HD HYUNDAI ELECTRIC

Essential for Today
Potential for Tomorrow

Customer :
Project Name :
Project No. :
Revision No. :

SPECIFICATION
for
INDUCTION MOTOR

0		For Bidding			
No.	DATE	DESCRIPTION	PREPARED BY	CHECKED BY	APPROVED BY

AC INDUCTION MOTOR DATA SHEET
IEEE841 TYPE

Catalog No.	IEEE20-18-256T	Item No.		Rev. No.	[ ]
Project Name		Project No.		Quantity	sets

GENERAL SPECIFICATION

Frame Size		256T
Type		PJP
Enclosure(Protection)		Totally Enclosed / IP55
Method of Cooling		IC411(FC)
Rated Frequency		60 Hz
Number of Phases		3
Insulation Class		F
Temp. Rise at full load (by resistance method)		
	at 1.0 S.F	80 deg. C
Motor Location		☐ Indoor ☐ Outdoor
Altitude		Less than 1,000 meter
Relative Humidity		Less than 80 %
Ambient Temp.		40 deg. C (Max.)
Duty Type		Continuous (S1)
Service Factor		1.15
Mounting		B3
Bearing	Type	Anti-Friction
	DE/N-DE	6309ZC3 / 6309ZC3
	Lubricant	Grease(Polyrex-EM)
External Thrust		Not applicable
Coupling Method		☑ Direct ☐ V-belt
Shaft Extension		Single
Terminal Box	Main	Cast Iron
	Aux.	No
	Location	Refer to Outline Drawing
Application		
Area classification		Hazardous
Type of Ex-Protection		Class I&II, Division 2
Applicable Standard		IEEE841, NEMA MG1, CSA C390

ACCESSORIES

SPARE PARTS

PERFORMANCE DATA

Rated Output		15 kW		20 HP
Number of Poles		4		
Rotor Type		Squirrel Cage		
Starting Method*		D.O.L		
Rated Voltage		575 V	460 V	230 V
Current	Full Load	19.9 A	24.8 A	49.7 A
	Locked-rotor**	800 %	800 %	800 %
Efficiency				
	50% Load	90.0 %		
	75% Load	92.0 %		
	100% Load	93.0 %		
Power Factor(p.u)				
	50% Load	0.665		
	75% Load	0.765		
	100% Load	0.815		
Speed at Full Load		1775 r.p.m		
Torque				
	Full Load	59.53 lb.ft		
	Locked-rotor**	200 %		
	Breakdown**	240 %		
Moment of Inertia (J)				
	Load(Max.)	122.210 lb.ft2		
	Motor	2.635 lb.ft2		
Sound Pressure Level (No-load & mean value at 1m from motor)		74 dB(A)		
Vibration		2.03 mm/sec (peak)		
Permissible number of consecutive starts		Cold 3 times		
		Hot 2 times		
Paint	Munsell No.	7.5BG6/1.5		

SUBMITTAL DRAWING

Outline Dimension Drawing	\ Motor Weight(Approx.)	
B3	LM-I1256B3PL001	300 lb.

REMARK

1. Premium efficiency according to NEMA MG1
2. Inverter Duty @ 1.0 Service Factor & F Temperature rise
   -. 10:1 VT (20:1 VT at 50% load)
   -. 10:1 CT (1 hour duty, 4:1 continuous)
   -. CHP up to 1.5 times base speed, NEMA MG1 Part31
3. CSA Certification
   -. Class I, Division 2, Group A, B, C & D
   -. Class II, Division 2 Group E, F & G (Group E : up to 320Fr.)
4. Service Factor 1.15 and Temperature rise B are applicable under the condition of sine wave power.
5. Service Factor 1.25 is applicable to motors of 100HP or less with temperature rise F & Non-Hazardous.
6. Temp. code : T3C(160°C) at sine wave

Date	DSND	CHKD	CHKD	APPD
2025-07-22	S.H. LEE	I.K. KIM	R.G. KIM	S.W. KIM

[Note] Others not mentioned in this data sheet shall be in accordance with maker standard.
Above technical data are only design values and shall be guaranteed with tolerance of applicable standard.
Inspection and performance test shall be done according to maker standard, if not mentioned.

* In case of Inverter-Fed Motor, performance data is based on sine wave tests. It may be different from test data of Inverter combined motor.

** Data is based on rated voltage & frequency and is expressed as a percentage of full-load value.

HD HYUNDAI ELECTRIC

본 도면은 HD현대일렉트릭(주) 재산이며 허가없이 복사할 수 없음 (취급유의)

THIS DRAWING IS PROPRIETARY TO HYUNDAI ELECTRIC. NO PART OF THIS DRAWING MAYBE REPRODUCED WITHOUT THE PERMISSION OF HYUNDAI ELECTRIC.

REV	DATE	CONTENTS	REVD BY	CHKD BY	CHKD BY	APPD BY

▣ MAIN NAMEPLATE

4.72

2.36

CROWN TRITON
Premium Efficiency AC 3 Phase Motor
C US Energy Verified
CC038A

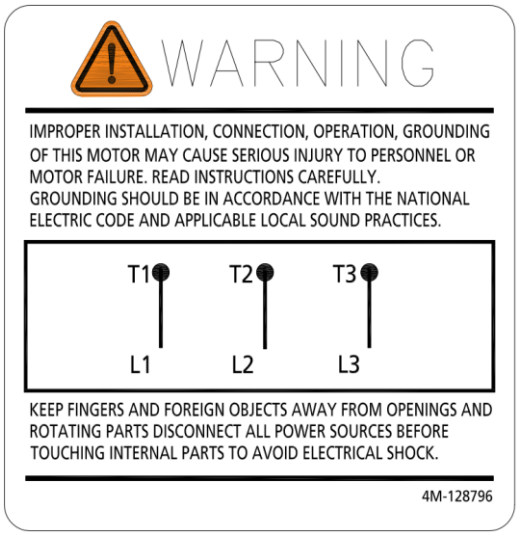
20HP	4P	460V		Cat. No.	IEEE20-18-256T		
Model	HLS256SR238			INS. Class	F HD-F1	Amps	24.8A
Type	HLS	Duty	CONT	Code J	Amb. 40°C	Hertz	60Hz
Frame	256T	Encl.	TEFC	S.F. 1.15	RPM 1775	NEMA Nom. Eff.	93.0%
Bearing	Drive 6309ZC3			S.F.1.00 (10:1 C.T., 20:1 V.T., NEMA-MG1 Part31)		3/4 Eff.	92.0%
	Opp. 6309ZC3					NEMA Design	B Torque
Usable at	50Hz 20HP 380V 33.6A 1470rpm S.F.: 1.15 Eff.: 91.0% Code: H						
	50Hz 20HP 400/415V 33.0/33.0A 1470/1475rpm S.F.: 1.15 Eff.: 91.0/91.0% Code: J/K						

CSA Certified for	Model LATER		Type PJP	Temp. Code (sine wave)	Frame	140~320FR	360~400FR	440FR
	CLASS I, Div. 2, Gr. A, B, C & D	CLASS II, Div. 2, Gr. E, F & G			Amb. 40°C	T3C (160°C)	T3B (165°C)	T3A (180°C)
	CLASS I, Zone 2, Gr. IIA, IIB, & IIC	(Gr. E : Up to 320FR)			Amb. 55°C	T3A (180°C)	T3A (180°C)	T3 (200°C)

No.	-	Date	-	Weight	300 lb

IEEE Std 841-2021 **MARINE DUTY IEEE45**
4M-135701 Made in Korea H1
HD HYUNDAI ELECTRIC

▣ WIRING DIAGRAM

D.O.L (INVERTER & SOFT STARTER)	WYE-DELTA (Y-D)
	N/A

APPD BY	S.Y.KIM	UNIT	INCH
CHKD BY	I.K.KIM	SCALE	NONE
CHKD BY	R.G.KIM	PROJEC'N	3rd Angle
DSND BY	S.H.LEE	DATE	2024.06.07

HD HYUNDAI ELECTRIC

SUBJECT	CSA Class I, Division2 IEEE841 (HL, 254-449)		DWG SIZE A4 (1:1)
TITLE	NAMEPLATE DRAWING		
REF. NO	4M-135701 / 4M-128796	Sheet No.	of
DWG NO	NP-IEEE20-18-256T	Revision No.	0

HYUNDAI ELECTRIC

PERFORMANCE CURVE

CURVE NO.

PC-IEEE20-18-256T

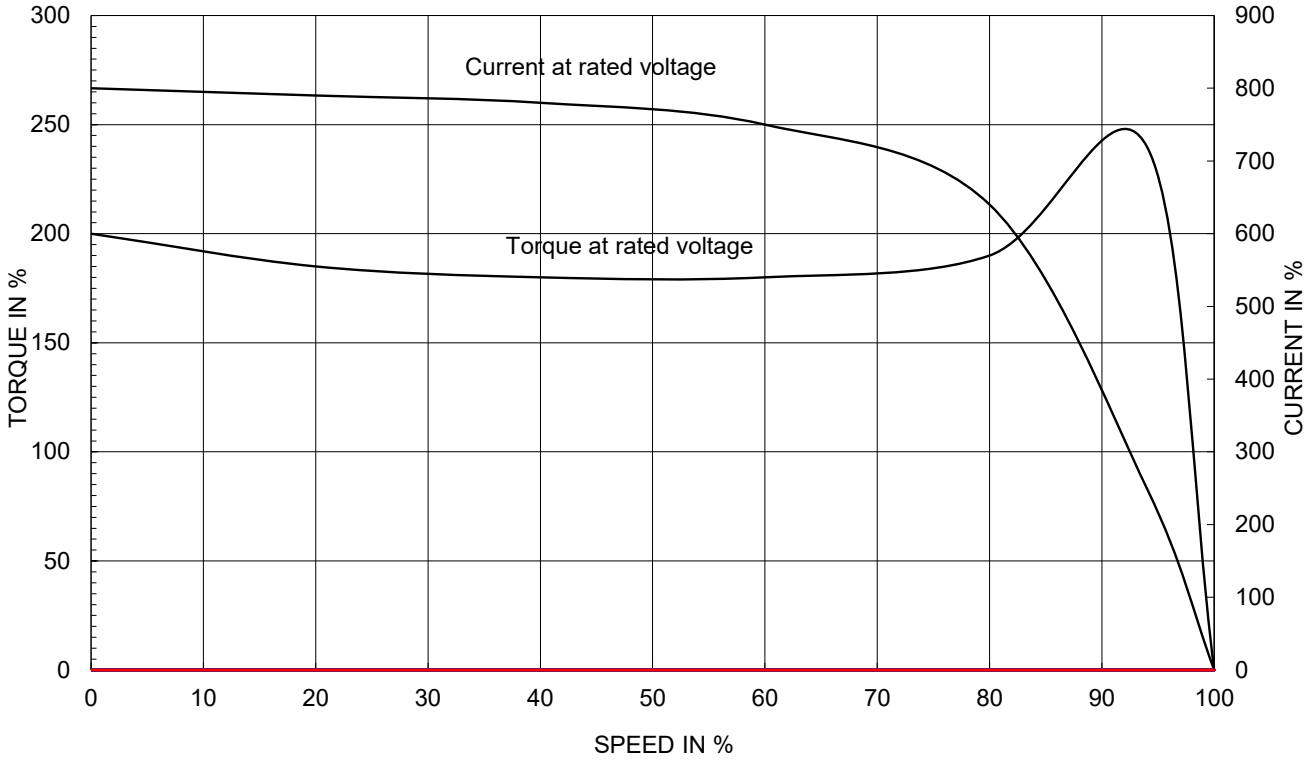
Type :	PJP	
Full Load Torque :	59.53	lb.ft
Load moment of Inertia (J) :	122.210	lb.ft2
Motor moment of Inertia (J) :	2.635	lb.ft2

15kW 20HP 4 P 60 Hz

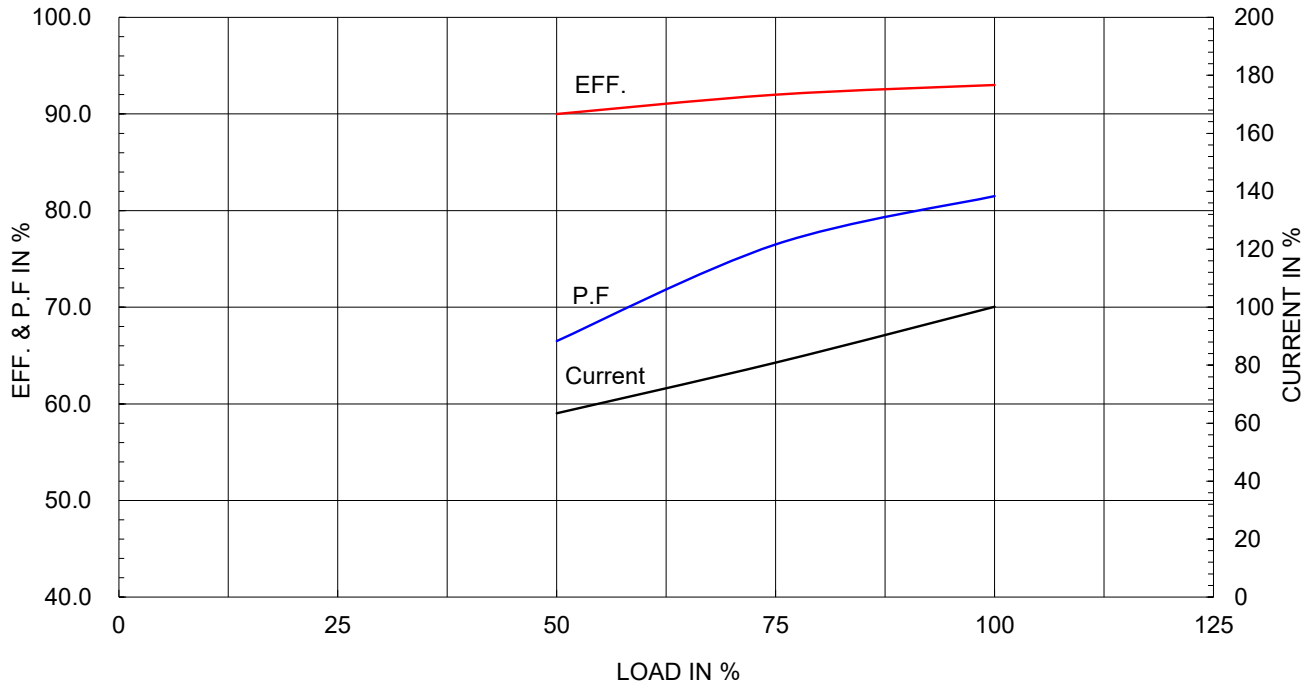
Speed at Full Load : 1775 RPM

Rated Voltage	575V	460V	230V
Full Load Current	19.9A	24.8A	49.7A

SPEED VS TORQUE & CURRENT CURVE



OUTPUT VS EFF., P.F & CURRENT CURVE



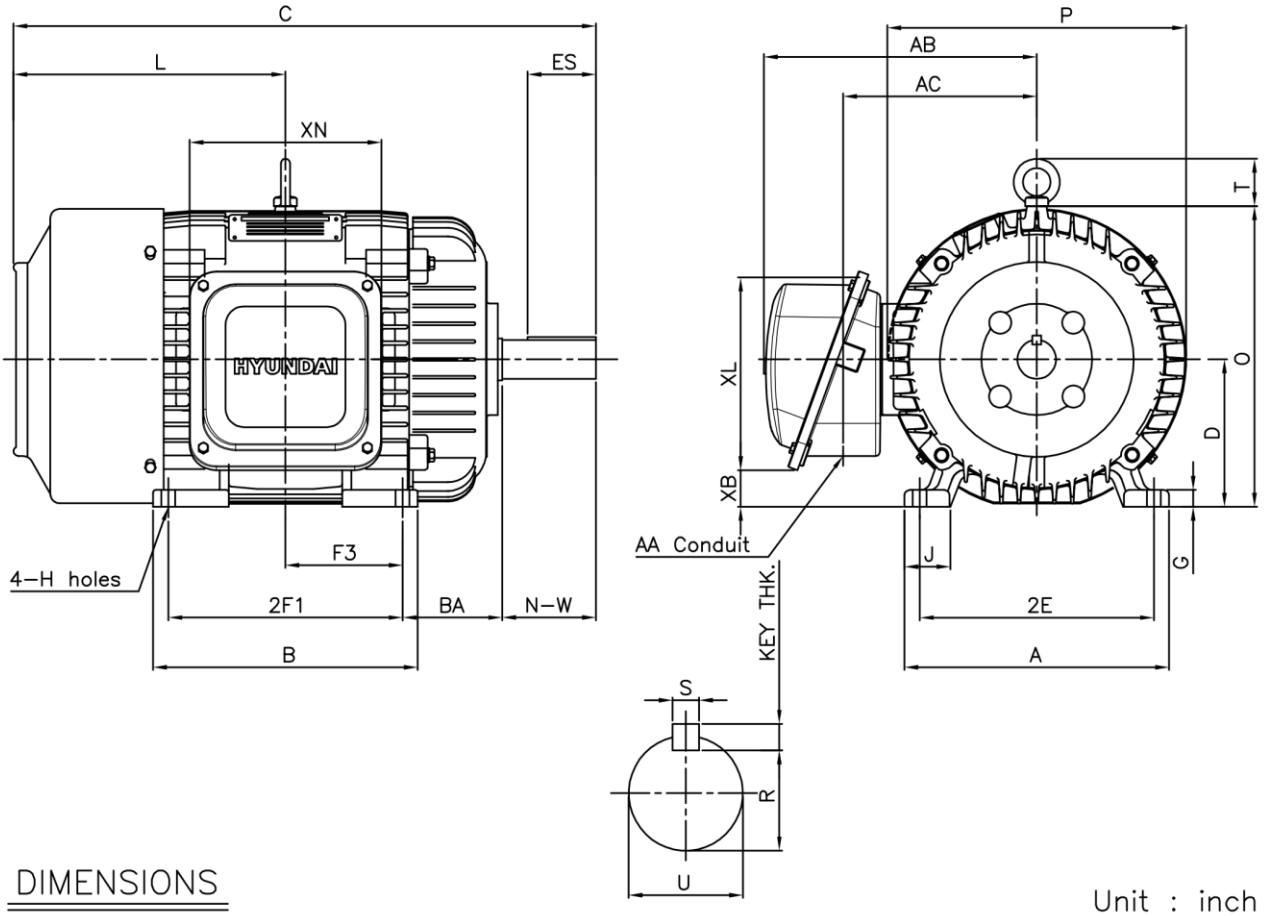
HD HYUNDAI ELECTRIC

본 도면은 HD현대일렉트릭(주) 재산이며
허가없이 복사할 수 없음 (취급유의)

THIS DRAWING IS PROPRIETARY TO HYUNDAI ELECTRIC. NO PART OF THIS DRAWING
MAYBE REPRODUCED WITHOUT THE PERMISSION OF HYUNDAI ELECTRIC.

▽	50S	REV	DATE	CONTENTS	REVD BY	CHKD BY	CHKD BY	APPD BY
▽▽	12.5S							
▽▽▽	3.2S							
▽▽▽▽	0.4S							

IEEE841



DIMENSIONS

Unit : inch

MOUNTING									CONDUIT BOX						APPROX. WGT.(LB)
A	B	2E	2F1	2F2	F3	G	J	H	AA	AB	AC	XB	XL	XN	
11.30	11.30	10.00	10.00	–	5.00	0.72	1.93	0.53	1.25	11.85	8.46	2.64	8.43	8.19	300

OVERALL							SHAFT					KEY THK.	BEARING	
BA	C	D	L	O	P	T	U	N–W	KEYWAY				DRIVE END	OPP. DRIVE END
									R	ES	S			
4.25	24.93	6.25	11.68	12.75	12.76	2.01	1.625	4.00	1.416	2.91	0.375	0.375	6309ZC3	6309ZC3

NOTE

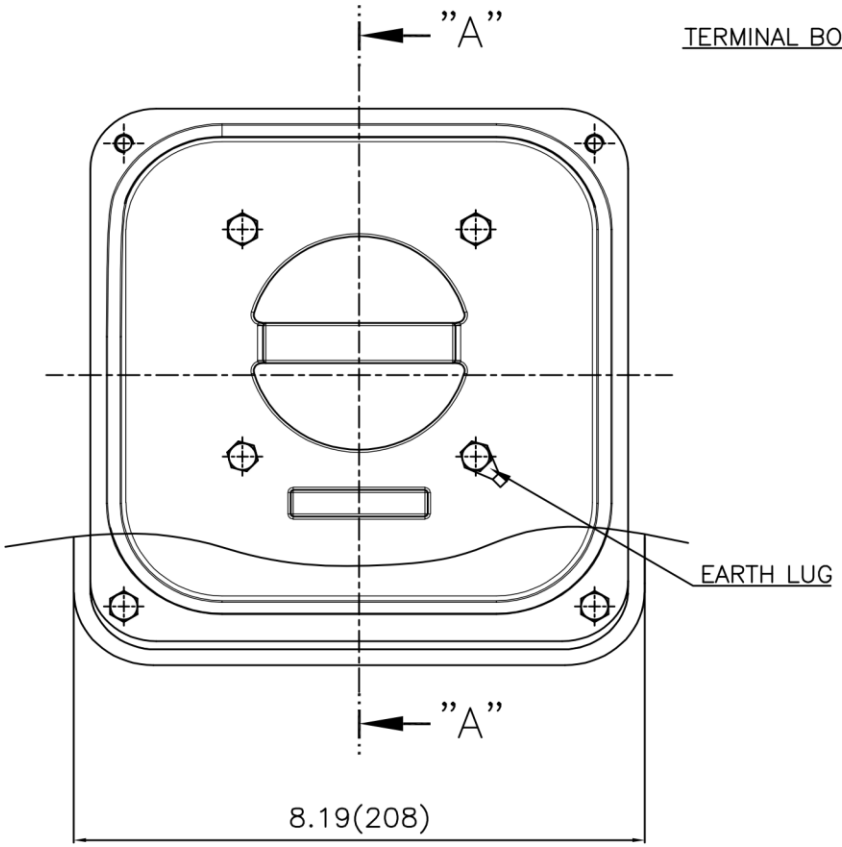
1.Dimension "D" tolerance : +0.00inch – 0.03inch
2.Dimension "U" tolerance : +0.000inch – 0.001inch
3.Dimension "R" tolerance : +0.000inch – 0.015inch

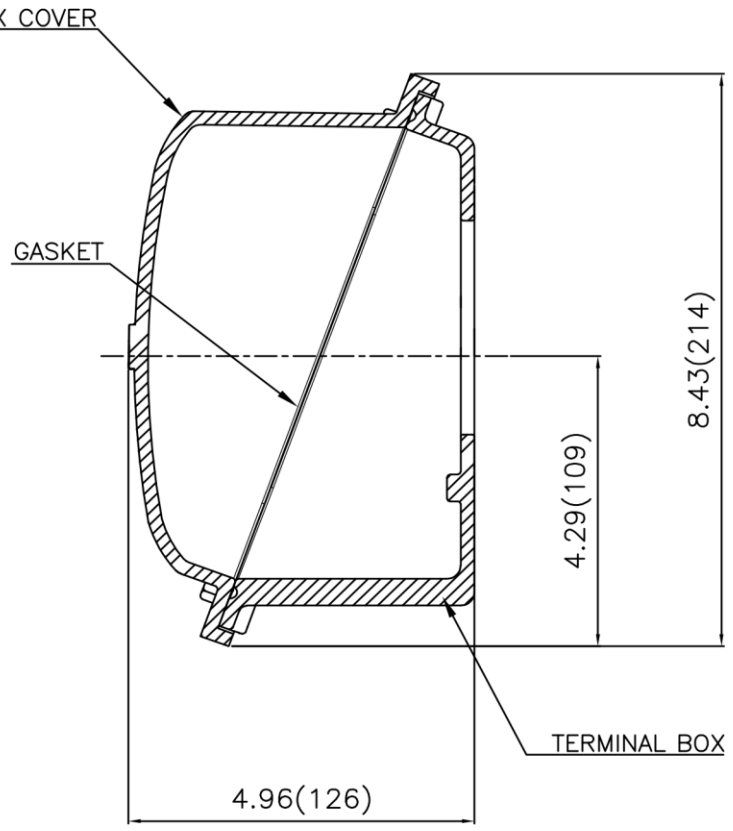
APPD BY	S.Y.KIM	UNIT	INCH
CHKD BY	R.G.KIM	SCALE	NONE
CHKD BY	Y.H.BAE	PROJEC'N	3각법(3rd Angle)
DSND BY	H.K.LEE	DATE	2021-04-30

SUBJECT	NEMA 256T		DWG SIZE A4 (1:1)
TITLE	OUTLINE		
REF. NO	350A8108AA	Sheet No.	of
DWG NO	LM-I1256B3PL001	Revision No.	0

HD HYUNDAI ELECTRIC

Cls. I&II, Div. 2
IEEE 841





SEC. "A"–"A"

본 도면은 HD현대일렉트릭(주) 재산이며 허가없이 복사할 수 없음 (취급유의)

THIS DRAWING IS PROPRIETARY TO HYUNDAI ELECTRIC. NO PART OF THIS DRAWING MAYBE REPRODUCED WITHOUT THE PERMISSION OF HYUNDAI ELECTRIC.

▽	50S
▽▽	12.5S
▽▽▽	3.2S
▽▽▽▽	0.4S

REV	DATE	CONTENTS	REVD BY	CHKD BY	CHKD BY	APPD BY

일반가공공차		일반제관공차	
1–4	±0.1	6–30	±0.5
4–18	±0.2	30–120	±0.8
18–63	±0.3	120–315	±1.2
63–250	±0.5	315–1000	±2.0
250–	±0.8	1000–	±3.0

Q'TY	DESCRIPTION	MATERIAL	DIMENSION	WEIGHT	PART NO.	REMARK	NO.

APPD BY	S.Y.KIM	UNIT	inch(mm)	SUBJECT	FR. 250–280 (CAST IRON)
CHKD BY		SCALE	1/2		
CHKD BY	R.G.KIM	PROJEC'N	3rd Angle	TITLE	TERMINAL BOX ASS'Y
DSND BY	배슬희	DATE	2023–10–19	REF. NO	
				DWG NO	3M–248458

DWG SIZE: A3 (1:2)

Sheet No. of

Revision No. 0