

Customer :

Project Name :

Project No. :

Revision No. :

SPECIFICATION for INDUCTION MOTOR



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

www.hd-hyundaelectric.com

AC INDUCTION MOTOR DATA SHEET

Catalog No.	HES20-12-284/6JM	Item No.		Rev. No.	[]
Project Name		Project No.		Quantity	sets

GENERAL SPECIFICATION			PERFORMANCE DATA					
Frame Size		286JM		Rated Output		15 kW 20 HP		
Type		PJP		Number of Poles		6		
Enclosure(Protection)		Totally Enclosed / IP55		Rotor Type		Squirrel Cage		
Method of Cooling		IC411(FC)		Starting Method*		D.O.L		
Rated Frequency		60 Hz		Rated Voltage		575 V	460 V	230 V
Number of Phases		3		Current	Full Load	21.3 A	26.7 A	53.3 A
Insulation Class		F			Locked-rotor**	650 %	650 %	650 %
Temp. Rise at full load (by resistance method)				Efficiency				
	at 1.0 S.F	80 deg. C			50% Load	88.7 %		
Motor Location		☐ Indoor ☐ Outdoor			75% Load	90.7 %		
Altitude		Less than 1,000 meter			100% Load	91.7 %		
Relative Humidity		Less than 80 %		Power Factor(p.u)				
Ambient Temp.		40 deg. C (Max.)			50% Load	0.620		
Duty Type		Continuous (S1)			75% Load	0.720		
Service Factor		1.15			100% Load	0.770		
Mounting		B35		Speed at Full Load		1175 r.p.m		
Bearing	Type	Anti-Friction		Torque				
	DE/N-DE	6312ZC3 / 6310ZC3			Full Load	89.94 lb.ft		
	Lubricant	Grease(Polyrex-EM)			Locked-rotor**	150 %		
External Thrust		Not applicable			Breakdown**	230 %		
Coupling Method		☒ Direct ☐ V-belt		Moment of Inertia (J)				
Shaft Extension		Single			Load(Max.)	336.373 lb.ft2		
Terminal	Main	Cast Iron			Motor	6.100 lb.ft2		
Box	Aux.	No		Sound Pressure Level (No-load & mean value at 1m from motor)				
	Location	Refer to Outline Drawing				65 dB(A)		
Application				Vibration		3.8 mm/s (peak)		
Area classification		Hazardous		Permissible number of		Cold	3 times	
Type of Ex-Protection		Class I&II, Division 2		consecutive starts		Hot	2 times	
Applicable Standard		NEMA MG1, CSA C390		Paint	Munsell No.	4.0PB5.4/5.5(VL-451)		

ACCESSORIES		SUBMITTAL DRAWING					
		Outline Dimension Drawing \ Motor Weight(Approx.)					
		B35		LM-T2286C4MLV25	430 lb.		
		REMARK					
SPARE PARTS		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
		2025-09-19		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.

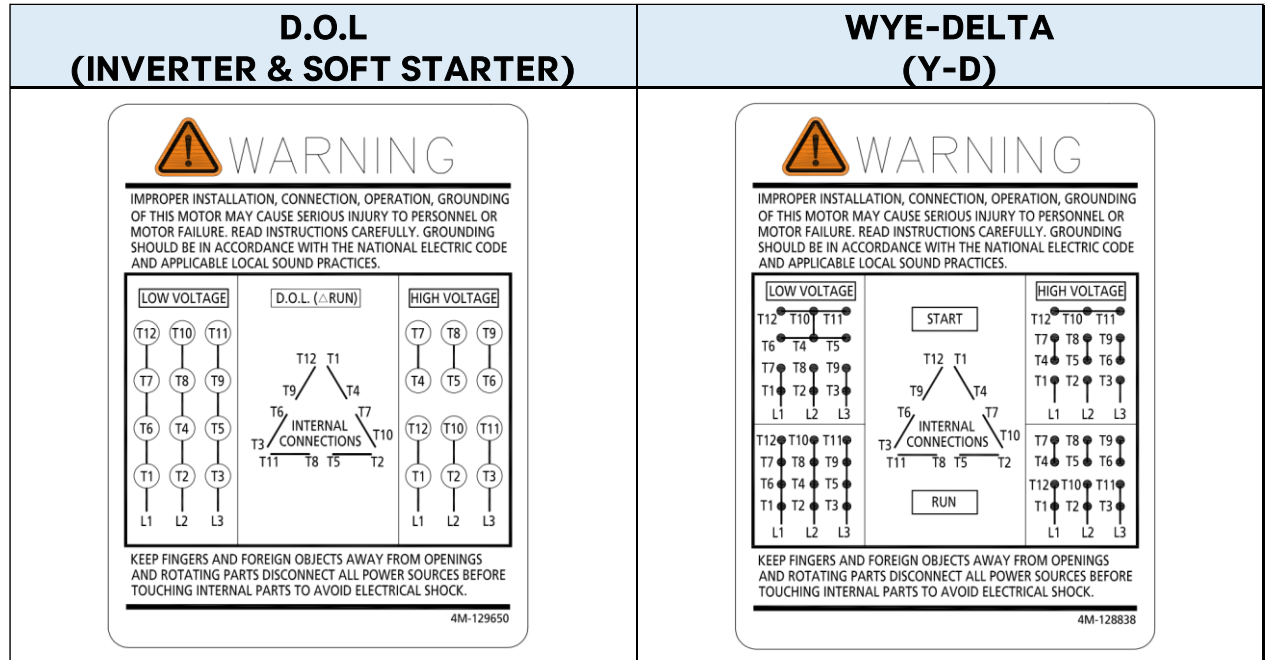
** Data is based on rated voltage & frequency and is expressed as a percentage of full-load value.

MAIN NAMEPLATE

4.72

CROWN TRITON G2									
Premium Efficiency AC 3 Phase Motor		C Energy Verified		US		CC038A			
20HP	6P	230/460V	Cat. No.	HES20-12-284/6JM					
Model	HLS286PR335V		INS. Class	F	HD-F1	Amps	53.3/26.7A		
Type	HLS	Duty	CONT	Code	H	Amb.	40°C	Hertz	60Hz
Frame	286JM	Encl.	TEFC	S.F.	1.15	RPM	1175	NEMA Nom. Eff.	91.7%
Bearing	Drive	6312ZC3		S.F.1.25 (When 100HP or less, Temp Rise F & Non-Hazardous)			3/4 Eff.	90.7%	
	Opp.	6310ZC3		S.F.1.00 (10:1 C.T., 20:1 V.T., NEMA-MG1 Part31)			NEMA Design	B Torque	
Usable at	50Hz 20HP 380V 34.4A 970rpm S.F.: 1.0 Eff.: 90.2% Code: G								
	50Hz 20HP 400/415V 34.0/34.3A 975/975rpm S.F.: 1.0 Eff.: 90.2/90.2% Code: H/J								
CSA Certified for	Model	-	Type	PJP	Temp. Code	Frame	140~320FR	360~400FR	440FR
	CLASS I, Div. 2, Gr. A, B, C & D		CLASS II, Div. 2 Gr. E, F & G (Gr. E: Up to 320FR)		(sine wave)	Amb. 40°C	T3C (160°C)	T3B (165°C)	T3A (180°C)
No.	-	Date	-	Weight	430 lb				
4M-137666 MARINE DUTY IEEE45			Made in Vietnam H4 Designed By HYUNDAI, Korea						

WIRING DIAGRAM



APPD BY	S.Y.KIM	UNIT	INCH	SUBJECT	CSA Class I, Division2 Severe Duty (HES, JM/JP, 254-326)	DWG SIZE
CHKD BY	I.K.KIM	SCALE	NONE	TITLE	NAMEPLATE DRAWING	A4 (1:1)
CHKD BY	R.G.KIM	PROJEC'N	3rd Angle			
DSND BY	S.H.LEE	DATE	2024.06.07			
				REF. NO	4M-137666 / 4M-129650	Sheet No. of
				DWG NO	NP-HES20-12-284/6JM	Revision No. 0

Type : PJP

15kW 20HP 6 P 60 Hz

Full Load Torque : 89.94 lb.ft

Speed at Full Load : 1175 RPM

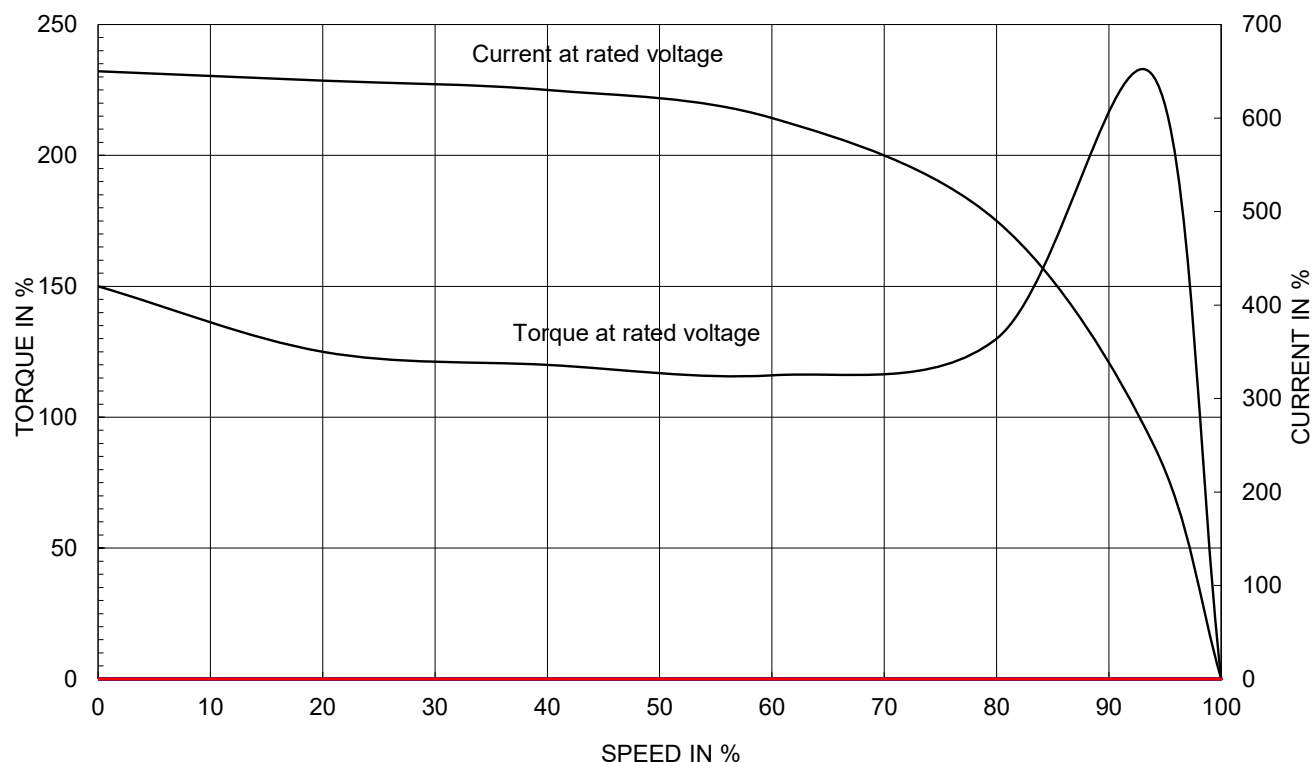
Load moment of Inertia (J) : 336.373 lb.ft²

Rated Voltage	575V	460V	230V
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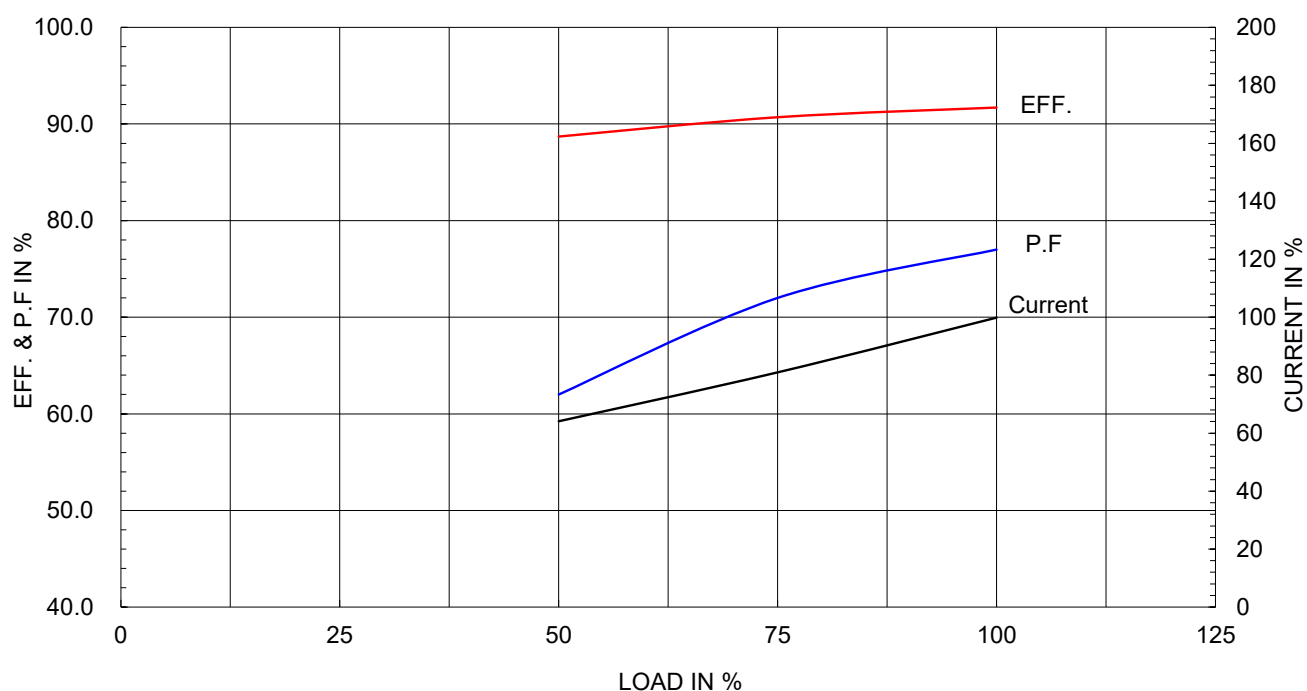
Motor moment of Inertia (J) : 6.100 lb.ft²

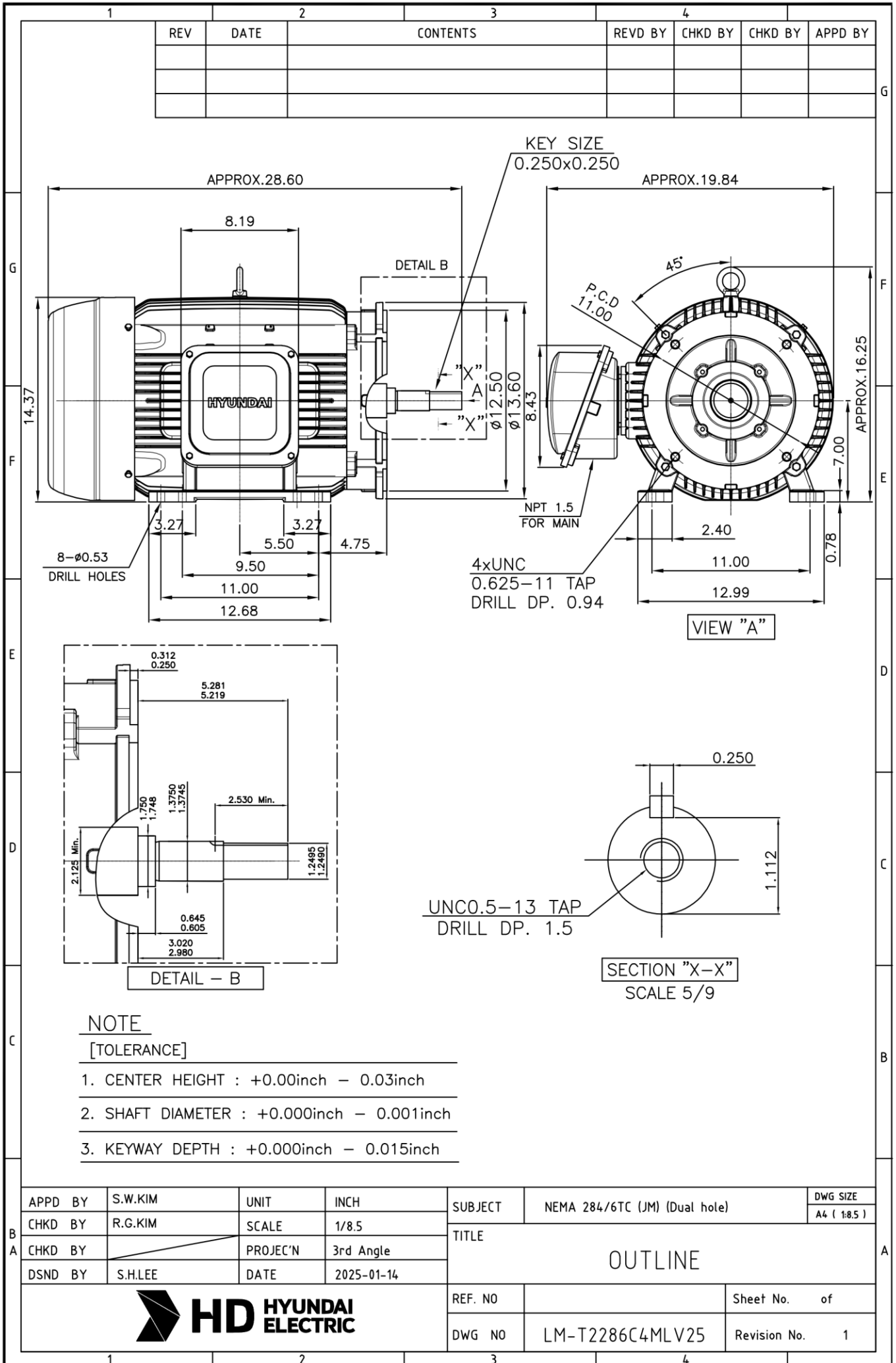
Full Load Current	21.3A	26.7A	53.3A
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SPEED VS TORQUE & CURRENT CURVE



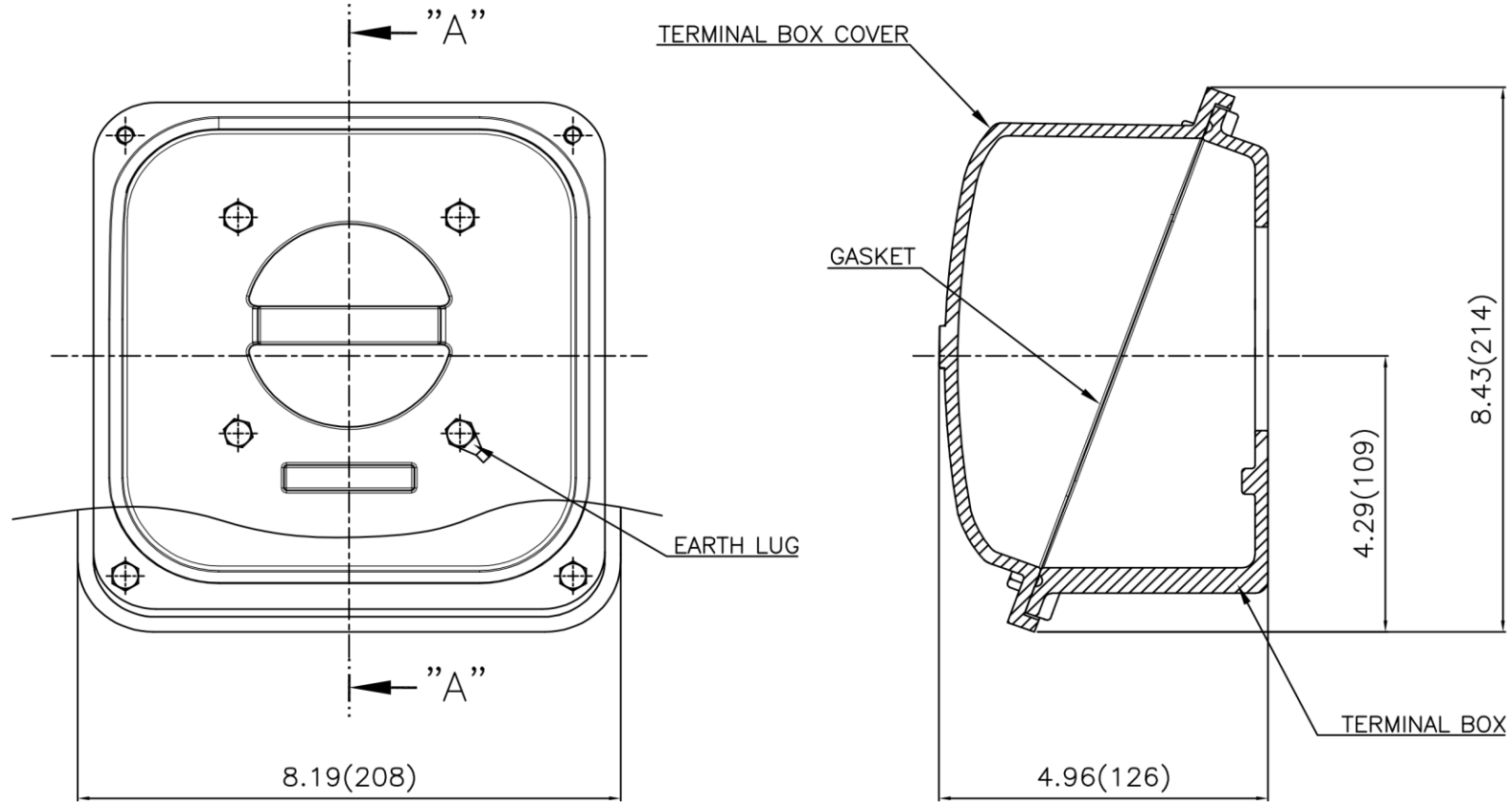
OUTPUT VS EFF., P.F & CURRENT CURVE





Cls. I&II, Div. 2

IEEE 841



SEC. "A"-"A"

▽	50S
▽▽	12.5S
▽▽▽	3.2S
▽▽▽▽	0.4S

REV	DATE	CONTENTS	REV'D BY	CHK'D BY	CHK'D BY	APP'D BY
1						

일반가공공차		일반계관공차	
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)	DWG SIZE	
CHKD BY		SCALE	1/2	TITLE	TERMINAL BOX ASS'Y	A3 (1:2)	
CHKD BY	R.G.KIM	PROJEC'N	3rd Angle	REF. NO		Sheet No.	of
DSND BY	네슬의	DATE	2023-10-19	DWG NO	3M-248458	Revision No.	0

