

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
-------------------------------	---	------------------------------

Product family	Product type	Data sheet
Pilot operated proportional directional valve with integral electronics	4WRZE-7X/...	RE 29 115
Hydraulic pilot operated	4WRH-7X/...*	RE 29 115
* only points 2. and 3.		

Description of the product family:

Pilot operated 2-stage proportional directional valve for controlling the magnitude and direction of a flow.

The above products comply with the following basic standards:

1. EMC (electromagnetic compatibility)

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	

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.

2. Climate

EN 60068-2

Environmental test

EN 60068-2-1:1994	Cold 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 EN 60068-2-2:1993	Storage temperature	– 20 °C, dwell time 16 hours + 80 °C, dwell time 16 hours
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

Vibration test in three perpendicular axes

IEC 68-2-6/:1990	Sine test	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 g ² / 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



Mannesmann Rexroth AG
D-97813 Lohr am Main
Jahnstraße 3-5 • D-97816 Lohr am Main
Telefon: 0 93 52/18-0 • Telefax: 0 93 52/18-10 40
Telex: 6 89 418-0

Mannesmann Rexroth Limited

Cromwell Road, St. Neots
Huntingdon, Cambsh. PE19 2ES
Telephone (01480) 476041 • Telefax (01480) 219052