

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

RE 30225-U/04.08

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Type VT-MSPA1-50-1X/...

Analog amplifier modules

Product types

- VT-MSPA1-50-1X/V0/ according to data sheet RE 30225
- VT-MSPA1-50-1X/V002/MIL according to data sheet RE 59497

Description of the product family

Analog amplifier modules for controlling direct operated proportional directional valves.

¹⁾ in the sense of the ECM 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 prEN 50082-2:1996, VDE 0839 part 82-2

EN 61000-4-2:1995 IEC 1000-4-2	VDE 0847-4-2	ESD (electrostatic discharge)	Air discharge: Severity 3 / assessment criterion A Contact discharge: Severity 4 / assessment criterion A
EN 61000-4-4:1995 IEC 1000-4-4	VDE 0847-4-4	BURST (transient discharge)	Supply voltage to: Severity 2 / assessment criterion A Severity 3 / assessment criterion B Data cable: Severity 4 / assessment criterion A
EN 61000-4-5:1995	VDE 0847-4-5	SURGE (surge voltages)	Supply voltage: Severity 1 / assessment criterion B
EN 61000-4-6:1996 IEC 1000-4-6	VDE 0847-4-6	HF fields, conducted interference	Severity 3 assessment criterion A

2. Climate

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

Details in () are applied for VT-MSPA1-50-1X/V002/MIL

EN 60068-2-1:1994		Cold test	2 cycles at –25 °C (–5 °C) Dwell time 2 hours
EN 60068-2-2:1993		Dry heat test	2 cycles at +55 °C (+70 °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 at –25 °C to +55 °C (–5 to +70 °C) Dwell time 3 hours each at min. / max. temperature
	IEC 68-2-30:1985 (IEC 60068-2-30:1999)	Damp heat, cyclical	Variant 2 +25 °C to +40 °C 93 % to 97 % relative humidity 2 cycles of 24 hours each

The products comply with the following standards (continued):

3. Mechanical stress

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

Testing in three axes (X/Y/Z)

prEN 60068-2-6:1994			Sine test	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 15 to 30 min dwell time at resonance frequency (data per axis)
	IEC 68-2-36:1973	DIN 40046-24:1977	Random test	20 to 500 Hz, amplitude 0.01 g ² /Hz (2.2 g RMS) Testing time 30 min (data per axis)
EN 60068-2-27:1993			Shock test	Half sine 15 g / 11 ms, 3 x in positive/ 3 x in negative direction per axis; 18 individual shocks in total

