



제 2013 - 58528 호

# 안 전 인 증 서

( 사업장명 )

(주)대산이노텍

( 소재지 )

(314-821)충남 공주시 정안면 사현리523

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

_____	품	목	_____
	호이스트		
_____	형식,모델(용량,등급)/인증번호		_____
	DSHM-2S (2Ton) /13-AG2AC-01680		
_____	인 증 기 준		_____
	고용노동부 고시 제2012 - 33호 ( 위험기계,기구 의무안전인증 고시 )		
_____	인 증 조 건		_____
인증유효기간	:		

2013년 05월 30일

한국산업안전보건공단이사장

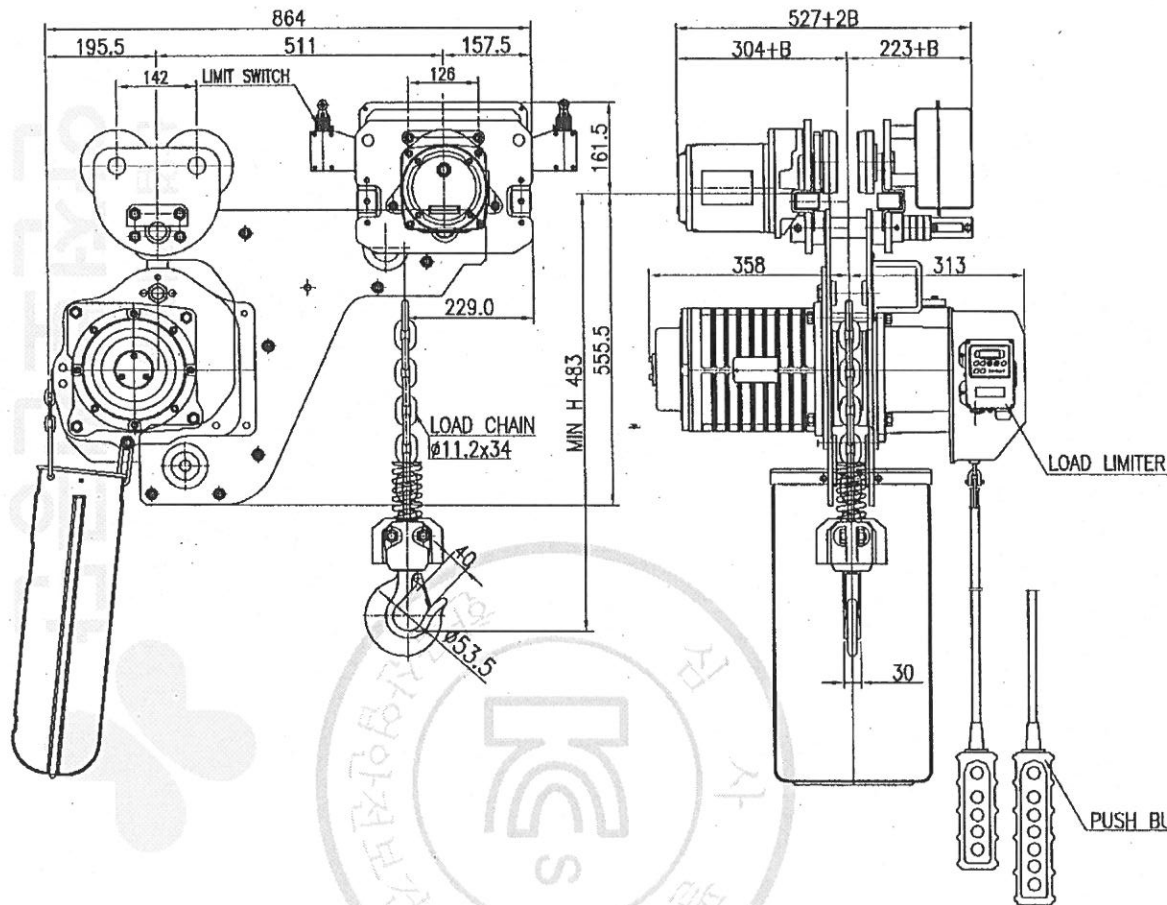


TECHNICAL SPECIFICATION

DESCRIPTION		2 TON MONORAIL HOIST	
TYPE		DSHM-2S MONORAIL TYPE	
HOISTING LOAD		2 TON	
TESTING LOAD		2.5 TON	
LIFT		50 M	
SPEED & MOTOR	HOISTING	SPEED	
		60 Hz	8.1
	TRAVERSING	50 Hz	6.7
		60 Hz	15, 22
		50 Hz	12, 15
BRAKE SYSTEM	HOISTING	D.C MAGNET DISC BRAKE	
	TRAVERSING	MECHANICAL BRAKE	
ELECTRIC SPECIFICATION	POWER SOURCE	AC 3Ø 60/50Hz 220V, 380V, 440V, 480V.	
	CONTROL SOURCE	AC 1Ø 50/60Hz 110V	
	LIMIT SWITCH	TWO STEP LIMIT SWITCH	
	OVER LOAD LIMITER	ELECTRICAL TYPE.	
	EM. STOP DEVICE	EMERGENCY STOP BUTTON	
LOAD CHAIN	Ø 11.2 x 34		
TRAVERSING POWER SYSTEM	TROLLEY BAR OR FESTOON TYPE		
MAX AMBIENT TEMPERATURE	40°C		
RATING	30 MIN		
RATED DUTY	40%ED, ED = <small>motor operation period(min) at maximum duty per hour</small> 60min		
AREA CLASSIFICATION	INDOOR		
CONTROL METHOD	BY PENDANT PUSH BUTTON S/W		
PAINTING COLOR	MUN SELL NO EX8816D YELLOW		

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NO	DESCRIPTION	MAT'L	Q'TY	T(kg)	REMARKS
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SPECIFICATION			
HOISTING LOAD	2	TON	
TESTING LOAD	2.5	TON	
LIFTING HEIGHT	50	M	
HOISTING	SPEED	8.1	M/MIN
	MOTOR	3.5	KW x 1 SET
TRAVERSING	SPEED	15/22	M/MIN
	MOTOR	0.4 KW	x 4/6P x 1SET
POWER SUPPLY	AC 220,380,440,480.x 3φ x 60 Hz		
OPERATING METHOD	P.B type ON . FL		
WEIGHT	356 KG		
I-BEAM SIZE	100-150 MM		

**NOTE**

- \* B는 BEAM 변동치수 치수임.
- \* ROLLER DIA : Ø110
- \* LIMIT SWITCH : OPTION
- \* 본 도면은 I-BEAM 100MM 기준임

제품 복제 및 배포금지

TITLE DSHM-2S CHAIN HOIST				PROJECTION	
WORK NO		WORK NAME			
				SCALE	Q'TY
				1/1	1
DRAWN	CHECKED	REVIEWED	APPROVED	DRAWING NO	
YOO.M.R	-	LEE. H.J	Y. K	DSHM020200	
2012.06.13	-	2012.06.21	2012.06.21		

도면에 지시되지 않은 일반공차						
기공법	치수	3-6	6-30	30-120	120-315	315-1000
선	각	±0.1	±0.2	±0.3	±0.5	±0.8
구멍간	거리	±0.1	±0.2	±0.3	±0.5	±0.8

REV.NO	DATE	REVISION DESCRIPTION	DRAWN	CHECKED	APPROVED

**DAESAN INoTEC IND. CO., LTD.**

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NO	COMMODITY	CAPACITY	MODEL NO	MAKER

ELECTRICAL DRAWING LIST	
DRAWING NO.	DIAGRAM LIST
DSHM1000	ELECTRICAL DRAWING LIST
DSHM1001	ELECTRIC ELEMENTARY DIAGRAM SYMBOL LIST
DSHM1002	ELECTRIC HOIST EQUIPMENT BOARD ASS'Y DRAWING (DSHM-1S,1.9W,2W/220[V],380[V],440[V])
DSHM1003	ELECTRIC HOIST EQUIPMENT BOARD ASS'Y DRAWING (DSHM-2S,1.9S, 3W,5W/220[V],380[V],440[V])
DSHM1004	ELECTRIC TROLLEY BOARD ASS'Y DRAWING (DSHM-1S,1.9W,2W,1.9S,2S,3W,5W/220[V],380[V],440[V])
DSHM1005	INTERLOCK LIST (DSHM-1S,1.9W,2W,1.9S,2S,3W,5W/220[V],380[V],440[V])
DSHM1006	접지도면 (DSHM-1S,1.9W,2W/220[V],380[V],440[V])
DSHM1007	접지도면 (DSHM-1.9S,2S,3W,5W/220[V],380[V],440[V])
DSHM1008	사용전선도면 (DSHM-1S,1.9W,2W/220[V],380[V],440[V])
DSHM1009	사용전선도면 (DSHM-1.9S,2S,3W,5W/220[V],380[V],440[V])
DSHM0001	CONTROL CIRCUIT DIAGRAM (DSHM-1S,1.9W,2W)
DSHM0002	CONTROL CIRCUIT DIAGRAM (DSHM-1.9S,2S,3W,5W)
DSHM0003	POWER CIRCUIT DIAGRAM (DSHM-1S,1.9W,2W/220[V],380[V],440[V])
DSHM0004	POWER CIRCUIT DIAGRAM (DSHM-1.9S,2S/220[V],380[V],440[V])
DSHM0005	POWER CIRCUIT DIAGRAM (DSHM-3W,5W/220[V],380[V],440[V])
	기타 자료 (PART LIST, 감전방지, 접지내용 CHART, 접지 계통도, 전선 허용전류, 차단기 선정 표)

KOREA OCCUPATIONAL SAFETY & HEALTH AGENCY  
 안전보건공단  
 한국산업안전보건공단

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물범복제 및 배포금지

REV. NO	DATE	REVISION DESCRIPTION	DRAWN	CHECKED	APPROVED

TITLE				PROJECTION
CIRCUIT DIAGRAM OF DSHM				
WORD NO	WORK NAME			
	ELECTRIC DRAWING LIST			SCALE Q'TY
	DSHM-1S,1.9W,2W,1.9S,2S,3W,5W			
DRAWN	CHECKED	REVIEWED	APPROVED	DRAWING NO
E.D			Y.K	DSHM1000
2013.04.03			2013.04.03	
DAESAN INoTECIND. CO., LTD.				

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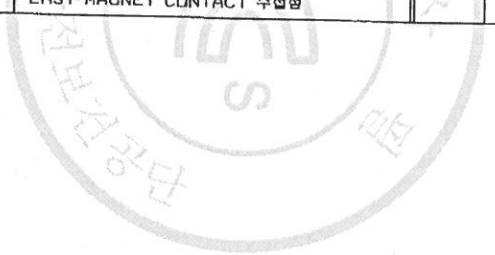
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NO	COMMODITY	CAPACITY	MODEL NO	MAKER

ELECTRIC ELEMENTARY DIAGRAM SYBOL LIST

항목	기호	약호	명칭	항목	기호	약호	명칭
1			WIRE	22		M302	WEST MAGNET CONTACT 주접점
2			WIRE CONNECTED	23		M101	UP MAGNET CONTACT 보조접점 a접점
3			TERMINAL	24		M102	DOWN MAGNET CONTACT 보조접점 a접점
4			접지	25		M101	UP MAGNET CONTACT 보조접점 b접점
5			전원입력	26		M102	DOWN MAGNET CONTACT 보조접점 b접점
6			NONE FUSE BREAKER	27		M301	EAST MAGNET CONTACT 보조접점 b접점
7			FUSE	28		M302	WEST MAGNET CONTACT 보조접점 b접점
8			비상스위치	29		UPPER L/S	UP LIMIT SWITCH b접점
9			PUSH BUTTON SWITCH a접점	30		LOWER L/S	DOWN LIMIT SWITCH b접점
10			TRANSFORMER	31		EAST L/S	횡행 LIMIT SWITCH b접점
11			장류기	32		WEST L/S	횡행 LIMIT SWITCH b접점
12			CURRENT TRANSFORMER	33		TP1	관상용 MOTOR 열동계전기 b접점
13			관상용 MOTOR	34		TP2	횡행 MOTOR 열동계전기 b접점
14			횡행 MOTOR	35		SOL	SOLENOID TYPE DC MAGNET BRAKE COIL
15			UP MAGNET CONTACTOR	36			MAIN MAGNETIC CONTACTOR
16			DOWN MAGNET CONTACTOR	37		M001	MAIN MAGNETIC CONTACTOR 주접점
17			EAST MAGNET CONTACTOR				
18			WEST MAGNET CONTACTOR				
19		M101	UP MAGNET CONTACT 주접점				
20		M102	DOWN MAGNET CONTACT 주접점				
21		M301	EAST MAGNET CONTACT 주접점				

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별첨부제 및 배포금지

TITLE				CIRCUIT DIAGRAM OF DSHM		PROJECTION	
WORD NO	WORK NAME			DIAGRAM SYMBOL LIST		SCALE	QTY
	DSHM-1S,19W,2W,19S,2S,3W,5W						
DRAWN	CHECKED	REVIEWED	APPROVED	DRAWING NO			
E.D			Y.K	DSH-M1001			
2013.04.03			2013.04.03				
DAESAN INOTECIND. CO., LTD.							

REV. NO	DATE	REVISION DESCRIPTION	DRAWN	CHECKED	APPROVED
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A

3. TRANSFORMAR 40EVA1  
INPUT 220,380,440[V]/OUTPUT 110[V]

1. MAGNET CONTACTOR  
DMC 226, COIL 110[V]

5. UP,DOWN LIMIT SWITCH  
440[V], 20[A]

2. CONVERTER(DC POWER MODULE)  
INPUT 220,380,440[V]/OUTPUT DC 99,200[V]

4. TERMINAL BLOCK  
20[A], 15P

6. PUSH BUTTON SWITCH  
MECHANICAL INTERLOCK

7. CAPTYER CORD/W STEEL WIRE  
0.75SQ W STEEL WIRE

8. OVER LOAD LIMITER

NO	COMMODITY	CAPACITY	L	MODEL NO	MAKER
1	Magnetic contactor	Coil 110V	2	DMC-226	Dong-a
2	Rectifier	DC 99-200V	1	SR-304	영우Eng
3	Transformer	220,380,440V/110V	1	DSAC-T	대원전기
4	Terminal Block	20A 15P	1	TBI-02006	KACON
5	CAM Switch	20A 2선	1	HY-S05-S	한양메스
6	Magnetic contactor	250V 6A	1	SH-1022SBB	한양메스
				SH-1024SBB	
7	Capter Cord/w Steel Wire	0.75SQ#5C	1	-	(주)광일산업
		0.75SQ#7C			
		0.75SQ#9C			
8	Load Limiter	70TON 이하	1	JDL-100	영우Eng

물품명세서 및 배품금지

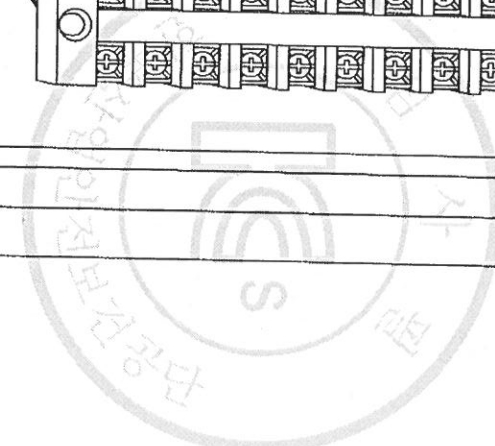
TITLE					PROJECTION	
CIRCUIT DIAGRAM OF DSHM						
WORD NO	WORK NAME				SCALE	QTY
	EQUIPMENT BOARD ASSY DRAWING					
	DSHM-2S,2BW,3W,5W					
DRAWN	CHECKED	REVIEWED	APPROVED	DRAWING NO		
E.D			Y.K	DSHM003		
2013.04.03			2013.04.03			
DAESAN INoTECIND. CO., LTD.						

REV. NO	DATE	REVISION DESCRIPTION	DRAWN	CHECKED	APPROVED
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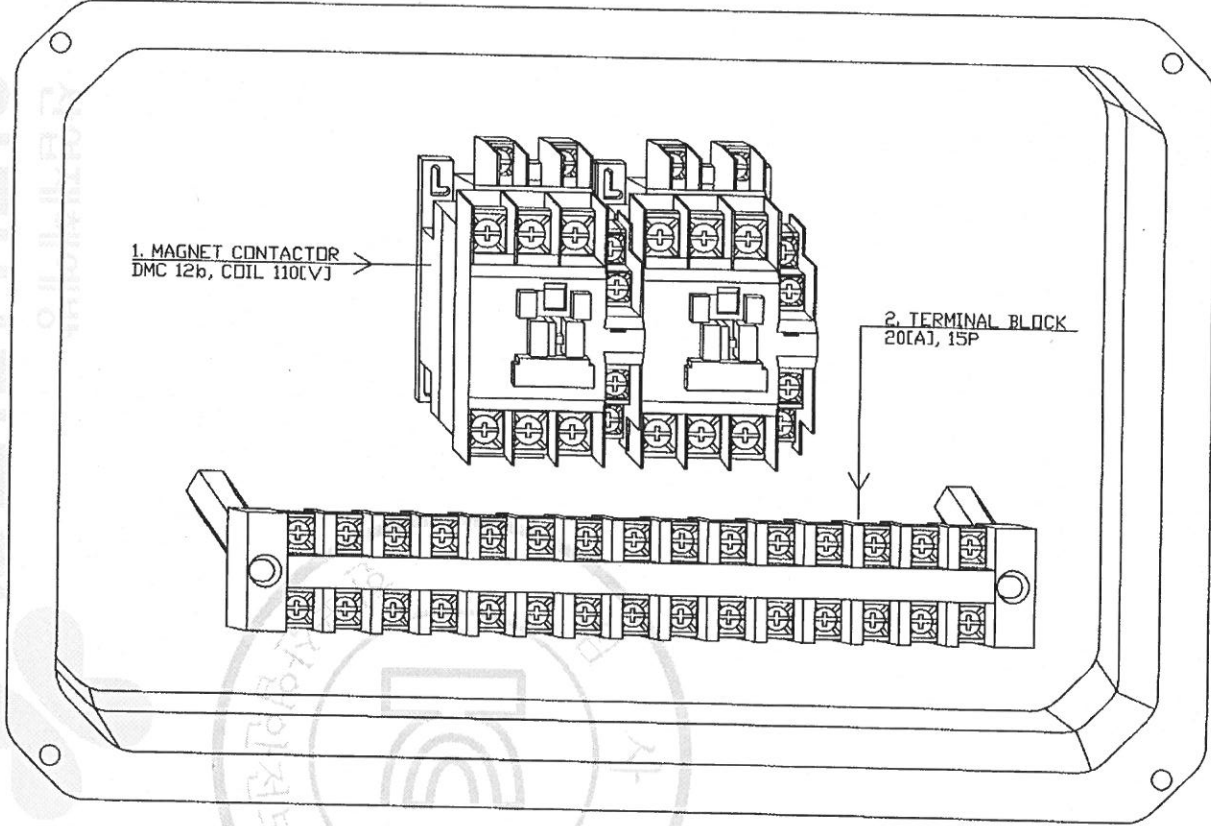
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NO	COMMODITY	CAPACITY	MODEL NO	MAKER
1	Magnetic contactor	Coil 110V	DMC-22b	Dong-a
2	Terminal Block	20A 15P	TBI-02006	KADEN



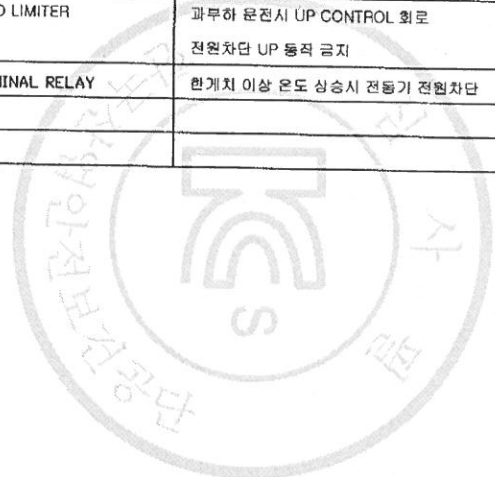
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REV. NO	DATE	REVISION DESCRIPTION	DRAWN	CHECKED	APPROVED
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9					
8					
7					

TITLE				PROJECTION	
CIRCUIT DIAGRAM OF DSHM					
WORD NO	WORK NAME			SCALE	Q'TY
	ELECTRIC TROLLEY BOARD ASS'Y DRAWING				
	DSHM-1S,1.9W,2W,1.9S,2S,3W,5W				
DRAWN	CHECKED	REVIEWED	APPROVED	DRAWING NO	
E.D			Y.K	DSHM1004	
2013.04.03			2013.04.03		
DAESAN INOTECIND. CO., LTD.					

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물범복제 및 배포금지

NO	COMMODITY	CAPACITY	MODEL NO	MAKER

INTERLOCK LIST

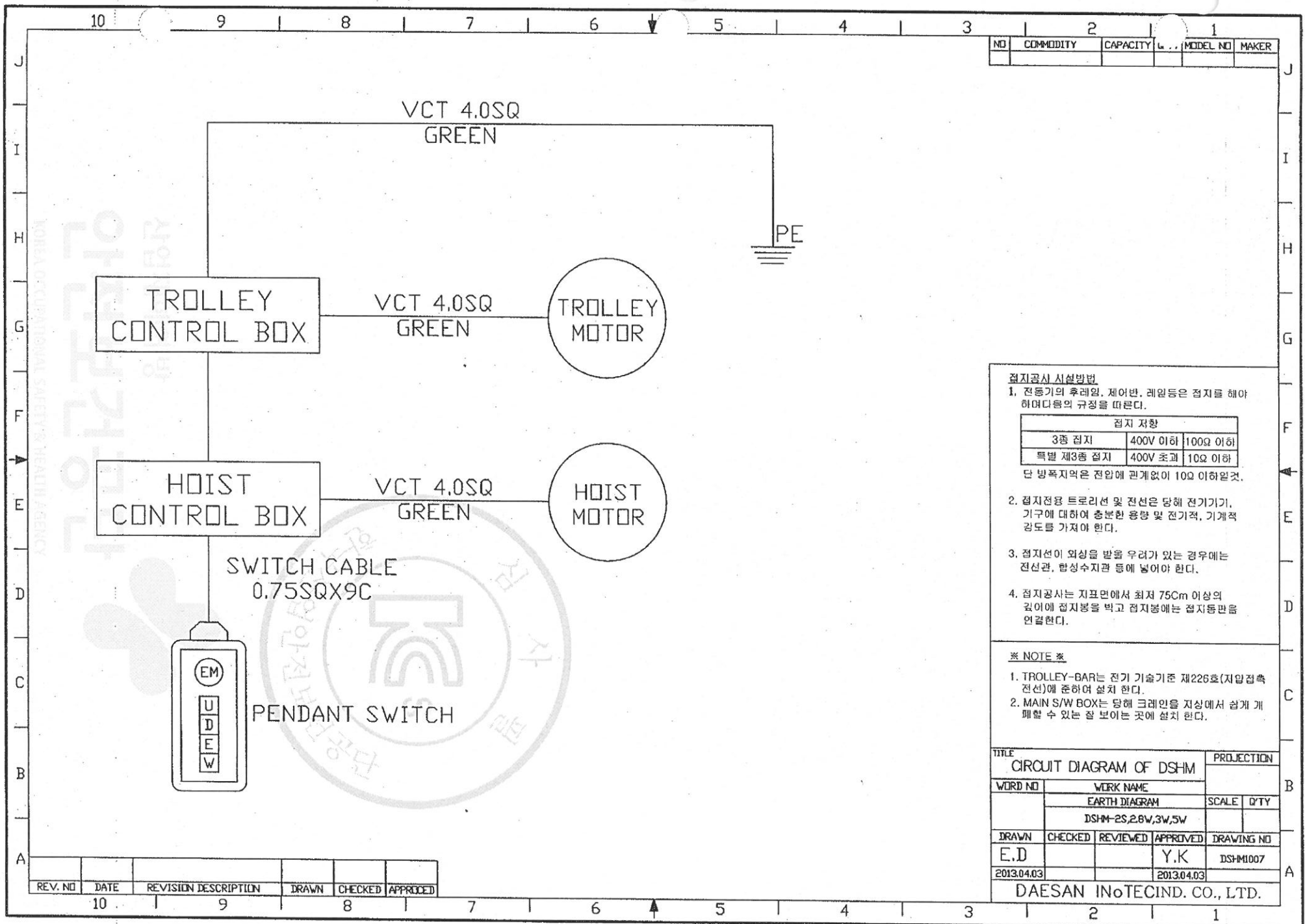
순번	기호/약어	명 칭	역 할	차 단 범 위	차 단 방 법	비 고
1	E/M	비상정지 스위치	비상시 전원차단	전동기 및 제어회로의 전원차단	마크네트 스위치 주점접 OPEN	
2	L/S UP	UP 리미트 스위치	한계치 이상 상승시 전동기 전원차단	전동기 전원차단	마크네트 스위치 주점접 OPEN	
3	L/S DOWN	DOWN 리미트 스위치	한계치 이상 하강시 전동기 전원차단	전동기 전원차단	마크네트 스위치 주점접 OPEN	
4	L/S EAST	RIGHT 리미트 스위치	한계치 이상 RIGHT 이동시 전동기 전원차단	전동기 전원차단	마크네트 스위치 주점접 OPEN	OPTION
5	L/S WEST	LEFT 리미트 스위치	한계치 이상 LEFT 이동시 전동기 전원차단	전동기 전원차단	마크네트 스위치 주점접 OPEN	OPTION
6	M101	UP M/C 보조점접 b점접	UP 동작시 DOWN 동작 금지	UP/DOWN 동시투입 금지	M/C 보조점접 b 점접 OPEN	
7	M102	DOWN M/C 보조점접 b점접	DOWN 동작시 UP 동작 금지	UP/DOWN 동시투입 금지	M/C 보조점접 b 점접 OPEN	
8	M301	EAST M/C 보조점접 b점접	RIGHT 동작시 LEFT 동작 금지	UP/DOWN 동시투입 금지	M/C 보조점접 b 점접 OPEN	
9	M302	WEST M/C 보조점접 b점접	LEFT 동작시 RIGHT 동작 금지	UP/DOWN 동시투입 금지	M/C 보조점접 b 점접 OPEN	
10	역상방지기	역상방지기	UP/DOWN 역상결선시 CONTROL회로 전원차단 UP/DOWN 동작 금지	UP/DOWN 동시투입 금지	내부 RELAY 보조점접 b 점접 OPEN	
11	LOAD LIMITER	LOAD LIMITER	과부하 운전시 UP CONTROL 회로 전원차단 UP 동작 금지	과부하 운전 금지	UP CONTROL회로 전원차단	
12	TP	TERMINAL RELAY	한계치 이상 온도 상승시 전동기 전원차단	전동기 전원차단	TP 내부점접 OPEN	전동기 내장

REV. NO	DATE	REVISION DESCRIPTION	DRAWN	CHECKED	APPROVED

TITLE CIRCUIT DIAGRAM OF DSHM				PROJECTION	
WORD NO	WORK NAME			SCALE Q'TY	
	INTERLOCK LIST				
	DSHM-1S,1.9W,2W,1.9S,2S,3W,5W				
DRAWN	CHECKED	REVIEWED	APPROVED	DRAWING NO	
E.D			Y.K	DSHM1005	
2013.04.03			2013.04.03		
DAESAN INOTECIND. CO., LTD.					



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NO	COMMODITY	CAPACITY	MODEL NO	MAKER

**접지공사 시설행법**

1. 전동기의 후레임, 제어반, 레일등은 접지를 해야 하며다음의 규정을 따른다.

접지 저항		
3층 접지	400V 이하	100Ω 이하
특별 제3층 접지	400V 초과	10Ω 이하

단 방폭지역은 전압에 관계없이 10Ω 이하로한다.

2. 접지전용 트롤리선 및 전선은 당해 전기기기, 기구에 대하여 충분한 용량 및 전기적, 기계적 강도를 가져야 한다.
3. 접지선이 외상을 받을 우려가 있는 경우에는 전선관, 합성수지관 등에 넣어야 한다.
4. 접지공사는 지표면에서 최저 75cm 이상의 깊이에 접지봉을 박고 접지봉에는 접지동판을 연결한다.

**※ NOTE ※**

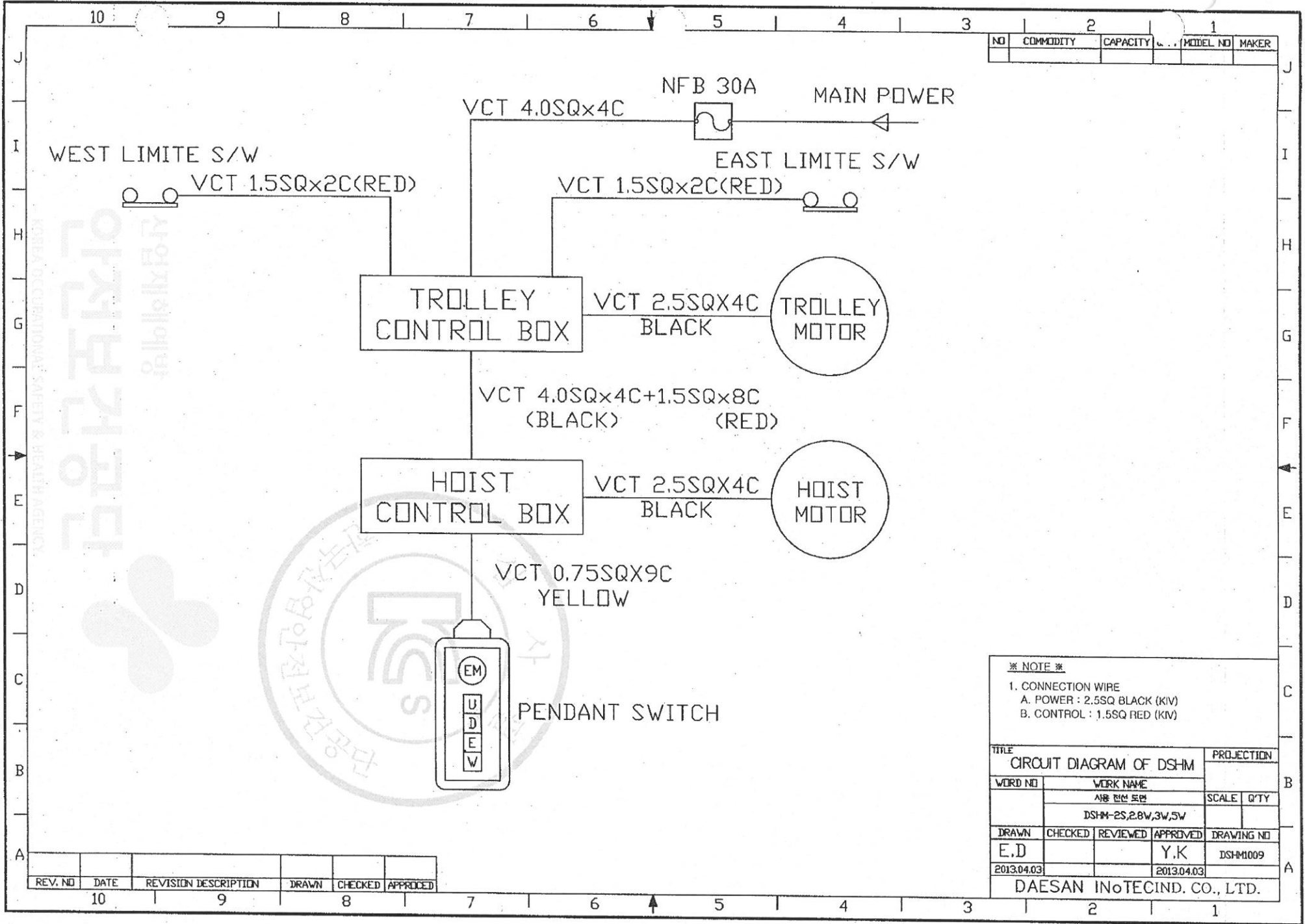
1. TROLLEY-BAR는 전기 기술기준 제226호(지압접속 전선)에 준하여 설치 한다.
2. MAIN S/W BOX는 당해 크레인을 지상에서 쉽게 개폐할 수 있는 알 보이는 곳에 설치 한다.

TITLE				PROJECTION	
CIRCUIT DIAGRAM OF DSHM					
WORD NO	WORK NAME			SCALE	Q'TY
	EARTH DIAGRAM				
	DSHM-2S,2.8W,3W,5W				
DRAWN	CHECKED	REVIEWED	APPROVED	DRAWING NO	
E.D			Y.K	DSHM1007	
2013.04.03			2013.04.03		
DAESAN INoTECIND. CO., LTD.					

REV. NO	DATE	REVISION DESCRIPTION	DRAWN	CHECKED	APPROVED

물범복제 및 배포금지

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NO	COMMODITY	CAPACITY	MODEL NO	MAKER

※ NOTE ※

- CONNECTION WIRE
  - A. POWER : 2.5SQ BLACK (KV)
  - B. CONTROL : 1.5SQ RED (KV)

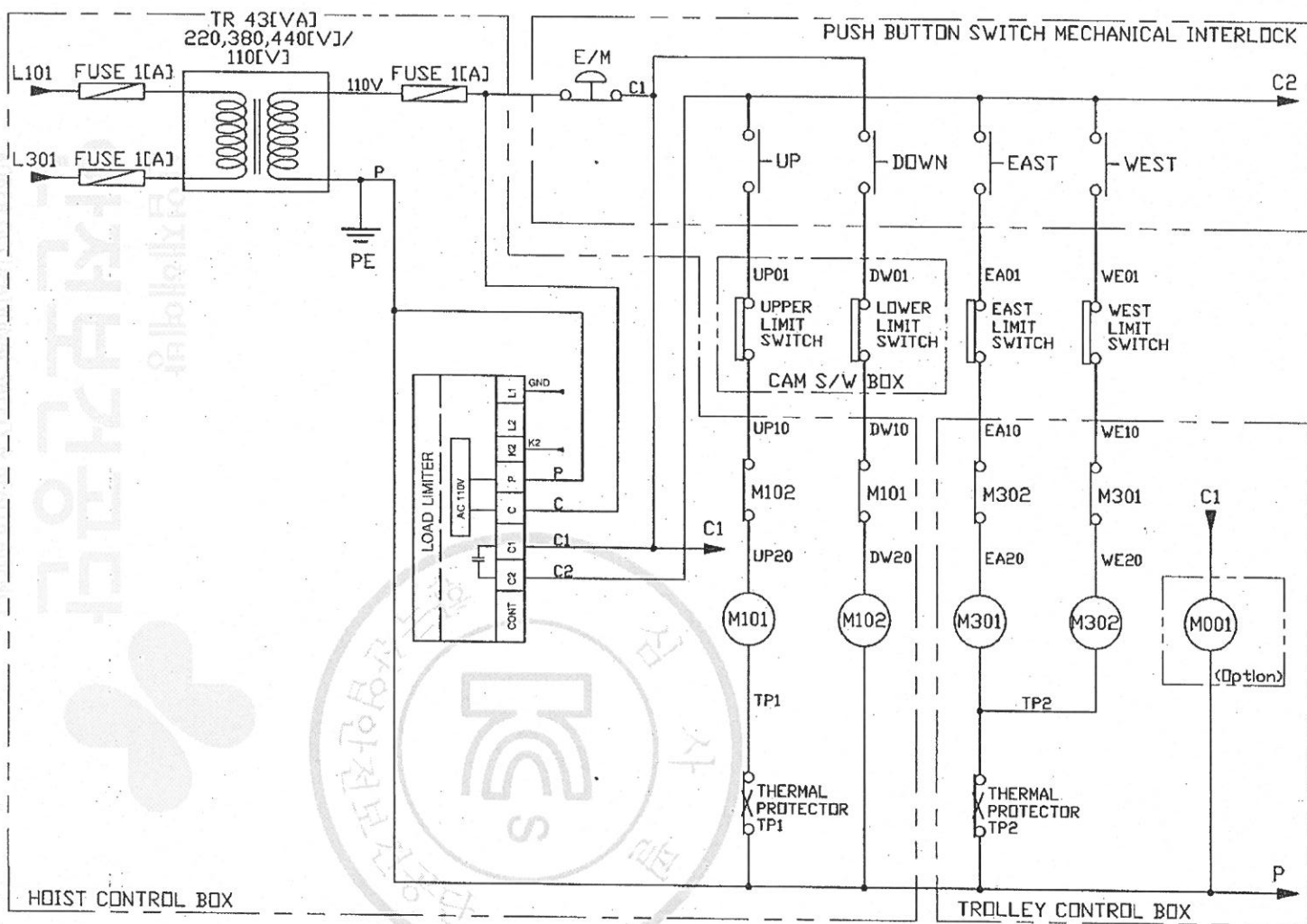
TITLE				PROJECTION
CIRCUIT DIAGRAM OF DSHM				
WORD NO	WORK NAME			SCALE   Q'TY
	DSHM-2S,2.8W,3W,5W			
DRAWN	CHECKED	REVIEWED	APPROVED	DRAWING NO
E.D			Y.K	DSHM009
2013.04.03			2013.04.03	

DAESAN INoTECIND. CO., LTD.

물범복제 및 배포금지

REV. NO	DATE	REVISION DESCRIPTION	DRAWN	CHECKED	APPROVED

NO	COMMODITY	CAPACITY	MODEL NO	MAKER
1	MAGNETIC CONTACTOR	2.2KW	DMC-22b	DONG-A
2	MAGNETIC CONTACTOR	3.7KW	DMC-22b	DONG-A
3	TRANSFORMER	43VA	-	DAESAN
4	PUSH BUTTON S/W	4POINT	1024SBB	HANWONG
5	LOAD LIMITER	70TON	JL-300	JUNG-HO
6	CAM SWITCH	20A	2E	HANWONG
7	LIMIT SWITCH	-	HY-ME04	HANWONG
8	FUSE	1A	-	LITTLE FUSE
9	FUSE HOLDER	3P	-	익성
10	TERMINAL BLOCK	15P	-	KAKON

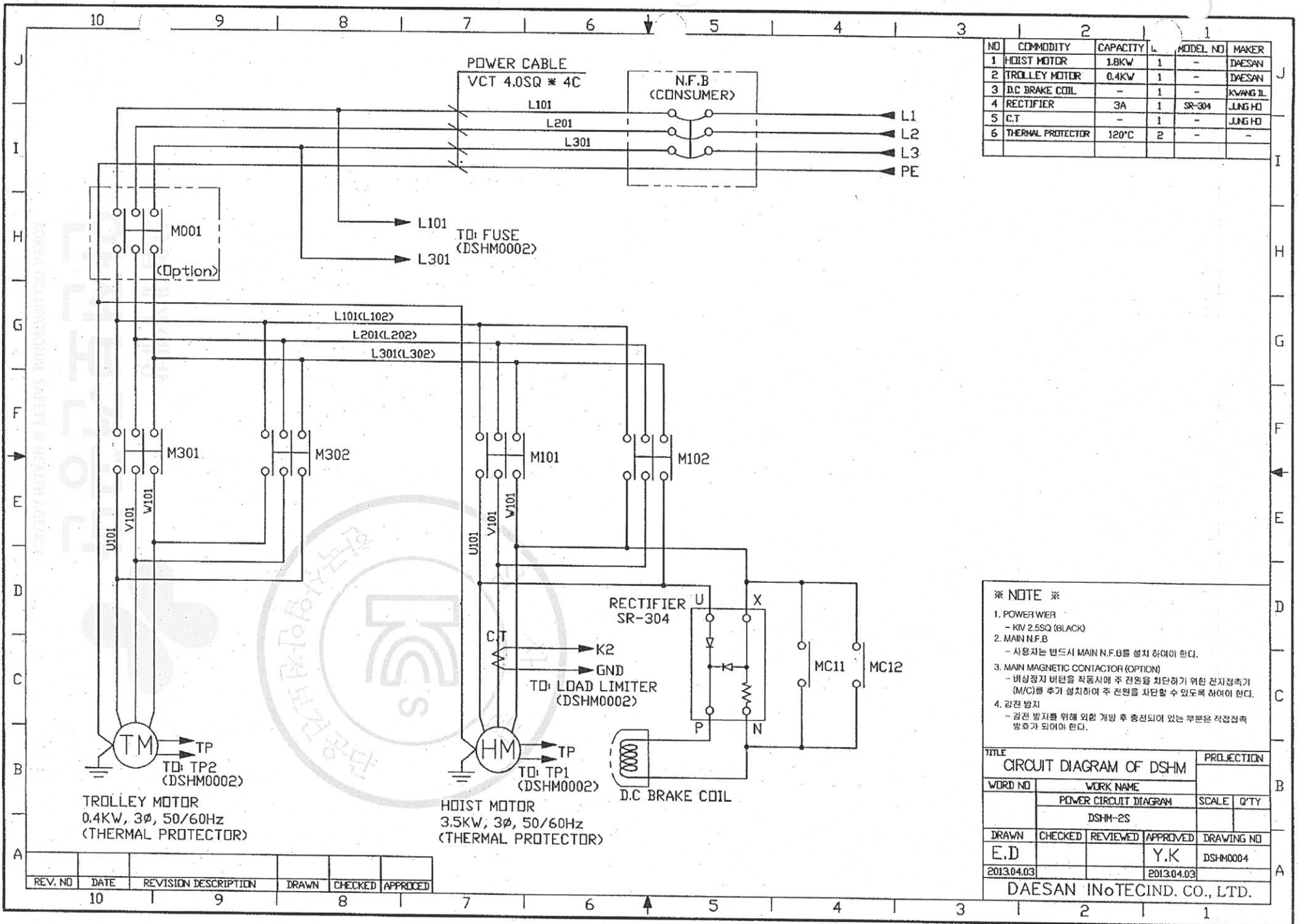


- ※ NOTE ※
- CONTROL WIER  
- KIV 1.5SQ (RED)
  - PUSH BUTTON SWITCH CABLE  
- 0.75SQ \* 7C
  - CAM SWITCH CABLE  
- VCTIF 1.5SQ \* 4C
  - MAIN MAGNETIC CONTACTOR (MC01)  
- (OPTION)
  - EAST, WEST LIMIT SWITCH  
- (OPTION)

TITLE		PROJECTION	
CIRCUIT DIAGRAM OF DSHM			
WORD NO	WORK NAME		
	CONTROL CIRCUIT DIAGRAM		SCALE Q'TY
	DSHM-2S,2.8W,3W,5W		
DRAWN	CHECKED	REVIEWED	APPROVED
E.D			Y.K
DRAWING NO		DRAWING NO	
DSHM0002		DSHM0002	
2013.04.03		2013.04.03	
DAESAN INOTECHIND. CO., LTD.			

REV. NO	DATE	REVISION DESCRIPTION	DRAWN	CHECKED	APPROVED
10					
9					
8					
7					
6					
5					
4					
3					
2					
1					

NO	COMMODITY	CAPACITY	QTY	MODEL NO	MAKER
1	HOIST MOTOR	1.8KW	1	-	DAESAN
2	TROLLEY MOTOR	0.4KW	1	-	DAESAN
3	DC BRAKE COIL	-	1	-	KWANG IL
4	RECTIFIER	3A	1	SR-304	JUNG HO
5	C.T	-	1	-	JUNG HO
6	THERMAL PROTECTOR	120°C	2	-	-



**\* NOTE \***

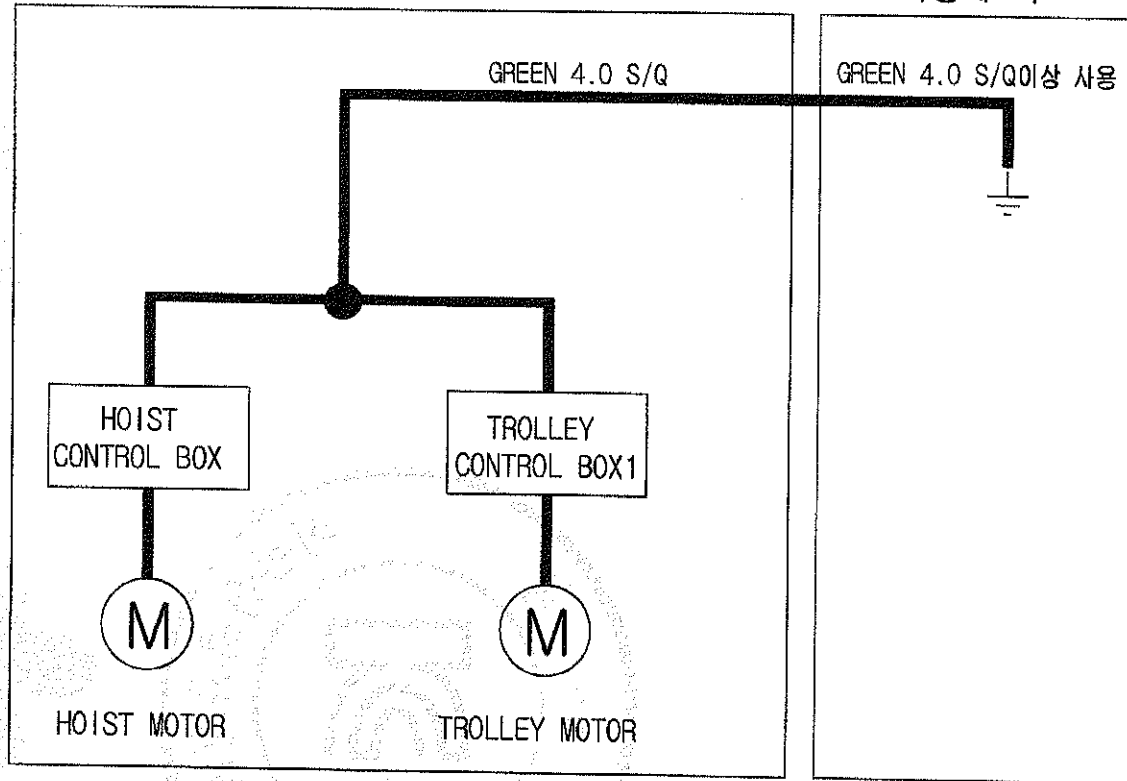
- POWER WIRE  
- KIV 2.5SQ (BLACK)  
- MAIN N.F.B  
- 사용자는 반드시 MAIN N.F.B를 설치 하여야 한다.
- MAIN MAGNETIC CONTACTOR (OPTION)  
- 비상정지 버튼을 작동시에 주 전원을 차단하기 위한 전자점락기 (M/C)를 추가 설치하여 주 전원을 차단할 수 있도록 하여야 한다.
- 감전 방지  
- 감전 방지를 위해 외관 개방 후 충전되어 있는 부분은 직접접촉 방호가 되어야 한다.

TITLE				PROJECTION	
CIRCUIT DIAGRAM OF DSHM					
WORD NO	WORK NAME			SCALE	Q'TY
	POWER CIRCUIT DIAGRAM				
	DSHM-2S				
DRAWN	CHECKED	REVIEWED	APPROVED	DRAWING NO	
E.D			Y.K	DSHM0004	
2013.04.03			2013.04.03		
DAESAN INOTECIND. CO., LTD.					

REV. NO	DATE	REVISION DESCRIPTION	DRAWN	CHECKED	APPROVED
10					
9					
8					
7					
6					
5					
4					
3					
2					
1					

제조사 측

사용자 측



NO	COMMODITY	CAPACITY	MODEL NO	MAKER
1				

※ NOTE ※

TITLE				PROJECTION	
CIRCUIT DIAGRAM OF DSHM					
WORD NO	WORK NAME			SCALE	QTY
	집기 개량도				
	DSHM-1.9S,2S,3W,5W				
DRAWN	CHECKED	REVIEWED	APPROVED	DRAWING NO	
E.D			Y.K		
2013.04.03			2013.04.03		

DAESAN INoTECIND. CO., LTD.

REV. NO	DATE	REVISION DESCRIPTION	DRAWN	CHECKED	APPROVED
10					
9					
8					
7					
6					
5					
4					
3					
2					
1					

DSHM-2T I-BEAM CALCULATION SHEET

	I-200x100x7/10	I-250x125x7.5/12.5	I-300x150x7.5/18.5
SPAN L=CM	280	450	600
$I_x(\text{Cm}^4)$	2170	5180	12700
$I_y(\text{Cm}^4)$	138	337	886
$Z_x(\text{Cm}^3)$	217	414	849
$Z_y(\text{Cm}^3)$	28	53.9	118
$\sigma A(\text{Kg. Cm}^2)$	998.77	872.4	569.06
$\delta(\text{Cm})$	0.233	0.417	0.396
$\delta/L$	1/1200	1/1080	1/1517



산업재해예방  
안전보건공단  
KOSHA OCCUPATIONAL SAFETY & HEALTH AGENCY

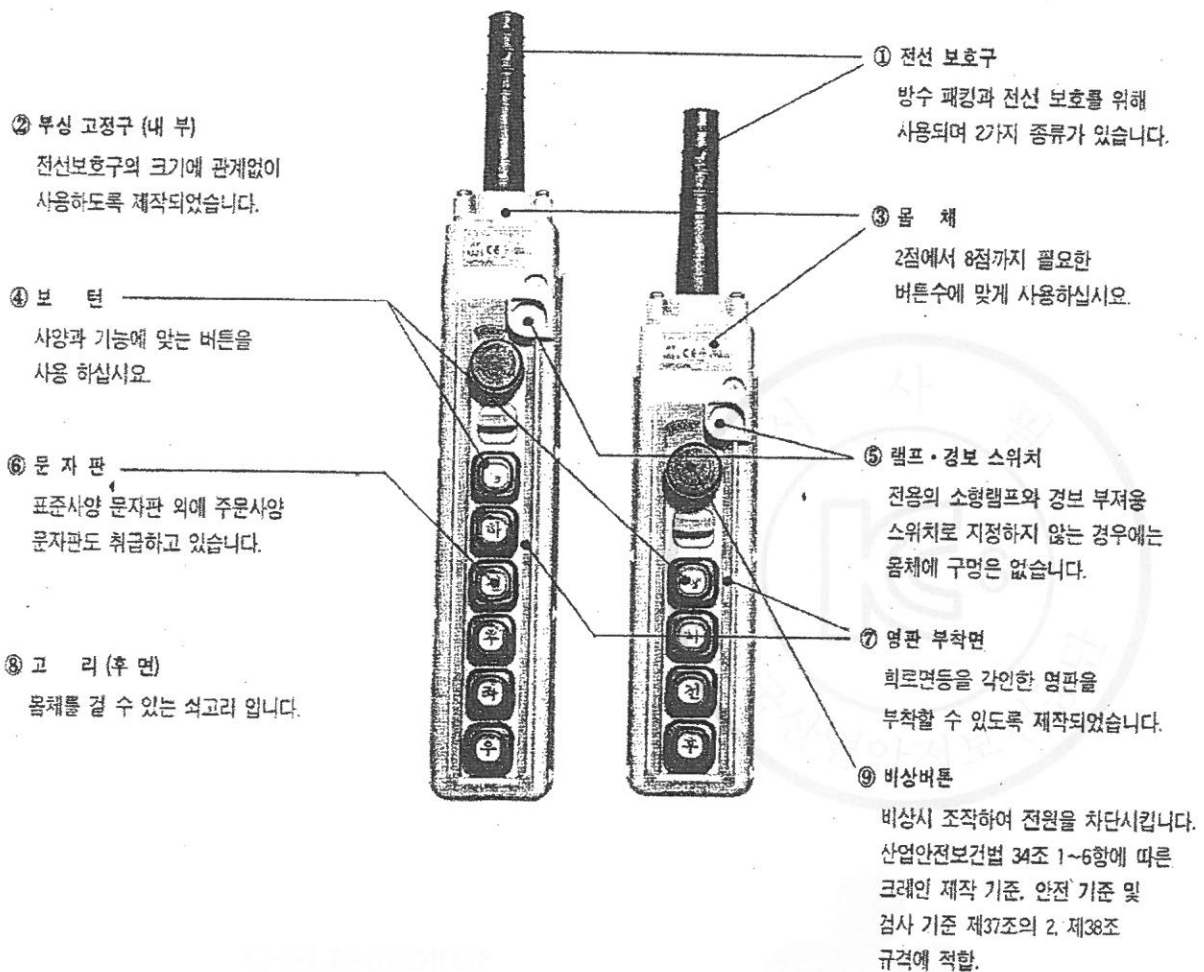
## 호이스트 스위치

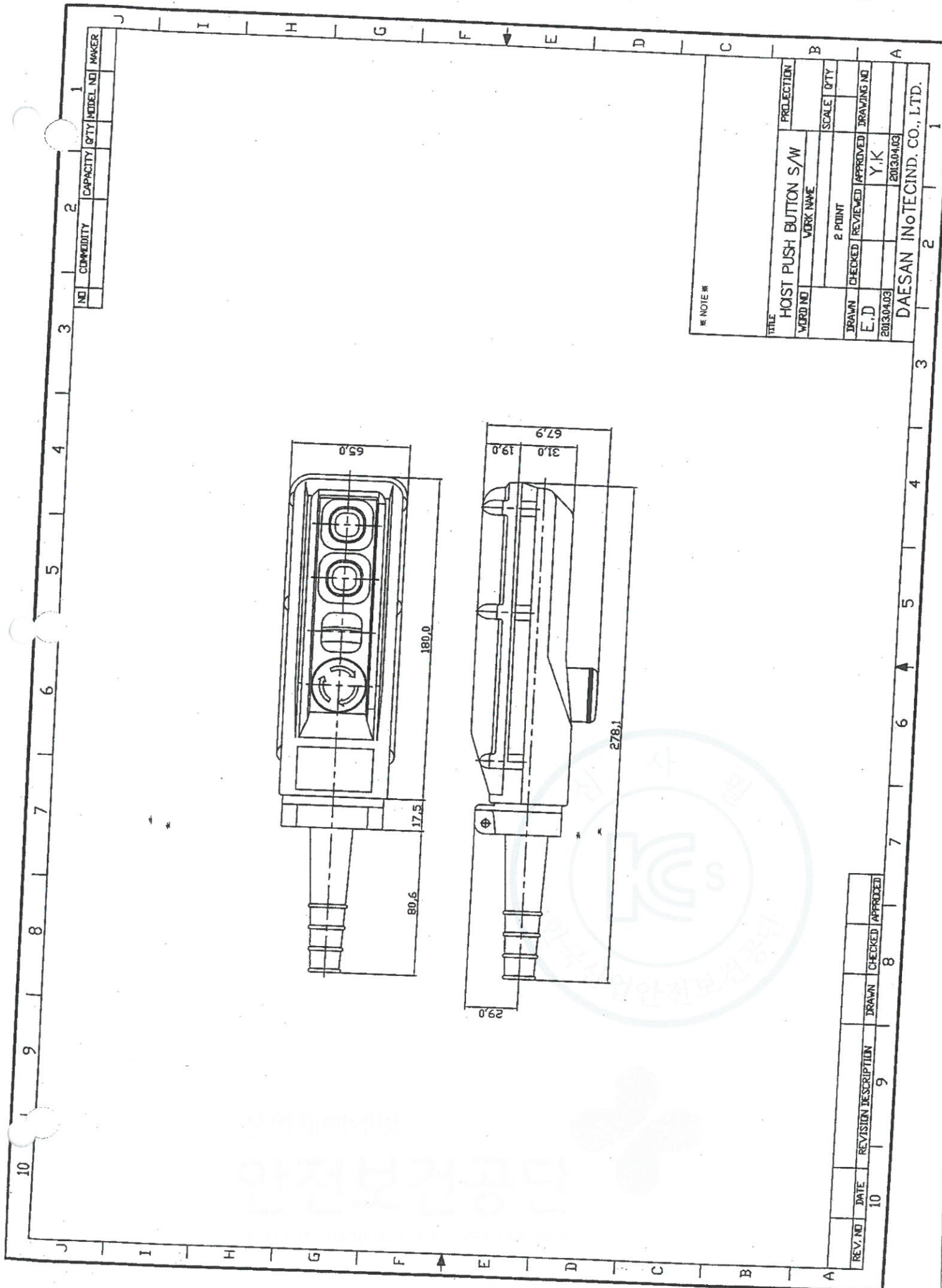
### 전자 조작용 개폐 스위치 (HOIST SWITCH)

- 전동 HOIST조작용으로 현수식 늘름버튼형 개폐기입니다.
- 방수형의 구조이며 외곽케이스는 기계적 강도 및 전기적 특성이 우수한 수지를 사용하여 가볍고 견고하게 설계되었습니다.
- 스위치 자체에 전원 단절용으로 주회로를 개폐할 수 있는 구조로 되어 있습니다.
- 접점 부분은 1단(1a)이 기본이며, 전동기 속도 제어용에 필요한 2단 접점이 있어 필요 부분에 부착 사용할 수 있도록 설계되어 있습니다.
- 풍부한 버튼 문자판이 준비되어 있어 용도에 맞추어 선택 사용이 용이합니다.
- 소형 및 경량으로 설계되어 경제적입니다.
- 걸고리가 장착되어 사용이 편리합니다.



### ■ 구조





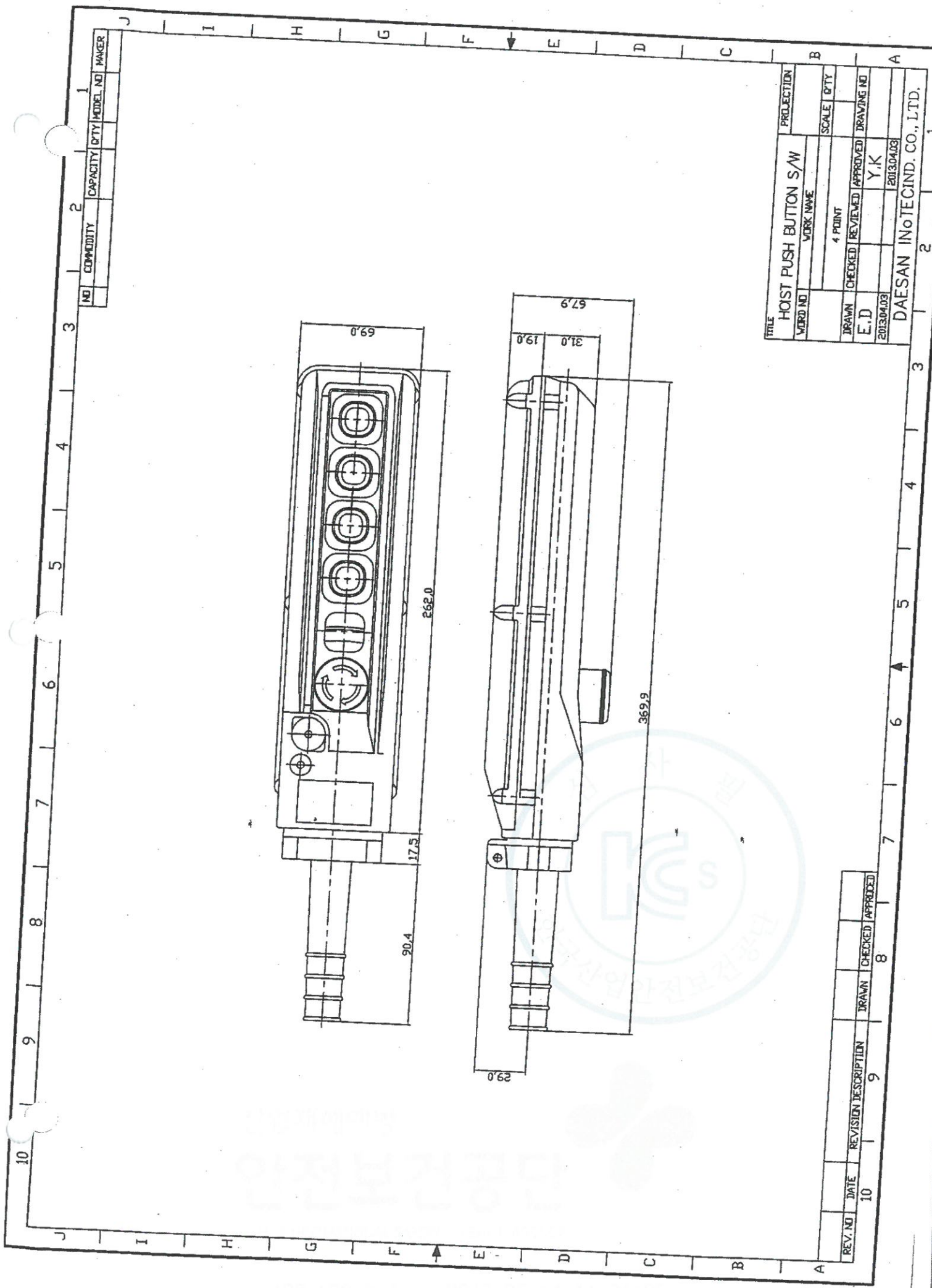
NO	COMMODITY	CAPACITY	QTY	MODEL NO	MAKER
1					

* NOTE *		PROJECTION	
TITLE HOIST PUSH BUTTON S/W			
MEMO NO	WORK NAME	SCALE	QTY
DRAWN	CHECKED	REVIEWED	APPROVED
E.D		Y.K	
2013.04.03			2013.04.03
DAESAN INOTECHIND. CO., LTD.			

REV. NO	DATE	REVISION DESCRIPTION	DRAWN	CHECKED	APPROVED
10				8	



불법복제 및 배포금지

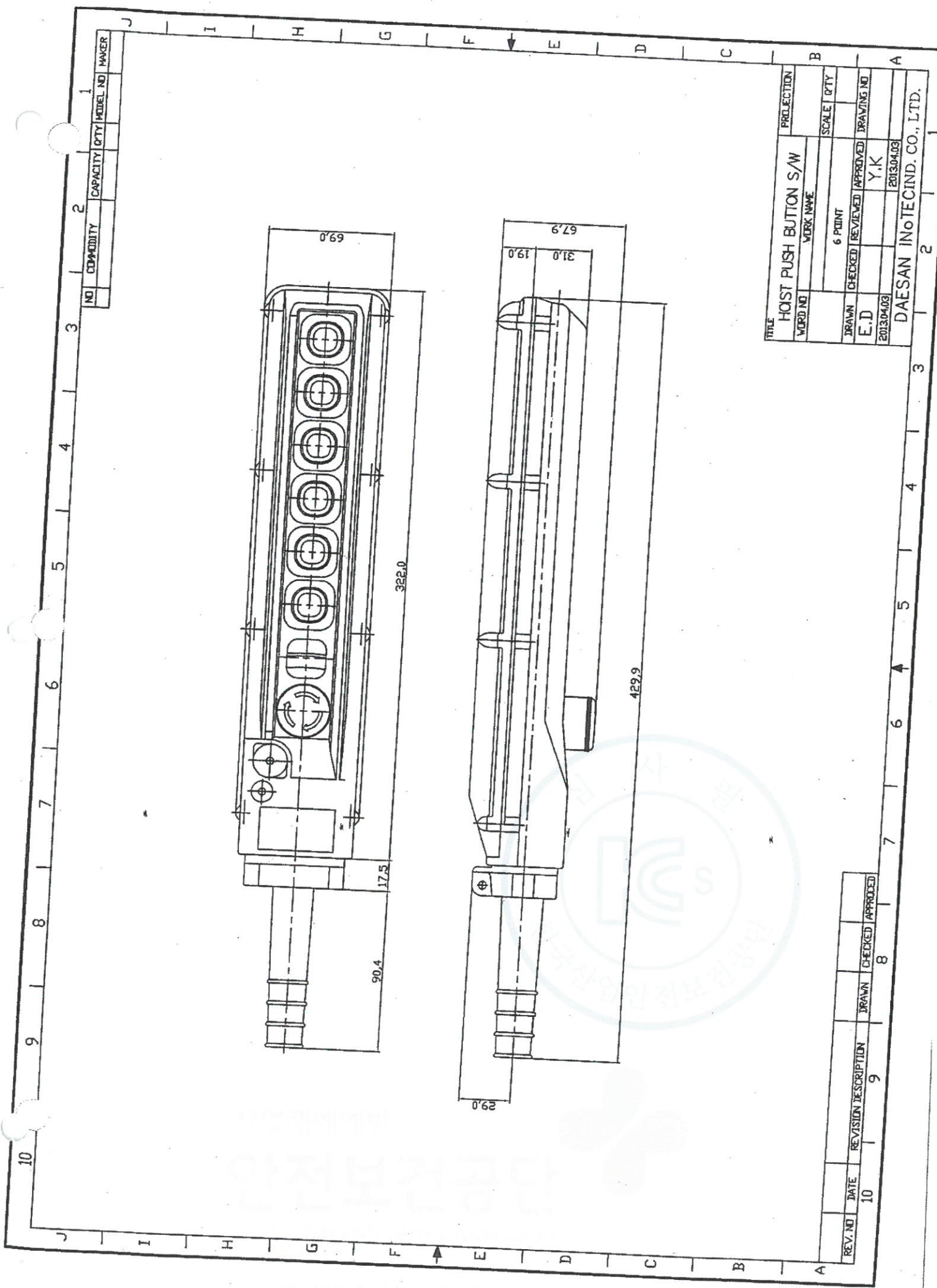


NO	COMMODITY	CAPACITY	QTY	MODEL NO	MAKER
1					

TITLE		HOIST PUSH BUTTON S/W		PROJECTION	
WORD NO	WORK NAME			SCALE	QTY
	4 POINT				
DRAWN	CHECKED	REVIEWED	APPROVED	DRAWING NO	
E.D			Y,K		
2013.04.03				2013.04.03	
DAESAN INOTECHIND. CO., LTD.					

REV. NO	DATE	REVISION DESCRIPTION	DRAWN	CHECKED	APPROVED
10					

불법복제 및 배포금지



NO	COMMODITY	CAPACITY	QTY	MODEL NO	MAKER
1					

TITLE		PROJECTION	
HOIST PUSH BUTTON S/W			
WORD NO	WORK NAME	SCALE	QTY
		6 POINT	
DRAWN	CHECKED	REVIEWED	APPROVED
E.D		Y.K	
2013.04.03		2013.04.03	
DAESAN INOTECHIND. CO., LTD.			

REV. NO	DATE	REVISION DESCRIPTION	DRAWN	CHECKED	APPROVED
10				8	

**FEC CHAIN CORPORATION**

337 KANAORI-CHO, HAMAMATSU CITY,  
SHIZUOKA PRE. 435-0026 JAPAN  
TEL:+81-53-425-4116, 2162 FAX:+81-53-425-5122

**TEST CERTIFICATE**

Distributor:	code #: 1080	distributor's name: ASAO & CO., LTD
Couustomer:		couustomer's name:
Article name: (Application)	Load chain for electric chain hoist	
Spec. standard	<input type="checkbox"/> DIN EN 818-7:2002 <input type="checkbox"/> ISO 3077	<input type="checkbox"/> JIS B 8812:1999 <input checked="" type="checkbox"/> FEC
Material spec.:	SAE15B24(Mn-B steel)	
Finish:	<input checked="" type="checkbox"/> temper-colored, <input type="checkbox"/> zinc-plated, <input type="checkbox"/> coated( <input type="checkbox"/> zinc-phosphated, <input type="checkbox"/> manganese-phosphated <input checked="" type="checkbox"/> oiled, <input type="checkbox"/> no-oiled	
Stamping:	<input type="checkbox"/> FEC standard, <input checked="" type="checkbox"/> couustomer's request → DS, JAPAN, (Lot 7N.7P.7L), FEC2	
Product code#: description: quality type	FCD11234 φ11.2*P34 G80/ type-DAT	

Dimention:			Result
Nominal diameter( dn )	[mm]	11.2 +0.3/-0.3	Good
Internal width, min.:	[mm]	14.0	Good
external width, max.:	[mm]	37.5	Good
Nominal pitch 1 t	[mm]	34.0 +0.4/-0.2	Good
5 t	[mm]	-	-
11 t	[mm]	-	-
Diameter at the weld(ds), max.:	[mm]	374.0 +1.3/-0.4	Good
	[mm]	12.0	Good

Mechanical properties:			Result
Working load limit(WLL), max.:	[ kg ]	3000	-
(drive mechanism)		-	-
Manufacturing proof force(MPF), min.:	[ KN ]	98	Good
Stress at min. MPF		-	-
Garanteed breaking force(BF), min.:	[ KN ]	160	Good
Stress at min. BF		-	-
Total ultimate elongation(A), min.:	[ % ]	10	Good
Surface hardness/HV3, min.:	[ - ]	500	Good
/HV5, min.:	[ - ]	-	-
Hardness /HRC, min.:	[ - ]	-	-
Case depth, min.:	[ mm ]	0.22	Good
Bend deflection( f ), min.:	[ mm ]	-	-
Fatigue resistance, min.:	[ cycle ]	-	-

Packing:		
Weight per meter:	[kg/m]	2.65
Length 1	[meter]	100m-16pcs
2	[meter]	100m-2pcs
Packing		Steel barrel

I hereby certify above all is true.

issued date: August 9, 2012

[Note]

K. Sugimura  
KAZUYUKI SUGIMURA  
Quality Assurance Dept.,  
Chief Inspector



## SCHEDULE OF TECHNICAL DATA

1. SERVICE	HOISTING
2. MANUFACTURE	DAESAN INOTEC INC.
3. MOTOR MODEL NO.	DSAI - 1.5S - 220
4. RATED POWER	3.5 KW x 4 P
5. RATED VOLTAGE AND FREQUENCY	220 V 60 HZ
6. MOTOR TYPE	SQUIRREL CAGE ROTOR YPE
7. RATING	30 MIN
8. LOCATION	IN-DOOR
9. INSULATION CLASS	B
10. DESING TEMPERATURE RISE (BY RESISTANCE)	80°C
11. FULL LOAD SPEED	1740 RPM
12. FULL LOAD CURRENT	17.0 A
13. STARTING CURRENT AT RATED VOLTAGE	76.5 A
14. MINIMUM STATING VOLTAGE	198 V
15. EFFICIENCY AT 100% RAGED LOAD	75.2%
16. POWER FACTOR AT 100% RATED LOAD	79.5%
17. STARTING TORQUE	238%
18. TYPE OF ENCLOSURE	전폐형
19. TYPE OF BEARING	PL : 6205DD OPL : 6008ZZ
20. MOUNTING	VERTICAL
21. MAXIMUM AMBIENT TEMPURE	40°C
22. BEARING LUBRICATION	GREASE
23. STARTING METHOD	FULL VOLTAGE

## SCHEDULE OF TECHNICAL DATA

1. SERVICE	HOISTING
2. MANUFACTURE	DAESAN INOTEC INC.
3. MOTOR MODEL NO.	DSAI - 1.5S - 380
4. RATED POWER	3.5 KW x 4 P
5. RATED VOLTAGE AND FREQUENCY	380 V 60 HZ
6. MOTOR TYPE	SQUIRREL CAGE ROTOR YPE
7. RATING	30 MIN
8. LOCATION	IN-DOOR
9. INSULATION CLASS	B
10. DESING TEMPERATURE RISE (BY RESISTANCE)	80°C
11. FULL LOAD SPEED	1740 RPM
12. FULL LOAD CURRENT	9.1 A
13. STARTING CURRENT AT RATED VOLTAGE	41.2 A
14. MINIMUM STATING VOLTAGE	342 V
15. EFFICIENCY AT 100% RAGED LOAD	75.2%
16. POWER FACTOR AT 100% RATED LOAD	82.0%
17. STARTING TORQUE	233%
18. TYPE OF ENCLOSURE	전폐형
19. TYPE OF BEARING	PL : 6205DD OPL : 6008ZZ
20. MOUNTING	VERTICAL
21. MAXIMUM AMBIENT TEMPURE	40°C
22. BEARING LUBRICATION	GREASE
23. STARTING METHOD	FULL VOLTAGE

## SCHEDULE OF TECHNICAL DATA

1. SERVICE	HOISTING
2. MANUFACTURE	DAESAN INOTEC INC.
3. MOTOR MODEL NO.	DSAI - 1.5S - 440
4. RATED POWER	3.5 KW x 4 P
5. RATED VOLTAGE AND FREQUENCY	440 V 60 HZ
6. MOTOR TYPE	SQUIRREL CAGE ROTOR YPE
7. RATING	30 MIN
8. LOCATION	IN-DOOR
9. INSULATION CLASS	B
10. DESING TEMPERATURE RISE (BY RESISTANCE)	80°C
11. FULL LOAD SPEED	1740 RPM
12. FULL LOAD CURRENT	7.9 A
13. STARTING CURRENT AT RATED VOLTAGE	38.8 A
14. MINIMUM STATING VOLTAGE	396 V
15. EFFICIENCY AT 100% RAGED LOAD	72.4%
16. POWER FACTOR AT 100% RATED LOAD	76.8%
17. STARTING TORQUE	243%
18. TYPE OF ENCLOSURE	전폐형
19. TYPE OF BEARING	PL : 6205DD OPL : 6008ZZ
20. MOUNTING	VERTICAL
21. MAXIMUM AMBIENT TEMPURE	40°C
22. BEARING LUBRICATION	GREASE
23. STARTING METHOD	FULL VOLTAGE

**SCHEDULE OF TECHNICAL DATA**

1. SERVICE	TRAVERSING
2. MANUFACTURE	DAESAN INOTEC INC.
3. MOTOR MODEL NO.	MT - 1 - 220
4. RATED POWER	0.4 KW x 6 P
5. RATED VOLTAGE AND FREQUENCY	220 V 60 HZ
6. MOTOR TYPE	SQUIRREL CAGE ROTOR YPE
7. RATING	30 MIN
8. LOCATION	IN-DOOR
9. INSULATION CLASS	B
10. DESING TEMPERATURE RISE (BY RESISTANCE)	100°C
11. FULL LOAD SPEED	1140 RPM
12. FULL LOAD CURRENT	3.3 A
13. STARTING CURRENT AT RATED VOLTAGE	13.9 A
14. MINIMUM STATING VOLTAGE	198V
15. EFFICIENCY AT 100% RAGED LOAD	57.5%
16. POWER FACTOR AT 100% RATED LOAD	54.5%
17. STARTING TORQUE	249%
18. TYPE OF ENCLOSURE	전폐형
19. TYPE OF BEARING	PL : 6202DD OPL : 6204ZZ
20. MOUNTING	VERTICAL
21. MAXIMUM AMBIENT TEMPURE	40°C
22. BEARING LUBRICATION	GREASE
23. STARTING METHOD	FULL VOLTAGE

**SCHEDULE OF TECHNICAL DATA**

1. SERVICE	TRAVERSING
2. MANUFACTURE	DAESAN INOTEC INC.
3. MOTOR MODEL NO.	MT - 1 - 380
4. RATED POWER	0.4 KW x 6 P
5. RATED VOLTAGE AND FREQUENCY	380 V 60 HZ
6. MOTOR TYPE	SQUIRREL CAGE ROTOR YPE
7. RATING	30 MIN
8. LOCATION	IN-DOOR
9. INSULATION CLASS	B
10. DESING TEMPERATURE RISE (BY RESISTANCE)	100°C
11. FULL LOAD SPEED	1140 RPM
12. FULL LOAD CURRENT	1.7 A
13. STARTING CURRENT AT RATED VOLTAGE	9.2 A
14. MINIMUM STATING VOLTAGE	342V
15. EFFICIENCY AT 100% RAGED LOAD	53.0%
16. POWER FACTOR AT 100% RATED LOAD	51.0%
17. STARTING TORQUE	249%
18. TYPE OF ENCLOSURE	전폐형
19. TYPE OF BEARING	PL : 6202DD OPL : 6204ZZ
20. MOUNTING	VERTICAL
21. MAXIMUM AMBIENT TEMPURE	40°C
22. BEARING LUBRICATION	GREASE
23. STARTING METHOD	FULL VOLTAGE



**SCHEDULE OF TECHNICAL DATA**

1. SERVICE	TRAVERSING
2. MANUFACTURE	DAESAN INOTEC INC.
3. MOTOR MODEL NO.	MT - 1 - 440
4. RATED POWER	0.4 KW x 6 P
5. RATED VOLTAGE AND FREQUENCY	440 V 60 HZ
6. MOTOR TYPE	SQUIRREL CAGE ROTOR YPE
7. RATING	30 MIN
8. LOCATION	IN-DOOR
9. INSULATION CLASS	B
10. DESING TEMPERATURE RISE (BY RESISTANCE)	100°C
11. FULL LOAD SPEED	1140 RPM
12. FULL LOAD CURRENT	1.5 A
13. STARTING CURRENT AT RATED VOLTAGE	9.2 A
14. MINIMUM STATING VOLTAGE	396V
15. EFFICIENCY AT 100% RAGED LOAD	55.3%
16. POWER FACTOR AT 100% RATED LOAD	57.2%
17. STARTING TORQUE	249%
18. TYPE OF ENCLOSURE	전폐형
19. TYPE OF BEARING	PL : 6202DD OPL : 6204ZZ
20. MOUNTING	VERTICAL
21. MAXIMUM AMBIENT TEMPURE	40°C
22. BEARING LUBRICATION	GREASE
23. STARTING METHOD	FULL VOLTAGE

제 2012-BJ-0009 호



# 안 전 인 증 서

정호엔지니어링

경기도 광명시 노동사동 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 \_\_\_\_\_  
아래 주소에서 생산되는 제품에 한함.  
정호엔지니어링, 경기도 광명시 노동사동 440-5

2012년 06월 11일

한국산업안전보건공단 이사장

