

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

Catalog No.	HES40-18-324TCRD	Item No.				Rev. No.	[]		
Project Name		Project No.				Quantity	sets		
GENERAL SPECIFICATION					PERFORMANCE DATA				
Frame Size	324TC		Rated Output	30 kW		40 HP			
Type	PJP		Number of Poles	4					
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	39.0 A	48.8 A	97.6 A		
Insulation Class	F			Locked-rotor**	850 %	850 %	850 %		
Temp. Rise at full load (by resistance method)			Efficiency						
at 1.0 S.F			80 deg. C						
Motor Location	☐ Indoor ☐ Outdoor		50% Load			91.1 %			
Altitude	Less than 1,000 meter		75% Load			93.1 %			
Relative Humidity	Less than 80 %		100% Load			94.1 %			
Ambient Temp.	40 deg. C (Max.)		Power Factor(p.u)						
Duty Type	Continuous (S1)		50% Load			0.670			
Service Factor	1.15		75% Load			0.770			
Mounting	B5		100% Load			0.820			
Bearing	Type	Anti-Friction	Speed at Full Load			1780 r.p.m			
	DE/N-DE	6313ZC3 / 6212ZC3	Torque						
	Lubricant	Grease(Polyrex-EM)	Full Load			118.74 lb.ft			
External Thrust	Not applicable		Locked-rotor**			170 %			
Coupling Method	☒ Direct ☐ V-belt		Breakdown**			220 %			
Shaft Extension	Single		Moment of Inertia (J)						
Terminal	Main	Cast Iron	Load(Max.)			218.553 lb.ft2			
Box	Aux.	No	Motor			7.121 lb.ft2			
	Location	Refer to Outline Drawing	Sound Pressure Level (No-load & mean value at 1m from motor)						
Application			74 dB(A)						
Area classification	Hazardous		Vibration			3.8 mm/sec (peak)			
Type of Ex-Protection	Class I&II, Division 2		Permissible number of			Cold 3 times			
Applicable Standard	NEMA MG1, CSA C390		consecutive starts			Hot 2 times			
			Paint	Munsell No.	4.0PB5.4/5.5(VL-451)				
ACCESSORIES			SUBMITTAL DRAWING						
			Outline Dimension Drawing \ Motor Weight(Approx.)						
			B5	LM-T2324C5PLV23	560 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.

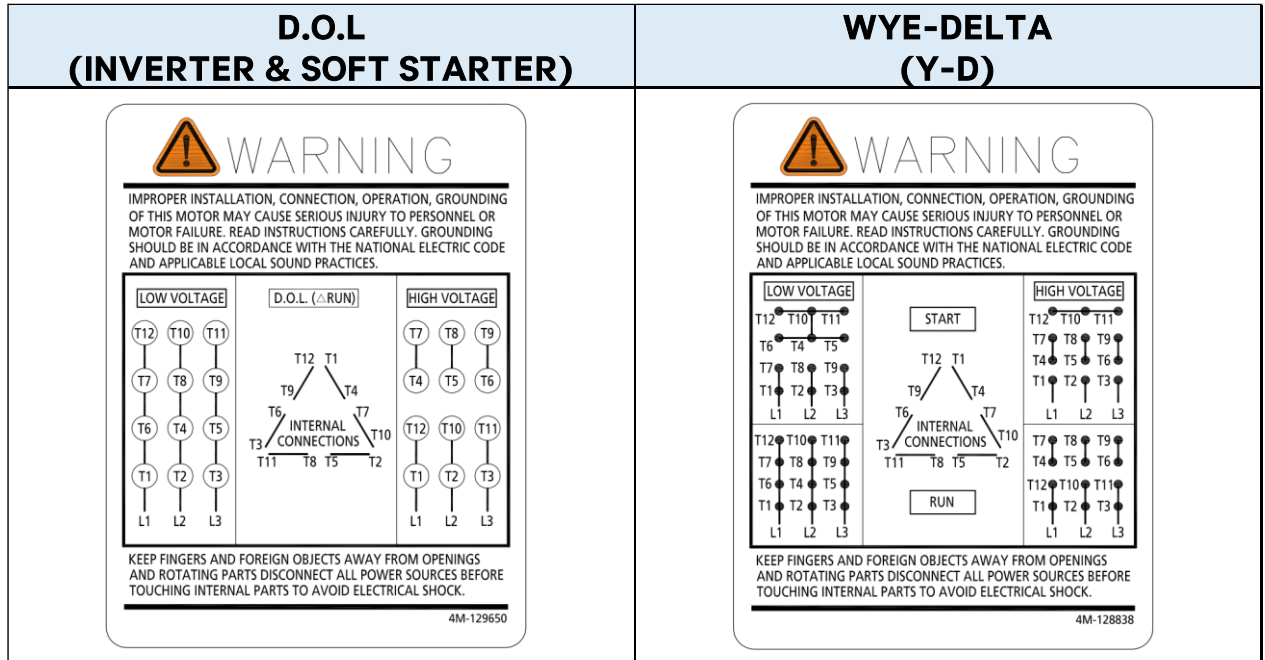
** Data is based on rated voltage & frequency and is expressed as a percentage of full-load value.

MAIN NAMEPLATE

4.72

40HP		4P	230/460V	Cat. No.	HES40-18-324TCRD				
Model		HLS324PR235V		INS. Class	F	HD-F1	Amps	97.6/48.8A	
Type	HLS	Duty	CONT	Code	K	Amb.	40°C	Hertz	60Hz
Frame	324TC	Encl.	TEFC	S.F.	1.15	RPM	1780	NEMA Nom. Eff.	94.1%
Bearing	Drive	6313ZC3			S.F.1.25 (When 100HP or less, Temp Rise F & Non-Hazardous)			3/4 Eff.	93.1%
	Opp.	6212ZC3			S.F.1.00 (10:1 C.T., 20:1 V.T., NEMA-MG1 Part31)			NEMA Design	B Torque
Usable at	50Hz 40HP 380V 66.4A 1480rpm S.F.: 1.0 Eff.: 93.0% Code: J								
	50Hz 40HP 400/415V 64.4/63.5A 1480/1485rpm S.F.: 1.0 Eff.: 93.0/93.0% Code: K/L								
CSA Certified for	Model	LATER	Type	PJP	Temp. Code	Frame	140~320FR	360~400FR	440FR
	CLASS I, Div. 2, Gr. A, B, C & D CLASS I, Zone 2, Gr. IIA, IIB, & IIC		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	560 lb
4M-136024 MARINE DUTY IEEE45				Made in Vietnam H4 Designed By HYUNDAI, Korea			HD HYUNDAI ELECTRIC		

WIRING DIAGRAM



APPD BY	S.Y.KIM	UNIT	INCH	SUBJECT	CSA Class I, Division2 Severe Duty (HES, 254-326)	DWG SIZE	A4 (1:1)
CHKD BY	I.K.KIM	SCALE	NONE	TITLE	NAMEPLATE DRAWING		
CHKD BY	R.G.KIM	PROJEC'N	3rd Angle	REF. NO	4M-136024 / 4M-129650	Sheet No.	of
DSND BY	S.H.LEE	DATE	2024.06.07	DWG NO	NP-HES40-18-324TCRD	Revision No.	0

Type : PJP

Full Load Torque : 118.74 lb.ft

Load moment of Inertia (J) : 218.553 lb.ft2

Motor moment of Inertia (J) : 7.121 lb.ft2

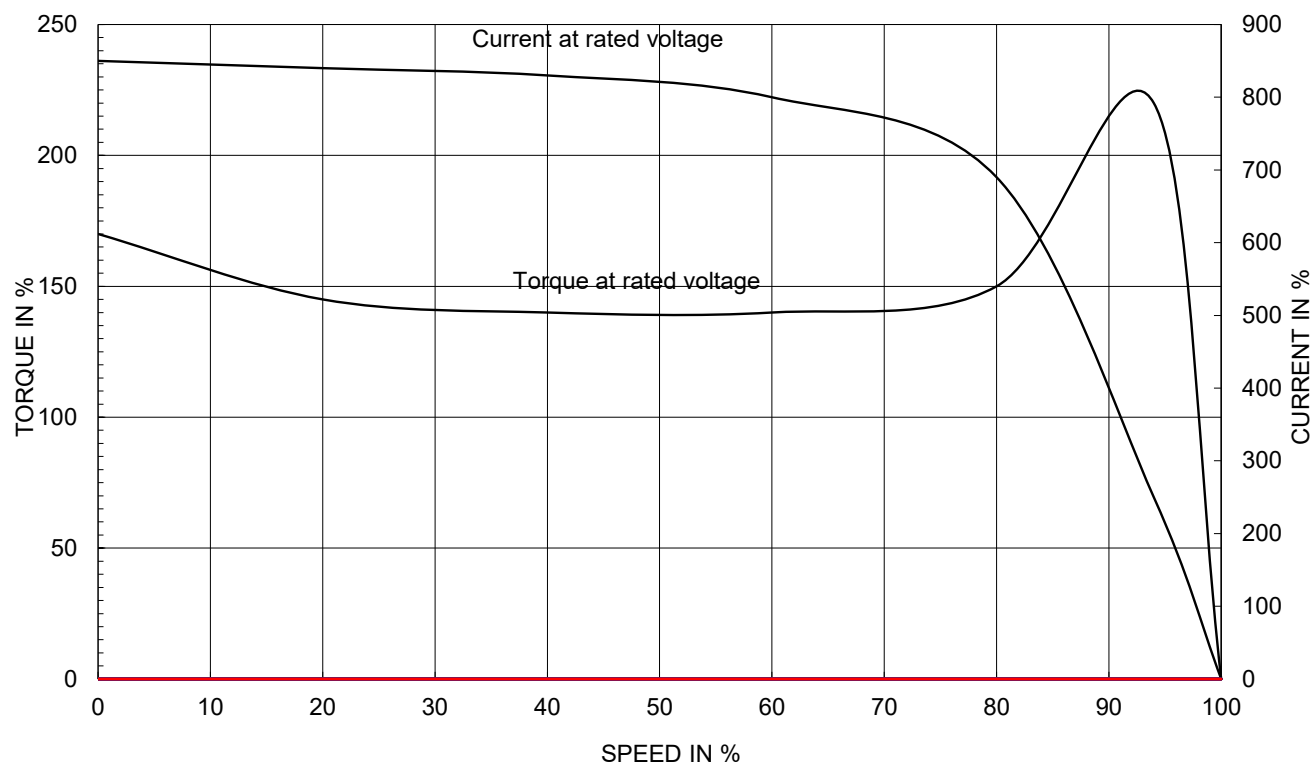
30kW 40HP 4 P 60 Hz

Speed at Full Load : 1780 RPM

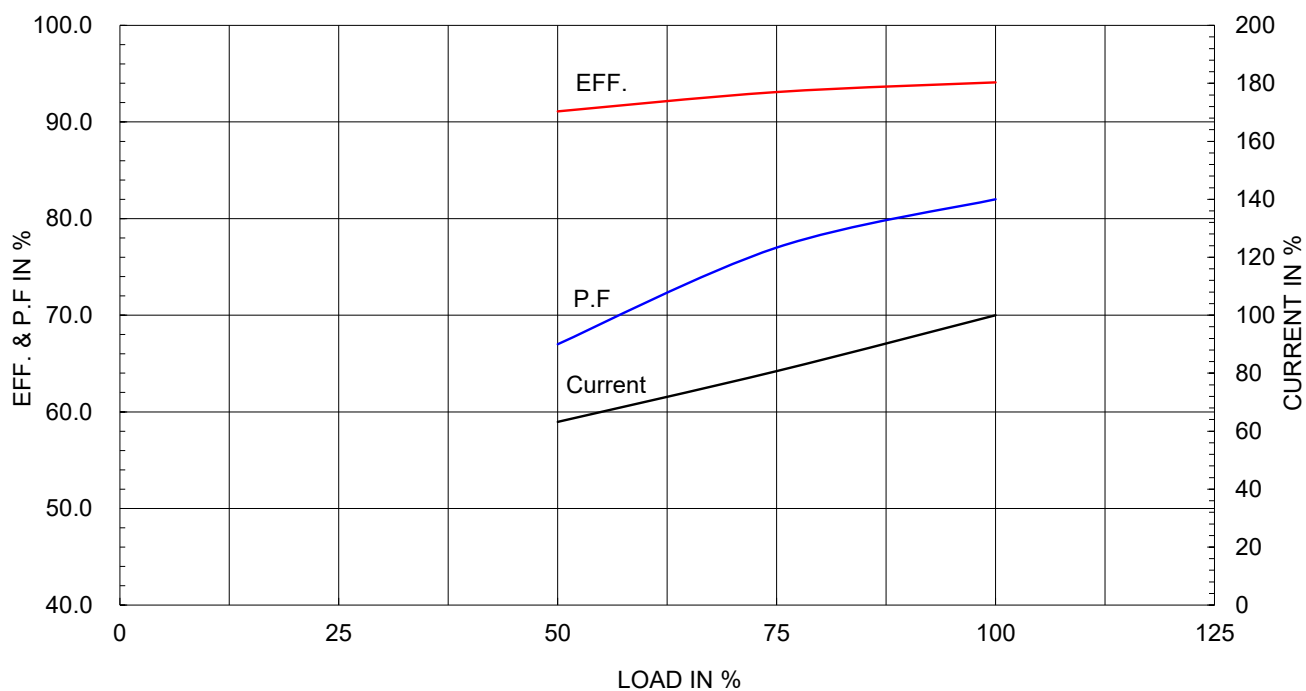
Rated Voltage	575V	460V	230V
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Full Load Current	39.0A	48.8A	97.6A
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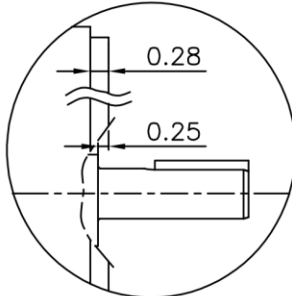
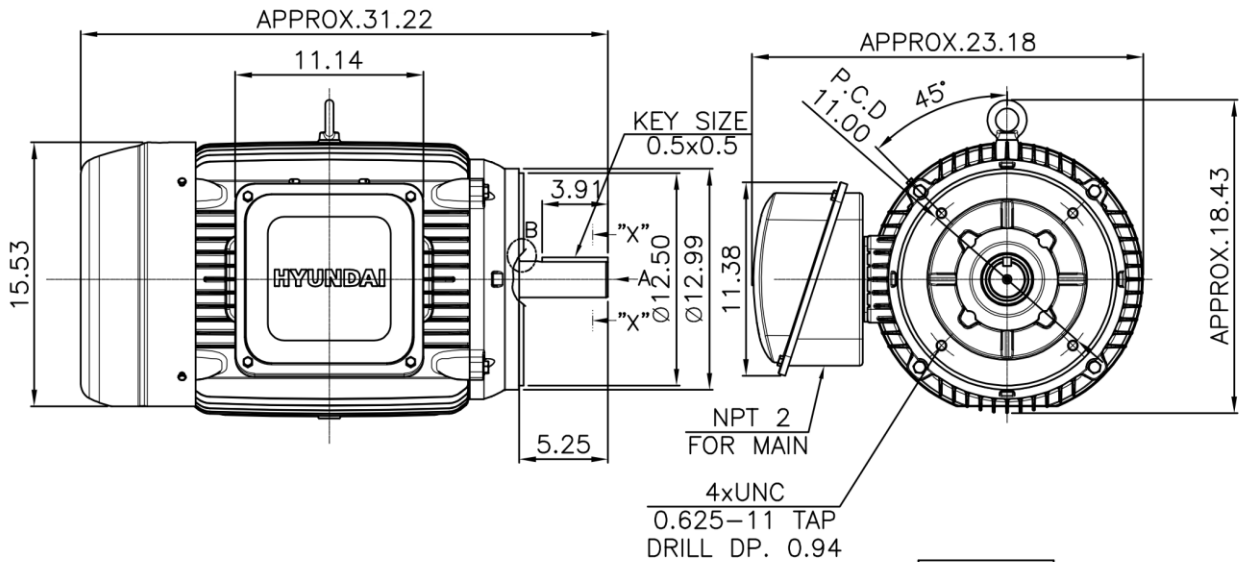
SPEED VS TORQUE & CURRENT CURVE



OUTPUT VS EFF., P.F & CURRENT CURVE



1			2		3		4		
▽	50S	REV	DATE	CONTENTS		REVD BY	CHKD BY	CHKD BY	APPD BY
▽▽	12.5S								
▽▽▽	3.2S								
▽▽▽▽	0.4S								

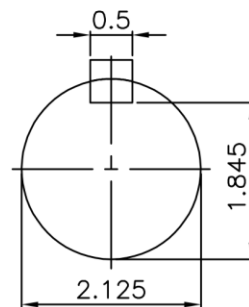


DETAIL - B

NOTE

[TOLERANCE]

- CENTER HEIGHT : +0.00inch - 0.03inch
- SHAFT DIAMETER : +0.000inch - 0.001inch
- KEYWAY DEPTH : +0.000inch - 0.015inch



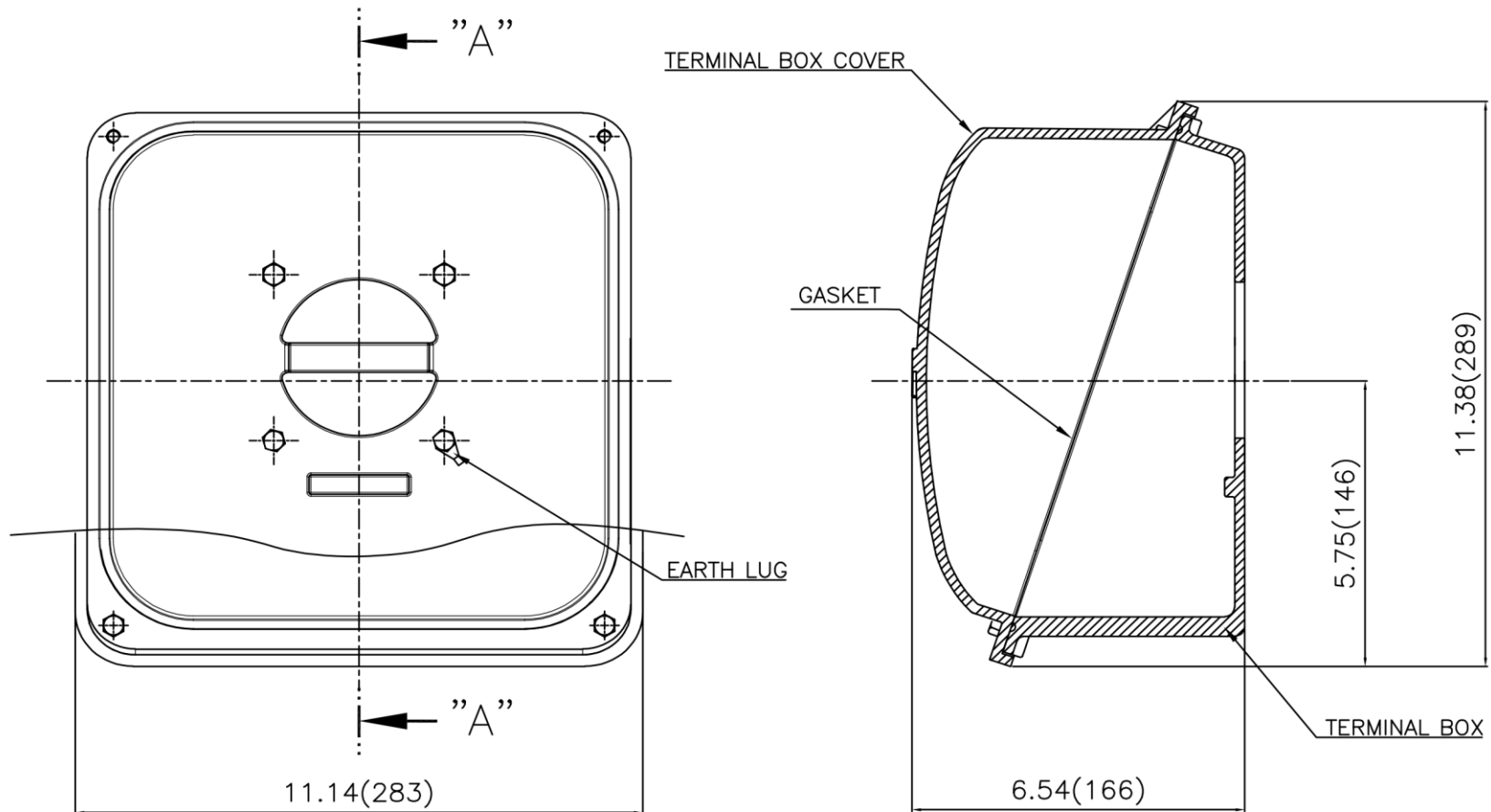
SECTION "X-X"

SCALE 5/11

APPD BY	S.Y.KIM	UNIT	inch	SUBJECT	NEMA 324TC		DWG SIZE	
CHKD BY	R.G.KIM	SCALE	1/11	TITLE OUTLINE				A4 (1:11)
CHKD BY		PROJEC'N	3rd Angle					
DSND BY	주유림	DATE	2021-04-28					
				REF. NO	.	Sheet No.	of	
				DWG NO	LM-T2324C5PLV23	Revision No.	0	

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	일반기공표	일반계관표
							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. 320 (CAST IRON)	DWG SIZE	
CHKD BY		SCALE	1/2.5	TITLE	TERMINAL BOX ASS'Y	A3 (1:2.5)	
CHKD BY	R.G.KIM	PROJEC'N	3rd Angle	REF. NO		Sheet No.	of
DSND BY	네슬의	DATE	2023-10-19	DWG NO	3M-248459	Revision No.	0