



**Technical Report No. 231-1007231-000**

**Rev. 02**

**Dated: 2010-09-22**

Client: Magnetek Enrange/Telemotive  
5 Four Coins Drive  
Canonsburg, PA 15317 USA

Attn: Chris Dulin, Radio Product and Development Mgr.  
800-288-8178 x7711  
cdulin@magnetek.com

Manufacturing place: Advanced Radiotech Corp., 1F, 288-3,  
Hsin Ya Road, Chien Chen District,  
Kaohsiung City, Taiwan

Test subject: Product: Wireless Crane Control  
Type: FLEX 4EX, FLEX 8EX, FLEX 12EX  
S/N: See below

Test specification: *EN 954-1:1996* (referenced by EN 13557:2003+A1:2008)

Purpose of examination:

- Test according to the test specification determine compliance of stop control with on device
- Test according to the requirements of the Machinery Directive 2006-42-EC for self certification by the manufacturer.

Test result: The equipment complies with the test specification

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## 1 Description of the test subject

### 1.1 Function / Intended Use

The overall equipment is a wireless controller for a crane. The equipment consists of a handheld control pendant and a crane mounted receiver.

The assessment investigates the stop control on the equipment (the control pendant has a stop control switch. The stop control switch stops radio transmission from the pendant. This loss of radio communication causes the receiver to de-energize the stop relays and to therefore switch off the output within 500 milliseconds).

### 1.2 History of the device

The assessment is the first assessment of this equipment by TÜV. The manufacturer presented reports on the overall unit, produced by NEMKO:

Nemko Report 45094, Assessment of FLEX12EX per EN 60204-32. Positive.

Nemko Report 4W08120, Assessment of FLEX4/8/12 EX, per EN 3002220-3. Positive.

Nemko Report 4R08120, Assessment of FLEX 12 EX, per EN 301489-3. Positive.

Nemko Certificate P 2047, Assessment of FLEX4EX, FLEX 8EX, and FLEX12EX, per EN 954-1.

Nemko Certificate P 2047, Assessment of FLEX4EX, FLEX 8EX, and FLEX12EX, per EN 60204-32.

### 1.3 Variants:

The FLEX 12EX was tested in this assessment. This model has 12 control buttons. Models FLEX 4EX (4 control buttons) and FLEX 8EX (8 control buttons) are considered included in this assessment as they have no safety relevant differences.

### 1.4 Technical Data:

Model: FLEX 12EX

Serial Number: Receiver: 0001

Pendant: 0001

### 1.5 Conditions of Acceptability

None identified in this inspection



## 2. Order

### 2.3 Date of Testing

Revision 00 of this report: Inspection performed on 2010-07-29

Revision 01 of this report: Report issued on 2010-08-26

Revision 02 of this report: Report issued on 2010-09-22

### 2.4 Location of Testing

TUV SUD America, 7800 SW Durham Road, Suite 200, Portland, OR 97224 USA

## 3. Test Results

The equipment complies with the indicated test specification. In particular, the equipment e-stop function meets the requirements of EN 954-1:1996, as references by the test specification, for Category 3 operation.

## 4. Remark

### 4.1 Remarks to Factory

The assembly of the product has to comply with the documentation and design as the equipment was inspected. Before the implementation of safety relevant modifications to the product, the product must be assessed for acceptance. The results must be implemented to the compliance documentation.

## 5. Documentation


- Technical Summary Report

## 6. Summary

The equipment submitted DOES meet the requirement of the test specifications (s.)

TÜV SÜD America Inc.

Engineer:   
Frank West  
Senior Engineer

Technical Report checked:   
Rick Grumski  
North American Industrial Machinery Mgr.