

Declaration on environmental compatibility in the field of EMC, climate and mechanical stress

RE 30119-U/11.04

1/4

Type VT-VRPA2,-1X/...

Analogue amplifier card

Description of the product family

The amplifier cards are of the analog type. They include the electronics for controlling proportional valve with closed-loop position control of the spool.

Biasing currents, step functions, sensitivity of actual value acquisition and maximum output currents are tailored to the valve. In some cases, command values and ramp times can be called up or switched over via 24-V signals.

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

The above products comply with the following basic standards:

1. EMC (electromagnetic compatibility)

prEN 50082-2:1996	(VDE 0839 part 82-2)	Specialized basic standard	Interference immunity
EN61000-4-2:1995 IEC1000-4-2	VDE 0847-4-2	ESD (electrostatic discharge)	Air discharge: Severity 3 / assessment criterion A Contact discharge Severity 3 / assessment criterion A
EN61000-4-4:1995 IEC1000-4-4	VDE 0847-4-4	BURST (transient discharge)	Supply voltages up to: Severity 3 / assessment criterion A Supply voltages: Severity 2 / assessment criterion A Severity 4 / assessment criterion B
EN61000-4-5:1995	VDE 0847-4-5	SURG (surge voltages)	Supply voltage: Severity 1 / assessment criterion A
EN61000-4-6:1996 IEC1000-4-6	VDE 0847-4-6	RF fields conducted interference	Severity 3 / 10V/m / assessment criterion A
Test set-up to EN 61000-4-2; EN 61000-4-4; EN 61000-4-5 and EN 61000-4-6			

2. Climate

EN60068-2			Environmental test
EN60068-2-1:1994		Cold test	2 cycles – 5 °C, dwell time 2 hours
EN60068-2-2:1993		Dry heat test	2 cycles + 55 °C, dwell time 2 hours
EN60068-2-1:1994 EN60068-2-2:1993		Storage temperature	– 25 °C dwell time 16 hours, + 85 °C dwell time 16 hours
	IEC 68-2-14:1986	Temperature cycle	4 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, 93 % to 97 % relative humidity, 2 cycles, 24 hours each

3. Mechanical stress

EN60068-2/IEC68-2/DIN 40046			Vibration test in three perpendicular axes
prEN60068-2-6:1994		Sine test	10 cycles , 5 - 500 - 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 15 min at resonance frequency
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 per axis
EN 60068-2-27:1993		Shock test	Half sine 15g / 11 ms in positive/negative direction per axis; in total, 18 individual shocks

