



EMI MEASUREMENTS ON THE  
**Electric Positioners**  
ELQ 100, 200, 300 & ELQ 500, 800

ACT UNDER ORDERS OF  
**EL-O-MATIC International BV**  
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Measurements carried out by: Mr. H.J.J. Bolk Bolborn EMC Solutions 29-Jan-1999 &  
10-Feb-1999  
Mr. A.A.G. Sogtoen Hollandse Signaalapparaten 11-Feb-1999

According to the EMC-directive 89/336/EC and generic standards EN50081 & EN50082

EMI-tests were witnessed by: Mr. W.G.D. Ekkel EL-O-MATIC Hengelo the Netherlands  
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**SUMMARY:**

**The Electric Positioners:**

**ELQ 100; ELQ 200 & ELQ 300 (proto type) with the options:**

**Positioner with display / Position transmitter / Status module / Speed control**

ELQ 100; ELQ 200 & ELQ 300 differs only by an other mechanical transmission.

The torque is resp. 100Nm; 200Nm; & 300Nm.

**ELQ 500 & ELQ 800 (proto type) with the options:**

**Positioner with display / Position transmitter / Status module / Speed control**

ELQ 500 & ELQ 800 differs only by an other mechanical transmission.

The torque is resp. 500Nm & 800Nm.

have been subjected to EMI measurements.

The level of the conducted- and radiated emission from the Electric Positioners ELQ 100; ELQ 200; ELQ 300 & ELQ 500; ELQ 800 under test was measured.

Subsequently the Electric Positioners ELQ 100; ELQ 200; ELQ 300 & ELQ 500; ELQ 800 was subjected to conducted- and radiated interference signals to test the EMI immunity.

The measurement procedures, and the applied limits were in accordance with the EMC-directive 89/336/EC and the generic standards EN50081-1, EN50081-2, EN50082-1 and EN50082-2.

**The performed emission tests are:**

Conducted emission,	150kHz → 30MHz	EN55011/EN55022	Class B	Group 1
Radiated emission, E-field	30MHz → 1GHz	EN55011/EN55022	Class B	Group 1
Harmonic currents emission	50Hz → 2kHz	EN60555-2/IEC555-2		
Voltage fluctuations on mains		EN60555-3/IEC555-3		

**The performed immunity tests are:**

Electrostatic discharge		EN61000-4-2/IEC1000-4-2		
Electromagnetic radiation	30MHz → 1GHz	ENV50140/ENV50204/EN61000-4-3		
Electric Fast Transient/Burst		EN61000-4-4/IEC1000-4-4		
Surges		EN61000-4-5/IEC1000-4-5		
R.F. common mode	150kHz → 80MHz	ENV50141/EN61000-4-6/IEC1000-4-6		
Magnetic Radiation (50Hz)	150kHz → 80MHz	EN61000-4-8/IEC1000-4-8		
Mains-dips & interruptions		EN61000-4-11/IEC1000-4-11		

**SUMMARY CONCLUSIONS:**

**The Electric Positioners: ELQ 100; 200; 300 & ELQ 500; 800 (proto type)**

**with the options: - Positioner with display**

**- Position transmitter**

**- Status module**

**- Speed control**

fulfils all the above mentioned tests and complies for this tests the requirements of the EMC-directive 89/336/EC.