DET NORSKE VERITAS

LVD TEST CERTIFICATE

CERTIFICATE NO. **2005-RGC-LVD-0005**

The certificate consists of 1 page

This is to certify that the

LINEAR ACTUATOR

with type designation(s)

LAK4(the controller), LAK2D(the controller),
LAN1(the actuator), LAP1, LAP4(hand controller)

Manufactured by

HIWIN MIKROSYSTEM CORP.
NO. 1, 6TH ROAD, TAICHUNG INDUSTRIAL PARK, TAICHUNG, TAIWAN, R.O.C.

is found to comply with the following European Standard(s)

- EN 60335-1: 2002

The LVD tests were carried out at a local LVD laboratory in China, recognized by DNV after a quality audit and follow-ups, based on EN45001; ISO17025 requirement

The LVD test report for the product(s) has been assessed with respect to the standard(s) given above

22 November, 2005
for Det Norske Veritas Taiwan

Limitations:

Any changes of the tested products shall immediately be reported to Det Norske Veritas Taiwan in order to examine whether this Certificate remains valid.

DET NORSKE VERITAS * 1864 *

Dennis Lin
Technical Director
DNV R.G.C. Product Certification

Notice: (1) This certificate is subject to terms and conditions overleaf. Any significant change in design or construction may render this certificate invalid
(2) This certificate is based on a single evaluation of one sample of the above mentioned product
(3) The product s are tested by Universal Laboraotry. Test report no.: UT94141

LABORATORY LVD TEST REPORT

Product : Linear Actuator

Report No.	:	UT94141
Model/Type	:	LAK4 (the controller), LAK2D (the controller), LAN1(the actuator) , LAP1, LAP4 (hand controller)
Rating	:	230Vac 50 Hz 2 A
Applicant	:	Hiwin Mikrosystem .Corp. No.1 , 6th. Road., Taichung Industrial Part, Taichung, Taiwan, R.O.C.
Manufacturer	:	Hiwin Mikrosystem .Corp. No.1 , 6th. Road., Taichung Industrial Part, Taichung, Taiwan, R.O.C.

All applicable test were carried out according to the following standards :

(1) EN60335-1:2002

(2) Explanations for the results in the text :

N/A = Not Applicable, ENCL.= Enclosure , Passed = Comply with the requirements

Sample received date: September 5, 2005 Test date: September 13- October 23, 2005

Sample serial no. N/A

Test method deviated from the standard : None Test result : Passed

Test results are valid only for the tested equipment. This test report can only be copied in whole. Permission from the test laboratory for partial duplication is required.

Name and address of the testing laboratory :

Universal Testing Inc. (DNV Recognition No. 413-1999-LAB20)
3rd. Fl., No. 30, Lane 60, Wen Hu St., Nei Hu, Taipei, Taiwan, R.O.C.

Tested by : Simon Hsieh
Simon Hsieh / Engineer
November 9 , 2005
Date

Reviewed : Steven Chang
Steven Chang / Manager
November 9 , 2005
Date

Approved by :
Det Norske Veritas
2005/12/9
Date

Possible test case verdicts:

- test case does not apply to the test object ..... ---- : N(.A.)
- test object does meet the requirement---------- : P(ass)
- test object does not meet the requirement ------: F(ail)

TEST REPORT
EN60601-1 : 1990
Including Amendment A1 (1993) and A2 (1995), A13 (1996) &
EN60601-2-38 : 1996 + Amendment A1 :2000

Product name : Linear Actuator

Model / Type : LAK4 (the controller), LAK2D (the controller), LAN1(the actuator) , LAP1, LAP4 (hand controller)

Trade mark : Hiwin

Serial No. : 200500537LAK4-DDD0-230-G(LAK4), 200500057LAK2D-0-DD-230-G(LAK2D), 200500033LAN1-2-1-250-24G(LAN1)

Name of applicant : Hiwin Mikrosystem .Corp.
No.1 , 6th. Road., Taichung Industrial Part, Taichung, Taiwan, R.O.C.

Name and address where manufactured :
Same as the applicant

The equipment is a Class I linear actuator system. It consists of an AC operated control box(LAK4 or LAK2D) , an DC Powered linear actuator(LAN1-1,-2,-3) and remote hand controllers (LAP1 or LAP4) . 3 types of actuators use the same motor. Only the moving speed and the max permissible load is different . The power cord and the control cable is non-detachable . The operation is intermittent with 10 % duty cycle and 6 minutes ON max in one hour. The degree of protection against the ingress of dust and water is checked separately and passed with the degree of IP54. It is not declared for use in the presence of flammable anesthetics or oxygen .

	RESULTS			
	PASS	FAIL	N/A	ENCL.
The equipment complies with the title EN standards	[X]	[ ]	[ ]	[ ]

Name and address of the testing laboratory :

Universal Testing Inc. (DNV Recognition No. 413-1999-LAB20)
2F,No.13,Lane 28,Sec.1,Huanshan Rd., NeiHu, Taipei, Taiwan, R.O.C.

Tested by : _____ November 9, 2005
Signature Date

Simon Hsieh
Engineer

Reviewed by : Steven Chang November 9, 2005
Signature Date

Steven Chang
Manager

Approved by : _____ 2005/12/01
Det Norske Veritas Date