



심사결과 통지서

| | | |
|-----|--------------------------------|-----------------------|
| 신청인 | 사업장명 : (주)대산이노텍 | 사업장관리번호 : 13481628890 |
| | 사업자등록번호 : 1348162889 | 대표자 성명 : 강성원 |
| | 소재지 : 충남 공주시 정안면 정안농공단지길 32-32 | |

| | |
|----------------------|-----------------|
| 안전인증대상 기계·기구명 : 호이스트 | |
| 형식(규격) : DLM-500 () | 용량(등급) : 0.5Ton |

「산업안전보건법」 제84조 및 같은 법 시행규칙 제110조에 따라 실시한

예비심사

서면심사

기술능력 및 생산체계 심사

결과가 적합
 부적합

함을 통지합니다.

개별 제품심사

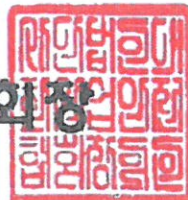
형식별 제품심사

2020년 07월 30일

인증심사원

이중남

대한산업안전협회



제2020 - BA2001876001호



안 전 인 증 서

(사업장명) (주)대산이노텍

(소재지) 충남 공주시 정안면 정안농공단지길 32-32

위 사업장에서 제조하는 아래의 품목이 「산업안전보건법」 제84조 및 같은 법 시행규칙 제110조의제1항에 따른 안전인증 심사 결과 안전·보건기준에 적합하므로 안전인증표시의 사용을 인증합니다.

품 목

호이스트

형식·모델(용량·등급) / 인증번호

DLM-500(, 0.5 Ton [세부용량 :0.5])/20-BA2AC-50056

인 증 기 준

고용노동부 고시 제2020 - 41호 (위험기계·기구 안전인증 고시)

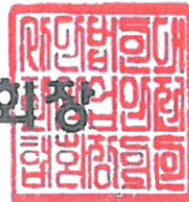
인 증 조 건

인증유효기간 :

설치장소 : (주)대산이노텍(충남 공주시 정안면 정안농공단지길 32-32)

2020년 07월 30일

대한산업안전협회장



형식 구분



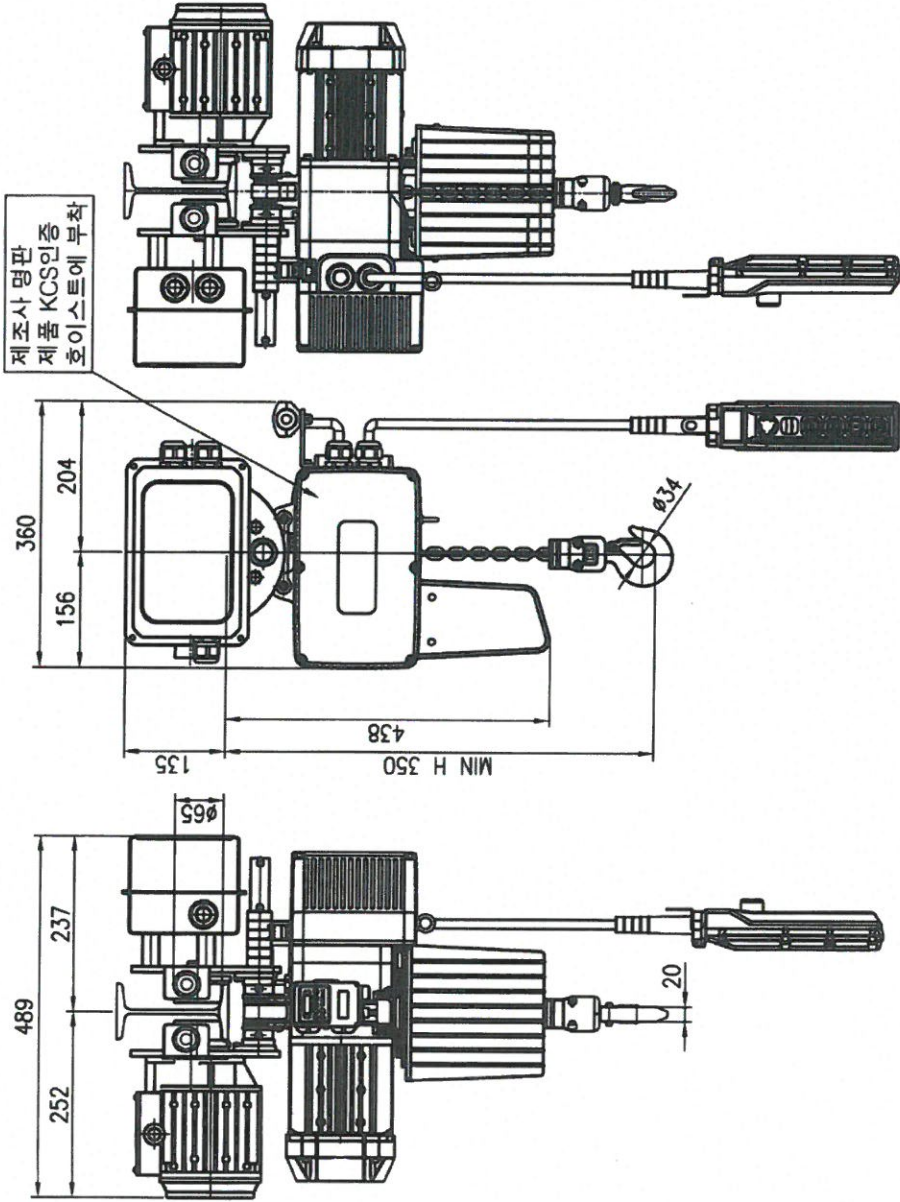
| | 형 식 | 권상 속도 | 횡행 속도 | 비 고 |
|-----------------|---------|-----------|------------|-----------------------|
| DLM - 500 | DLM-500 | 7.6 M/MIN | 20.7 M/MIN | 상 / 하, 좌 / 우 동작 |

TECHNICAL SPECIFICATION



| | | | |
|--------------------------------|--------------------------|--|---------------|
| DESCRIPTION | | 500 KG MONORAIL HOIST | |
| TYPE | | DLM - 500KG MONORAIL | |
| RATED LOAD | | 500 [KG] | |
| TESTING LOAD | | 625 [KG] | |
| LIFT | | 최대 50 [M] (기본 4 [M]) | |
| SPEED & MOTOR | HOISTING (M/MIN) | 7.6 | 0.75[Kw] × 4P |
| | TRAVERSING (M/MIN) | 20.7 | 0.4[Kw] × 4P |
| BRAKE SYSTEM | HOISTING | CONE BRAKE | |
| | TRAVERSING | CONE BRAKE | |
| ELECTRIC SPECIFIC- ATION | POWER SOURCE | AC 3PH 60[Hz] 220, 380, 440, 460, 480[V] | |
| | CONTROL SOURCE | AC 110[V] | |
| | LIMIT SWITCH | TWO STEP LIMIT SWITCH | |
| | OVER LOAD LIMITER | ELECTRICAL TYPE. | |
| | EM. STOP DEVICE | EMERGENCY STOP BUTTON | |
| LOAD CHAIN | Ø 5.0 × P15.0 < 1 FALL > | | |
| TRAVERSING POWER SYSTEM | | TROLLEY BAR OR FESTOON TYPE | |
| MAX AMBIENT TEMPERATUE | | 40[℃] | |
| RATING | | 30[min] | |
| AREA CLASSIFICATION | | INDOOR | |
| CONTROL METHOD | | BY PENDANT PUSH BUTTON S/W | |
| PAINTING COLOR | | MUNSELL NO EX8816D YELLOW, MUNSELL CODE N2.0 BLACK | |
| 방폭 유무 | | 비방폭 | |

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



SPECIFICATION

| | | |
|---------------------|--|----------------------|
| RATED LOAD | 500 | KG |
| TESTING LOAD | 625 | KG |
| LIFTING HEIGHT | 최대 50 M (기분 4 M) | |
| HOISTING | SPEED | 7.6 M/MIN |
| | MOTOR | 0.75 KW x 4P x 1 SET |
| TRAVERSING | SPEED | 20.7 M/MIN |
| | MOTOR | 0.4 KW x 4P x 1 SET |
| POWER SUPPLY | AC 220/380, 440, 460, 480V x 3φ x 60Hz | |
| OPERATING METHOD | P.B type ON . FL | |
| WEIGHT | 76.5 KG | |
| LOAD CHAIN FALL | φ5.0 x P15.0 x 1 | |
| BEAM WIDTH | 75-150 MM | |
| AREA CLASSIFICATION | INDOOR | |

* 점검시 안전한 사다리 등 사용할것.

| | | | | | |
|--------------------------|----------|-----------------------|------------|------------|------------|
| TITLE | | DLM-500KG CHAIN HOIST | | PROJECTION | |
| WORK NO | MODEL NO | DLM-500 | | SCALE | 1/1 |
| DRAWN | CHECKED | REVIEWED | APPROVED | MODEL NO | DLM-500-3 |
| 김수환 | - | 이화재 | 선우영구 | 2019.09.25 | 2019.09.25 |
| 2019.09.25 | - | 2019.09.25 | 2019.09.25 | 2019.09.25 | 2019.09.25 |
| DAESAN INOTEC INC | | | | | |

2020-06-15

10/264

| | | | | | |
|---------|------|----------------------|-------|---------|----------|
| REV. NO | DATE | REVISION DESCRIPTION | DRAWN | CHECKED | APPROVED |
| | | | | | |

| DRAWING NO. | DESCRIPTION | REVISION | REVISION NOTATION | DESIGNER | DATE |
|-------------|-----------------------------------|----------|-------------------|---------------|------------|
| DLM3500E01 | DRAWING LIST | - | 0 | Hyeon-Jin.Kim | 2020.03.16 |
| DLM3500E02 | SYMBOL LIST | - | 0 | Hyeon-Jin.Kim | 2020.03.16 |
| DLM3500E03 | TROLLEY CONTROL COMPONENT | - | 0 | Hyeon-Jin.Kim | 2020.03.16 |
| DLM3500E04 | HOIST CONTROL COMPONENT | - | 0 | Hyeon-Jin.Kim | 2020.03.16 |
| DLM3500E05 | SCHEMATIC DIAGRAM | - | 0 | Hyeon-Jin.Kim | 2020.03.16 |
| DLM3500E06 | CIRCUIT DIAGRAM | - | 0 | Hyeon-Jin.Kim | 2020.03.16 |
| DLM3500E07 | LOAD LIMITER SETTING, SAFETY DATA | - | 0 | Hyeon-Jin.Kim | 2020.03.16 |

| MOTOR | 모델 | 상 (Phase) | 정격하중 (kg) | 모터용량 (Kw x 극수) | 전압 전류 V(A) | 전원선 사이즈 |
|---------|-----|-----------|-----------|----------------|------------|------------|
| HOIST | DL | 3φ | 500kg | 0.75 x 4P | 220V(5.7A) | 2.5SQ x 4C |
| | DL | 3φ | 500kg | 0.75 x 4P | 380V(3.0A) | 2.5SQ x 4C |
| | DL | 3φ | 500kg | 0.75 x 4P | 440V(2.7A) | 2.5SQ x 4C |
| | DL | 3φ | 500kg | 0.75 x 4P | 460V(2.5A) | 2.5SQ x 4C |
| | DL | 3φ | 500kg | 0.75 x 4P | 480V(2.3A) | 2.5SQ x 4C |
| | DLM | 3φ | 500kg | 0.4 x 4P | 220V(3.0A) | 2.5SQ x 4C |
| TROLLEY | DLM | 3φ | 500kg | 0.4 x 4P | 380V(1.8A) | 2.5SQ x 4C |
| | DLM | 3φ | 500kg | 0.4 x 4P | 440V(1.6A) | 2.5SQ x 4C |
| | DLM | 3φ | 500kg | 0.4 x 4P | 460V(1.5A) | 2.5SQ x 4C |
| | DLM | 3φ | 500kg | 0.4 x 4P | 480V(1.4A) | 2.5SQ x 4C |
| | DLM | 3φ | 500kg | 0.4 x 4P | 480V(1.4A) | 2.5SQ x 4C |

| | | | |
|---------------------|-------------------------------------|-------------|------------|
| TITLE | DLM-500KG | SHEET | 1/1 |
| | 3Phase 220,380,440,460,480V 50/60Hz | REVISION NO | 0 |
| | DRAWING LIST | DRAWING NO | DLM3500E01 |
| DRAWING | KIM.H.J | CHECKED | Y.K |
| 20.03.16 | 20.03.16 | REVIEWED | 20.03.16 |
| DAESAN INOTECH INC. | | | |

| NO | SYMBOL | DESCRIPTION |
|----|--------|---|
| 1 | | Three Pole Circuit Breaker |
| 2 | | Three Pole Contactor (NO) |
| 3 | | Normally Open Contactor (NO) |
| 4 | | Normally Closed Contactor (NC) |
| 5 | | Emergency Push Button (NC) |
| 6 | | Push button (NO) Mechanical Interlock |
| 7 | | 2 Layer Push button (NO) Mechanical Interlock |
| 8 | | Limit Switch (NC) Cam Operating |
| 9 | | Limit Switch (NC) Roller |
| 10 | | Limit Switch (NC) Micro Switch |
| 11 | | Self Operating Thermal Switch (NC) Motor Thermal Protector |
| 12 | | Contactor Coil |
| 13 | | Fuse |
| 14 | | Resistor |
| 15 | | Capacitor |

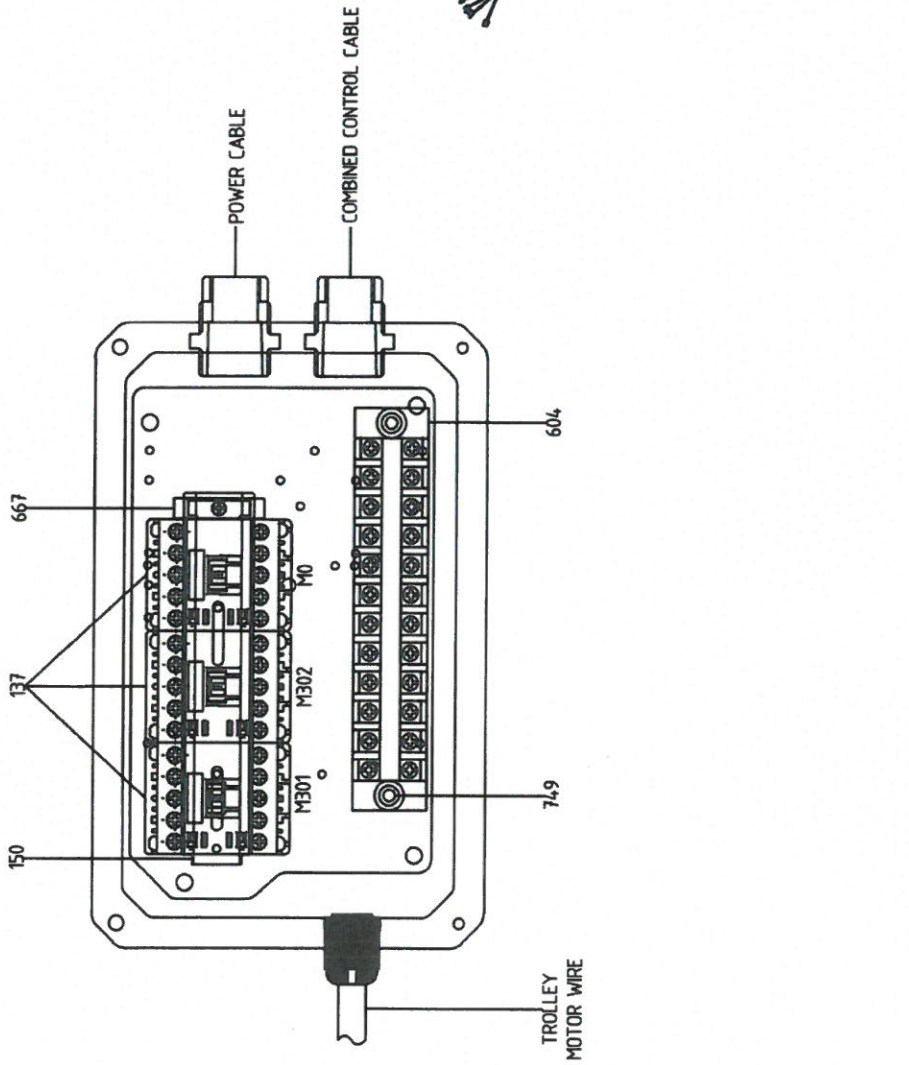
| NO | SYMBOL | DESCRIPTION |
|----|--------|---|
| 16 | | Current Transformer |
| 17 | | Rectifier |
| 18 | | Earth |
| 19 | | Terminal Block |
| 21 | | 3P Thermal Relay |
| 22 | | Jack & Plug |
| 23 | | Transformer |
| 24 | | Solenoid Brake Coil Only DC100V or DC200V |
| 25 | | Solenoid Brake Coil DC100/200V DC100V Wiring |
| 26 | | Solenoid Brake Coil DC100/200V DC200V Wiring |

| NO | SYMBOL | DESCRIPTION |
|----|--------|--|
| 27 | | 3 Phase Motor Only 220V or 440V or 460V |
| 28 | | 3 Phase Motor 220/380V 220V Wiring |
| 29 | | 3 Phase Motor 220/380V 380V Wiring |
| 30 | | 3 Phase Motor 230/460V 230V Wiring |
| 31 | | 3 Phase Motor 230/460V 460V Wiring |
| 32 | | 1 Phase Motor 110/220V |

| | | | | |
|-------------------------------------|-------------|----------|-------------|------------|
| TITLE | DLM-500KG | | SHEET | 1/1 |
| 3Phase 220,380,440,460,480V 50/60Hz | SYMBOL LIST | | REVISION NO | 0 |
| DRAWING | CHECKED | REVIEWED | APPROVED | DRAWING NO |
| KIM.H.J | WOO.S.W | Y.K | DLM3500E02 | |
| 20.03.16 | 20.03.16 | 20.03.16 | | |

DAESAN INOTECH INC.

| PART NO | COMMODITY | STANDARD | CAPACITY | QTY | MAKER | REMARK |
|---------|------------------------|------------|---------------------|-----|-----------------|---|
| 150 | CHANNEL | 50mm | 50mm | 1 | DAESAN INOTEC | Machine Screw S/W, P/W M4x8 (P/W, ø10) |
| 591 | POWER CABLE ASSY | VCT | 2550VAC | 15M | KI CABLE | - |
| 592 | COMBINED CONTROL CABLE | VCT | 2550VAC ±1550VDC | 1M | KI CABLE | - |
| 604 | TERMINAL BLOCK | KTBI-02012 | 20A 600VAC | 1 | HANYOUNG NUX | Machine Screw S/W, P/W M4x7 (P/W, ø8) |
| 137 | MAGNETIC CONTACTOR | GPC-12M1b) | AL3 | 3 | LS IS | - |
| 667 | CHANNEL STOPPER | JTSM-2 | - | 1 | EDNO | - |
| 749 | HEX STAY PIN | 108mm | - | 2 | DAESAN INOTEC | - |

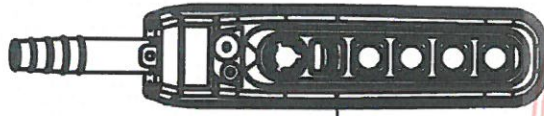
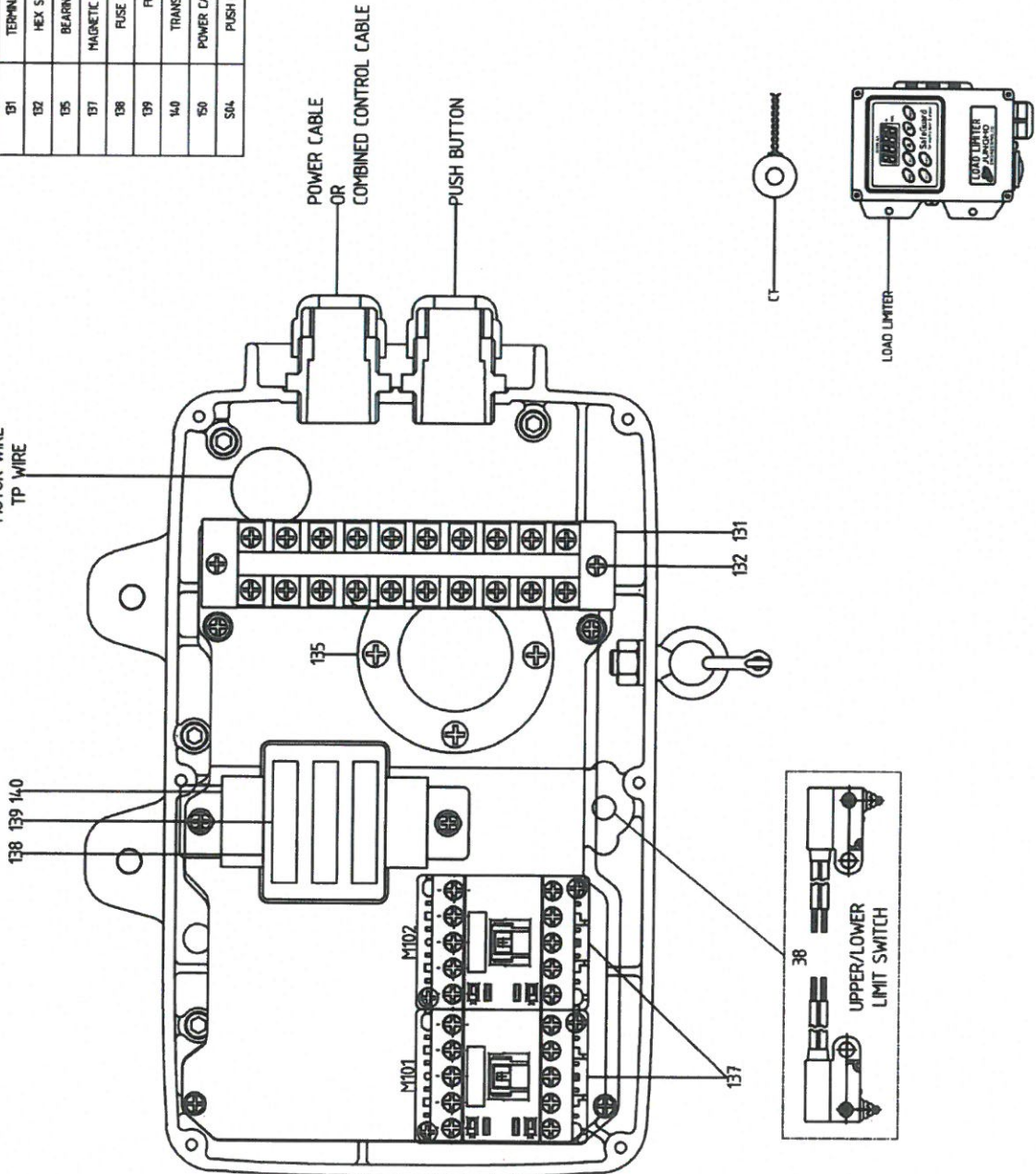


| TITLE | SHEET | | | |
|-------------------------------------|-------------|----------|----------|------------|
| DLM-500KG | 1/1 | | | |
| 3Phase 220,380,440,460,480V 50/50Hz | REVISION NO | | | |
| TROLLEY CONTROL COMPONENT | 0 | | | |
| DRAWING | CHECKED | REVIEWED | APPROVED | DRAWING NO |
| KIM,H.J | WOO,S.W | | Y.K | DLM3500E03 |
| 20.03.16 | 20.03.16 | | 20.03.16 | |

DAESAN INOTEC INC.

| PART NO | COMMODITY | STANDARD | CAPACITY | QTY | MAKER | REMARK |
|---------|--------------------|-------------|----------------------|-----|------------------------|---------------------------|
| 38 | LIMIT SWITCH | D2RW-C202PR | 0.1A-25VAC | 2 | OMRON | UPPER, LOWER LIMIT SWITCH |
| 131 | TERMINAL BLOCK | KTBI-02010 | 20A 600VAC | 1 | HANYOUNG NUX | MACHINE SCREW S/W |
| 132 | HEX STAY PIN | 65mm | 65mm | 2 | DAESAN INOTEC | M4x17 |
| 135 | BEARING COVER | - | - | 1 | DAESAN INOTEC | - |
| 137 | MAGNETIC CONTACTOR | CMC-12M1b | AC3 | 2 | LS IS | MACHINE SCREW S/W |
| 138 | FUSE HOLDER | 3P | 20A 250VAC | 1 | K SUNG | MACHINE SCREW S/W, P/W |
| 139 | FUSE | S61 | 1A 250VAC | 3 | ORISEL | M4x17 (P/W, Ø8) |
| 140 | TRANSFORMER | 35VA | 230-380/240V -10V | 1 | DECHANG TRANSFORMER | MACHINE SCREW S/W, P/W |
| 150 | POWER CABLE ASSY | VCT | 2.550x4C | 15M | KI CABLE | M4x8 (P/W, Ø8) |
| S04 | PUSH BUTTON | HY-P024SBB | 6A-250VAC | 1 | HANYOUNG NUX | - |

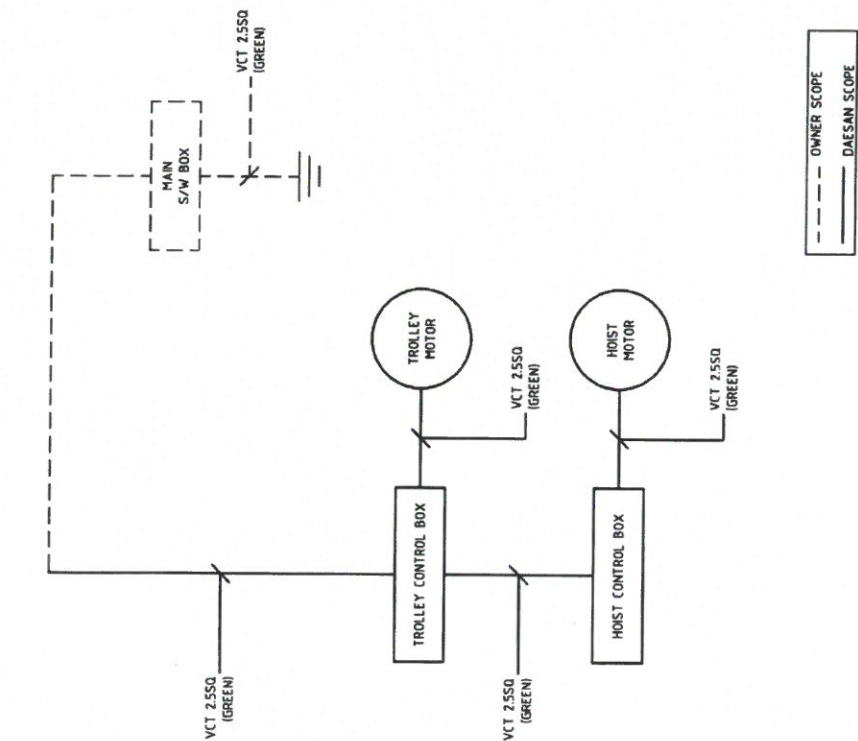
MOTOR WIRE
TP WIRE



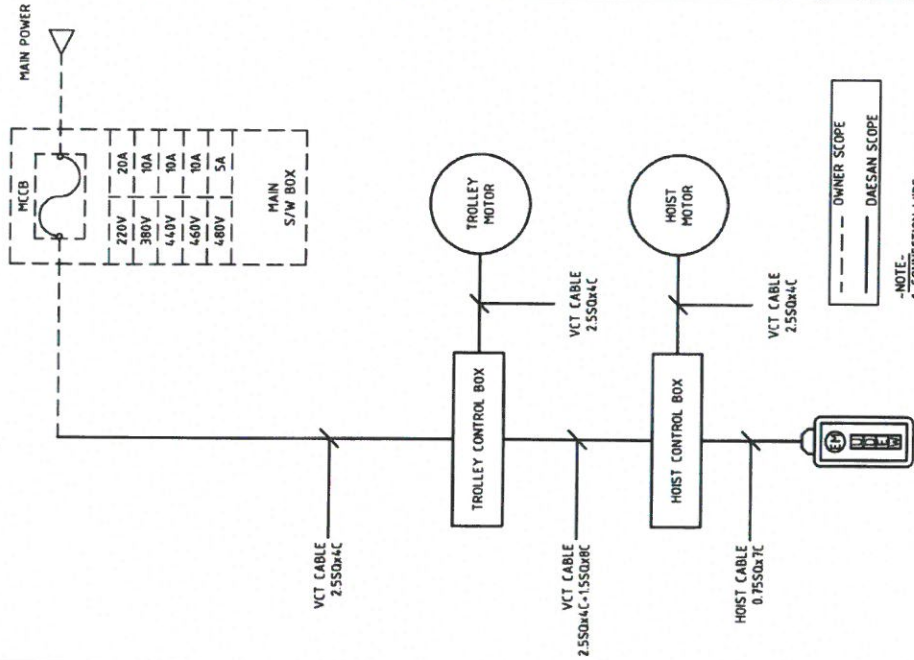
| TITLE | SHEET | | | |
|-------------------------------------|-------------|----------|----------|------------|
| DLM-500KG | 1/1 | | | |
| 3Phase 220-380-440-460-480V 50/60Hz | REVISION NO | | | |
| HOIST CONTROL COMPONENT | 0 | | | |
| DRAWING | CHECKED | REVIEWED | APPROVED | DRAWING NO |
| KIM.H.J | WOO.S.W | Y.K | | DLM3500E04 |
| 20.03.16 | 20.03.16 | 20.03.16 | 20.03.16 | |

DAESAN INOTEC INC.

GROUNDING



CABLE



-NOTE-
1. CONNECTION WIRE
A. POWER : KV 2.550(BLACK)
B. CONTROL : KV 1.550(BROWN)

■ 접지공사 시설행법

1. 전동기의 프레임, 제어반, 레일등은 접지를 해야 하며 다음의 규정을 따른다.

접지 저항

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

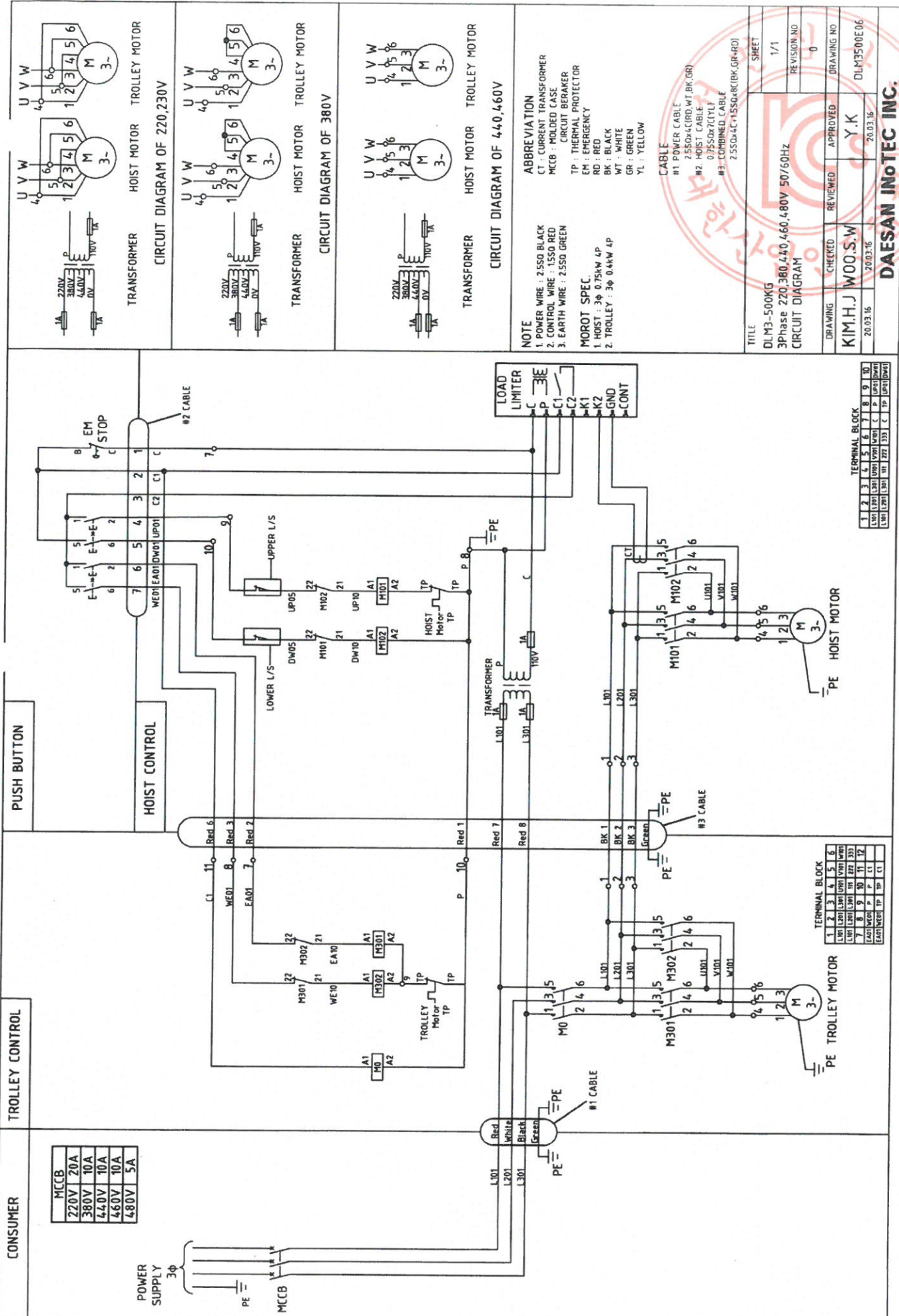
1. 단 방폭지역은 전압에 관계없이 10Ω 이하일 것.
2. 접지전용 트로리선 및 전선은 당해 전기기기, 기구에 대하여 충분한 용량 및 전기적, 기계적 강도를 가져야 한다.
3. 접지선이 외상을 받을 우려가 있는 경우에는 전선관, 합성 수지관 등에 넣어야 한다.
4. 접지공사는 지표면에서 최저 75Cm 이상의 깊이에 접지봉을 박고 접지봉에는 접지 동판을 연결한다.

■ NOTE

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

| | | | |
|----------|---|-------------|------------|
| TITLE | DLM-500KG 3Phase 220 380-440, 460, 480V 50/60Hz SCHEMATIC DIAGRAM | SHEET | 1/1 |
| DRAWING | KIM.H.J WOO.S.W | REVISION NO | 0 |
| CHECKED | Y.K | APPROVED | DLH3500E05 |
| 20.03.16 | 20.03.16 | 20.03.16 | |

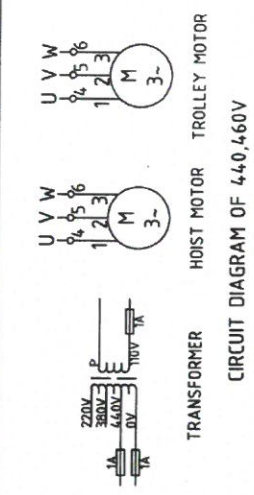
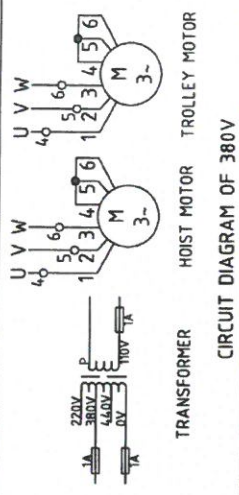
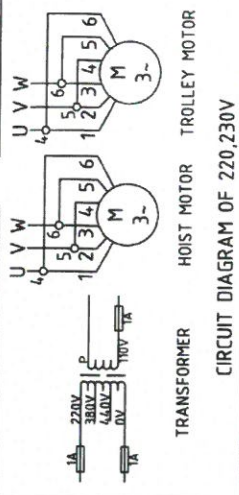
DAESAN INOTEK INC.



| MCCB |
|----------|
| 220V 20A |
| 380V 10A |
| 440V 10A |
| 460V 10A |
| 480V 5A |

| TERMINAL BLOCK | | | | | | | | | |
|----------------|------|------|------|------|------|----|----|----|----|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| L101 | L201 | L301 | W101 | W201 | W301 | TP | CT | PE | PE |
| EAO1 | WE10 | EA10 | P | TP | TP | TP | TP | TP | TP |

| TERMINAL BLOCK | | | | | | | | | |
|----------------|------|------|------|------|------|----|----|----|----|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| L101 | L201 | L301 | W101 | W201 | W301 | TP | CT | PE | PE |
| EAO1 | WE10 | EA10 | P | TP | TP | TP | TP | TP | TP |



NOTE

1. POWER WIRE : 2.550 BLACK
2. CONTROL WIRE : 1.550 RED
3. EARTH WIRE : 2.550 GREEN

MOTOR SPEC

1. HOIST : 3φ 0.75kW 4P
2. TROLLEY : 3φ 0.4kW 4P

ABBREVIATION

CT : CURRENT TRANSFORMER
MCCB : MOLDED CASE CIRCUIT BREAKER
TP : THERMAL PROTECTOR
EM : EMERGENCY
RD : RED
BK : BLACK
WT : WHITE
GR : GREEN
YL : YELLOW

CABLE

#1 : POWER CABLE
#2 : HOIST CABLE
#3 : COMBINED CABLE

2.550x4(CRD,WT,BK,GR)
0.7550x7(CLY)
2.550x4(C+1.550x8(BK,GR,RD))

TITLE

DLM3-500KG
3Phase 220,380,440,460,480V 50/60Hz
CIRCUIT DIAGRAM

SHEET

1/1
REVISION NO
0

DRAWING

CHECKED
Y.K
20.03.16

APPROVED

Y.K
20.03.16

DRAWING NO

DLM3500E06

DAESAN INOTEK INC.

LOAD LIMITER SETTING DATA

| Motor | Motor pole | Weight | Power source | Load limiter setting data | | | | |
|--------|------------|-----------------|--------------|---------------------------|---------------|------------|-----------|-----------|
| | | | | start Delay time | Overload time | Reset time | L current | H current |
| 0.75kW | 4 | 0.55 ton (110%) | 220V 60Hz | 0.7 | 0.7 | 0.7 | 4.80 | 4.80 |
| | | | 380V 60Hz | 0.7 | 0.7 | 0.7 | 3.04 | 3.04 |
| | | | 440V 60Hz | 0.7 | 0.7 | 0.7 | 2.60 | 2.60 |
| | | | 460V 60Hz | 0.7 | 0.7 | 0.7 | 2.70 | 2.70 |
| | | | 480V 60Hz | 0.7 | 0.7 | 0.7 | 2.80 | 2.80 |

- LOAD LIMITER 설정은 무게 110%의 값으로 함.
- 위 DATA는 대산이노텍 공칭나부 전압 기준으로 설정함.
- 각각의 전동기 특성 및 현장 조건에 따라 전류의 설정치는 약간의 변동이 발생될 수 있음.

SAFETY

※감전 방지를 위한 외함구조

- 숙련자만이 취급할 수 있도록 키 동봉 부착하거나 고정식 덮개의 구조일 것.
- 외함 개방시 충전 부분이 차단 되도록 함 것.
- 외함 개방 후 충전 되어 있는 부분은 IP2X 이상의 직접접촉 방호가 되어 있을 것.

CIRCUIT BREAKER

| Power source | Rated current (A) | | Total rated current (A) | | Circuit breaker | |
|--------------|------------------------------|---------------------------------|-------------------------|----------------------|-------------------|------------------|
| | Host motor (I _N) | Trolley motor (I _N) | I _N ×1 | I _N ×250% | AF (Ampere Frame) | AT (Ampere Trip) |
| 220V 60Hz | 5.7 | 3.0 | 9.7 | 24.3 | 30AF | 20AT |
| 380V 60Hz | 3.0 | 1.8 | 5.8 | 14.5 | 30AF | 10AT |
| 440V 60Hz | 2.7 | 1.6 | 4.3 | 10.8 | 30AF | 10AT |
| 460V 60Hz | 2.5 | 1.5 | 4 | 10 | 30AF | 10AT |
| 480V 60Hz | 2.3 | 1.4 | 3.7 | 9.3 | 30AF | 5AT |

※위 표는 각 제품 1대에 대한 권고치임.

- ※과전류 보호
- 과전류 보호를 위하여 각 부품의 정격전류 또는 도체의 허용전류 값 중에서 더 작은 값에 대하여 보호되어야 한다.
 - 퓨즈의 정격전류 또는 기타 과전류 보호장치의 전류 설정값은 가능한 낮게 선정되야 예상되는 과전류(전동기 가동 전류 등)에 직접하여야 한다.
 - 과전류 보호용으로 차단기 또는 퓨즈를 설치시 차단용량은 해당 전동기 등의 정격전류에 대하여 **차단기는 250%**, 퓨즈는 300% 이하여야 한다.
 - 과전류 차단장치는 각 분기회로마다 설치되어야 한다.
 - 진원전압에 직접 접속되는 제어회로 및 제어회로 변압기는 과전류 보호가 되어야 한다.
 - 제어용터미널기 2차측 회로의 과전류보호장치는 접지회로가 아닌 다른 단에 설치되어야 한다.

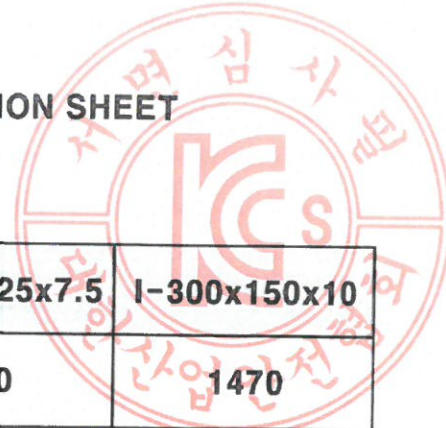
WIRE COLOR

※전선 및 조작 버튼의 색상

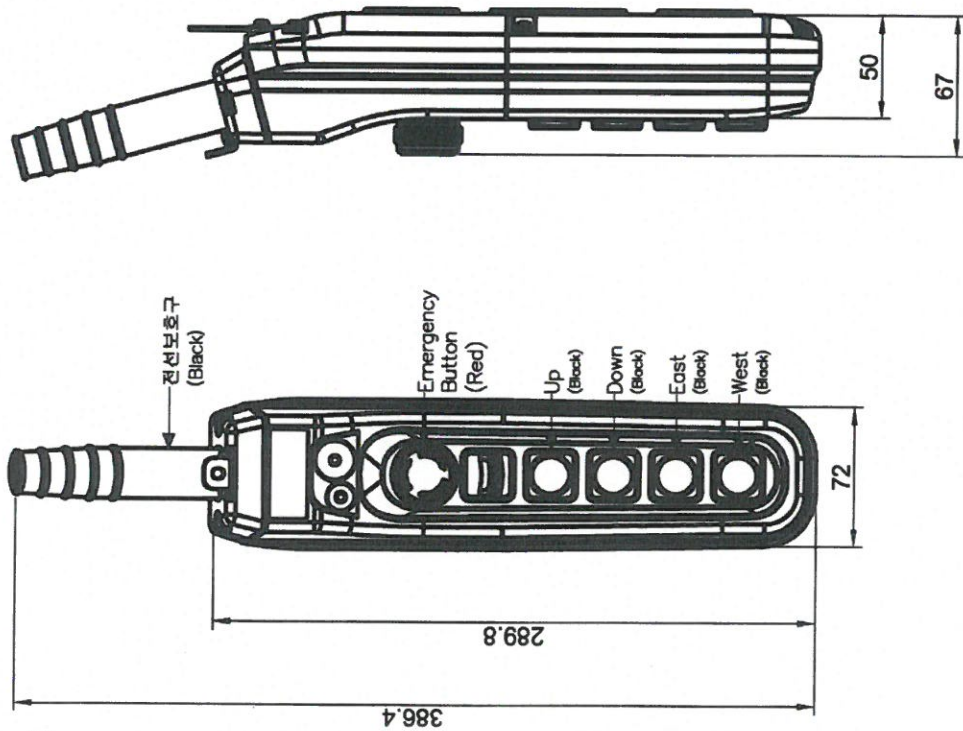
- 조작 버튼의 색상
 - 빨간색(RED) ----- 비상 스위치
 - 노랑색(YELLOW) ----- 비상상
 - 녹색(GREEN) ----- 정상
 - 청색(BLUE) ----- 의무
 - 흰색/회색 또는 흑색 ----- 지정된 의미 없음
- 표시등의 색상
 - 빨간색(RED) ----- 비상
 - 노랑색(YELLOW) ----- 비정상
 - 녹색(GREEN) ----- 정상
 - 청색(BLUE) ----- 의무
 - 흰색/회색 또는 흑색 ----- 지정된 의미 없음
- 전선의 색상
 - 검정색(BLACK) ----- 전원선(POWER)
 - 빨간색(RED) ----- 교류제어선(CONTROL)
 - 청색(BLUE) ----- 직류제어선
 - 노랑색(YELLOW) ----- 외부에서 공급되는 연동장치 제어회로
 - 녹색(GREEN) 또는 노랑색(YELLOW) 혼용 ----- 접지

| | |
|--------------------|---|
| TITLE | DLM-500KG 3Phase 220,380,440,460,480V 50/60Hz LOAD LIMITER SETTING, SAFETY DATA |
| SHEET | 1/1 |
| REVISION NO | 0 |
| DRAWING | CHECKED |
| REVIEWED | APPROVED |
| DRAWING NO | Y.K |
| DLM3500E07 | 20.03.16 |
| DAESAN INoTEC INC. | 20.03.16 |

EDLM-500 / DLM-500 I-BEAM CALCULATION SHEET



| | I-150x75x5.5 | I-200x100x7 | I-250x125x7.5 | I-300x150x10 |
|--------------------------------|--------------|-------------|---------------|--------------|
| SPAN L=CM | 400 | 630 | 900 | 1470 |
| Ix(Cm⁴) | 819 | 2170 | 5180 | 12700 |
| Iy(Cm⁴) | 58 | 138 | 337 | 886 |
| Zx(Cm³) | 109 | 217 | 414 | 849 |
| ZY(Cm³) | 15 | 28 | 54 | 118 |
| σ 1(Kg. Cm²) | 699.01 | 592.47 | 499.68 | 374.95 |
| δ 2(Cm) | 0.447 | 0.659 | 0.805 | 1.43 |
| δ /L | 1/833.218 | 1/811.801 | 1/813.981 | 1/807.545 |



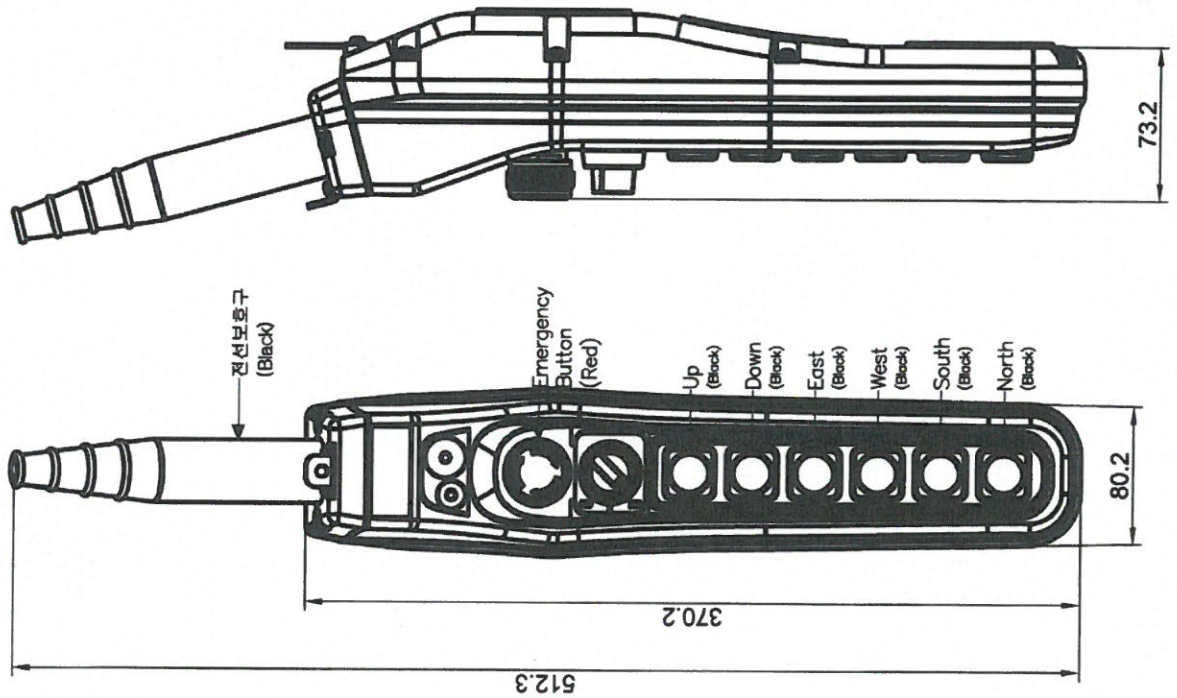
※ 사양

| | |
|---------|--|
| 정격 전류 | 6 A 250 V a.c. |
| 정격 전압 | 10 A 250 V a.c. 비상용 스위치 (푸쉬 록-틴 리셋) |
| 내전압 | 100 MA (500 V a.c.) |
| 보호구조 | 2000 V a.c. 1분간 (충전부-비충전부 사이) IP-65 |
| 재질 | 케이스 : 고충격용 ABS수지 접점 : AgSnO2 |
| 진동 (내구) | 10 - 55 Hz 복진폭 1.0 mm |
| 충격 (내구) | 500 m/s ² |
| 사용주위 온도 | -10 ~ 45 °C |
| 사용주위 습도 | 45 ~ 85 % R.H. |

※ 점접구성

| | | |
|------------------|------------|------------------------------|
| 비상용 스위치 | 1단 스위치 | 2단 스위치 |
| B L A C | 1 5 2 6 | 6 4 5 3 14 16 13 15 |

| | | | | | |
|---------------------------|----------|----------|----------|-------------|--|
| TITLE | | | | SHEET | |
| HOIST SWITCH | | | | 1/1 | |
| HY-P1024S | | | | REVISION NO | |
| 4 POINT | | | | 0 | |
| DRAWING | CHECKED | REVIEWED | APPROVED | DRAWING NO | |
| KIM.H.J | WOO.S.W | | Y.K | HY-P1024SBB | |
| 20.03.16 | 20.03.16 | | 20.03.16 | | |
| DAESAN INOTEC INC. | | | | | |



※ 사양

| | |
|---------|--|
| 정격 전류 | 6 A 250 V a.c. |
| 정격 저항 | 10 A 250 V a.c. 비상용 스위치 (푸쉬 록-턴 리셋) |
| 내전압 | 100 MΩ (500 V a.c.) |
| 보호구조 | 2000 V a.c. 1분간 (출전부-비출전부 사이) IP-65 |
| 재질 | 케이스 : 고탈격용 ABS수지 접점 : AgSnO2 |
| 진동 (내구) | 10 - 55 Hz 박진폭 1.0 mm |
| 충격 (내구) | 500 m/s ² |
| 사용주위 온도 | -10 ~ 45 °C |
| 사용주위 습도 | 45 ~ 85 % R.H. |

※ 점접구성

| | | |
|---------|--------|--------|
| 비상용 스위치 | 1단 스위치 | 2단 스위치 |
| | | |

| | | | |
|---------------------------|----------|--------------|----------|
| TITLE | | SHEET | |
| HOIST SWITCH | | 1/1 | |
| HY-P1024SBBB | | REVISION NO | |
| 6 POINT | | 0 | |
| DRAWING | CHECKED | REVIEWED | APPROVED |
| KIM.H.J | WOO.S.W | | Y.K |
| 20.03.16 | 20.03.16 | | 20.03.16 |
| | | DRAWING NO | |
| | | HY-P1026SBBB | |
| DAESAN INOTEC INC. | | | |



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 |
|---------|-------|---------------|
| JDLS-70 | J-2 | 12-AV2BJ-0008 |

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



FEC CHAIN

CORPORATION

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

337 KANAORI-CHO ,MINAMI-KU, HAMAMATSU CITY,

SHIZUOKA PREF.,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 checked="" type="checkbox"/> FEC standard, <input type="checkbox"/> coustermer's request → DAT, JPN , (Lot 1S), FEC8 | | |
| Product code#: | FCD05015 | Result | |
| description: | φ5.0*P15 | | |
| quality type | G80/ type-DAT | | |
| Dimention: | | | |
| Nominal diameter(dn) | [mm] | 5.0+0.2/-0.2 | Good |
| Internal width,min.: | [mm] | 6.2 | Good |
| external width, max.: | [mm] | 17.5 | Good |
| Nominal pitch 1 t | [mm] | 15.0+0.29/-0 | Good |
| 5 t | [mm] | | - |
| 11 t | [mm] | 165.0+0.78/-0 | Good |
| Diameter at the weld(ds), max.: | [mm] | 5.6 | Good |
| Mechanical properties: | | | |
| Working load limit(WLL), max.: | [kg] | 630 | - |
| (drive mechanism group:) | | - | - |
| Manufacturing proof force(MPF), min.: | [KN] | 20 | Good |
| Stress at min. MPF | | - | - |
| Guranteed breaking force(BF), min.: | [KN] | 31.5 | 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] | 0.15 | Good |
| Bend deflection(f),min.: | [mm] | - | - |
| Fatigue resistance, min.: | [cycle] | - | - |
| Packing: | | | |
| Weight per meter: | [kg/m] | | |
| Length 1 | [meter] | 10m-1pc | |
| 2 | [meter] | - | |
| Packing | - | Cardboard box | |
| I hereby certify above all is true. | | <i>M. Miwa</i> MASAKI MIWA Quality Assurance Dept., Chief Inspector | |
| issued date: | April 19,2018 | | |
| [Note] | | | |

TECHNICAL DATA

| | |
|---|--------------------------|
| 1. SERVICE | HOISTING |
| 2. MANUFACTURE | DAESAN INOTEC INC. |
| 3. MOTOR MODEL NO. | EDL - 500KG - 220 |
| 4. RATED POWER | 0.75 KW x 4 P |
| 5. RATED VOLTAGE AND FREQUENCY | 3Ø 220V 60HZ |
| 6. MOTOR TYPE | SQUIRREL CAGE ROTOR YPE |
| 7. RATING | 30 MIN |
| 8. LOCATION | IN-DOOR , OUT-DOOR |
| 9. INSULATION CLASS | F |
| 10. DESIGN TEMPERATURE RISE (BY RESISTANCE) | 80°C |
| 11. FULL LOAD SPEED | 1660 RPM |
| 12. FULL LOAD CURRENT | 5.7 A |
| 13. STARTING CURRENT AT RATED VOLTAGE | 16.2 A |
| 14. MINIMUM STATING VOLTAGE | 198 V |
| 15. EFFICIENCY AT 100% RAGED LOAD | 70.2% |
| 16. POWER FACTOR AT 100% RATED LOAD | 56.0% |
| 17. STARTING TORQUE | 269% |
| 18. TYPE OF ENCLOSURE | 전폐형 |
| 19. TYPE OF BEARING | PL : 6005DD OPL : 6206ZZ |
| 20. MOUNTING | VERTICAL |
| 21. MAXIMUM AMBIENT TEMPERATURE | 40°C |
| 22. BEARING LUBRICATION | GREASE |
| 23. STARTING METHOD | FULL VOLTAGE |

TECHNICAL DATA

| | |
|---|--------------------------|
| 1. SERVICE | HOISTING |
| 2. MANUFACTURE | DAESAN INOTEC INC. |
| 3. MOTOR MODEL NO. | EDL - 500KG - 380 |
| 4. RATED POWER | 0.75 KW x 4 P |
| 5. RATED VOLTAGE AND FREQUENCY | 3Ø 380V 60HZ |
| 6. MOTOR TYPE | SQUIRREL CAGE ROTOR YPE |
| 7. RATING | 30 MIN |
| 8. LOCATION | IN-DOOR , OUT-DOOR |
| 9. INSULATION CLASS | F |
| 10. DESIGN TEMPERATURE RISE (BY RESISTANCE) | 80°C |
| 11. FULL LOAD SPEED | 1660 RPM |
| 12. FULL LOAD CURRENT | 3.0 A |
| 13. STARTING CURRENT AT RATED VOLTAGE | 8.57 A |
| 14. MINIMUM STATING VOLTAGE | 342 V |
| 15. EFFICIENCY AT 100% RAGED LOAD | 70.2% |
| 16. POWER FACTOR AT 100% RATED LOAD | 59.0% |
| 17. STARTING TORQUE | 265% |
| 18. TYPE OF ENCLOSURE | 전폐형 |
| 19. TYPE OF BEARING | PL : 6005DD OPL : 6206ZZ |
| 20. MOUNTING | VERTICAL |
| 21. MAXIMUM AMBIENT TEMPERATURE | 40°C |
| 22. BEARING LUBRICATION | GREASE |
| 23. STARTING METHOD | FULL VOLTAGE |

TECHNICAL DATA

| | |
|---|--------------------------|
| 1. SERVICE | HOISTING |
| 2. MANUFACTURE | DAESAN INOTEC INC. |
| 3. MOTOR MODEL NO. | EDL - 500KG - 440 |
| 4. RATED POWER | 0.75 KW x 4 P |
| 5. RATED VOLTAGE AND FREQUENCY | 3Ø 440V 60HZ |
| 6. MOTOR TYPE | SQUIRREL CAGE ROTOR YPE |
| 7. RATING | 30 MIN |
| 8. LOCATION | IN-DOOR , OUT-DOOR |
| 9. INSULATION CLASS | F |
| 10. DESIGN TEMPERATURE RISE (BY RESISTANCE) | 80°C |
| 11. FULL LOAD SPEED | 1660 RPM |
| 12. FULL LOAD CURRENT | 2.7 A |
| 13. STARTING CURRENT AT RATED VOLTAGE | 7.7 A |
| 14. MINIMUM STATING VOLTAGE | 396 V |
| 15. EFFICIENCY AT 100% RAGED LOAD | 70.2% |
| 16. POWER FACTOR AT 100% RATED LOAD | 59.0% |
| 17. STARTING TORQUE | 265% |
| 18. TYPE OF ENCLOSURE | 전폐형 |
| 19. TYPE OF BEARING | PL : 6005DD OPL : 6206ZZ |
| 20. MOUNTING | VERTICAL |
| 21. MAXIMUM AMBIENT TEMPERATURE | 40°C |
| 22. BEARING LUBRICATION | GREASE |
| 23. STARTING METHOD | FULL VOLTAGE |

TECHNICAL DATA

| | |
|---|--------------------------|
| 1. SERVICE | HOISTING |
| 2. MANUFACTURE | DAESAN INOTEC INC. |
| 3. MOTOR MODEL NO. | EDL - 500KG - 460 |
| 4. RATED POWER | 0.75 KW x 4 P |
| 5. RATED VOLTAGE AND FREQUENCY | 3Ø 460V 60HZ |
| 6. MOTOR TYPE | SQUIRREL CAGE ROTOR YPE |
| 7. RATING | 30 MIN |
| 8. LOCATION | IN-DOOR , OUT-DOOR |
| 9. INSULATION CLASS | F |
| 10. DESIGN TEMPERATURE RISE (BY RESISTANCE) | 80°C |
| 11. FULL LOAD SPEED | 1660 RPM |
| 12. FULL LOAD CURRENT | 2.5 A |
| 13. STARTING CURRENT AT RATED VOLTAGE | 7.13 A |
| 14. MINIMUM STATING VOLTAGE | 414 V |
| 15. EFFICIENCY AT 100% RAGED LOAD | 70.2% |
| 16. POWER FACTOR AT 100% RATED LOAD | 59.0% |
| 17. STARTING TORQUE | 265% |
| 18. TYPE OF ENCLOSURE | 전폐형 |
| 19. TYPE OF BEARING | PL : 6005DD OPL : 6206ZZ |
| 20. MOUNTING | VERTICAL |
| 21. MAXIMUM AMBIENT TEMPERATURE | 40°C |
| 22. BEARING LUBRICATION | GREASE |
| 23. STARTING METHOD | FULL VOLTAGE |

TECHNICAL DATA

| | |
|---|--------------------------|
| 1. SERVICE | HOISTING |
| 2. MANUFACTURE | DAESAN INOTEC INC. |
| 3. MOTOR MODEL NO. | EDL - 500KG - 480 |
| 4. RATED POWER | 0.75 KW x 4 P |
| 5. RATED VOLTAGE AND FREQUENCY | 3Ø 480V 60HZ |
| 6. MOTOR TYPE | SQUIRREL CAGE ROTOR YPE |
| 7. RATING | 30 MIN |
| 8. LOCATION | IN-DOOR , OUT-DOOR |
| 9. INSULATION CLASS | F |
| 10. DESIGN TEMPERATURE RISE (BY RESISTANCE) | 80°C |
| 11. FULL LOAD SPEED | 1660 RPM |
| 12. FULL LOAD CURRENT | 2.3 A |
| 13. STARTING CURRENT AT RATED VOLTAGE | 6.56 A |
| 14. MINIMUM STATING VOLTAGE | 432 V |
| 15. EFFICIENCY AT 100% RAGED LOAD | 70.2% |
| 16. POWER FACTOR AT 100% RATED LOAD | 59.0% |
| 17. STARTING TORQUE | 265% |
| 18. TYPE OF ENCLOSURE | 전폐형 |
| 19. TYPE OF BEARING | PL : 6005DD OPL : 6206ZZ |
| 20. MOUNTING | VERTICAL |
| 21. MAXIMUM AMBIENT TEMPERATURE | 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. | EDLM - 500 - 220 |
| 4. RATED POWER | 0.4 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 | F |
| 10. DESING TEMPERATURE RISE (BY RESISTANCE) | 100°C |
| 11. FULL LOAD SPEED | 1750 RPM |
| 12. FULL LOAD CURRENT | 3.0 A |
| 13. STARTING CURRENT AT RATED VOLTAGE | 12.1 A |
| 14. MINIMUM STATING VOLTAGE | 198V |
| 15. EFFICIENCY AT 100% RAGED LOAD | 64.8% |
| 16. POWER FACTOR AT 100% RATED LOAD | 57.0% |
| 17. STARTING TORQUE | 195% |
| 18. TYPE OF ENCLOSURE | 전폐형 |
| 19. TYPE OF BEARING | PL : 6005DD OPL : 6206ZZ |
| 20. MOUNTING | VERTICAL |
| 21. MAXIMUM AMBIENT TEMPERATURE | 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. | EDLM - 500 - 380 |
| 4. RATED POWER | 0.4 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 | F |
| 10. DESING TEMPERATURE RISE (BY RESISTANCE) | 100°C |
| 11. FULL LOAD SPEED | 1750 RPM |
| 12. FULL LOAD CURRENT | 1.8 A |
| 13. STARTING CURRENT AT RATED VOLTAGE | 7.5 A |
| 14. MINIMUM STATING VOLTAGE | 342V |
| 15. EFFICIENCY AT 100% RAGED LOAD | 64.8% |
| 16. POWER FACTOR AT 100% RATED LOAD | 57.0% |
| 17. STARTING TORQUE | 195% |
| 18. TYPE OF ENCLOSURE | 전폐형 |
| 19. TYPE OF BEARING | PL : 6005DD OPL : 6206ZZ |
| 20. MOUNTING | VERTICAL |
| 21. MAXIMUM AMBIENT TEMPERATURE | 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. | EDLM - 500 - 440 |
| 4. RATED POWER | 0.4 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 | F |
| 10. DESING TEMPERATURE RISE (BY RESISTANCE) | 100°C |
| 11. FULL LOAD SPEED | 1750 RPM |
| 12. FULL LOAD CURRENT | 1.6 A |
| 13. STARTING CURRENT AT RATED VOLTAGE | 6.5 A |
| 14. MINIMUM STATING VOLTAGE | 396V |
| 15. EFFICIENCY AT 100% RAGED LOAD | 64.8% |
| 16. POWER FACTOR AT 100% RATED LOAD | 57.0% |
| 17. STARTING TORQUE | 195% |
| 18. TYPE OF ENCLOSURE | 전폐형 |
| 19. TYPE OF BEARING | PL : 6005DD OPL : 6206ZZ |
| 20. MOUNTING | VERTICAL |
| 21. MAXIMUM AMBIENT TEMPERATURE | 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. | EDLM - 500 - 460 |
| 4. RATED POWER | 0.4 KW x 4 P |
| 5. RATED VOLTAGE AND FREQUENCY | 460 V 60 HZ |
| 6. MOTOR TYPE | SQUIRREL CAGE ROTOR YPE |
| 7. RATING | 30 MIN |
| 8. LOCATION | IN-DOOR |
| 9. INSULATION CLASS | F |
| 10. DESING TEMPERATURE RISE (BY RESISTANCE) | 100°C |
| 11. FULL LOAD SPEED | 1750 RPM |
| 12. FULL LOAD CURRENT | 1.5 A |
| 13. STARTING CURRENT AT RATED VOLTAGE | 6.3 A |
| 14. MINIMUM STATING VOLTAGE | 414V |
| 15. EFFICIENCY AT 100% RAGED LOAD | 64.8% |
| 16. POWER FACTOR AT 100% RATED LOAD | 57.0% |
| 17. STARTING TORQUE | 195% |
| 18. TYPE OF ENCLOSURE | 전폐형 |
| 19. TYPE OF BEARING | PL : 6005DD OPL : 6206ZZ |
| 20. MOUNTING | VERTICAL |
| 21. MAXIMUM AMBIENT TEMPERATURE | 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. | EDLM - 500 - 480 |
| 4. RATED POWER | 0.4 KW x 4 P |
| 5. RATED VOLTAGE AND FREQUENCY | 480 V 60 HZ |
| 6. MOTOR TYPE | SQUIRREL CAGE ROTOR YPE |
| 7. RATING | 30 MIN |
| 8. LOCATION | IN-DOOR |
| 9. INSULATION CLASS | F |
| 10. DESING TEMPERATURE RISE (BY RESISTANCE) | 100°C |
| 11. FULL LOAD SPEED | 1750 RPM |
| 12. FULL LOAD CURRENT | 1.4 A |
| 13. STARTING CURRENT AT RATED VOLTAGE | 6.0 A |
| 14. MINIMUM STATING VOLTAGE | 432V |
| 15. EFFICIENCY AT 100% RAGED LOAD | 64.8% |
| 16. POWER FACTOR AT 100% RATED LOAD | 57.0% |
| 17. STARTING TORQUE | 195% |
| 18. TYPE OF ENCLOSURE | 전폐형 |
| 19. TYPE OF BEARING | PL : 6005DD OPL : 6206ZZ |
| 20. MOUNTING | VERTICAL |
| 21. MAXIMUM AMBIENT TEMPERATURE | 40°C |
| 22. BEARING LUBRICATION | GREASE |
| 23. STARTING METHOD | FULL VOLTAGE |