

# Declaration on environmental compatibility in the fields of EMC<sup>1)</sup>, climate and mechanical stress

RE 29902-U/07.07

1/4

## Type VT-SWMA

Analogue command value module

### Product types

– VT-SWMA-1-1X/V0/0 according to data sheet RE 29902

### Product description

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The analogue command value module VT-SWMA serves the signal processing for activation of valves with on-board electronics.

<sup>1)</sup> in the sense of the EMC law 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 50082-2:1996, 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: Severity 3 / assessment criterion A Severity 4 / assessment criterion B Data cable: Severity 4 / assessment criterion A Severity X; $\pm 4$ kV / assessment criterion A
EN 61000-4-5:1995 VDE 0847-4-5	SURGE (surge voltages)	Supply voltage: Severity 1 / assessment criterion A
Measuring system according to EN 61000-4-2, EN 61000-4-4 und EN 61000-4-5		

### 2. 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 cycle	2 cycles $-5$ °C bis $+55$ °C Dwell time 3 hours each 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

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

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### 3. Mechanical stress

Vibration and shock test according to EN 60068-2 / IEC 68-2 / DIN 40046 (Environmental test)

Tests were carried out in three axes (X/Y/Z)

prEN 60068-2-6:1994	Sine test	20 cycles, 5 to 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
IEC 68-2-36:1973 DIN 40046-24:1977	Random test Broadbandnoise	20 to 500 Hz, amplitude 0,01 g <sup>2</sup> /Hz (2,2 g RMS) testing time 30 min (data per axis)
EN 60068-2-27:1993	Shock test	Half sine 15g / 11 ms, 3 x in positive/3 x in negative direction per axis; in total, 18 individual shocks

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