / line 1 ⁴⁾
IEC/CISPR16-2-1:2005-09, Punkt 7.4.1 IEC/CISPR16-1-2:2006-08, Punkt 4.3	Emission DC/power supply connection, conducted	Limit values to EN 61000-6-4:2007 0.15...30 MHz Table 1 / line 2 ³⁾ Limit values to EN 61000-6-3:2007 0.15...30 MHz Table 1 / line 3 ³⁾

When properly installed in a switch cabinet and wired in accordance with data sheet RE 30139 observing the notes in operating instructions RE 30139-B, the design of the digital axis control (HNC100-3X) fulfills the preconditions for meeting the requirements laid down in EMC standards EN 61000-6-2:2005, EN 61000-6-3 and EN 61000-6-4.

¹⁾ It is recommended to use unshielded individual wires (here: DIGITAL I/O) only up to a max. length of 30 m per wire.

Beyond a cable length of 30 m, a shielded cable must be used.

²⁾ Assessment criterion C due to the protective and safety shutdown of the electronics. The operable condition of the electronics can be restored by a reset or power OFF/ON.

³⁾ Unrestrictedly valid for all control types of VT-HNC100, component series 3X

⁴⁾ Valid for the following control types of the VT-HNC100, component series 3X, under the following conditions:

VT-HNC100-C-3X/P-I-00/...	Snap ferrite (WE 74271112) mounted to PROFIBUS cable
VT-HNC100-1-3X/P-I-00/...	No further conditions
VT-HNC100-2-3X/P-I-00/...	No further conditions
VT-HNC100-3-3X/P-I-00/...	No further conditions
VT-HNC100-4-3X/P-I-00/...	No further conditions
VT-HNC100-C-3X/S-I-00/...	Snap ferrite (WE 74271112) mounted to the supply cable (U_B)
VT-HNC100-1-3X/S-I-00/...	Snap ferrite (WE 74271112) mounted to the supply cable (U_B)

In all cases, the cables must be installed in accordance with the installation instructions.

The products comply with the following standards (continued):**2. Climate**

Testing in accordance with EN 60068-2 / IEC 68-2 (environmental testing)

EN 60068-2-1:1994		Cold test	2 cycles -5 °C Dwell time 2 hours
EN 60068-2-2:1993		Dry heat test	2 cycles +55 °C Dwell time 2 hours
EN 60068-2-1:1994 EN 60068-2-2:1993		Storage temperature	-25 °C, dwell time 16 hours +85 °C, dwell time 16 hours
	IEC 68-2-14:1986	Temperatur cycle	2 cycles -5 °C to +55 °C Dwell time 3 hours each at min. / max. temperature
EN 60068-2-30:1999		Damp heat, cyclical	Variant 2 +25 °C to +40 °C 93 % to 97 % relative humidity 2 cycles 24 hours each

3. Mechanical stress

Vibration and shock test in accordance with EN 60068-2 / IEC 68-2 / DIN 40046 (environmental testing)

Testing in three axes (X/Y/Z)

EN 60068-2-6:1996			Sine test	20 cycles, 5...500 Hz at a logarithmic frequency change rate of 1 oct./min. 5 to 57 Hz, amplitude 0.3 mm (p-p) 57 to 500 Hz, amplitude 2 g
EN 60068-2-64:1995	IEC 68-2-36:1973	DIN 40046-24:1977	Random test Wide band noise	20 to 500 Hz, amplitude 0,01 g ² / Hz (2.2 g RMS) Testing time 30 min
EN 60068-2-27:1993			Shock test	Half sine 15g / 11 ms, 3 x in positive/ 3 x in negative direction per axis; in to- tal, 18 individual shocks

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