■ 산업안전보건법 시행규칙 [별지 제10호의 5서식]

심사결과 통지서

신청인	사업장명	(주)KITO	사업장관리번호	2010E110010
	사업자등록번호	010-E1-10010	대표자 성명	KITO YOSHIO
	소재지	2000,Tsuijiarai,Showa-Cho,Nakakoma-Gun,Yamanashi,Japan		

안전인증대상기계·기구명	호이스트		
형식(규격)	KD-ER2-050	용량(등급)	5 ton

「산업안전보건법」 제34조 및 같은 법 시행규칙 제58조의4제4항에 따라 실시한

[ ] 예비심사

[■] 서면심사

[ ] 기술능력 및 생산체계 심사

[ ] 개별 제품심사

[ ] 형식별 제품심사

결과가 [■] 적 합 / [ ] 부적합 함을 통지합니다.

2012년 08월 27일

인증심사원 최 창 일 (서명) 최창일

오 태 화 (서명) 오태화

한국승강기안전기술원 이사장

■ 산업안전보건법 시행규칙 [별지 제10호의 6서식]

제 CA-2012-0039 호

안 전 인 증 서

(사업장명) **(주)KITO**

(소 재 지) **2000,Tsuijiarai,Showa-Cho,Nakakoma-Gun,Yamanashi, Japan**

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

품 명 : 호이스트

형식(용량): KD-ER2-050(5 ton)

인증번호 : 12-CA4AC-0039

인증기준 : 위험기계·기구 의무안전인증기준 (고용노동부고시 제2011-39호)

인증조건 : 산업안전보건법 "제34조 준수"

2012년 11월 30일

한국승강기안전기술원 이사장

【별지 제4호서식】

동 일 형 식 일 람 표

사업장명	KITO CORP.	개정일자 및 번호	2012.08.17	인증번호	

형식 및 모델번호		동일형식 항목 및 내역			비고
형식번호	모델번호	동일형식 항목1	동일형식 항목2	동일형식 항목3	
KD-ER2-050	KITO-ER2D050S-S	Lift max 30m 권상모타 3.5kW .S : 3.5m/min .IS: 3.3/0.6m/min Inverter control	횡행모터 0.4kWx2SET .S : 24m/min .L: 12m/min .IS:24/4m/min .IL:12/2m/min	전기Trolley 결합 type	
	KITO-ER2D050S-L				
	KITO-ER2D050S-IS				
	KITO-ER2D050S-IL				
	KITO-ER2D050IS-S				
	KITO-ER2D050IS-L				
	KITO-ER2D050IS-IS				
	KITO-ER2D050IS-IL				
	KITO-C-ER2D050S-S			전기Trolley 결합 Clean type	
	KITO-C-ER2D050S-L				
	KITO-C-ER2D050S-IS				
	KITO-C-ER2D050S-IL				
	KITO-C-ER2D050IS-S				
	KITO-C-ER2D050IS-L				
	KITO-C-ER2D050IS-IS				
	KITO-C-ER2D050IS-IL				

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)

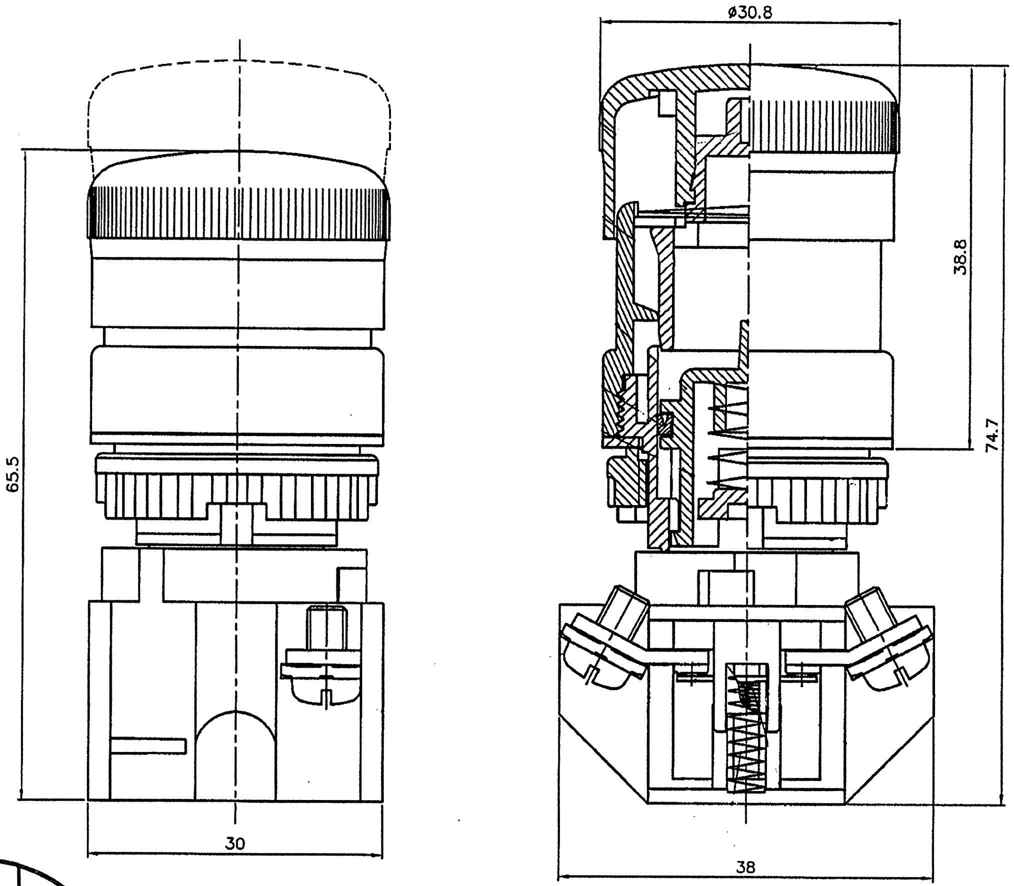
인 증 조 건

아래 주소에서 생산되는 제품에 한함.

정호엔지니어링, 경기도 광명시 노온사동 440-5

2012년 06월 11일

한국산업안전보건공단 이사장



一般公差	0.1~30mm:±0.2	30.1~60mm:±0.3	60.1~300mm:±0.5	模具材質		模具處理		模具孔數		單位	mm	材質		圖號	T2-BKH
天得科技股份有限公司 TEND TECHNOLOGY CO.,LTD.	最新修正		品保	品保部 95.05.24 林建宏	核准	研發部 95.05.24 鐘健誌	核對	研發部 95.05.24 周欽祥	繪圖	比例	2:1	表面處理		品名	T2 BKH 連鎖開關
	前次修正								設計課 95.05.24 吳宗達	投影法		顏色			

版序：A

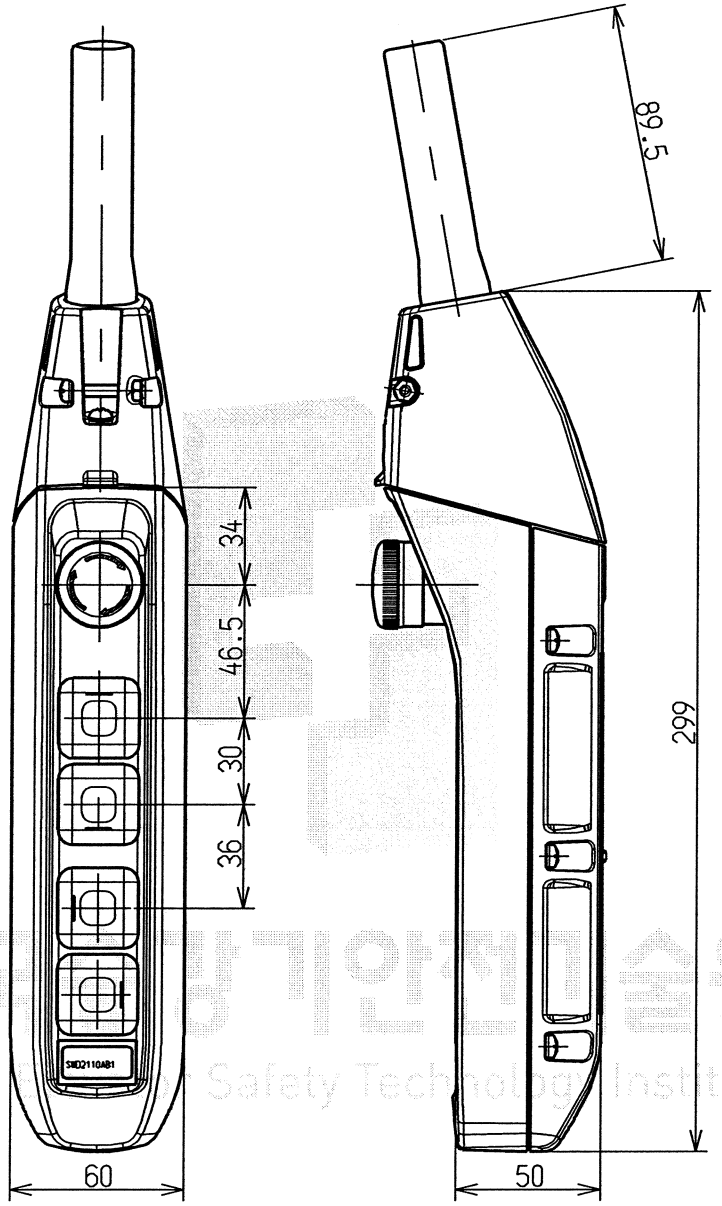
2012.08.?7

12/T2/BKH/T2_BKH.dwg

14/141

様式:04KH-N001DA

Revision	Incidence	Description	Date	Charge	Approved



The lifting and lowering push buttons are marked with ⇑⇓ for single speed or ⇑⇊ for dual speed.
The traveling push buttons are marked with E W or N S depending on the installed direction.

NOTE											MATERIAL		CODE
											NOS./UNIT		NAME 5point Pendant control station MXX subassembly
APPROVED	H.FURIYA 09.04.21	CHECKED	T.HATANO 09.04.21	DESIGNED	KOBAYASHI 09.04.21	DRAWN	KOBAYASHI 09.04.21	SCALE	-		DWG.NO.	SWD2XX0AAA	

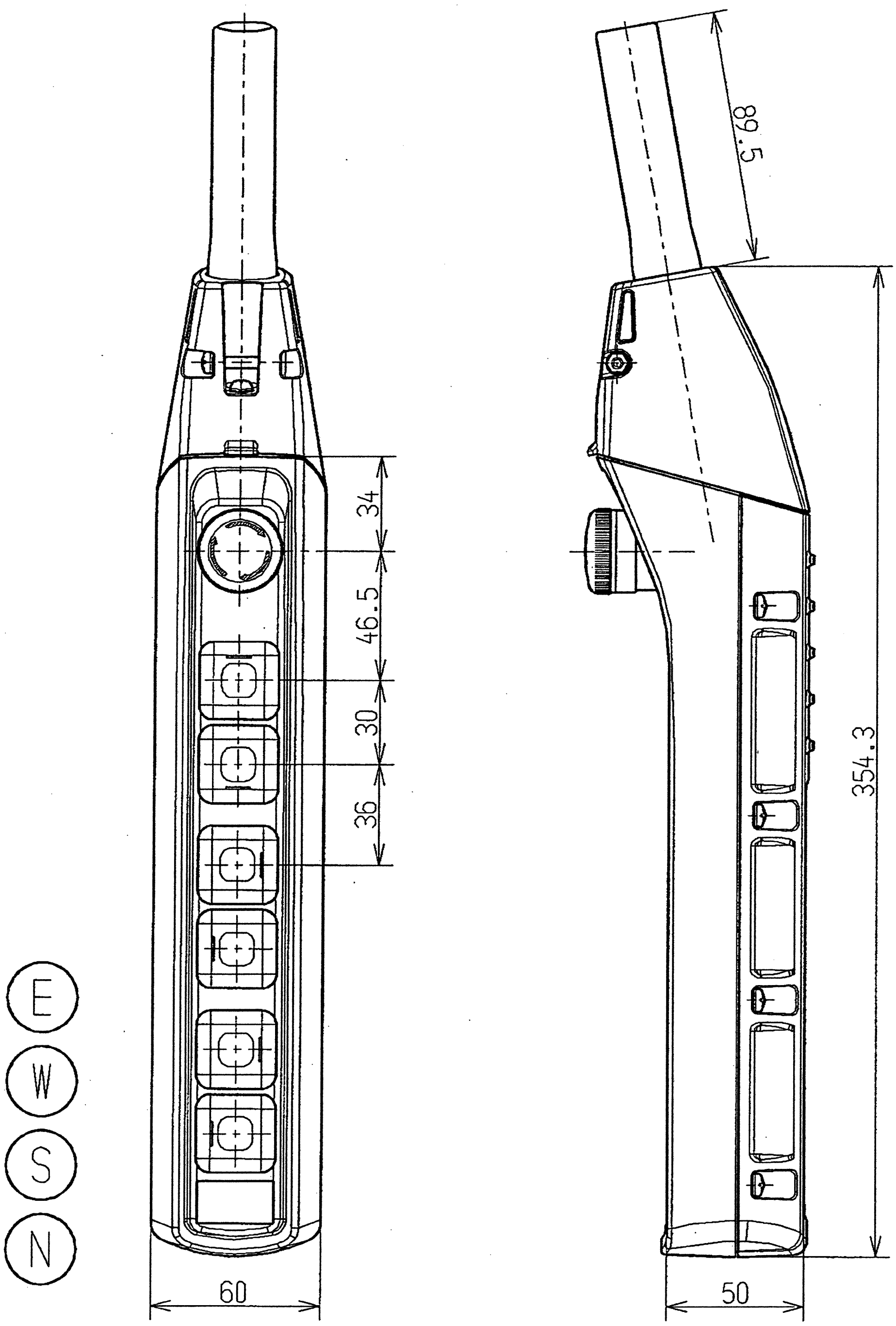
⑥ ⑤ ④ ③ ② ①
Date issued

KITO CORPORATION

2012.08.27

UNLESS 1 4mm

Revision	Incidence	Description	Date	Charge	Approved



⑥	
⑤	
④	
③	
②	
①	
Date issued	

NOTE

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

MATERIAL	
NOS./UNIT	
CODE	
NAME	?point Pendant control station MXXX subassembly
DWG.NO.	SWD2XXXXA-1

서면심사 2012.08.27 한국기계전기전자시험연구원

KITO CORPORATION

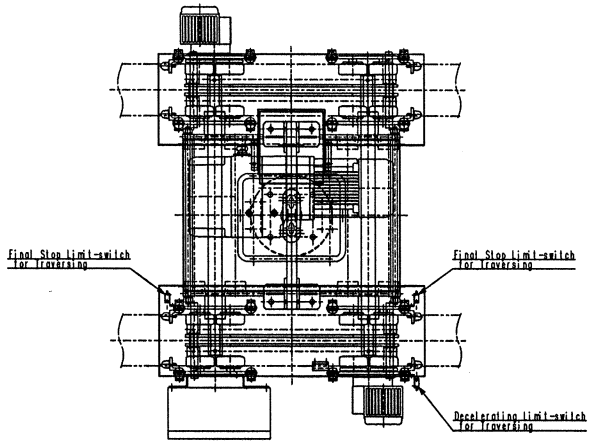
UNIT: mm

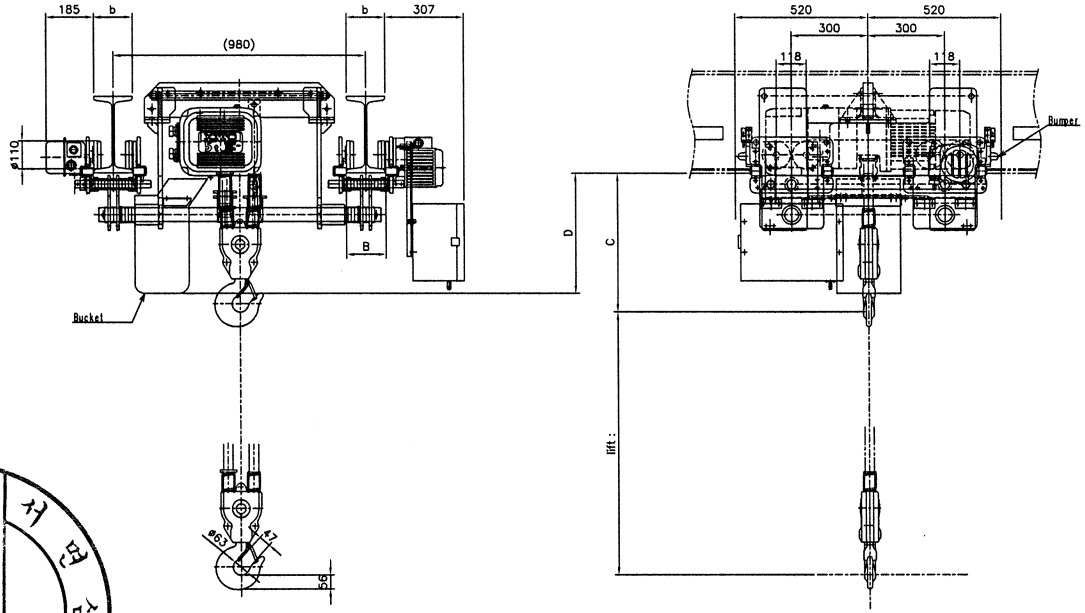
형식번호 : KD-ER2-050

Model number.

KITO-ER2D050S-S
KITO-ER2D050S-L
KITO-ER2D050S-IS
KITO-ER2D050S-IL

KITO-ER2D050IS-S
KITO-ER2D050IS-L
KITO-ER2D050IS-IS
KITO-ER2D050IS-IL





Particulars				
基本本体 Size		ER2-F		
定格荷重 Nominal Capacity		5t		
揚程 Lift		5.5(max 30)m		
チェーンサイズ Chain size		φ11.2 x 2		
レール下面よりフックまでの最小距離 : C Min. Headroom		540mm		
相数・電圧 Phase・Voltage		3φ 220(208)V 60Hz 380,440V 60Hz		
Control Voltage		1φ 110V, 24 V 60Hz		
モータ出力・反復定格・等級 Motor Output Duty Rating Classification	巻上モータ for Lifting	3.5kW・20/10XED-M4		
	横行モータ for Traversing	0.4kWx2・27/13XED		
巻上速度 Lifting Speed	S	3.5 m/min		
	IS	3.3/0.6 m/min		
横行速度 Traversing Speed	L	12 m/min		
	S	24 m/min		
	IL	12/2 m/min		
	IS	24/4 m/min		
オシボタンコード長さ : L Push Button Cord		5.3(29.7)m		
キャブタイヤ給電ケーブル長さ Length of Power Supply Cable		3(27)m		
レール下面よりチェーンバケットまでの寸法 : D Chain Container Distance from Bottom of Beam		490mm		
適用レール巾 : B Flange Width		125mm	150mm	175mm
		133mm	158mm	183mm
質量 Mass		約 650kg		
塗装色 Painting Color		マンセル 7.5YR7/14 Munsell 7.5YR7/14		

1. Load Chain:ND Chain
2. 자바라 옵션

지면심사 승인 2012.08.27 한국산업기술원

改訂 REV.	数 QTY	内容 CONTENTS	年.月.日 DATE	担当 DRAWN	承認 APPROVED

承認 APPROVED	検図 CHECKED	設計 DESIGNED	製図 DRAWN
A.Saito Jul.2.12	K.Suzuki Jul.2.12	H.Kanemaru Jul.2.12	H.Kanemaru Jul.2.12

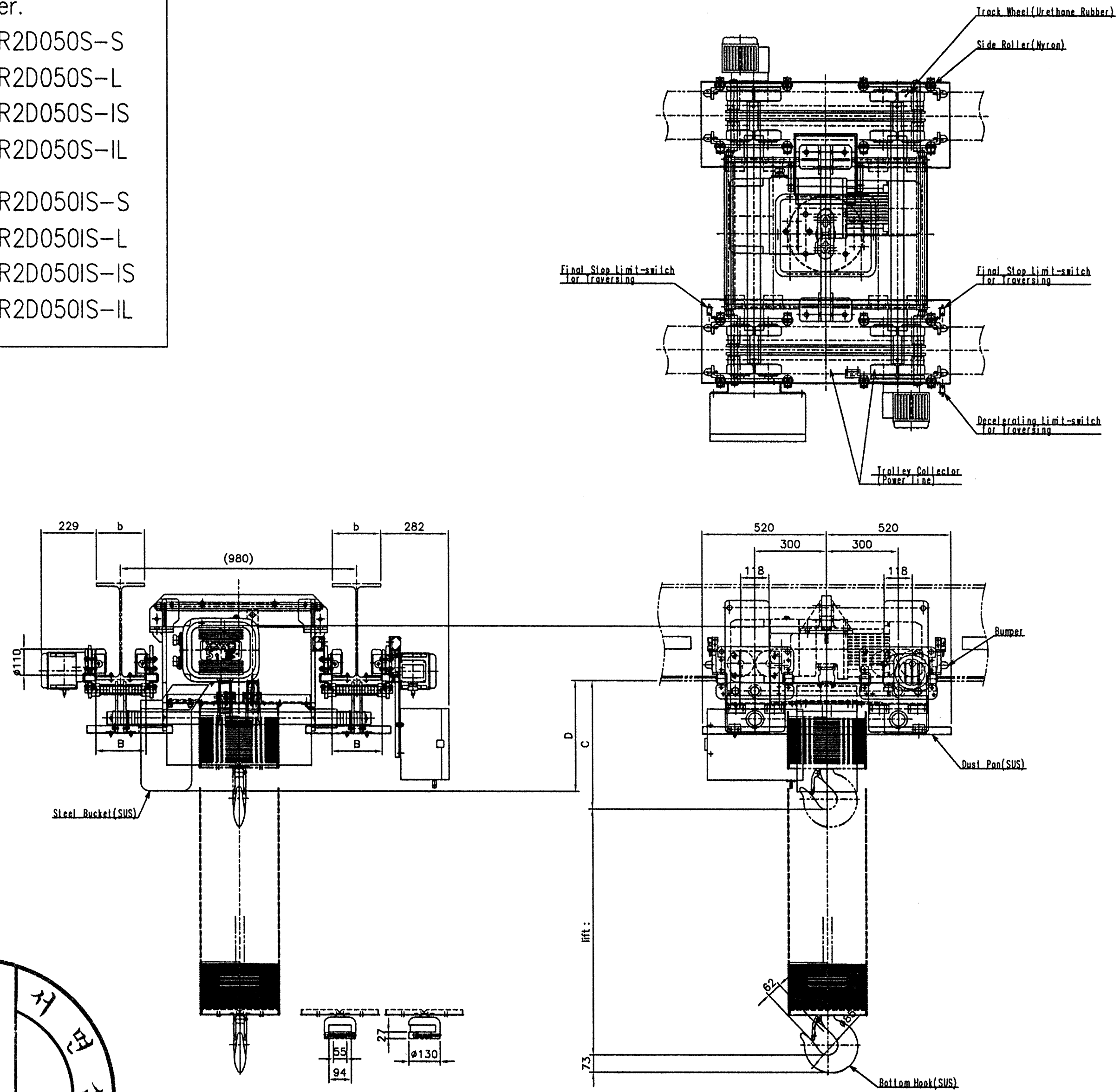
株式会社 キトー KITO CORP

名称 TITLE	5t ER2M SERIES ELECTRIC CHAIN HOIST WITH MOTORIZED TOROLLEY		
製造番号 CODE	KD-ER2-050	尺度 SCALE	NOT
図番 DWG.NO.	KD-ER2-050-2	変更回数 REV.	0

様式 D25P-19

三角法 単位 : mm

형식번호 : KD-ER2-050
Model number.
KITO-C-ER2D050S-S
KITO-C-ER2D050S-L
KITO-C-ER2D050S-IS
KITO-C-ER2D050S-IL
KITO-C-ER2D050IS-S
KITO-C-ER2D050IS-L
KITO-C-ER2D050IS-IS
KITO-C-ER2D050IS-IL



諸元表 Particulars			
基本本体 Size		ER2-F	
定格荷重 Nominal Capacity		5t	
揚程 Lift		5.5(max 30)m	
チェーンサイズ Chain size		ø11.2 x 2	
レール下面よりフックまでの最小距離 : C Min. Headroom		540mm	
相数・電圧 Phase・Voltage		3φ 220(208)V 60Hz 380,440V 60Hz	
Control Voltage		1φ 110V, 24V 60Hz	
モータ出力・反復定格・等級 Motor Output Duty Rating Classification	巻上モータ for Lifting	3.5kW・20/10%ED・M4	
	横行モータ for Traversing	0.4kWx2・27/13%ED	
巻上速度 Lifting Speed	S	3.5 m/min	
	IS	3.3/0.6 m/min	
横行速度 Traversing Speed	L	12 m/min	
	S	24 m/min	
	IL	12/2 m/min	
	IS	24/4 m/min	
オシボタンコード長さ : L Push Button Cord		5.3(29.7)m	
キャブタイヤ給電ケーブル長さ Length of Power Supply Cable		3(27)m	
レール下面よりチェーンバケットまでの寸法 : D Chain Container Distance from Bottom of Beam		490mm	
適用レール巾 : B Flange Width	200mm	250mm	300mm
	208mm	258mm	308mm
質量 Mass		約 680kg	
塗装色 Painting Color		マンセル 7.5YR7/14 Munsell 7.5YR7/14	

1. Load Chain:ND Chain
2. 자바라 옵션

承認 APPROVED	検図 CHECKED	設計 DESIGNED	製図 DRAWN
A.Saito Jul.2.12	K.Suzuki Jul.2.12	H.Kanemaru Jul.2.12	H.Kanemaru Jul.2.12

改訂 REV.	数 QTY	内容 CONTENTS	年.月.日 DATE	担当 DRAWN	承認 APPROVED

株式会社 キトー KITO CORP

名称 TITLE	5t ER2M SERIES ELECTRIC CHAIN HOIST WITH MOTORIZED TOROLLEY(clean)		
製造番号 CODE	KD-ER2-050	尺度 SCALE	NOT
図番 DWG.NO.	KD-ER2-050-1	変更回数 REV.	0

様式 025P-19

三角法 単位 : mm

서면심사 2012 .08. 27 한국승강기안전기술원

LOAD SUMMARY 1 - INVERTER사양

*POWER SOURCE : AC 3Φ 220(208)V

OBJECT	HOISTING	TRAVERSING	CONTROL CIRCUIT
MOTOR OUTPUT	3.5KW x 4P	0.4KW x 4P x 2SET	
FULL LOAD CURRENT	18.7 (A)	6 (A)	0.5 (A)

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

*** NOMAL 전류값 ***

권상과 횡행시 : HOISTING + TRAVERSING + CONTROL CIRCUIT = 25.2 A

*** PEAK 전류값 ***

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

NOMAL 전류값 * K = 25.2 * 1.25 = 31.5 A

*POWER SOURCE : AC 3Φ 380(440)V

OBJECT	HOISTING	TRAVERSING	CONTROL CIRCUIT
MOTOR OUTPUT	3.5KW x 4P	0.4KW x 4P x 2SET	
FULL LOAD CURRENT	9.2 (A)	5 (A)	0.5 (A)

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

*** NOMAL 전류값 ***

권상과 횡행시 : HOISTING + TRAVERSING + CONTROL CIRCUIT = 14.7 A

*** PEAK 전류값 ***

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

NOMAL 전류값 * K = 14.7 * 1.25 = 18.3 A

LOAD SUMMARY 2 - 1속형사양

*POWER SOURCE : AC 3Φ 220(208)V

OBJECT	HOISTING	TRAVERSING	CONTROL CIRCUIT
MOTOR OUTPUT	3.5KW x 4P	0.4KW x 4P x 2SET	
FULL LOAD CURRENT	16.9 (A)	6 (A)	0.5 (A)

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

*** NOMAL 전류값 ***

권상과 횡행시 : HOISTING + TRAVERSING + CONTROL CIRCUIT = 23.4 A

*** PEAK 전류값 ***

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

NOMAL 전류값 * K = 23.4 * 1.25 = 29.2 A

*POWER SOURCE : AC 3Φ 380(440)V

OBJECT	HOISTING	TRAVERSING	CONTROL CIRCUIT
MOTOR OUTPUT	3.5KW x 4P	0.4KW x 4P x 2SET	
FULL LOAD CURRENT	8.7 (A)	4.4 (A)	0.5 (A)

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

*** NOMAL 전류값 ***

권상과 횡행시 : HOISTING + TRAVERSING + CONTROL CIRCUIT = 13.6 A

*** PEAK 전류값 ***

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

NOMAL 전류값 * K = 13.6 * 1.25 = 17 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
  GCB : SF6 GAS CIRCUIT BREAKER
  VCB : VACUUM CIRCUIT BREAKER
  ACB : AIR CIRCUIT BREAKER
- POWER CIRCUIT BREAKER, DRAWOUT TYPE

- CIRCUIT BREAKER, FIXED TYPE
  MCCB : MOULDED CASE CIRCUIT BREAKER
  MCB : MINIATURE CIRCUIT BREAKER
- CIRCUIT BREAKER, DRAWOUT TYPE
- WITHDRAWABLE INTERCONNECTOR
- CIRCUIT BREAKER, MANUALLY OPERATED FIXED TYPE WITH THERMAL & MAGNETIC TRIP
- CIRCUIT BREAKER, MANUALLY OPERATED FIXED TYPE WITH MAGNETIC TRIP ONLY
- CIRCUIT BREAKER, MANUALLY OPERATED DRAWOUT TYPE WITH THERMAL & MAGNETIC TRIP
- CIRCUIT BREAKER, MANUALLY OPERATED FIXED TYPE WITH THERMAL & MAGNETIC TRIP AND RESIDUAL CURRENT RELEASE

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

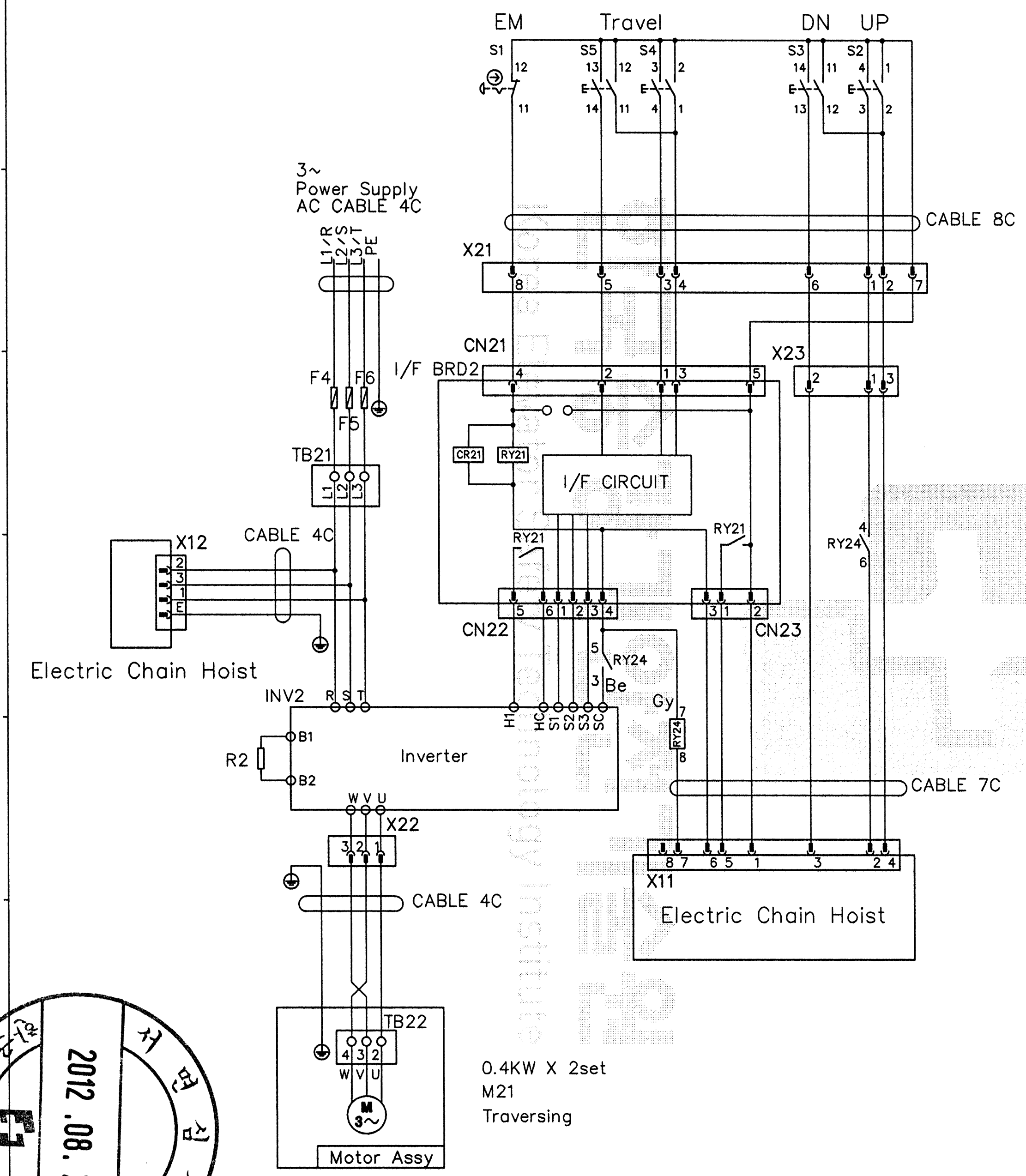
- AUX. CONTACT, NORMALLY OPEN WHEN MAIN SWITCHING DEVICE IS DE-ENERGIZED
- AUX. CONTACT, NORMALLY CLOSED WHEN MAIN SWITCHING DEVICE IS DE-ENERGIZED
- MAGNETIC CONTACTOR, ELECTRICALLY OPERATED
- EOCR — COMBINATION STARTER, FULL VOLTAGE, NON-REVERSING, DRAWOUT TYPE, WITH ELECTRICALLY OPERATED CONTACTORS, WITH MAGNETIC MOTOR CIRCUIR 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

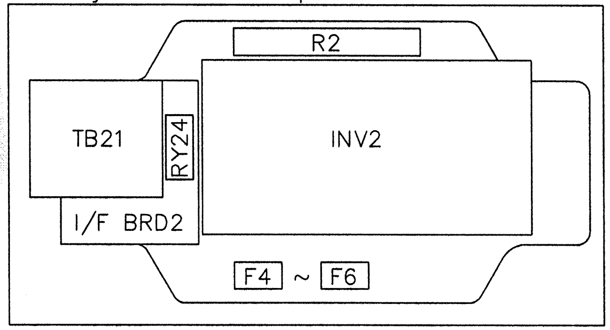
- CONTROLLED RECTIFIER
- DC-DC CONVERTER
- RECTIFIER, BATTERY CHARGER
- DC-AC INVERTER
- BATTERY BANK
- ELECTRIC HEATER, INDICATE 1ø OR 3ø AND kW RATING. UNLESS OTHERWISE SPECIFIED, TO BE REGARDED AS 1ø.
- EARTHING CONNECTION
- DISCONNECTION LINK
- CROSSING OF CONDUCTORS NOT CONNECTED
- OR — JUNCTION OF CONDUCTORS OR WIRES
- BUS DUCT
  SPB : SEGREGATED PHASE BUS DUCT
  IPB : ISOLATED PHASE BUS DUCT
- CABLE HEAD AND CABLE CONNECTION
- AS — AMMETER SWITCH
- VS — VOLTMETER SWITCH
- SIGNAL LAMP
  * R = RED Y = YELLOW
  G = GREEN B = BLUE
  W = WHITE A = AMBER
  C = CYAN

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



전선 색상
Black : 전원
Red : 교류제어선
Blue : 직류제어선
Orange : 외부에서 공급되는 연동장치 제어회로
Green & Yellow : 접지

The layout of electric parts



특수 공구(+,육각)을 사용하여
개방구 쪽은 제외

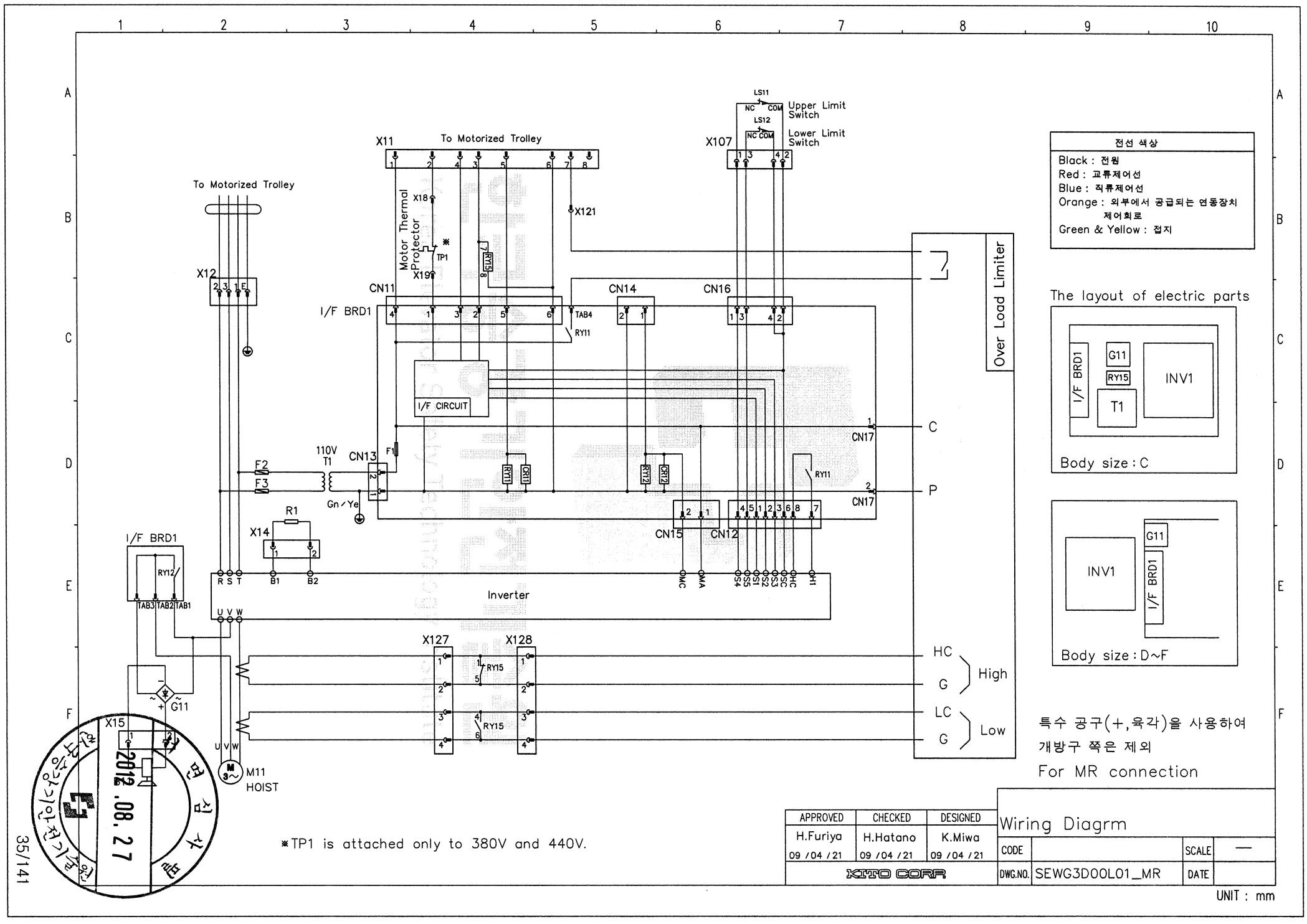
APPROVED	CHECKED	DESIGNED
H.Furiya	H.Hatano	K.Miwa
09 /04 /21	09 /04 /21	09 /04 /21

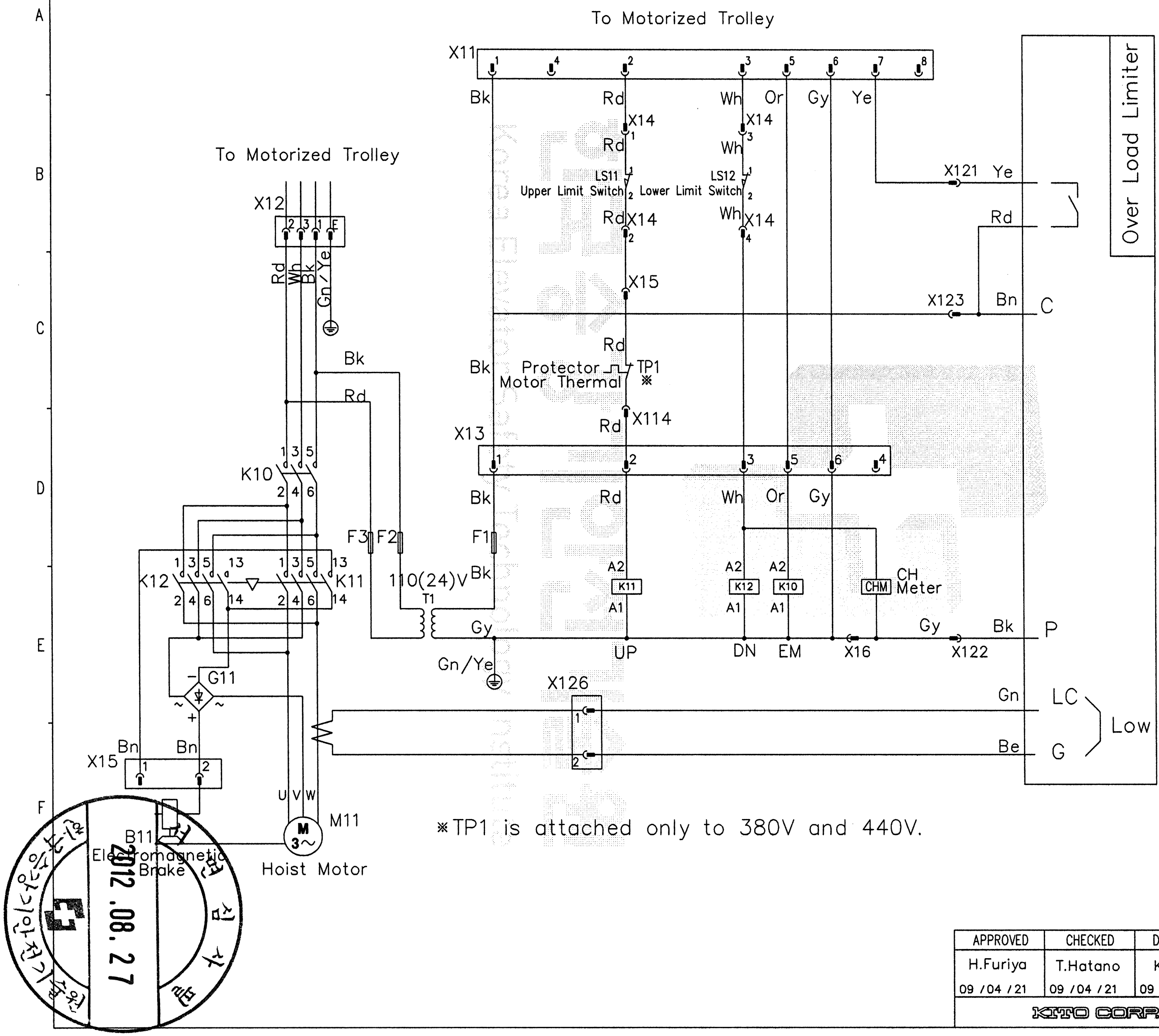
KITO CORP.

Wiring Diagrm

CODE		SCALE	—
DWG.NO.	SEWG3DD0L01	DATE	

UNIT : mm

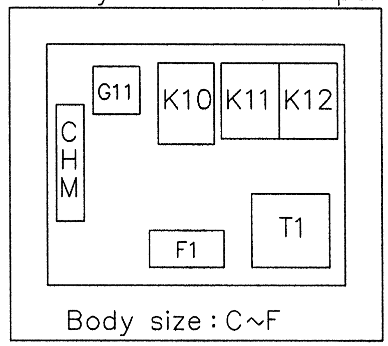

LS11
NC COM Upper Limit Switch
LS12
NC COM Lower Limit Switch
X107
X11 To Motorized Trolley
To Motorized Trolley
X12
X18
X19
Motor Thermal Protector
TP1
RY15
X121
CN11
I/F BRD1
CN14
CN16
TAB4
RY11
I/F CIRCUIT
Over Load Limiter
CN17
C
P
110V
T1
CN13
F1
F2
F3
Gn / Ye
RY11
CR11
RY12
CR12
CN15
CN12
R1
X14
I/F BRD1
RY12
TAB3 TAB2 TAB1
R S T
B1 B2
Inverter
U V W
OMC OMA S4 S3 S2 S1 S5 S6 HC H1
X127
X128
RY15
HC
G
High
LC
G
Low
G11
X15
M11
HOIST
3~
*TP1 is attached only to 380V and 440V.
전선 색상
Black : 전원
Red : 교류제어선
Blue : 직류제어선
Orange : 외부에서 공급되는 연동장치 제어회로
Green & Yellow : 접지
The layout of electric parts
I/F BRD1
G11
RY15
T1
INV1
Body size : C
INV1
G11
I/F BRD1
Body size : D~F
특수 공구(+,육각)을 사용하여
개방구 쪽은 제외
For MR connection
APPROVED
H.Furiya
09 /04 /21
CHECKED
H.Hatano
09 /04 /21
DESIGNED
K.Miwa
09 /04 /21
KITO CORP.
Wiring Diagrm
CODE
SCALE —
DWG.NO. SEWG3D00L01_MR
DATE
UNIT : mm
2012.08.27
35/141



※TP1 is attached only to 380V and 440V.

전선 색상
Black : 전원
Red : 교류제어선
Blue : 직류제어선
Orange : 외부에서 공급되는 연동장치 제어회로
Green & Yellow : 접지

The layout of electric parts

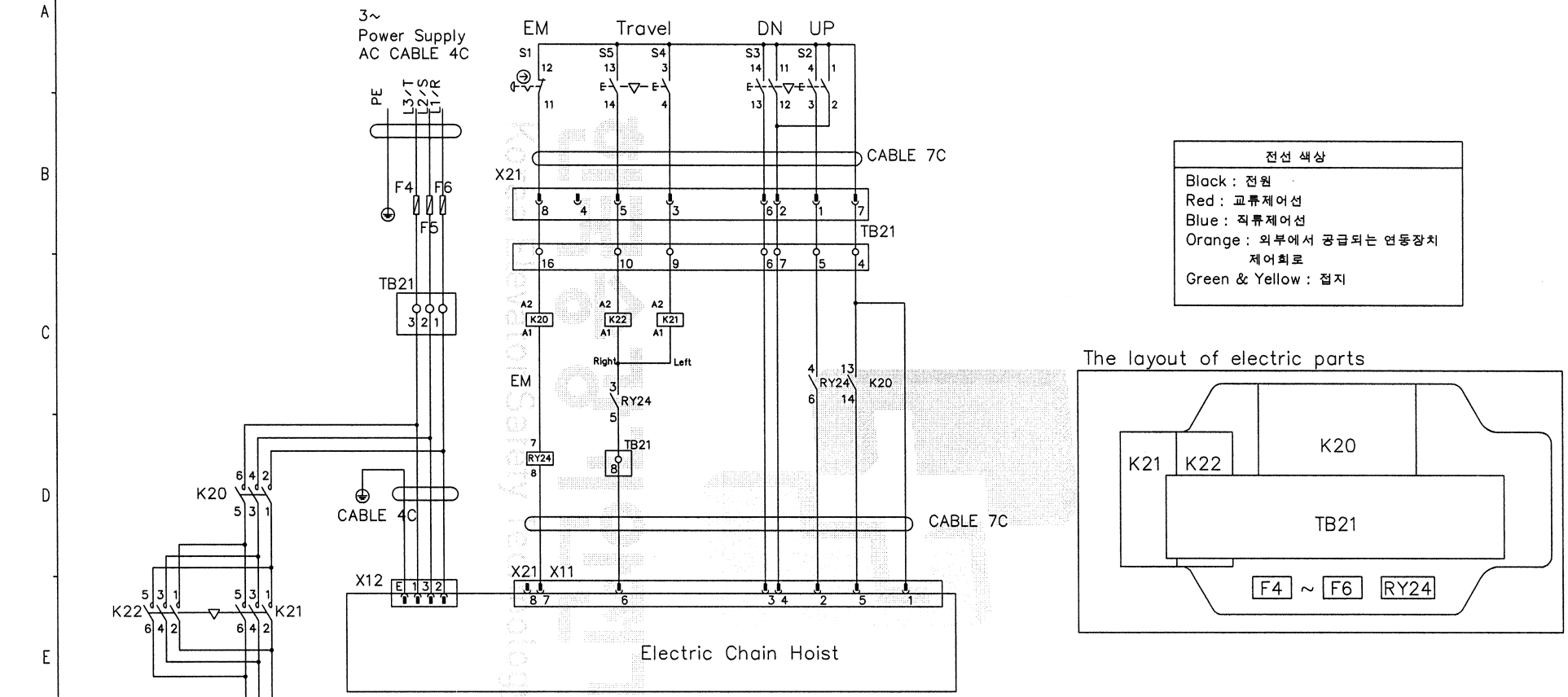


특수 공구(+,육각)을 사용하여 개방구 쪽은 제외

For MR connection

APPROVED	CHECKED	DESIGNED	Hoisting 1speed Traversing Wiring Diagrm		
H.Furiya 09 /04 /21	T.Hatano 09 /04 /21	K.Miwa 09 /04 /21	CODE		SCALE —
KITO CORP			DWG.NO.	SEWG3100L01_MR	DATE

UNIT : mm



전선 색상
Black : 전원
Red : 교류제어선
Blue : 직류제어선
Orange : 외부에서 공급되는 연동장치 제어회로
Green & Yellow : 접지

The layout of electric parts

특수 공구(+,육각)을 사용하여
개방구 쪽은 제외

0.4KWx2SET
M21
Traversing

APPROVED	CHECKED	DESIGNED
H.Furiya	H.Hatano	K.Miwa
09 /04 /21	09 /04 /21	09 /04 /21
KITO CORP.		

Traversing 1speed
Wiring Diagrm

CODE		SCALE	—
DWG.NO.	SEWG3DD0L01	DATE	

UNIT : mm

2012.08.27

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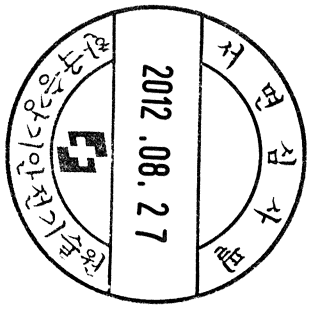
CABLE 구성도 및 사양 - 권상 용량 3.5kw

CABLE SPECIFICATION FOR ER2M

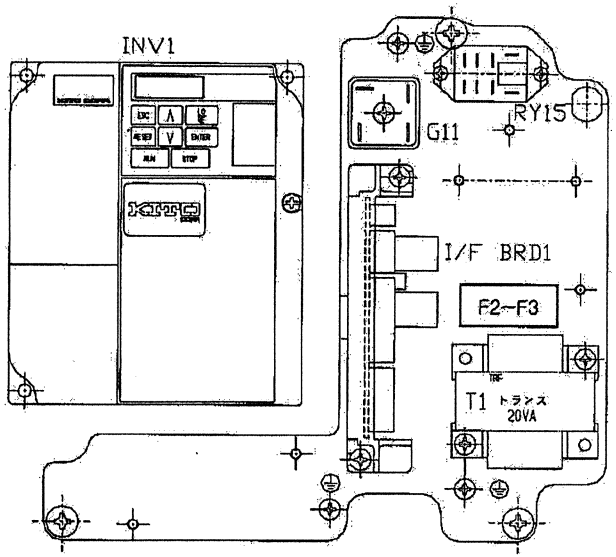
NO	ITEM	TYPE	ER2M30
			SIZE
①	Power Line	VCT	4sq x 4C
②	Push Button Switch	VCT	1.5sq x 8C
③	Loas Limit	VCT	0.75sq x 8C
④	Power Line for ER	VCT	2.5sq x 4C
⑤	Control Line for ER	VCT	1.5sq x 6C
⑥	Traversing Motor With Earth	VCT	1.5sq x 4C

(3Φ 220(208)V / 380V / 440V 60Hz)

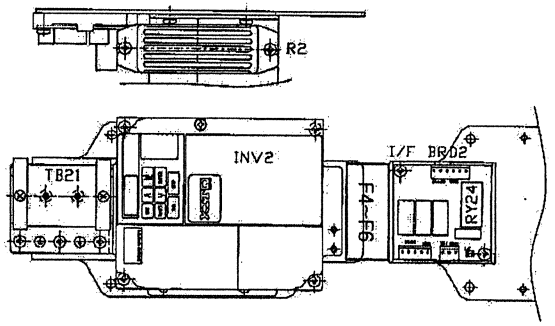


. 호이스트 CONTROL BOX 배치도

HOISTING CONTROL BOX



TRAVERSING CONTROL BOX



ENCLOSURE : HOIST BODY – IP55
PUSH BUTTON – IP65

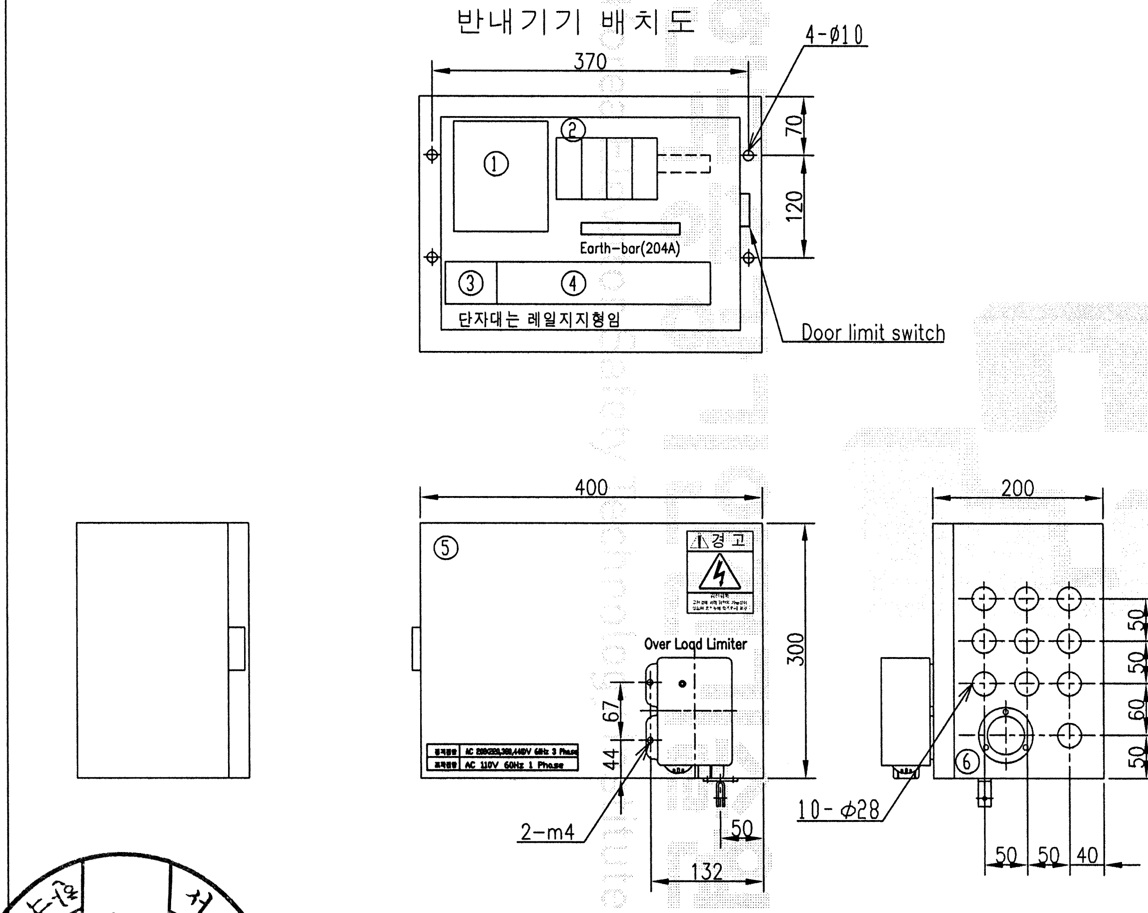
MARK	DESCRIPTION	TYPE OF MODEL			Q'TY	MAKER	REMARKS
		220V	380V	440V			
INV1	INVERTER	V1000	V1000	V1000	1	YASKAWA	UP/DOWN
T1	TRANSFORMER	220V/110V 20VA	380V/110V 20VA	440V/110V 20VA	1	KITO	CONTROL CIRCUIT
G11	BRIDGE DIODE	S15VB60	S15VB60	S15VB60	1	SHINDENGEN	
I/F BRD1	INTERFACE BOARD	10~15A	10~15A	10~15A	1	KITO	
F2~F3	GLASS FUSE	10A	10A	10A	2	FUJI	
F4~F6	GLASS FUSE	30A	30A	30A	3	FUJI	
RY15	RELAY	110V	110V	110V	1	OMRON	HIGH/LOW
INV2	INVERTER	V1000	V1000	V1000	1	YASKAWA	RIGHT/LEFT
I/F BRD2	INTERFACE BOARD	10~15A	10~15A	10~15A	1	KITO	
RY24	RELAY	110V	110V	110V	1	OMRON	EMERGENCY STOP
TB21	TERMINAL BOARD 21	10~15A	10~15A	10~15A	1	KITO	

工　番	製作数量	納期

削り加工普通寸法許容差		
JIS B0405 中級		
0.5以上	6以下	±0.1
6をこえ	30	±0.2
30	120	±0.3
120	400	±0.5
400	1000	±0.8
1000	2000	±1.2
2000	4000	±2.0

압착단자는 전부 절연피복 부착타입을 사용할것

塗装色 : 먼셀넘버 5Y7/1 (메이커 표준색)
設定機器 : 인버터



番号	機器番号	名　称	形　式	メーカ	個数	備　考
1	INV2	인버터	FRN1.5C1S-2J21	富士	1	
2		릴레이	HH54P-L (AC24V)	富士	4	
		소켓	TP514X1	富士	4	
3		단자대	TX20 (4P)	春日	1式	커버부착형
4		단자대	TX10S (30P)	春日	1式	커버부착형
5		함	CH20-43A	日東	1	
6		Door limits switch	KH-9015-HL	KOINO		
7						
8						
9						
10						

단자대 배열

TX20(4P)

R2	S2	T2	E

TX10S (30P)

UT	VT	WT	E	CM	X3A	X3	T100	R100	DLL	TX	RX	DL	UPA	UP
DN	HI	TFB	TFA	TRB	TRA	THA	TH	T100	T100	R100	R100			

Note

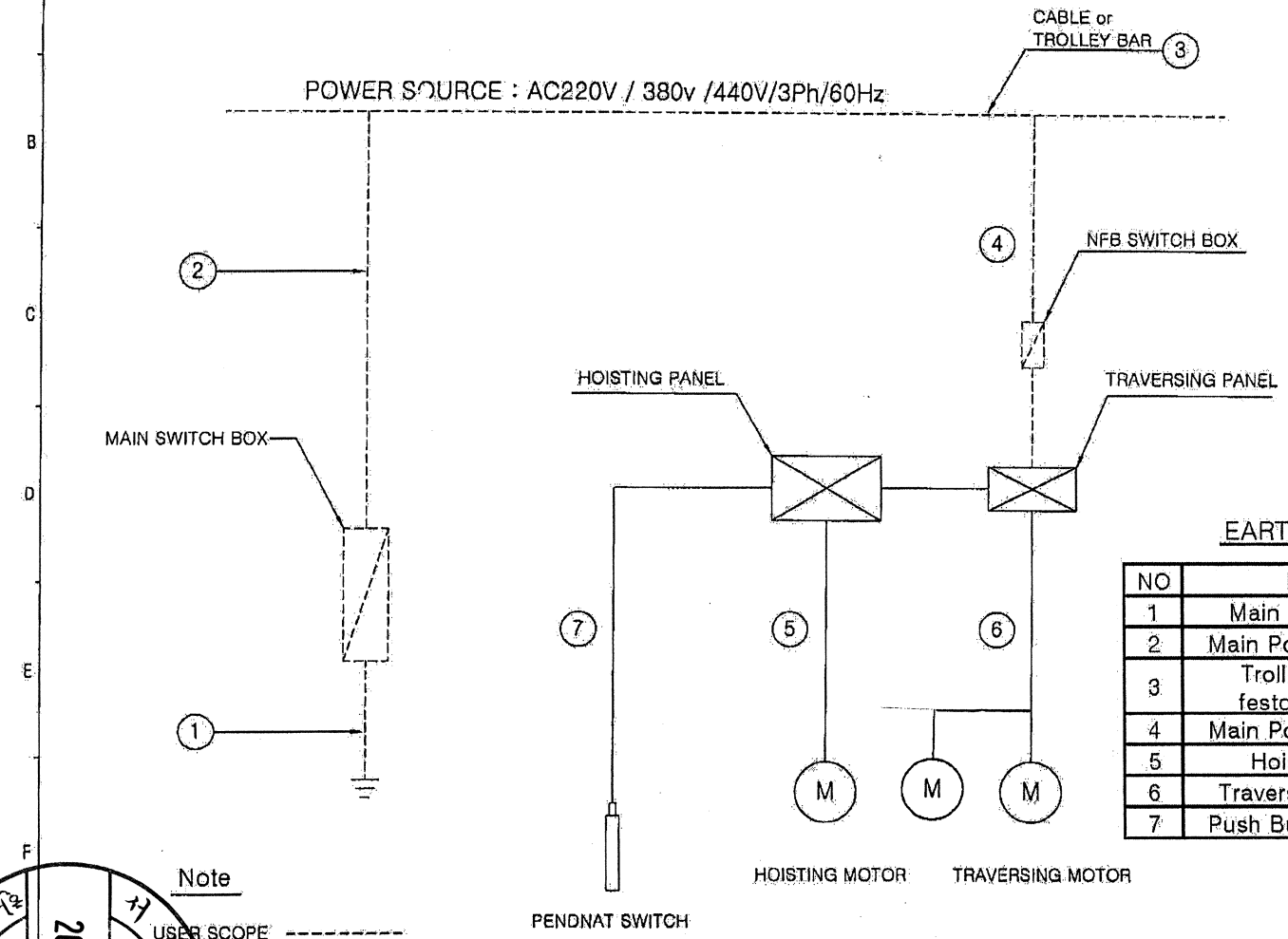
1) 외함 개방 시 충전 부분이 차단되도록 한다.

記事		材質	-	製造番号	303910
		質量	-	名称	セツゾクハコ
承認 齊藤 10.10.8	検図 鈴木 10.10.8	設計 細田 10.10.8	製図 -	尺度 NOT	図番 303910-35011

改訂数	内　容	年月日	設計	承認

株式会社 キトー　　様式 025C-06　　三角法 単位: mm

서면심사 2012.08.27 한국승강기안전기술원



접지설비 시공방법

1. 전동기의 외함, 제어반 등은 접지를 해야하며 그 접지저항은 다음의 규정에 따른다.

접지공사		
3종 접지공사	400V 이하	100Ω이하
특3종 접지공사	400V 이상	10Ω이하

단, 방폭지역은 전압에 관계없이 10Ω이하 일 것.

2. 접지전용 Trolley Duct 및 전선은 당해 전기기기, 기구에 대하여 충분한 용량과 전기적, 기계적인 강도를 가져야 함.

3. 접지선이 외상을 받을 우려가 있는 경우에는 전선관, 합성수지관 등과 함께 사용한다.

4. 접지공사는 지표면에서 최저 75cm이상의 깊이에 접지봉을 박고 접지봉에는 접지동판을 연결한다.

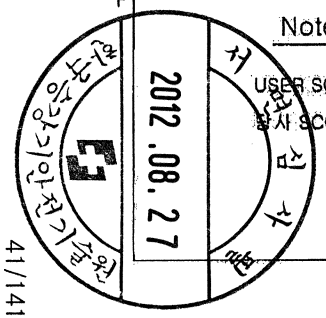
EARTH CABLE

NO	ITEM	Cable size	Earth Cable
1	Main Earth Line	User Scope	1 Core
2	Main Power Source	User Scope	1 Core
3	Trolley bar or festoon cable	User Scope	1 Core
4	Main Power Source	User Scope	1 Core
5	Hoist Motor	VCT 4 sq	1 Core
6	Traversing Motor	VCT 4 sq	1 Core
7	Push Button Switch	VCT 1.5 sq	1 Core

Note

USER SCOPE ----------

공사 SCOPE ——————



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APPROVED	CHECKED	DESIGNED	TITLE 접지계통도 3 ton CHAIN HOIST	
			CODE	SCALE 1/10
유니크 UNIQUE CORP.			DWG.NO.	DATE

UNIT : mm

KITO CORPORATION

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".

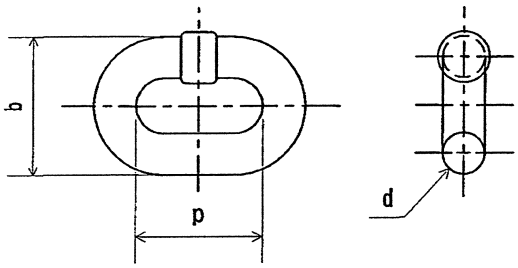
Technical Control Group

Certificate No. : FK100110
Date Issued : 2010/6/3

INSPECTION CERTIFICATE

Messrs. SAMSUNG HEAVY INDUSTRIES CO.,LTD.

Commodity : NC Load Chain
Code : KER2-112
Lot No. : 2358
Quantity : 1 line(s)
Reference No. : U3-U63-00563
Order No. : KJ-10-076B
Production No. : 303035



1. Material : Manganese Alloy Steel

2. Dimensions (mm)

	d	p	b
Specified	11.2 ±0.4	31.2 $^{+0.61}_{0}$	Max. 39.0
Result	Good	Good	Good

3. Breaking test

	Breaking load (kN)	Total ultimate elongation (%)
Specified	Min. 160	Min. 10
Result	Good	Good

4. Manufacturing Proof force test (Test load : 100 kN)

	Permanent elongation (%)
Specified	Max. 0.25
Result	Good

General judgment : Satisfactory

KITO CORP.
2000 Tsukijiarai, Showa-cho,
Nakakoma-gun, Yamanashi, JAPAN

Quality Assurance Group
Quality Assurance Department
M. Ogihara (Manager)

Certificate No.: MM080011g

Date of Issue: 2009/3/4

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	3.5kW	4P	60%ED	220V	60Hz

Full load characteristics

Voltage Frequency		220V 60Hz
Load	%	100
Current	A	16.9
Speed	rpm	1670

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

KITO CORP.

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

Quality Assurance Group
Quality Assurance Department
Development & Technology Division

M. Ogihara (Manager)

Certificate No.: MM070011g

Date of Issue: 2008/03/21

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	3.5kW	4P	60%ED	380 - 440V	60Hz

Full load characteristics

Voltage Frequency		380 - 440V 60Hz
Load	%	100
Current	A	8.7
Speed	rpm	1650

Insulation class B

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

KITO CORP.

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

Quality Assurance Group
Quality Assurance Depertment
Development & Technology Division
(Manager)

K. Kishimoto

Certificate No.: MM080011h

Date of Issue: 2009/3/4

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	3.5kW	4P	40/20%ED	220V	Speed Control by Inverter

Full load characteristics

Voltage Frequency		220V Speed Control by Inverter
Load	%	100
Current	A	18.7
Speed	rpm	～

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

KITO CORP.

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

Quality Assurance Group
Quality Assurance Department
Development & Technology Division

M. Ogihara (Manager)

Certificate No.: MM070011h

Date of Issue: 2008/03/21

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	3.5kW	4P	60%ED	380 - 440V	Speed Control by Inverter

Full load characteristics

Voltage Frequency		380 - 440V Speed Control by Inverter
Load	%	100
Current	A	9.2
Speed	rpm	~

Insulation class B

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

KITO CORP.

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

Quality Assurance Group
Quality Assurance Depertment
Development & Technology Division

(Manager)

K. Kishimoto

Certificate No.: MM080012a

Date of Issue: 2009/3/4

Messrs. _____

Motor Test Report for Electric Trolley

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-T	0.4kW	4P	40%ED	220V	60Hz

Full load characteristics

Voltage Frequency		220V 60Hz
Load	%	100
Current	A	3.0
Speed	rpm	1685

Insulation class E

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

KITO CORP.
2000 Tsuijiarai, Showa-cho,
Nakakoma-gun, Yamanashi, JAPAN

Quality Assurance Group
Quality Assurance Department
Development & Technology Division
M. Ogihara (Manager)

Certificate No.: MM080012b

Date of Issue: 2009/3/4

Messrs._____

Motor Test Report for Electric Trolley

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-T	0.4kW	4P	27/13%ED	220V	Speed Control by Inverter

Full load characteristics

Voltage Frequency		220V Speed Control by Inverter
Load	%	100
Current	A	3.0
Speed	rpm	~

Insulation class E

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

KITO CORP.

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

Quality Assurance Group
Quality Assurance Department
Development & Technology Division

M. Ogihara (Manager)

Certificate No.: MM070013a

Date of Issue: 2008/03/21

Messrs._____

Motor Test Report for End Carriage

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-T	0.4kW	4P	40%ED	380 - 440V	60Hz

Full load characteristics

Voltage Frequency		380 - 440V 60Hz
Load	%	100
Current	A	2.2
Speed	rpm	1670

Insulation class B

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

KITO CORP.
2000 Tsuijiarai, Showa-cho,
Nakakoma-gun, Yamanashi, JAPAN

Quality Assurance Group
Quality Assurance Depertment
Development & Technology Division
(Manager)
K. Kishimoto

Certificate No.: MM070013b

Date of Issue: 2008/03/21

Messrs._____

Motor Test Report for End Carriage

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-T	0.4kW	4P	40%ED	380 - 440V	Speed Control by Inverter

Full load characteristics

Voltage Frequency		220 – 230V Speed Control by Inverter
Load	%	100
Current	A	2.5
Speed	rpm	~

Insulation class B

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

KITO CORP.

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

Quality Assurance Group
Quality Assurance Depertment
Development & Technology Division

(Manager)

K. Kishimoto