



제 2012 - 5007 호

# 안 전 인 증 서

( 사업장명 )

(주)대산이노텍

( 소 재 지 )

(314-821)충남 공주시 정안면 사현리 523

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 \_\_\_\_\_  
DSM-10W (10Ton) /12-AG2AC-00100

\_\_\_\_\_ 인 증 기 준 \_\_\_\_\_  
고용노동부 고시 제2011 - 39호 ( 위험기계,기구 의무안전인증 고시 )

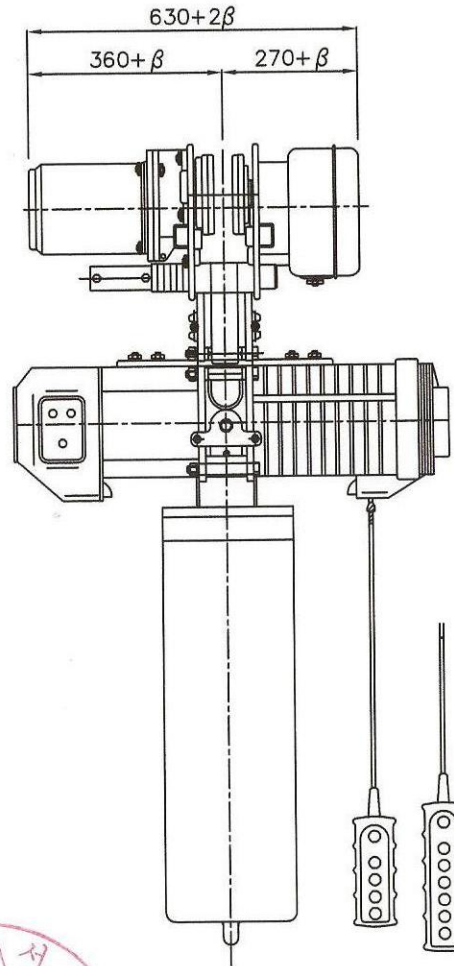
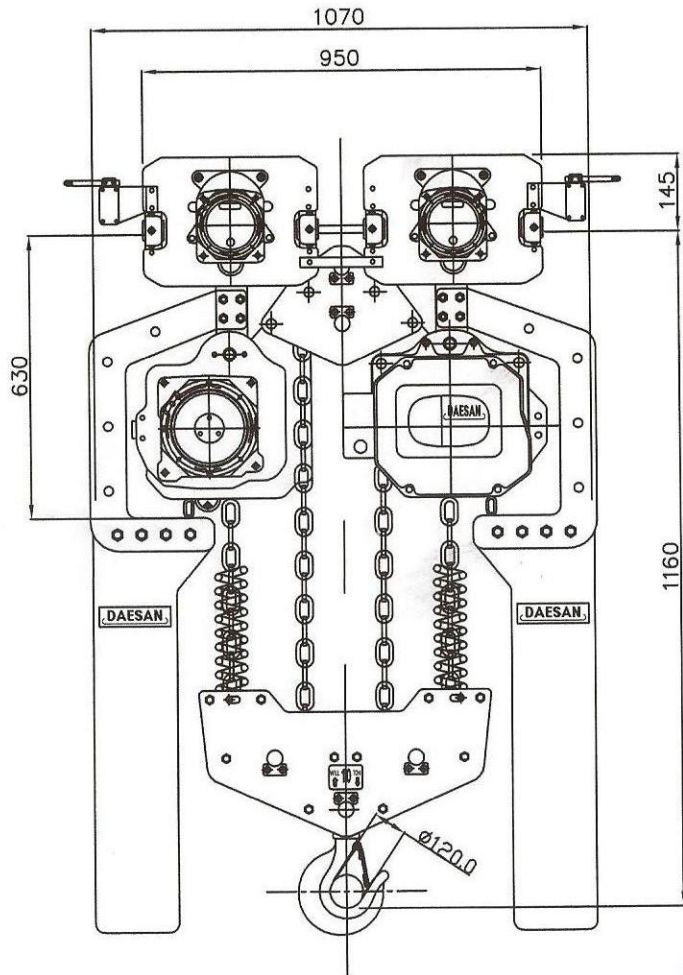
\_\_\_\_\_ 인 증 조 건 \_\_\_\_\_

2012년 01월 10일

한국산업안전보건공단이사장



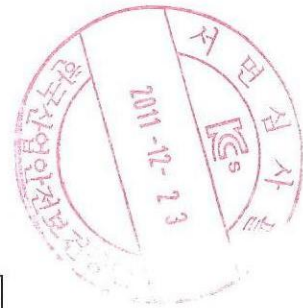
NO	DESCRIPTION	SIZE	MAT'L	Q'TY	WT(kg)	REMARKS



SPECIFICATION		
HOISTING LOAD	10	TON
TESTING LOAD	12.5	TON
LIFTING HEIGHT	45	M
HOISTING	SPEED	3.2/2.7 M/MIN
	MOTOR	3.5 KW*2SET
TRAVERSING	SPEED	14/11 M/MIN
	MOTOR	0.75 KW*2SET
POWER SUPPLY	AC 220,380,440V*3 $\phi$ *60/50Hz	
OPERATING METHOD	P.B TYPE ON. FL	
WEIGHT	640	
LOAD CHAIN FALL	4	
I-BEAM WIDTH	125~190	
MIN.RADIUS OF CURVATURE(m)	$\infty$	

※  $\beta$ 은 BEAM폭에 따라 변동됨

※ ROLLER외경 : 140mm



DSM-10W ELECTRIC CHAIN HOIST					PROJECTION	
WORK NO	WORK NAME				SCALE Q'TY	
DRAWN	CHECKED	REVIEWED	APPROVED	DRAWING NO		
SONG			Y.K	DSM010W		
09.02			09.02			
<b>DAESAN INoTEC IND. CO., LTD.</b>						

REV.NO	DATE	REVISION DESCRIPTION	DRAWN	CHECKED	APPROVED

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

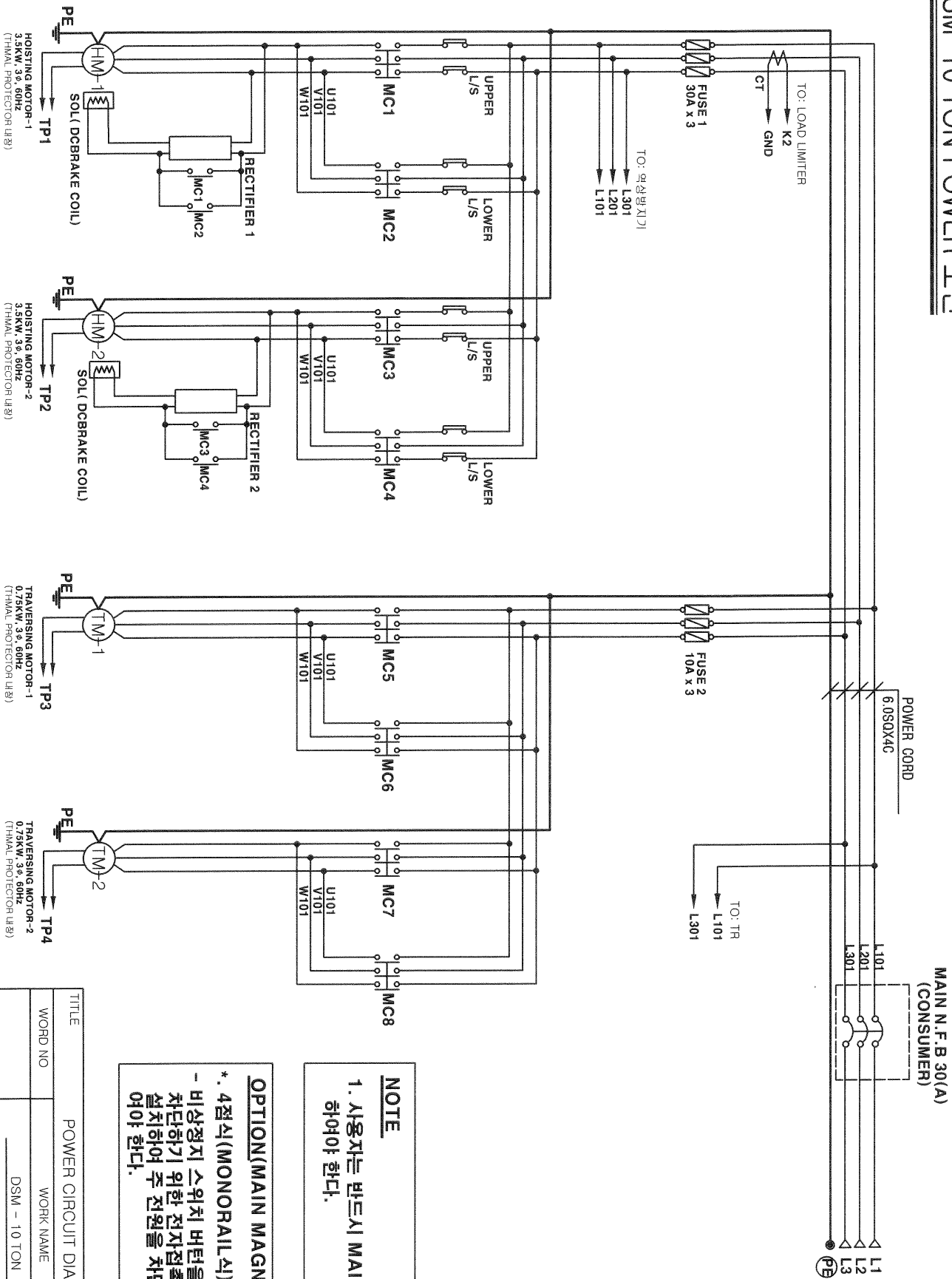
2012년 06월 11일

한국산업안전보건공단 이사장

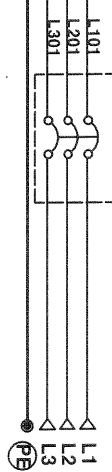




# DSM-10 TON POWER 도면



MAIN N.F.B 30(A)  
(CONSUMER)



### NOTE

1. 사용자는 반드시 MAIN N.F.B를 설치 하여야 한다.

### OPTION(MAIN MAGNET SWITCH)

\*. 4점식(MONORAIL식)  
- 비상정지 스위치 버튼을 작동시 주전원을 차단하기 위한 전자접촉기(M/C)를 추가 설치하여 주 전원을 차단할 수 있도록 하여야 한다.

REV. NO	DATE	REVISION DESCRIPTION	DRAWN	CHECKED	APPROVED

TITLE		POWER CIRCUIT DIAGRAM		PROJECTION	
WORD NO	WORK NAME	SCALE	QTY		
	DSM - 10 TON	N	S		
DRAWN	CHECKED	REVIEWED	APPROVED	DRAWING NO	
E.D			Y.K	DSE06010	
2011.11.02			2011.11.02		

INOTECH IND. CO., LTD.

## RECOMMENDED SETTING DATA OF LOAD LIMITER

POWER SOURCE AC 220[V] 3PH 60Hz

MODEL NO'	HOIST CAPACITY [TON]	MOTOR CAPACITY [KW]-POLES	LOAD CURRENT [A]				LOAD LIMITER SETTING RANGE				APPLIED CURRENT TRANSFORMER	
			100%		125%		Load Current [%]	Start Time [SEC]	Over Load Time [SEC]	Rest Time [SEC]	CT Ratio	Turn
			UP	DOWN	UP	DOWN						
DSA-1S	1	1.8-4	6.3	5	7	6.5	125	1.5	1.5	1.5	250:5	1
DSA-1.9W	1.9	1.8-4	6.3	5	7	6.5	125	1.5	1.5	1.5	250:5	1
DSA-2W	2	1.8-4	6.3	5	7	6.5	125	1.5	1.5	1.5	250:5	1
DSA-1.5S	1.5	3.5-4	12.7	10.5	13.9	11.5	125	1.5	1.5	1.5	250:5	1
DSA-1.9S	1.9	3.5-4	12.7	10.5	13.9	11.5	125	1.5	1.5	1.5	250:5	1
DSA-2S	2	3.5-4	12.7	10.5	13.9	11.5	125	1.5	1.5	1.5	250:5	1
DSA-2.5S	2.5	3.5-4	12.7	10.5	13.9	11.5	125	1.5	1.5	1.5	250:5	1
DSA-3W	3	3.5-4	12.7	10.5	13.9	11.5	125	1.5	1.5	1.5	250:5	1
DSA-5W	5	3.5-4	12.7	10.5	13.9	11.5	125	1.5	1.5	1.5	250:5	1
DSA-7.5W	7.5	3.5-4	12.7	10.5	13.9	11.5	125	1.5	1.5	1.5	250:5	1
DSA-10W	10	3.5-4	12.7	10.5	13.9	11.5	125	1.5	1.5	1.5	250:5	1

## RECOMMENDED SETTING DATA OF LOAD LIMITER

POWER SOURCE AC 380[V] 3PH 60Hz

MODEL NO'	HOIST CAPACITY [TON]	MOTOR CAPACITY [KW]-POLES	LOAD CURRENT [A]				LOAD LIMITER SETTING RANGE				APPLIED CURRENT TRANSFORMER	
			100%		125%		Load Current [%]	Start Time [SEC]	Over Load Time [SEC]	Rest Time [SEC]	CT Ratio	Turn
			UP	DOWN	UP	DOWN						
DSA-1S	1	1.8-4	3.5	2.3	4.5	3.5	125	1.5	1.5	1.5	250:5	1
DSA-1.9W	1.9	1.8-4	3.5	2.3	4.5	3.5	125	1.5	1.5	1.5	250:5	1
DSA-2W	2	1.8-4	3.5	2.3	4.5	3.5	125	1.5	1.5	1.5	250:5	1
DSA-1.5S	1.5	3.5-4	7.2	5.5	8.3	6.3	125	1.5	1.5	1.5	250:5	1
DSA-1.9S	1.9	3.5-4	7.2	5.5	8.3	6.3	125	1.5	1.5	1.5	250:5	1
DSA-2S	2	3.5-4	7.2	5.5	8.3	6.3	125	1.5	1.5	1.5	250:5	1
DSA-2.5S	2.5	3.5-4	7.2	5.5	8.3	6.3	125	1.5	1.5	1.5	250:5	1
DSA-3W	3	3.5-4	7.2	5.5	8.3	6.3	125	1.5	1.5	1.5	250:5	1
DSA-5W	5	3.5-4	7.2	5.5	8.3	6.3	125	1.5	1.5	1.5	250:5	1
DSA-7.5W	7.5	3.5-4	7.2	5.5	8.3	6.3	125	1.5	1.5	1.5	250:5	1
DSA-10W	10	3.5-4	7.2	5.5	8.3	6.3	125	1.5	1.5	1.5	250:5	1

## RECOMMENDED SETTING DATA OF LOAD LIMITER

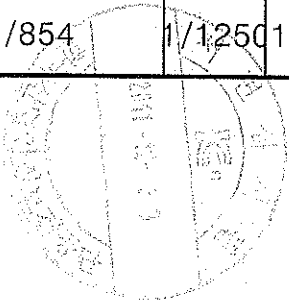
POWER SOURCE AC 440[V] 3PH 60Hz

MODEL NO'	HOIST CAPACITY [TON]	MOTOR CAPACITY [KW]-POLES	LOAD CURRENT [A]				LOAD LIMITER SETTING RANGE				APPLIED CURRENT TRANSFORMER	
			100%		125%		Load Current [%]	Start Time [SEC]	Over Load Time [SEC]	Rest Time [SEC]	CT Ratio	Turn
			UP	DOWN	UP	DOWN						
DSA-1S	1	1.8-4	3.4	2.3	4.3	3.2	125	1.5	1.5	1.5	250:5	1
DSA-1.9W	1.9	1.8-4	3.4	2.3	4.3	3.2	125	1.5	1.5	1.5	250:5	1
DSA-2W	2	1.8-4	3.4	2.3	4.3	3.2	125	1.5	1.5	1.5	250:5	1
DSA-1.5S	1.5	3.5-4	7.2	5.3	8.1	6.1	125	1.5	1.5	1.5	250:5	1
DSA-1.9S	1.9	3.5-4	7.2	5.3	8.1	6.1	125	1.5	1.5	1.5	250:5	1
DSA-2S	2	3.5-4	7.2	5.3	8.1	6.1	125	1.5	1.5	1.5	250:5	1
DSA-2.5S	2.5	3.5-4	7.2	5.3	8.1	6.1	125	1.5	1.5	1.5	250:5	1
DSA-3W	3	3.5-4	7.2	5.3	8.1	6.1	125	1.5	1.5	1.5	250:5	1
DSA-5W	5	3.5-4	7.2	5.3	8.1	6.1	125	1.5	1.5	1.5	250:5	1
DSA-7.5W	7.5	3.5-4	7.2	5.3	8.1	6.1	125	1.5	1.5	1.5	250:5	1
DSA-10W	10	3.5-4	7.2	5.3	8.1	6.1	125	1.5	1.5	1.5	250:5	1

# I-beam calculation sheets

\*발강표시 : DSM-10W 모델

	I-150×75×5.5/9.5	I-200×100×7/10			I-250×125×7.5/12.5				I-300×150×8/13	I-300×150×10/18		I-600×190×13/25
	1TON	1TON	2(1.9)TON	3TON	1TON	2(1.9)TON	3TON	10TON	2(1.9)TON	3TON	10TON	10TON
SPAN L=Cm	300	400	300	250	600	400	400	150	650	700	300	600
I <sub>x</sub> (Cm <sup>4</sup> )	819	2170			5180				9480	12700		98400
I <sub>y</sub> (Cm <sup>4</sup> )	57.5	138			337				588	886		2460
z <sub>x</sub> (Cm <sup>3</sup> )	109	217			414				632	849		3280
z <sub>y</sub> (Cm <sup>3</sup> )	15.3	27.7			53.9				78.4	118		259
S <sub>I</sub> (Kg·Cm <sup>2</sup> )	883	604	863(821)	1124	503	619(589)	683	1058	507(484)	588	1096	596
δ(Cm)	0.35	0.32	0.26	0.24	0.48	0.26	0.39	0.07	0.48	0.48	0.22	0.24
δ/L	1/854	1/1250	1/1158	1/1030	1/1243	1/1523	1/1025	1/1000	1/1369	1/1470	1/1428	1/2500





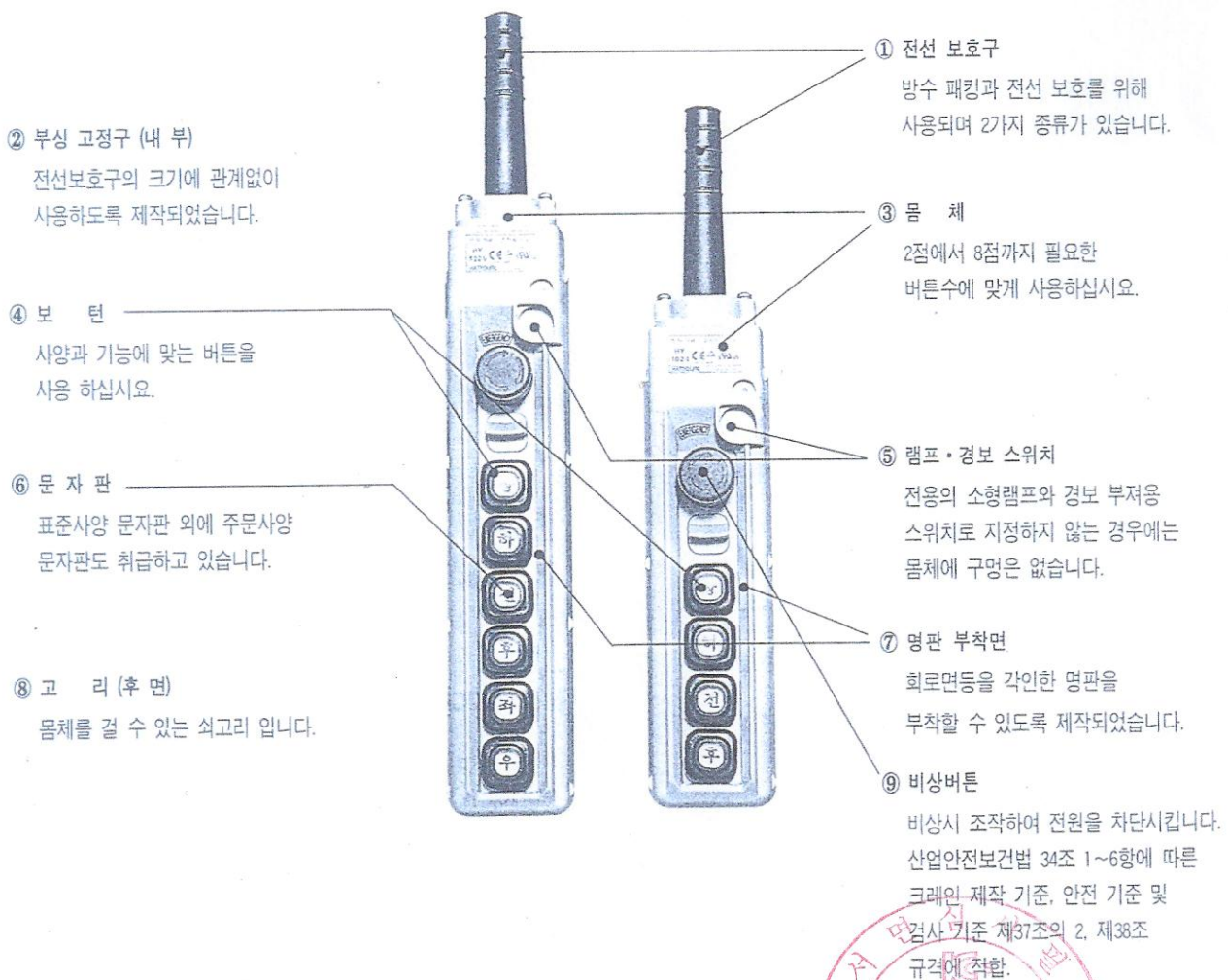
# 호이스트 스위치

## 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 제어에 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.

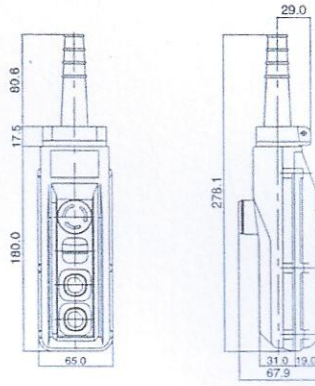


### ■ 구조

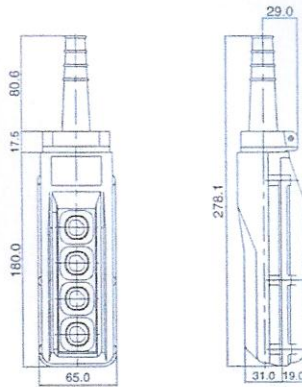
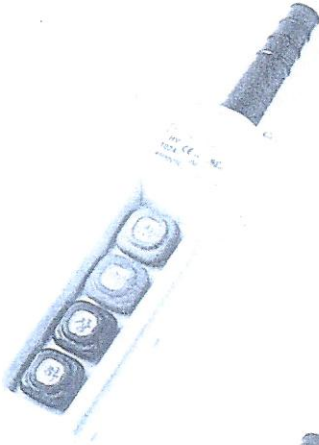


# 호이스트 스위치

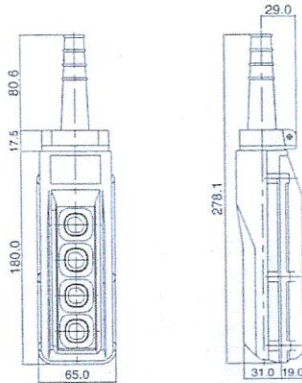
HY-1022 SB



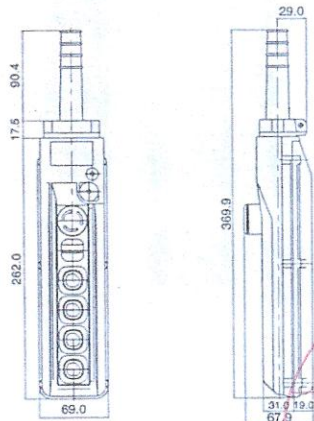
HY-1024 AB



HY-1024BB



HY-1024SBB

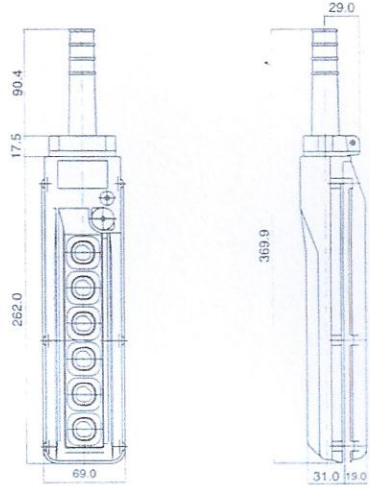


개폐스위치  
조작용

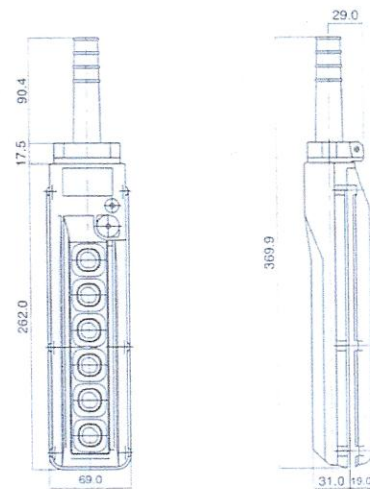
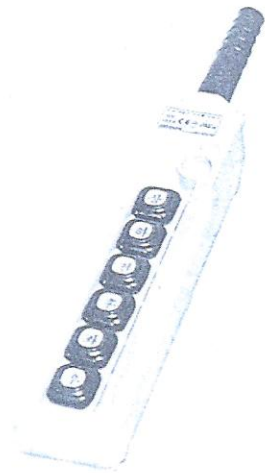
사면심사  
2011-12-23  
한국산업안전연구원

# 호이스트 스위치

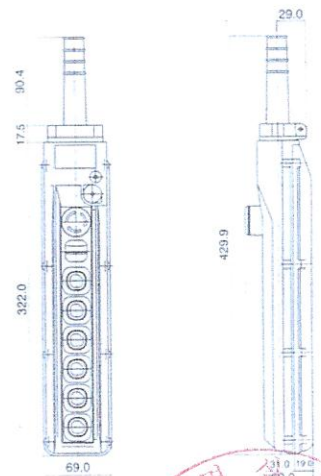
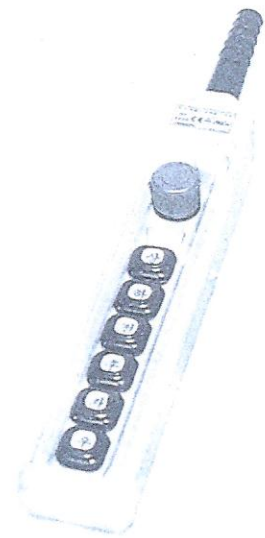
HY-1026 ABB



HY-1026 BBB



HY-1026 SBBB





# FEC CHAIN

CORPORATION

TEL:+81-53-425-4116 , 2162

337 KANAORI-CHO , HAMAMATSU CITY,

SHIZUOKA PRE.,435-0026 JAPAN

FAX:+81-53-425-5122

## TEST CERTIFICATE

Distributor:	code #: 1080	distributor's name: ASAO & CO., LTD
Coustermer:		coustermer's name:
Article name: (Application)	Load chain for electric chain hoist	
Spec. standard	<input type="checkbox"/> DIN EN 818-7:2002 , <input type="checkbox"/> JIS B 8812:1999 <input type="checkbox"/> ISO 3077 , <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"/> coustermer's request → DS, JAPAN , (Lot #), FEC#	

Product code#:	FCD11234
description:	φ11.2*P34
quality type	G80/ type-DAT

			Result
<b>Dimention:</b>			
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]	374.0 +1.3/-0.4	Good
Diameter at the weld(ds), max.:	[mm]	12.0	Good
<b>Mechanical properties:</b>			
Working load limit(WLL), max.:	[ kg ]	3000	-
	(drive mechanism g	-	-
Manufacturing proof force(MPF), min.:	[ KN ]	98	Good
Stress at min. MPF		-	-
Guranteed 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 ]	-	-

<b>Packing:</b>			
Weight per meter:	[kg/m]	2.65	
Length 1	[meter]	100m-15pcs	
2	[meter]	-	
Packing	-	Steel barrel	

I hereby certify above all is true.

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

issued date: August 4,2011

[Note]

2011-12-23

## EC Declaration of Conformity

We hereby declare that the following product is in conformity with the essential health and safety requirements of the following EC Directive:

Product : AC Motor  
Model : DSAI-1.5S  
Manufacture : DAESAN INOTEC INC.  
523, Sahyun-Ri, Jungahn-Myun, Gongju-Si,  
Chungcheongnam-do, South Korea  
Rated input voltage : AC 220V / 380V / 440V  
Rated frequency : 50/60 Hz  
Rated input current : 17.0A/9.1A/7.86A  
Applicable EU Directive : Low Voltage Directive (73/23/EEC)

This product is designed and manufactured in accordance with the following standards

Applicable standards : IEC 60034/1:2004  
IEC 60034-11:2004

Year of CE Marking : 2011-11-30

Authorized signature : \_\_\_\_\_

Name / Title of signature : Sung Won Kang President





DAESAN INOTEC INC.

## EC Declaration of Conformity

We hereby declare that the following product is in conformity with the essential health and safety requirements of the following EC Directive:

Product : AC Motor

Model : DSMI-35

Manufacture : DAESAN INOTEC INC.  
523, Sahyun-Ri, Jungahn-Myun, Gongju-Si,  
Chungcheongnam-do, South Korea

Rated input voltage : AC 220V / 380V / 440V

Rated frequency : 50/60 Hz

Rated input current : 5.1A/2.45A/2.13A

Applicable EU Directive : Low Voltage Directive (73/23/EEC)  
EMC Directive (89/336/EEC)

This product is designed and manufactured in accordance with the following standards

Applicable standards : IEC 60034/1: 2004  
IEC 60034-11:2004

Year of CE Marking : 2011-11-30

Authorized signature : \_\_\_\_\_

Name / Title of signature : Sung Won Kang President

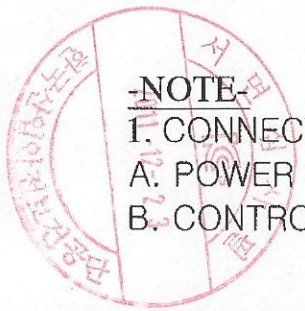
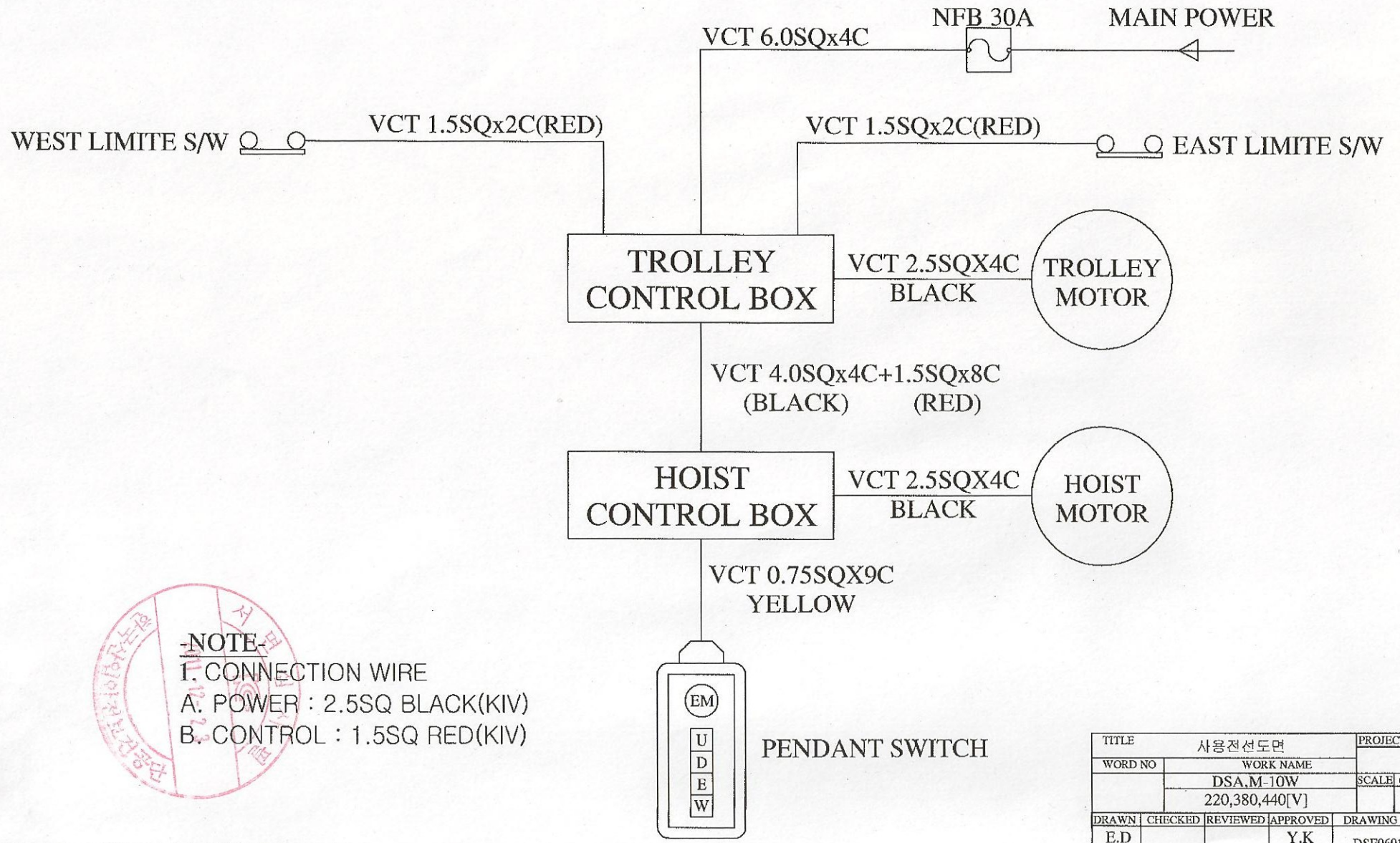




사용전선도면

MODEL : DSA,M-10W

NO	Commodity	Capacity	QTY	Serial No.	Maker
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**-NOTE-**  
 I. CONNECTION WIRE  
 A. POWER : 2.5SQ BLACK(KIV)  
 B. CONTROL : 1.5SQ RED(KIV)

TITLE		사용전선도면		PROJECTION
WORD NO	WORK NAME			
	DSA,M-10W			SCALE QTY
	220,380,440[V]			
DRAWN	CHECKED	REVIEWED	APPROVED	DRAWING NO
E.D			Y.K	DSE06015
11.30			11.30	
<b>INoTEC</b> IND. CO., LTD.				

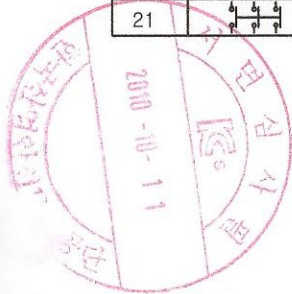
REV.NO	DATE	REVISION DESCRIPTION	DRAWN	CHECKED	APPROVED
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NO	Commodity	Capacity	Q'TY	Model No.	Maker
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ELECTRIC ELEMENTARY DIAGRAM SYBOL LIST

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	횡형 LIMIT SWITCH b접점
11			정류기	32		WEST L/S	횡형 LIMIT SWITCH b접점
12			CURRENT TRANSFORMER	33		TP1	권상용 MOTOR 열동계전기 b접점
13			권상용 MOTOR	34		TP2	횡형 MOTOR 열동계전기 b접점
14			횡형 MOTOR	35		SOL	SOLENOID TYPE DC MAGNET BRAKE COIL
15			UP MAGNET CONTACTOR				
16			DOWN MAGNET CONTACTOR				
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				



TITLE				ELECTRIC ELEMENTARY DIAGRAM SYMBL LIST		PROJECTION	
WORD NO		WORK NAME					
		DSA.M-1S,1.5S,1.9S,1.9W,2W,2S,2.5S,3W,5W				SCALE	Q'TY
DRAWN	CHECKED	REVIEWED	APPROVED	DRAWING NO			
Y.D	Y.C		Y.k	DSE06002			
10.09.02	10.09.03						
<b>INoTEC IND. CO., LTD.</b>							

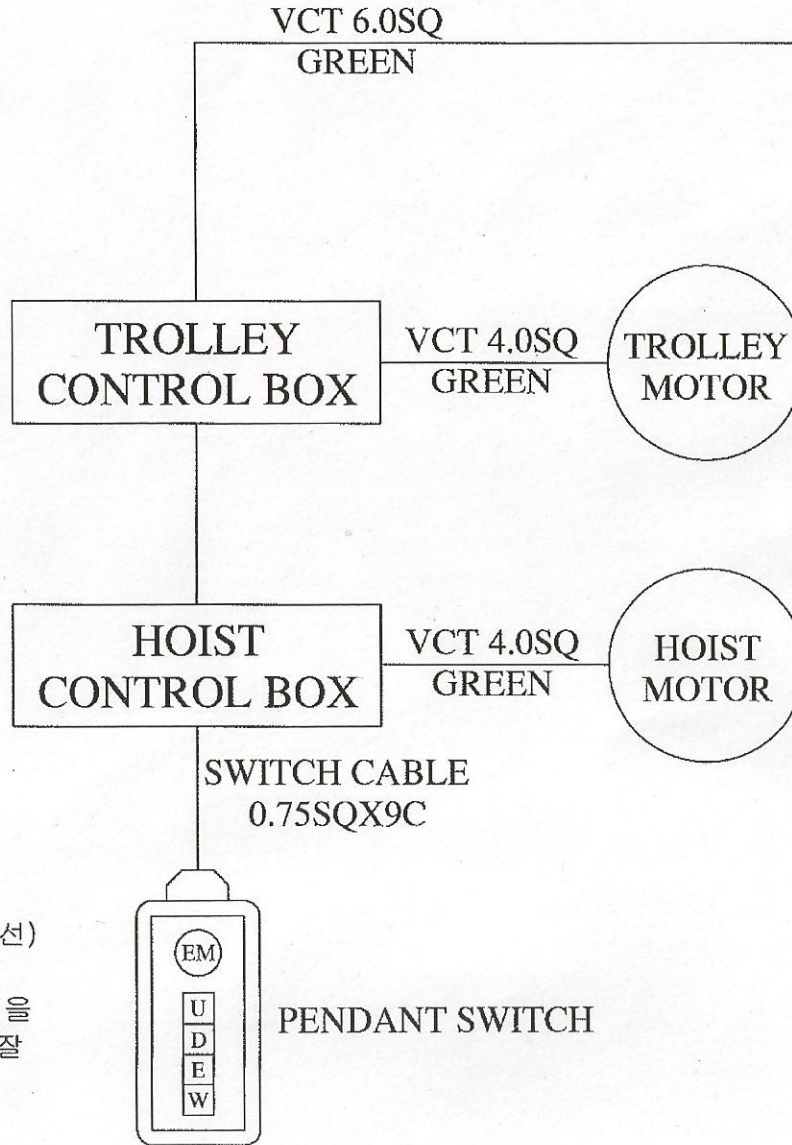
REV.NO	DATE	REVISION DESCRIPTION	DRAWN	CHECKED	APPROVED
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NO	Commodity	Capacity	QTY	No.	Maker
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# 접지도면

MODEL : DSA,M-10W



### 접지공사 시설방법

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

	3종 접지	400V 이하	100Ω 이하
	특별 제3종 접지	400V 초과	10Ω 이하

단 방폭지역은 전압에 관계없이 10Ω 이하일것.

2. 접지전용 트로리선 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 (저압접촉전선)에 준하여 설치한다.
2. MAIN S/W BOX는 당해 크레인을 지상에서 쉽게 개폐할 수 있는 잘 보이는 곳에 설치한다.

TITLE				접 지도 면	PROJECTION
WORD NO		WORK NAME			
		DSA,M-10W			SCALE
		220,380,440[V]			QTY
DRAWN	CHECKED	REVIEWED	APPROVED	DRAWING NO	
E.D			Y.K	DSE06014	
11.30			11.30		
InoTEC IND. CO., LTD.					

REV. NO	DATE	REVISION DESCRIPTION	DRAWN	CHECKED	APPROVED
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