

RE 29 115-U/06.98

MANNESMANN REXROTH	Declaration on environmental compatibility in the field of EMC (as defined by EMC law dated 30th August, 1995 and directive 89/336/EWG), climate and mechanical stress	RE 29 115-U/06.98																								
<p>Product family</p> <p>Pilot operated proportional directional valve with integral electronics</p> <p>Hydraulic pilot operated</p> <p>* only points 2. and 3.</p> <p>Description of the product family:</p> <p>Pilot operated 2-stage proportional directional valve for controlling the magnitude and direction of a flow.</p>	<p>Product type</p> <p>4WRZE-7X/...</p> <p>4WRH-7X/...*</p>	<p>Data sheet</p> <p>RE 29 115</p> <p>RE 29 115</p>																								
The above products comply with the following basic standards:																										
<p>1. EMC (electromagnetic compatibility)</p> <table border="0"> <tr> <td data-bbox="245 1218 456 1240">prEN 50082-2:1994</td> <td data-bbox="485 1218 695 1240">(VDE 0839 part 82-2)</td> <td data-bbox="1043 1218 1267 1240">Interference immunity</td> </tr> <tr> <td data-bbox="245 1267 456 1312">prEN 61000-4-2:1994 IEC1000-4-2</td> <td data-bbox="485 1267 628 1290">VDE 0847-4-2</td> <td data-bbox="743 1267 967 1312">ESD (electrostatic discharge)</td> </tr> <tr> <td data-bbox="245 1321 456 1366"></td> <td data-bbox="485 1321 628 1344"></td> <td data-bbox="1043 1267 1366 1366">Air discharge: Severity 4 / assessment criterion 1 Contact discharge: Severity 4 / assessment criterion 1</td> </tr> <tr> <td data-bbox="245 1393 456 1438">prEN 61000-4-4:1994 IEC1000-4-4</td> <td data-bbox="485 1393 628 1415">VDE 0847-4-4</td> <td data-bbox="743 1393 935 1438">BURST (transient discharge)</td> </tr> <tr> <td data-bbox="245 1447 456 1469"></td> <td data-bbox="485 1447 628 1469"></td> <td data-bbox="1043 1393 1366 1514">Supply voltage: Severity 3 / assessment criterion 2 Data lines up to: Severity 1 / assessment criterion 1 Severity 4 / assessment criterion 2</td> </tr> <tr> <td colspan="3" data-bbox="245 1541 839 1563">Test set-up according to prEN 61000-4-2 and prEN 61000-4-4</td></tr> <tr> <td data-bbox="245 1590 421 1612">EN 50081-1:1992</td> <td data-bbox="485 1590 695 1612">(VDE 0839 part 81-1)</td> <td data-bbox="1043 1590 1251 1612">Emitted interference</td> </tr> <tr> <td data-bbox="245 1639 399 1662">EN 55022:1994</td> <td data-bbox="485 1639 660 1662">VDE 0878 part 22</td> <td data-bbox="1043 1639 1398 1684">Radio interference emission depends on arrangement and cabling</td> </tr> </table> <p>When the valve is properly connected and wired according to the data sheet (see list above), the design complies with the preconditions for meeting the requirements of EMC standards EN 50081-1 and prEN 50081-2.</p>			prEN 50082-2:1994	(VDE 0839 part 82-2)	Interference immunity	prEN 61000-4-2:1994 IEC1000-4-2	VDE 0847-4-2	ESD (electrostatic discharge)			Air discharge: Severity 4 / assessment criterion 1 Contact discharge: Severity 4 / assessment criterion 1	prEN 61000-4-4:1994 IEC1000-4-4	VDE 0847-4-4	BURST (transient discharge)			Supply voltage: Severity 3 / assessment criterion 2 Data lines up to: Severity 1 / assessment criterion 1 Severity 4 / assessment criterion 2	Test set-up according to prEN 61000-4-2 and prEN 61000-4-4			EN 50081-1:1992	(VDE 0839 part 81-1)	Emitted interference	EN 55022:1994	VDE 0878 part 22	Radio interference emission depends on arrangement and cabling
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2. Climate

EN 60068-2

EN 60068-2-1:1994

Cold test

Environmental test

2 cycles – 20 °C,
dwell time 2 hours

EN 60068-2-2:1993

Dry heat test

2 cycles + 50 °C,
dwell time 2 hours

EN 60068-2-1:1994

Storage temperature

– 20 °C, dwell time 16 hours
+ 80 °C, dwell time 16 hours

EN 60068-2-2:1993

IEC 68-2-14:1986

Temperature cycles

2 cycles
– 20 °C to + 50 °C,
dwell time 3 hours at
min / max temperature

IEC 68-2-30:1985

Damp heat,
cyclical

Variant 2
+ 25 °C to + 55 °C,
90 % to 97 % relative humidity
2 cycles, 24 hours each

3. Mechanical stress

IEC 68-2-6/:1990

Sine test

Vibration test in three perpendicular axes

10 cycles,
5 to 2000 to 5 Hz at a logarithmic
frequency change rate of Oct./min
5 to 57 Hz, amplitude 1.5 mm (p-p)
57 to 2000 Hz, amplitude 10 g
Dwell time 30 min at resonance
frequency

IEC 68-2-36:1973

Random test

20 to 2000 Hz,
amplitude 0.05 g² / Hz (10 g RMS)
Testing time 30 min per axis

ICE 68-2-27:1989

Shock test

Half sine 15 g / 11 ms in positive /
negative direction per axis,
in total 18 individual shocks

