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Declaration on environmental compatibility in the field of EMC[1)], climate and mechanical stress

RE 29929-U/03.09 1/4
Replaces: 10.96

Typs VT-NE30, VT-NE31 and VT-NE32

Compact power supply units

Produkt typs

- VT-NE30-2X according to data sheet RE 29929
- VT-NE31-1X according to data sheet RE 29929
- VT-NE32-1X according to data sheet RE 29929

Description of the product family

- Power supply unit **VT-NE30** (unipolar output voltage):
  - For the voltage supply of amplifiers for proportional valves
  - For the voltage supply of proportional valves with integrated electronics
- Power supply unit **VT-NE31** (bipolar output voltage):
  - For the voltage supply of amplifiers for servo-valves
- Power supply unit **VT-NE32** (unipolar output voltage):
  - Same function as power supply unit VT-NE30
  - In addition, regulated output voltage for the supply of closed-loop control or evaluation electronics or accessory components such as pressure transducers, position measuring systems

[1)] as defined by EMC dated 30th August 1995 and Directive 89/336/EEC

The above products comply with the following standards:

1. EMC (electromagnetic compatibility)

Testing according to specialized basic standard prEN 50082-2:1994, VDE 0839 part 82-2, Interference immunity
for VT-NE31-1X und VT-NE32-1X

prEN 61000-4-2:1994 IEC 1000-4-2	VDE 0847-4-2	ESD (electrostatic discharge)	Air discharge: Severity 4 / Assessment criterion 1
EN 61000-4-4:1994 IEC 1000-4-4	VDE 0847-4-4	BURST (transient discharge)	Supply voltage: Severity 4 / Assessment criterion 1 Data cable: Severity 4 / Assessment criterion 1

Testing according to EN 62041:2003, Interference immunity
for VT-NE30-2X

EN 62041:2003, category 1		Increased testing accuracy

Test set-up according to prEN 61000-4-2 and prEN 61000-4-4

Testing according to specialized basic standard EN 50081-1:1992, VDE 0839 Teil 81-1, Emitted interference
for VT-NE31-1X and VT-NE32-1X

EN 55022:1994	VDE 0878 Teil 22	Radio interference voltage	Radio interference emission depends on arrangement and cabling

Testing according to EN 62041:2003, Emitted interference
for VT-NE30-2X

EN 62041:2003, category 1		class B

When properly installed in a control cabinet and wired according to the data sheet (see list above), the arrangement (power supply unit and control cabinet) complies with the preconditions for meeting the requirements of EMC standards EN50081-1 and prEN50082-2. The required control cabinet design depends on the magnitude of the externally emitted interference and may require special RF measures when exposed to extreme interference (irradiation).

2. Electrical tests (safety)

Insulation and voltage test

Insulation test			
EN 60204	VDE 0113	Primary winding Secundary winding	500 V 500 V
Voltage test			
EN 60204	VDE 0113	Primary winding Secundary winding	2 kV 2 kV

The above products comply with the following standards (continued):

3. Climate

Testing according to EN 60068-2 / IEC 68-2 (Environmental test)

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	Temperature cycles	2 Cycles –5 °C to +55 °C dwell time 3 hours at min / max temperature
	IEC 68-2-30:1985	Damp heat, cyclical	Variant 2 +25 °C to +40 °C (+55 °C) 93 % to 97 % relative humidity 2 Cycles á 24 hours

4. Mechanical stress (only tested with VT-NE32-1X)

Vibration and shock test according to EN 60068-2 / IEC 68-2 (Environmental test)
Tests were carried out in three axes (X/Y/Z)

	IEC 68-2-6:1990	Vibration, sinusoidal	10 Cycles, 5…500 Hz…5 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 dwell time 10 to 30 min at one resonance frequency
	IEC 68-2-36:1973	Random vibration Broadband noise	20 to 500 Hz, amplitude 0,01 g^2/Hz (2,2 g RMS) testing time 30 min per axis
EN 60068-2-27:1995		Shock	Half sine 15 g / 11 ms, 3 x in positive / 3 x in negative direction per axis, in total 18 individual shocks

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