

FUNCTIONAL SAFETY DATA SHEET[®]

Manufacturer	WENLEN S.A. Estrada 180 Bella Vista, Pcia. de Buenos Aires Argentina
Product(s)	Single action linear motion actuator (scotch yoke, single effect) series WA-N (pneumatic) v.1.0. Nominal torque: 700 to 140,000 Nm (according to size)
Safety function	Being action axis in on-position (pneumatic cylinder pressurized, spring compressed): in the very moment the air pressure is released in the pneumatic cylinder, turn action axis (¼ turn) to lead it to its off-position, with a minimum delay.
Basis of testing	IEC 61508:2010
Report	The test report 198.105.041.3 Rev. 1.0 of 24/08/2010 is an integral part of this data sheet
Functional Safety Data	
Type	A
Hardware Fault Tolerance	0
Safe Failure Fraction	77%
Safe Detected Failure Rate	0,00 /hour
Safe Undetected Failure Rate	6,07 E-07 /hour
Dangerous Detected Failure Rate	0,00 /hour
Dangerous Undetected Failure Rate	1,77 E-07 /hour
MTTFd	645 years
PFD	See report for sample calculations
Fit for use in Safety Integrity Level	1–3 (see report)
MTTFs	188 years
PFS	See report for sample calculations
Fit for use in Spurious Trip Level™	4

September 7, 2010

Date

Dr. M.J.M. Houtermans