

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

RE 30118-U/02.05

1/2

Type VT-VRPA1-100-1X/, VT-VRPA1-150-1X/, VT-VRPA1-151-1X/

Amplifier

Description of the product

The analog amplifier type VT-VRPA1-100, VT-VRPA1-150 and VT-VRPA1-151 series 1X is suitable for controlling direct operated proportional pressure control valves with electrical position feedback, type DBETR, and proportional flow control valves with electrical position feedback, type 2FRE(G).

The above products comply with the following basic standards:

1. EMC (electromagnetic compatibility)

EN 61000-6-2:2001	VDE 0839 Teil 6-2		Interference immunity
EN 61000-4-2:1995 +A1:1998 +A2:2000 IEC 1000-4-2	VDE 0847-4-2	ESD (electrostatic discharge)	Air discharge: Severity 3 / assessment criterion B Front panel carthed: Severity 3 / assessment criterion B
EN 61000-4-4:1995 +A1:2001 +A2:2001 IEC 1000-4-4	VDE 0847-4-4	BURST (transient discharge)	Supply voltages: Severity 3 / assessment criterion A Data cable: Severity 4 / assessment criterion A
EN 61000-4-5:1995 +A1:2001 IEC 1000-4-5	VDE 0847-4-5	SURGE (surge voltages)	Supply voltage: Severity 1 / assessment criterion B
EN 61000-4-6:1996 +A1:2001 IEC 1000-4-6	VDE 0847-4-6	HF fields conducted interference	Severity 3 / assessment criterion A

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

2. Climate

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 cycle	2 cycles –5 °C to +55 °C dwell time 3 hours at min./max. temperature
	IEC 68-2-30:1986	Damp heat, cyclical	Variant 2 +25 °C to +40 °C 93 % to 97 % relative humidity 2 cycles, 24 hours each

3. Mechanical stress

EN 60068-2	IEC 68-2 DIN 40046		Vibration test in three perpendicular axes
EN 60068-2-6:1994		Sine test	10 cycles , 5 to 500 to 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 10-15 min. at resonant frequency
	IEC 68-2-36:1973 DIN 40046-24:1977	Random test	20 to 500 Hz, amplitude 0,01 g ² / Hz (effective 2,2 g _{RMS}), testing time 30 min
EN 60068-2-27:1993		Shock test	Half sine 15g / 11 ms in positive / negative direction per axis; in total, 18 individual shocks