

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

RE 29050-U/04.06 1/4

Type 4WREQ Series 2X

4/3-Proportional directional valve, direct operated, with pQ-functionality

Description of the product

- Direct operated proportional directional valve with integrated digital electronics for the closed-loop control of pressure, force and flow.
- Integrated Axis Controller with analogue sensor interface and Fieldbus interface.

Features:

- Open-loop flow control
- Closed-loop flow control
- Closed-loop pressure control
- Closed-loop force control
- p/Q-Functionality
- integrated pressure sensors (optional)

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

The above mentioned products comply with the following basic standards:

1. EMC (electromagnetic compatibility)

EN 61000-6-2:2001	VDE 0839 part 6-2	Field basic standard	Interference immunity
EN 61000-4-2:1995 +A1:1998 +A2:2000 IEC 1000-4-2	VDE 0847-4-2	ESD (electrostatic discharge)	Air discharge up to: Severity grade 4 / assessment criterion A Contact unloading: Severity grade 4 / assessment criterion A
EN 61000-4-3:1996 +A1 1998, +A2 2001 IEC 1000-4-3	VDE 0847-4-3	HF-Fields	Severity grade 3 / assessment criterion A 10 V/m, 80...1000 MHz Severity grade 3 / assessment criterion A 10 V/m, 1 ...2,5 GHz
EN 61000-4-4:2004 IEC 1000-4-4	VDE 0847-4-4	BURST (transient interference)	Repetition rate: 5 kHz Power supply: Severity grade 3 / assessment criterion A Data lines up to: Severity grade 4 / assessment criterion A Repetition rate:100 kHz Power supply: Severity grade 3 / assessment criterion A Data lines up to: Severity grade 4 / assessment criterion A
EN 61000-4-5:1995 +A1:2001 IEC 1000-4-5	VDE 0847-4-5	SURGE (surge voltage)	Power supply: Severity grade 1 / assessment criterion A
EN 61000-4-6:1996 +A1:2001 IEC 1000-4-6	VDE 0847-4-6	HF-Fields, conducted interference	Severity grade 3 / assessment criterion A

EN 61000-6-3:2001	VDE 0839 part 6-3	Field basic standard	Interference emitted
EN 55022:1998 A1:2000 +A2:2003	VDE 0878-22	Emission Interference voltage	Class B* / 0,15...30 MHz *with power supply NE40 used (Mat.Nr.: R900782039)
EN 55022:1998 +Corr2001 +A1:2000	VDE 0878-22	Emission noise field strength	Class B / 30...1000 MHz

EN 61000-6-4:2001	VDE 0839 part 6-4	Field basic standard	Interference emitted
EN 55011:1998 A1:1999 +A2:2002	VDE 0875-11	Emission Interference voltage	Class A / 0,15...30 MHz

2. Climate

EN 60068-2	IEC 68-2		Environmental test
EN 60068-2-1:1994		Cold test	2 cycles, -25 °C dwell time 2 hours
EN 60068-2-2:1993		Dry heat test	2 cycles, +65 °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 -25 °C to +65 °C dwell time 3 hours at min. / max. temperature
	IEC 68-2-30:1985	Damp heat, cyclical	Variant 2 +25 °C to +55 °C 93 % to 97 % relative humidity 2 cycles of 24 hours

3. Mechanical stress (Specification per axis; specification only for WREQ 6 with sub plate)

EN 60068-2	IEC 68-2 DIN 40046		Vibration test in three perpendicular axes (X/Y/Z)
	IEC 68-2-36:1973 DIN 40046-24:1977	Swing (Random) Wide tape noises	20 to 2000 Hz, A) power spectral density (psd) 0,05 g ² /Hz (10 g RMS/30 g Peak), dwell time 30 min
EN 60068-2-27:1993		Shock	Half sin 15 g / 11 ms, 3x in positive / 3x in negative direction (in total 6 individual shocks)

4. Protection test (IP)

EN 60529	DIN VDE 0470 Part 1/ Pkt. 14		Protection test (IP)
EN 60529:1991	DIN VDE 0470, part 1	International Protection	x5 water jet protected with mounted and bolted cable connectors