



## 심사결과 통지서

신청인	사업장명	KITO CORPORATION	사업장관리번호	2010E110010
	사업자등록번호	010-E1-10010	대표자 성명	KITO YOSHIO
	소재지	2000, Tsuijjarai, Showa-Cho, Nakakoma-Gun, Yamanashi, 409-3853 Japan		
안전인증대상기계 · 기구명 호이스트				
형식(규격) KS-ER2-010SD			용량(등급) 1 ton	

『 산업안전보건법 』 제34조 및 같은 법 시행규칙 제58조의4제4항에 따라 실시한

- |  |     |   |           |
|--|-----|---|-----------|
| <input type="checkbox"/> 예비심사            |     |   |           |
| <input checked="" type="checkbox"/> 서면심사 |     |   |           |
| <input type="checkbox"/> 기술능력 및 생산체계심사   | 결과가 | <input checked="" type="checkbox"/> 적 합 | 함을 통지합니다. |
| <input type="checkbox"/> 개별 제품심사         |     | <input type="checkbox"/> 부적합            |           |
| <input type="checkbox"/> 형식별 제품심사        |     |   |           |

2016년 12월 13일

인증심사원

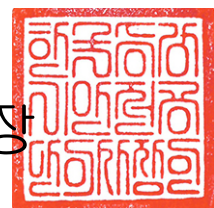
박영민

(서명 또는 인)

고광윤

(서명 또는 인)

한국승강기안전공단 이사장





제 CE-2016-50351 호

# 안 전 인 증 서

( 사업장명 ) KITO CORPORATION

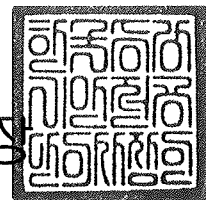
( 소재지 ) 2000, Tsuijiarai, Showa-Cho, Nakakoma-Gun, Yamanashi, 409-3853 Japan

위 사업장에서 제조하는 아래의 품목이 『산업안전보건법』 제34조 및 같은 법 시행규칙 제58조의4제4항에 따른 안전인증 심사결과 안전·보건기준에 적합하므로 안전인증표시의 사용을 인증합니다.

_____	품 목 :	호이스트	_____
_____	형식(용량) :	KS-ER2-010SD(1 ton)	_____
_____	인증번호 :	16-CE4AC-50351	_____
_____	인증기준 :	위험기계·기구 안전인증기준 (고용노동부고시 제2016-29호)	_____
_____	인증조건 :	산업안전보건법 "제34조 준수"	_____

2016년 12월 29일

한국승강기안전공단 이사장



제 2012-BJ-0009 호



# 안 전 인 증 서

정호엔지니어링

경기도 광명시 노온사동 440-5

위 사업장에서 제조하는 아래의 품목이 산업안전보건법 제34조 및 같은 법 시행규칙 제58조의4제4항에 따른 안전인증 심사 결과 안전·보건기준에 적합하므로 안전인증표시의 사용을 인증합니다.

## 품 목

양중기용 과부하방지장치

## 형식·모델/용량·등급/인증번호

형식·모델	용량·등급	인증번호
JDL-100	J-2	12-AV2BJ-0009

## 인 증 기 준

방호장치 의무안전인증 고시(고용노동부고시 제2010-36호)

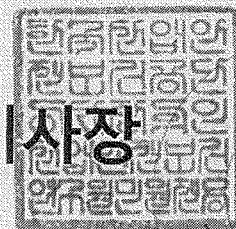
## 인 증 조 건

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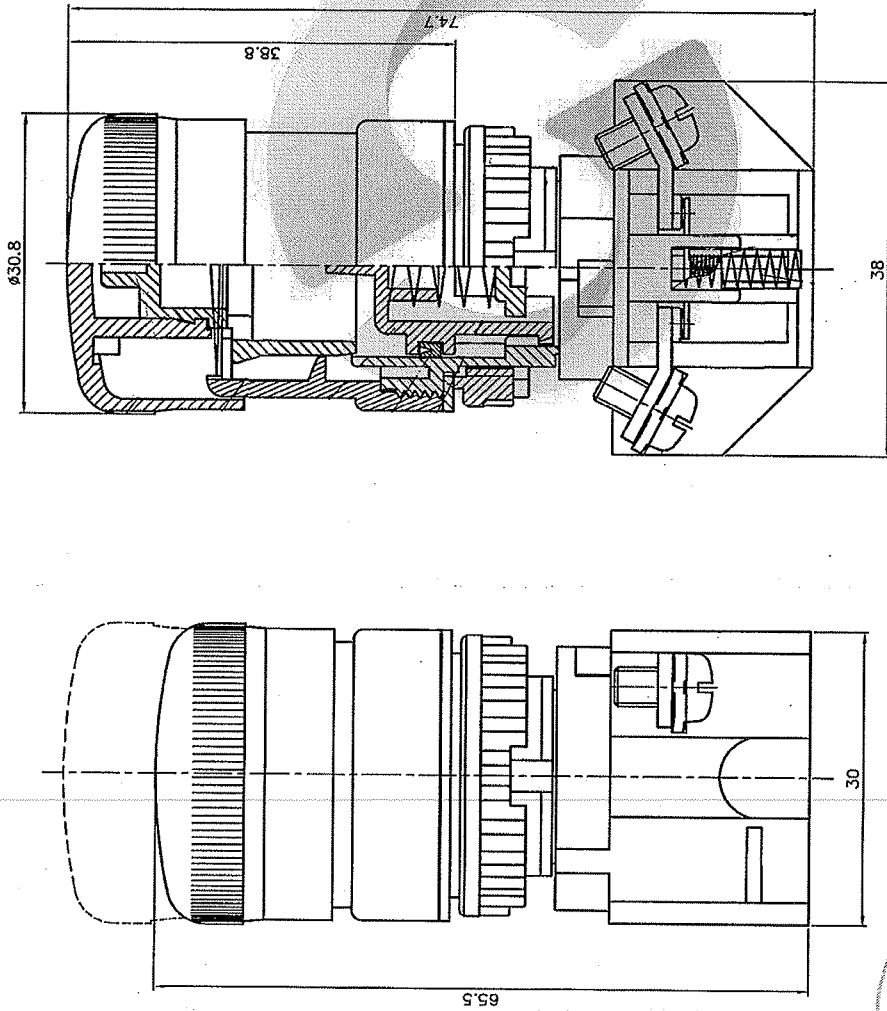
정호엔지니어링, 경기도 광명시 노온사동 440-5

2012년 06월 11일

# 한국산업안전보건공단 이사장



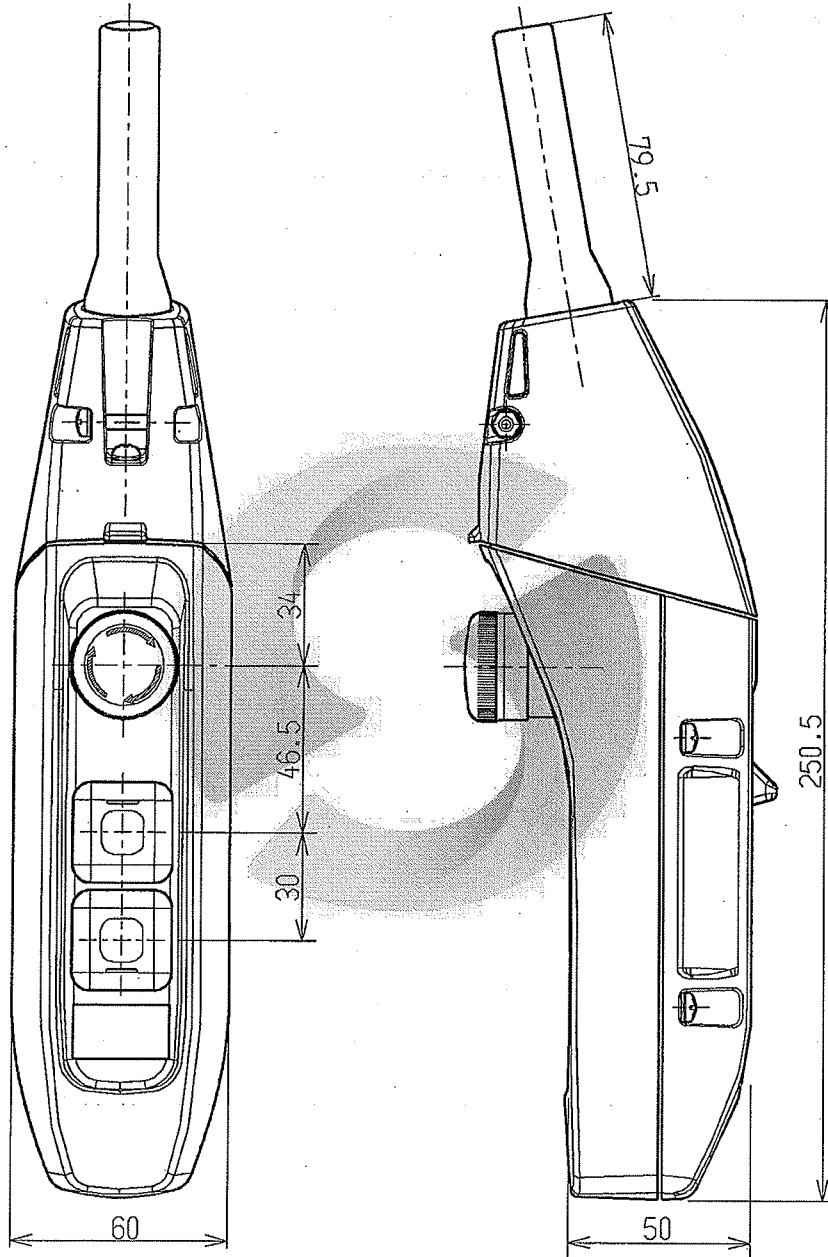
불법복제 및 배포금지



1	圖號	T2-BKH	
2	品名	T2 BKH 連鎖開關	
3	單位	mm	
3	比例	2:1	
3	投影法	第一角	
4	繪圖	繪圖	95.05.24 吳宗達
4	校對	校對	95.05.24 周欽祥
5	核准	核准	95.05.24 錢建宏
6	品保	品保	95.05.24 林建宏
7	最新修正		
7	前次修正		
8	公差	0.2~30mm: ±0.2	30.1~60mm: ±0.3
8	公差	60.1~300mm: ±0.5	



Revision	Incidence	Description	Date	Charge	Approved



A  
B  
C  
D  
E  
F  
G  
H

⑥
⑤
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③
②
①
Date issued

APPROVED  
NOTE

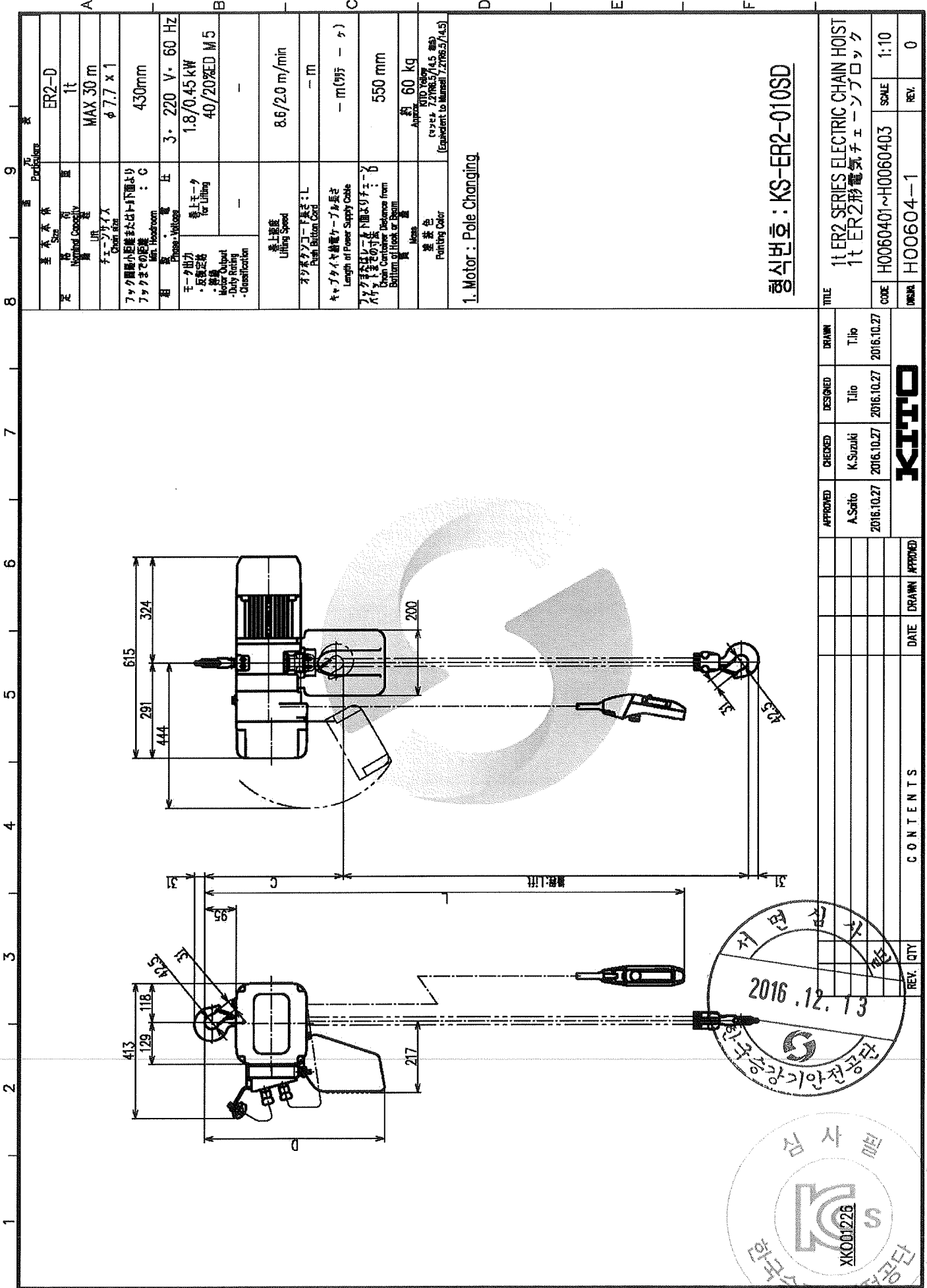
APPROVED	ISHIKAWA	CHECKED	FURIYA	DESIGNED	KOBAYASHI	DRAWN	KOBAYASHI	SCALE	-
Date issued	08.02.08		08.02.08		08.02.08		08.02.08		

DWG. NO.	SWD2X00A
NOS./UNIT MATERIAL	
NAME CODE	

3point Pendant control station MX subassembly

검사필 (Check Required)

안전 (Safety)



1. Motor : Pole Changing

형식번호 : KS-ER2-010SD

TITLE	1t ER2 SERIES ELECTRIC CHAIN HOIST 1t ER2形電氣チェーンブロック		
CODE	H0060401~H0060403	SCALE	1:10
INNR	H00604-1	REV.	0

APPROVED	A.Saito	2016.10.27
CHECKED	K.Suzuki	2016.10.27
DESIGNED	T.Ito	2016.10.27
DRAWN	T.Ito	2016.10.27

**KATO**

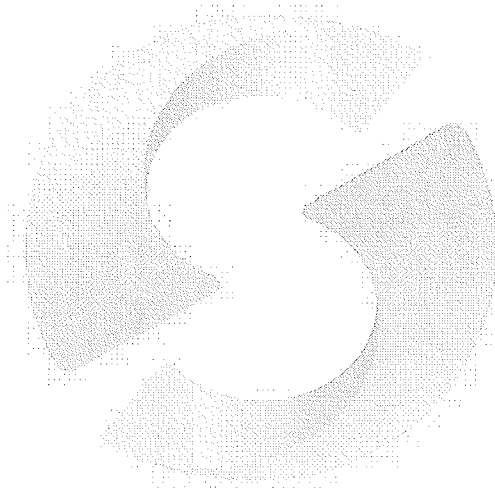
DATE DRAWN APPROVED

CONTENTS

REV. QTY

4. 전 기 도 면

- 1) ELECTRICAL SPECIFICATION
- 2) SYMBOL LIST
- 3) 배선배관도 & 접지계통도
- 4) 전기회로도
- 5) PANEL 관련도



# LOAD SUMMARY

\*POWER SOURCE : AC 3Φ 220V

OBJECT	HOISTING	TRAVERSING	CONTROL CIRCUIT
MOTOR OUTPUT	1.8/0.45KW x 2/8P	-	
FULL LOAD CURRENT	9.4 /4.3 (A)	0  (A)	0.5  (A)

\*크레인 하중상태를 HOIST의 정격 LOAD의 100(%)를 사용했을때를 기준으로 작성하였음.

\*\*\* NOMAL 전류값 \*\*\*

권상 : HOISTING + CONTROL CIRCUIT = 9.9 A

\*\*\* PEAK 전류값 \*\*\*

K= NOMAL 전류치가 50A미만일때 1.25, 50A이상일때 1.1적용

NOMAL 전류값 \* K = 9.9 \* 1.25 = 12.3 A





**ROTATING MACHINE**

- SYNCHRONOUS GENERATOR, 3-PHASE
- AC INDUCTION MOTOR, 3-PHASE
- \* N : NORMAL DUTY
- S : STAND-BY
- DC MOTOR

**LIGHTNING ARRESTERS**

- LA : LIGHTNING ARRESTER
- SA : SURGE ARRESTER
- SS : SURGE SUPPRESSOR
- DISCHARGE COUNTER

**INSTRUMENT TRANSFORMERS**

- CURRENT TRANSFORMER
- ZERO PHASE CURRENT TRANSFORMER
- POTENTIAL TRANSFORMER

**CIRCUIT BREAKERS**

- POWER CIRCUIT BREAKER, FIXED TYPE
- CCB : SF6 GAS CIRCUIT BREAKER
- VCB : VACUUM CIRCUIT BREAKER
- ACB : AIR CIRCUIT BREAKER
- POWER CIRCUIT BREAKER, DRAWOUT TYPE

**SWITCHES**

- DISCONNECTOR SWITCH, SINGLE THROW MANUALLY OPERATED
- LOAD BREAK SWITCH, SINGLE THROW MANUALLY OPERATED
- EARTHING SWITCH, SINGLE THROW MANUALLY OPERATED
- DISCONNECTOR SWITCH, SINGLE THROW MOTOR OPERATED
- EARTHING SWITCH, SINGLE THROW MOTOR OPERATED
- VACUUM CIRCUIT SWITCH
- FUSED DISCONNECTOR SWITCH
- FUSE-SWITCH
- LIMIT SWITCH (MAKE CONTACT)
- LIMIT SWITCH (BREAK CONTACT)
- PUSH BUTTON, NORMALLY OPEN MOMENTARY CONTACT
- PUSH BUTTON, NORMALLY CLOSED MOMENTARY CONTACT
- PUSH BUTTON, NORMALLY OPEN PUSH TO LOCK, RELEASED BY KEY
- MANUAL SELECTOR SWITCH (LOCKED)

**CONTACTORS AND STARTERS**

- AUX. CONTACT, NORMALLY OPEN WHEN MAIN SWITCHING DEVICE IS DE-ENERGIZED
- AUX. CONTACT, NORMALLY CLOSED WHEN MAIN SWITCHING DEVICE IS DE-ENERGIZED
- MAGNETIC CONTACTOR, ELECTRICALLY OPERATED
- COMBINATION STARTER, FULL VOLTAGE, NON-REVERSING, DRAWOUT TYPE, WITH ELECTRICALLY OPERATED CONTACTORS, WITH MAGNETIC MOTOR CIRCUIT BREAKER, BUILT IN ELECTRONIC OVER-CURRENT RELAY WITH ADJUSTABLE TRIP RATING
- COMBINATION STARTER, FULL VOLTAGE, NON-REVERSING, FIXED TYPE, WITH ELECTRICALLY OPERATED CONTACTORS, WITH MAGNETIC MOTOR CIRCUIT BREAKER, BUILT IN THERMAL OVER-CURRENT RELAY WITH ADJUSTABLE TRIP RATING

**GRAPHIC SYMBOLS**

- GENERAL OPERATING COIL
- CAPACITOR
- CAPACITOR VOLTAGE TRANSFORMER (CVT)
- RESISTOR
- DIODE
- BUS DUCT
- SPB : SEGREGATED PHASE BUS DUCT
- IPB : ISOLATED PHASE BUS DUCT
- CABLE HEAD AND CABLE CONNECTION
- AMMETER SWITCH
- VOLTMETER SWITCH

- SIGNAL LAMP
- \* R = RED
- G = GREEN
- W = WHITE
- C = CYAN
- Y = YELLOW
- B = BLUE
- A = AMBER

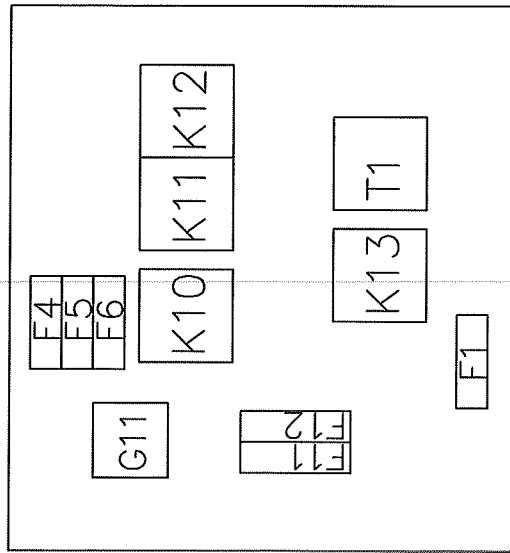
**SYMBOL LIST**

APPROVED	CHECKED	DESIGNED	CODE	SCALE
KOTO CORP.			DWG. NO.	SYMBOL LIST
				DATE

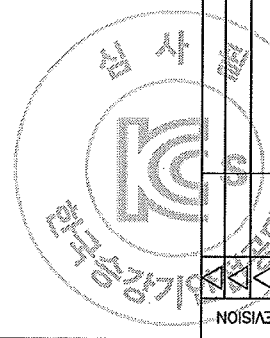




Control Box  
The layout of electric parts



Parts No	NAME
1 T1	Transformer 220(200,208)/24V 30VA
2 F1	Fuse 125V 3A
3 F11,F12	Fuse 250V 1A
4 F4~6	Fuse 250V 20A
5 B11	Electromagnetic Brake
6 G11	Rectifier
7 M11	Hoist Motor 1.8/0.45Kw X 2/8P
8 K10	MAG. CONTACTOR CLK-25J3UL
9 K11,K12	MAG. CONTACTOR RSK-11J-S95 2.2KW
10 K13	MAG. CONTACTOR PAK-12J22-S585 1.8KW
11 X~,CN~	Plug/Socket/Connector
12 TP1	Motor Thermal Protector
13 LS11	Upper Limit Switch
14 LS12	Lower Limit Switch



REVISION		DATE		REASON	

SCALE	N/S	DRAWN	DESIGNED	CHECKED	APPROVED	WORK NAME
DATE	2016.12.08	J.G YOO	J.S CHO	J.S CHO	J.S CHO	DRAWING

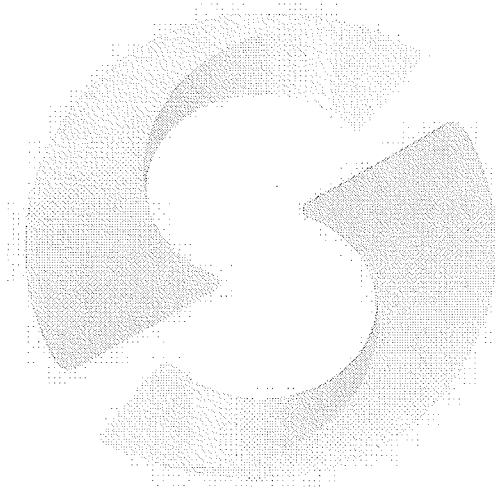
  

KOTO KOREAN CO., LTD. 주식회사 키토코리아						TITLE	SINGLE LINE DIAGRAM



6. FOR REFERENCE

- 1) LOAD CHAIN 시험성적서
- 2) MOTOR DATA SHEET
- 3) HOIST 사용설명서( operation manual )



Date: 2009/04/14

## Certificate of Compliance

We certify that the ER2 protection degrees conform to the IP rating as follows:

Hoist body - IP55 based on JIS C 4034-5, "Rotating electrical machines – Part5: Classification of degrees of protection provided by enclosures of rotating electrical machines (IP code)".

Push button - IP65 based on JIS C 0920, "Tests to prove protection against ingress of water and degrees of protection against ingress of solid objects for electrical equipment".

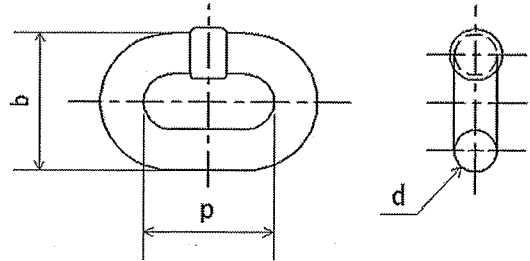
Technical Control Group



# INSPECTION CERTIFICATE

Messrs. KITO KOREA CO., LTD.

Commodity : NC Load Chain  
 Code : KER2-077  
 Lot No. : 7309  
 Quantity : 1 line(s)  
 Reference No. : U3-U63-04144  
 Order No. : KJ-16-620C  
 Production No. : H0060401



1. Material : Nickel Alloy Steel

2. Dimensions (mm)

	d	p	b
Specified	7.7 ±0.3	21.4 +0.46 0	Max. 27.0
Result	Good	Good	Good

3. Breaking test

	Breaking load (kN)	Total ultimate elongation (%)
Specified	Min. 75	Min. 10
Result	Good	Good

4. Manufacturing Proof force test (Test load : 47 kN)

	Permanent elongation (%)
Specified	Max. 0.25
Result	Good

General judgment : Satisfactory

# KITO

2000 Tsuijjarai, Showa-cho,  
 Nakakoma-gun, Yamanashi, JAPAN

Quality Control Group  
 Quality Assurance Department

*M Ogihara*  
 (Manager)



Messrs. \_\_\_\_\_

**Motor Test Report for Electric Chain Hoist**

Motor type : Three phase squirrel cage type induction motor.

Manufacturer : Yasukawa Electric Mfg. Co.

Production No. : -

Rating

Model	Output	Pole	Intermittent Rating	Voltage	Frequency
IBQ	1.8/0.45kW	2/8P	40/20%ED	220V	60Hz

Full load characteristics

Voltage	Frequency	220V 60Hz
Load	%	100
Current	A	9.4 / 4.3
Speed	rpm	2810/680

Insulation class E

The above characteristics are obtained from calculation where the motor is assembled with an electric chain hoist and the hoist is subjected to full load



2000 Tsuijarai, Showa-cho,  
Nakakoma-gun, Yamanashi, JAPAN

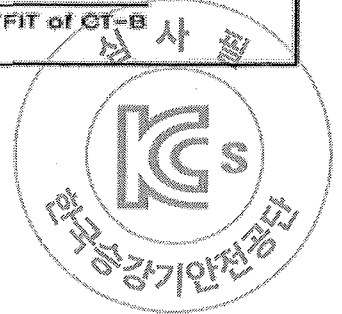
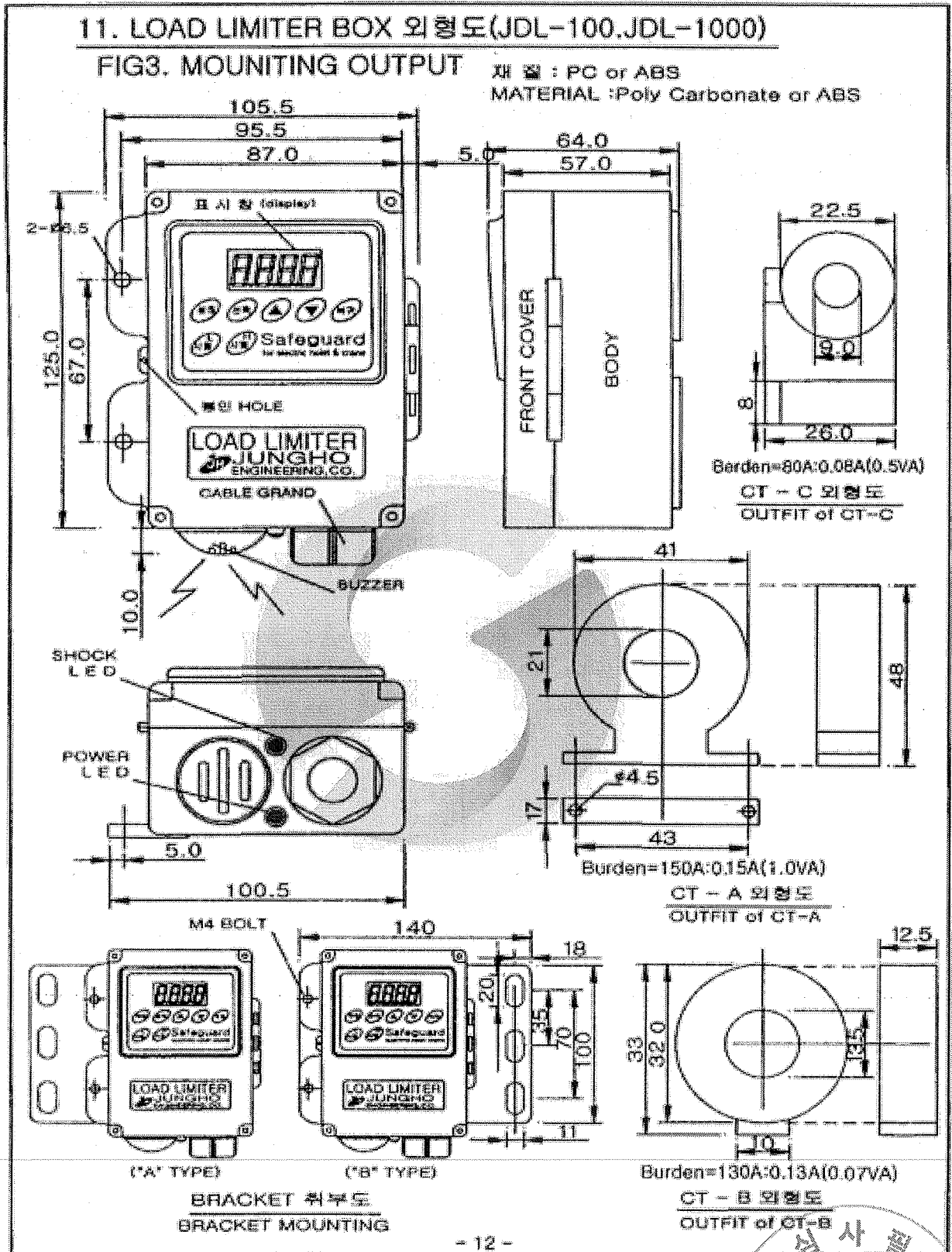
Quality Assurance Group  
Quality Assurance Department  
Development & Technology Division

*M. Ogihara*





1) 과부하 방지장치



제 2012-BJ-0009 호



# 안 전 인 증 서

정호엔지니어링

경기도 광명시 노온사동 440-5

위 사업장에서 제조하는 아래의 품목이 산업안전보건법 제34조 및 같은 법 시행규칙 제58조의4제4항에 따른 안전인증 심사 결과 안전·보건기준에 적합하므로 안전인증표시의 사용을 인증합니다.

## 품 목

양중기용 과부하방지장치

## 형식·모델/용량·등급/인증번호

형식·모델  
JDL-100

용량·등급  
J-2

인증번호  
12-AV2BJ-0009

## 인 증 기 준

방호장치 의무안전인증 고시(고용노동부고시 제2010-36호)

## 인 증 조 건

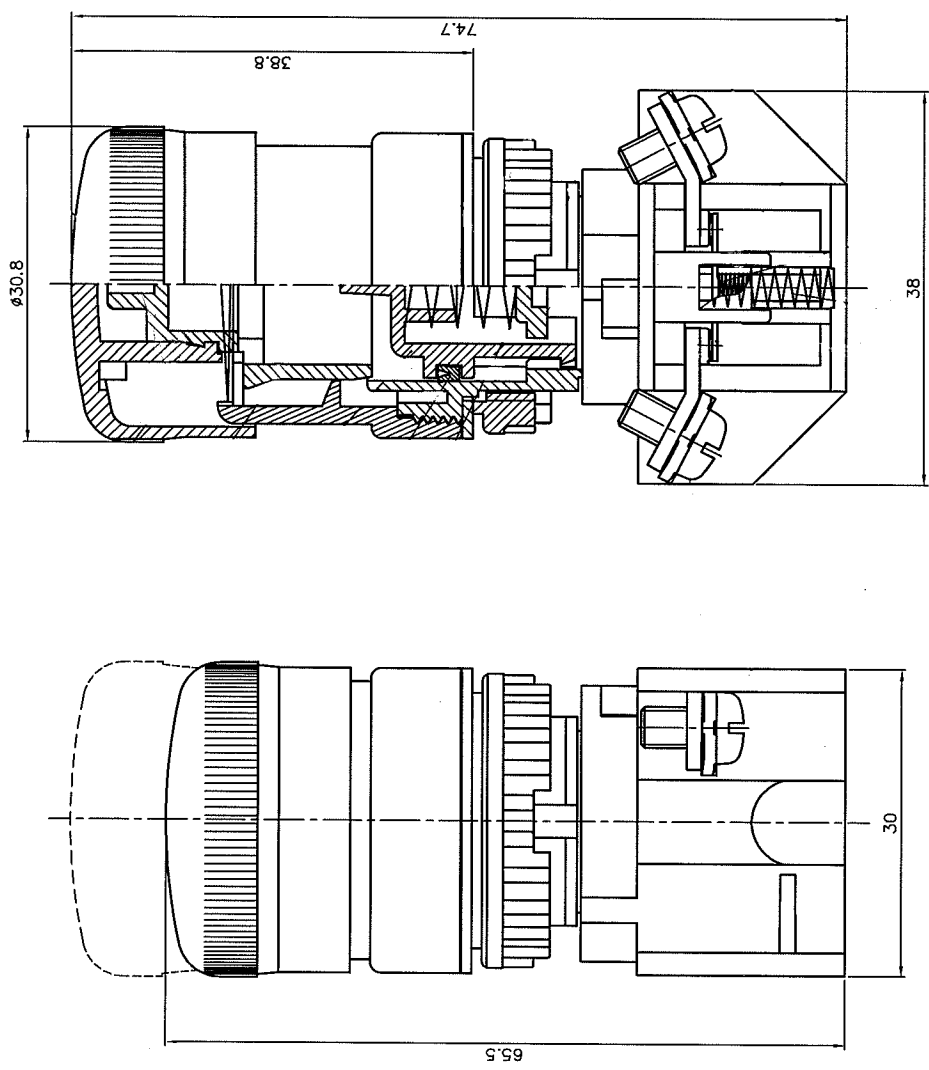
아래 주소에서 생산되는 제품에 한함.

정호엔지니어링, 경기도 광명시 노온사동 440-5

2012년 06월 11일

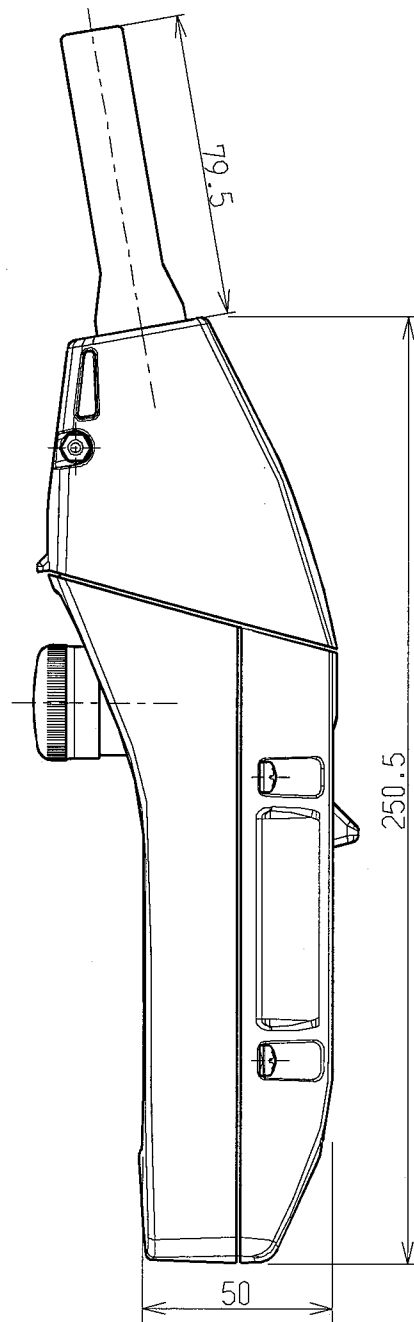
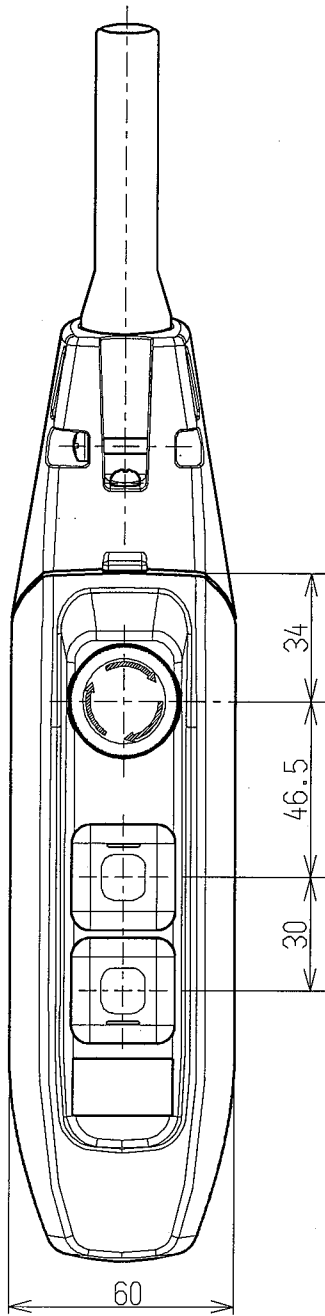
한국산업안전보건공단 이사장





一般公差	0.2~30mm: ±0.2	30.1~60mm: ±0.3	60.1~300mm: ±0.5	模具材質	研發部 95.05.24 劉從義	模具處理	研發部 95.05.24 周欽祥	模具孔數	研發部 95.05.24 吳保達	單位	mm	材質	圖號	T2-BKH
			品保	核准	對	枚	繪	圖	比例	2:1	表面處理	品名	T2 BKH 連鎖開關	
			品保	品保部 95.05.24 林建安	研發部 95.05.24 劉從義	研發部 95.05.24 周欽祥	研發部 95.05.24 吳保達	投影法	第一角	顏色				
天得科技股份有限公司 TEND TECHNOLOGY CO., LTD.														

Revision	Incidence	Description	Date	Change	Approved



⑥	
⑤	
④	
③	
②	
①	
Date issued	

APPROVED		CHECKED		DESIGNED		DRAWN		SCALE		DWG. NO.		MATERIAL		NAME		CODE	
ISHIKAWA		FURUYA		KOBAYASHI		KOBAYASHI		-		SWD2X00AA1				3point Pendant control station MX subassembly			
08.02.08		08.02.08		08.02.08		08.02.08											

Date: 2009/04/14

## Certificate of Compliance

We certify that the ER2 protection degrees conform to the IP rating as follows:

Hoist body - IP55 based on JIS C 4034-5, "Rotating electrical machines – Part5: Classification of degrees of protection provided by enclosures of rotating electrical machines (IP code)".

Push button - IP65 based on JIS C 0920, "Tests to prove protection against ingress of water and degrees of protection against ingress of solid objects for electrical equipment".

Technical Control Group

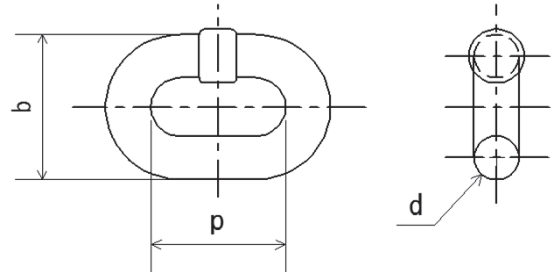
Certificate No. : FK160250-1

Date Issued : 2016/12/8

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 Lot No. : 7309  
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 Production No. : H0060401



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General judgment : Satisfactory

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 Nakakoma-gun, Yamanashi, JAPAN

Quality Control Group  
 Quality Assurance Department

*M Ogihara*

(Manager)

Messrs. \_\_\_\_\_

**Motor Test Report for Electric Chain Hoist**

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Manufacturer : Yasukawa Electric Mfg. Co.

Production No. : -

## Rating

Model	Output	Pole	Intermittent Rating	Voltage	Frequency
IBQ	1.8/0.45kW	2/8P	40/20%ED	220V	60Hz

## Full load characteristics

Voltage	Frequency	220V 60Hz
Load	%	100
Current	A	9 . 4 / 4 . 3
Speed	rpm	2810/680

## Insulation class E

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