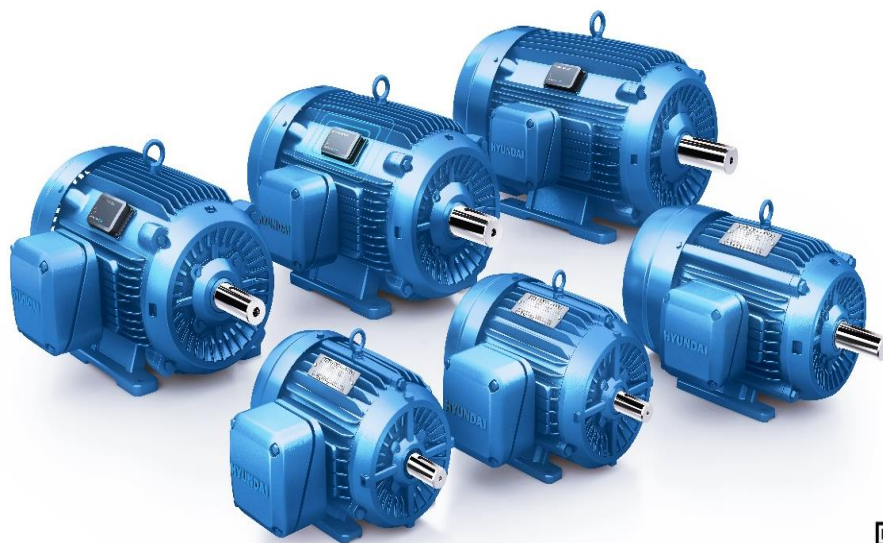


Customer :
Project Name :
Project No. :
Revision No. :

SPECIFICATION for INDUCTION MOTOR



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

AC INDUCTION MOTOR DATA SHEET

Catalog No.	HES25-36-160M/L	Item No.			Rev. No.	[]	
Project Name		Project No.			Quantity	sets	
GENERAL SPECIFICATION				PERFORMANCE DATA			
Frame Size	160L		Rated Output	18.5 kW		25 HP	
Type	PJP		Number of Poles	2			
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		460 V		
Number of Phases	3		Current	Full Load	28.8 A		
Insulation Class	F			Locked-rotor**	870 %		
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 0.730				
Duty Type	Continuous (S1)		75% Load 0.830				
Service Factor	1.15		100% Load 0.880				
Mounting	B3		Speed at Full Load		3535 r.p.m		
Bearing	Type	Anti-Friction	Torque				
	DE/N-DE	6309ZC3 / 6309ZC3	Full Load 36.87 lb.ft				
	Lubricant	Grease(Polyrex-EM)	Locked-rotor** 180 %				
External Thrust	Not applicable		Breakdown** 250 %				
Coupling Method	☒ Direct ☐ V-belt		Moment of Inertia (J)				
Shaft Extension	Single		Load(Max.) 24.988 lb.ft2				
Terminal	Main	Cast Iron	Motor 1.163 lb.ft2				
Box	Aux.	No	Sound Pressure Level (No-load & mean value at 1m from motor)				
	Location	Refer to Outline Drawing	77 dB(A)				
Application			Vibration 2.8 mm/s (r.m.s)				
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	IEC, CSA C390		Paint	PANTONE	PANTONE279C		
ACCESSORIES			SUBMITTAL DRAWING				
			Outline Dimension Drawing \ Motor Weight(Approx.)				
			B3		LM-T2165B3PTV09	290 lb.	
SPARE PARTS			REMARK				
			1. IE3 (Premium efficiency) according to IEC60034-30-1				
			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 200Fr.)				
			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

18.5kW (25HP)		2P	460V	Encl.	IP55(TEFC)	Cat. No.	HES25-36-160M/L	
UL Model	HLS165SR188HPV			S.F.	1.15	Amps	28.8A	
Frame	160L	Duty	S1(CONT)	INS. Class	F	Hertz	60Hz	
UL Type	HLS			Code	J	Eff.	91.7%	3/4 Eff. 90.7%
Bearing	Drive	6309ZC3			Amb.	40°C	RPM	3535
	Opp.	6309ZC3			S.F.1.00(10:1 C.T., 20:1 V.T., NEMA-MG1 Part31)			
Usable at	50Hz 25HP 380V 34.6A 2935rpm S.F.: 1.15 Eff.: 91.9% Code: J							
	50Hz 25HP 400/415V 32.9/31.5A 2935/2935rpm S.F.: 1.15 Eff.: 91.9/92.4% Code: J/J							
CSA Certified for	Model	TPO1918916LH004AI0JT300001		Type	PJP	Temp. Code		
	CLASS I, Div. 2, Gr. A, B, C & D		CLASS II, Div. 2 Gr. E, F & G (Gr. E: Up to 200FR)		(sine wave)	Frame	71~200FR	225~250FR
	CLASS I, Zone 2, Gr. IIA, IIB, & IIC					Amb. 40°C	T3C (160°C)	T3B (165°C)
No.	-			Date	-		Weight	135 kg (290 lb)

4M-133043 IEC60034-1

Made in Vietnam H4 Designed By HYUNDAI, Korea

IEC 60034-30-1(IE3)

WIRING DIAGRAM

D.O.L (INVERTER & SOFT STARTER)	WYE-DELTA (Y-D)
WARNING IMPROPER INSTALLATION, CONNECTION, OPERATION, GROUNDING OF THIS MOTOR MAY CAUSE SERIOUS INJURY TO PERSONNEL OR MOTOR FAILURE. READ INSTRUCTIONS CAREFULLY. GROUNDING SHOULD BE IN ACCORDANCE WITH THE NATIONAL ELECTRIC CODE AND APPLICABLE LOCAL SOUND PRACTICES. D.O.L. (ΔRUN) KEEP FINGERS AND FOREIGN OBJECTS AWAY FROM OPENINGS AND ROTATING PARTS DISCONNECT ALL POWER SOURCES BEFORE TOUCHING INTERNAL PARTS TO AVOID ELECTRICAL SHOCK. 4M-137622	WARNING IMPROPER INSTALLATION, CONNECTION, OPERATION, GROUNDING OF THIS MOTOR MAY CAUSE SERIOUS INJURY TO PERSONNEL OR MOTOR FAILURE. READ INSTRUCTIONS CAREFULLY. GROUNDING SHOULD BE IN ACCORDANCE WITH THE NATIONAL ELECTRIC CODE AND APPLICABLE LOCAL SOUND PRACTICES. START RUN KEEP FINGERS AND FOREIGN OBJECTS AWAY FROM OPENINGS AND ROTATING PARTS DISCONNECT ALL POWER SOURCES BEFORE TOUCHING INTERNAL PARTS TO AVOID ELECTRICAL SHOCK. 4M-130346

APPD BY	S.Y.KIM	UNIT	INCH	SUBJECT	CSA Class I, Division2 Severe Duty (IEC, 160-280)	DWG SIZE	
CHKD BY	I.K.KIM	SCALE	NONE			A4 (1:1)	
CHKD BY	R.G.KIM	PROJEC'N	3rd Angle			TITLE	NAMEPLATE DRAWING
DSND BY	S.H.LEE	DATE	2024.06.07				
				REF. NO	4M-133043 / 4M-137622	Sheet No. of	
				DWG NO	NP-HES25-36-160M/L	Revision No. 0	

Type : PJP

18.5kW 25HP 2 P 60 Hz

Full Load Torque : 36.87 lb.ft

Speed at Full Load : 3535 RPM

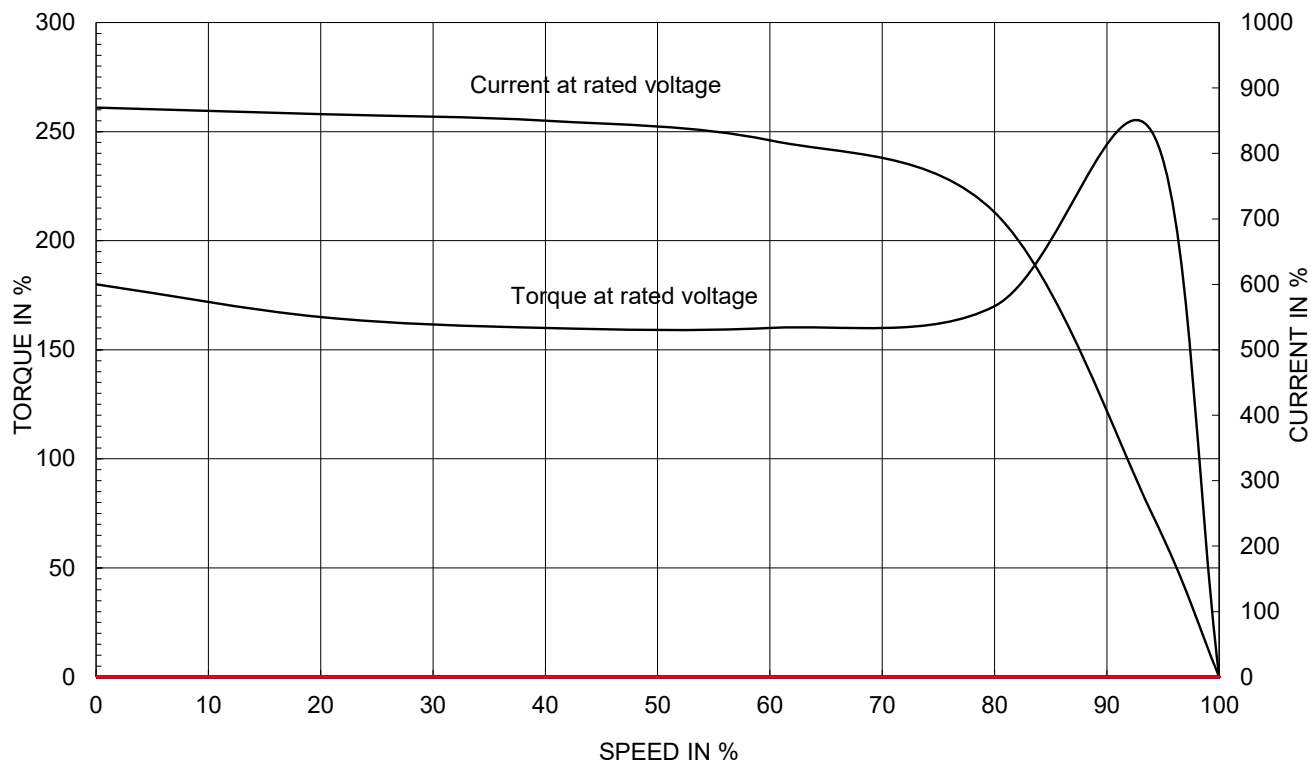
Load moment of Inertia (J) : 24.988 lb.ft2

Rated Voltage 460V

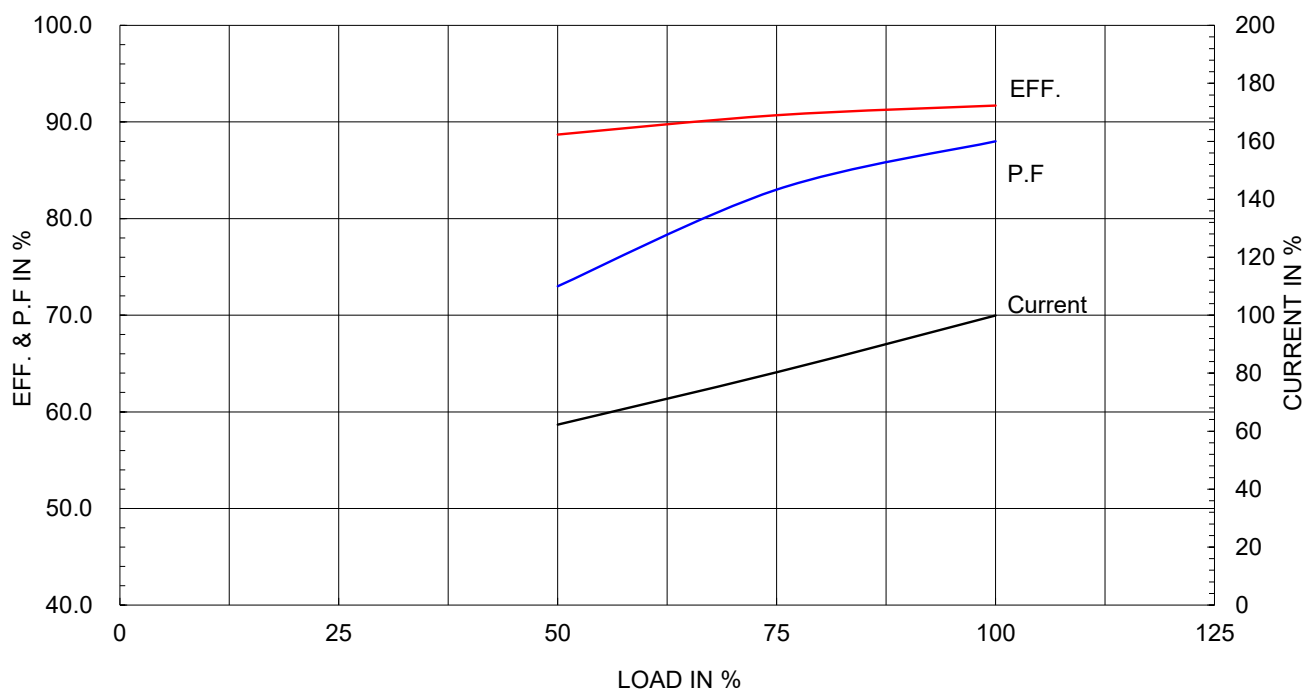
Motor moment of Inertia (J) : 1.163 lb.ft2

Full Load Current 28.8A

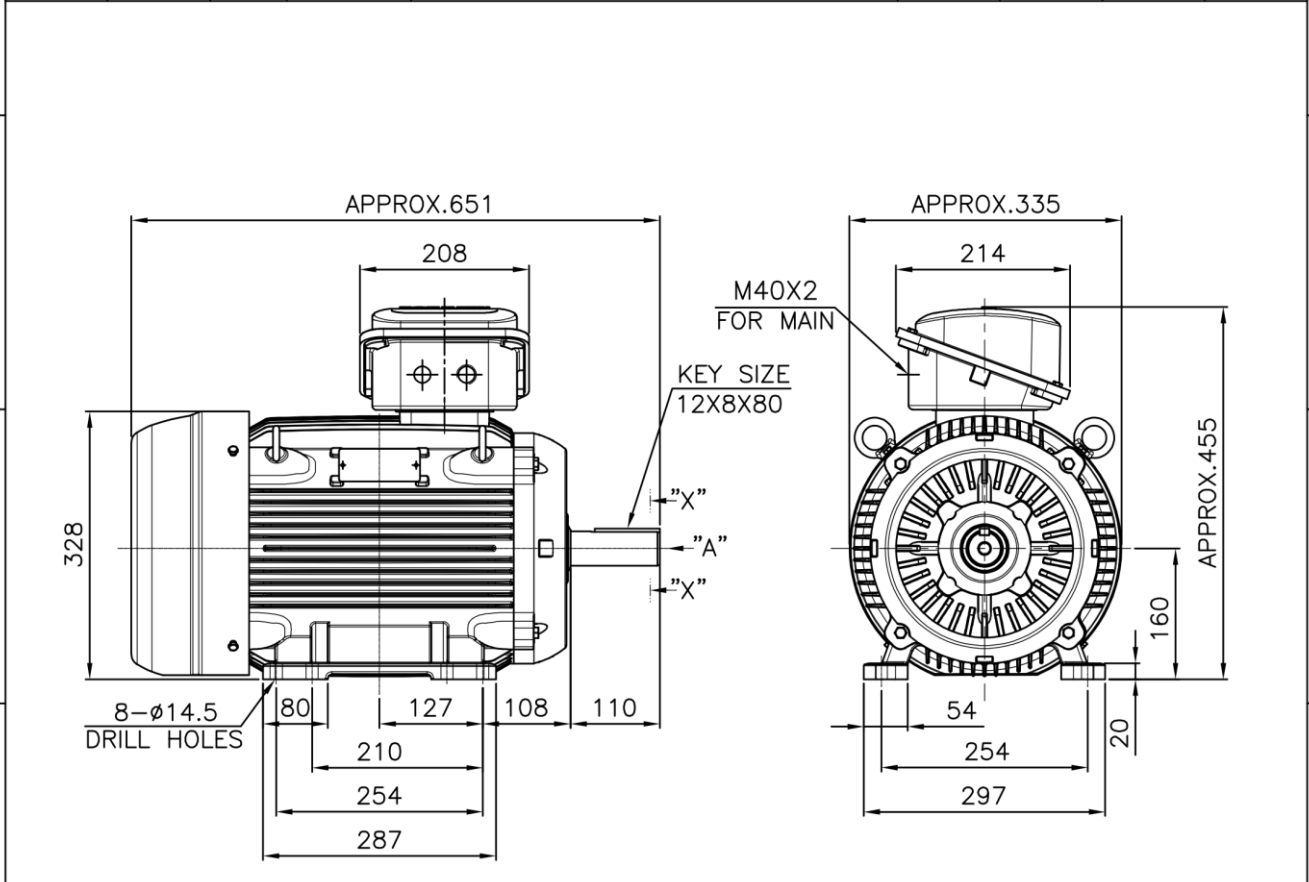
SPEED VS TORQUE & CURRENT CURVE



OUTPUT VS EFF., P.F & CURRENT CURVE



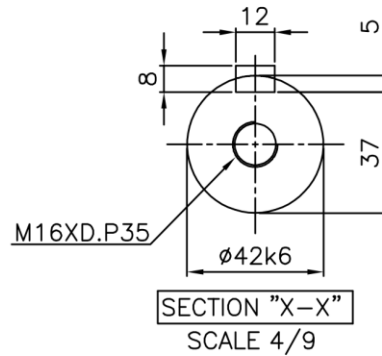
1	2	3	4
▽	50S	REV	DATE
▽▽	12.5S		
▽▽▽	3.2S		
▽▽▽▽	0.4S		



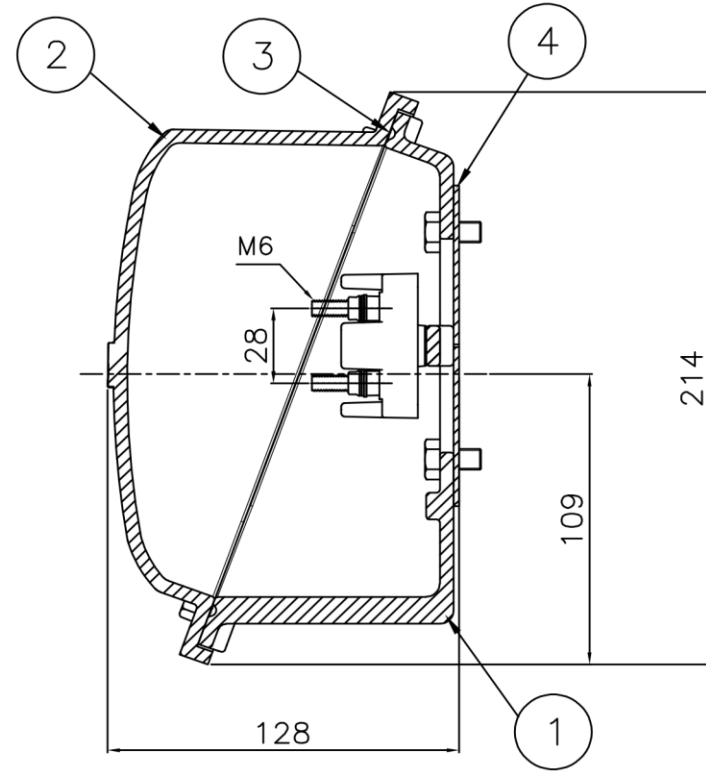
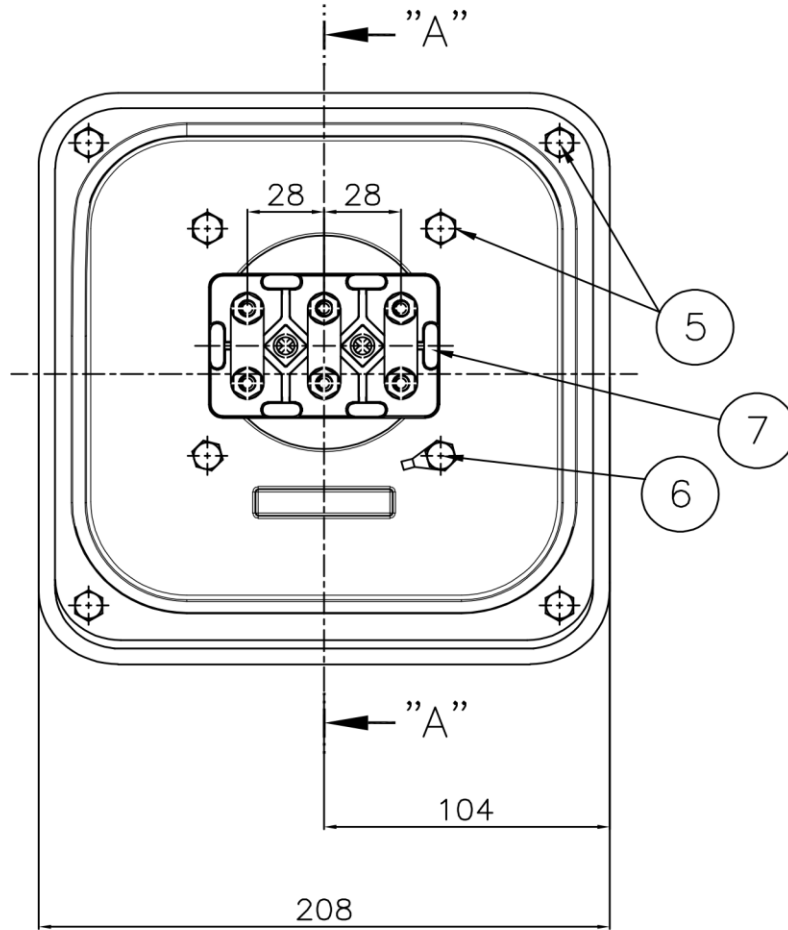
NOTE

1.TOLERANCE :

CENTER HEIGHT	160	$\begin{smallmatrix} 0 \\ -0.5 \end{smallmatrix}$
BASE HOLES	$\phi 14.5$	$\begin{smallmatrix} +0.43 \\ 0 \end{smallmatrix}$
SHAFT DIAMETER	$\phi 42$	$\begin{smallmatrix} +0.018 \\ +0.002 \end{smallmatrix}$
KEYWAY WIDTH	12	$\begin{smallmatrix} 0 \\ -0.043 \end{smallmatrix}$
KEYWAY DEPTH	5	$\begin{smallmatrix} +0.2 \\ 0 \end{smallmatrix}$
KEY WIDTH	12	$\begin{smallmatrix} 0 \\ -0.043 \end{smallmatrix}$
KEY HEIGHT	8	$\begin{smallmatrix} 0 \\ -0.090 \end{smallmatrix}$



APPD BY	S.Y.KIM	UNIT	mm	SUBJECT	IEC 160M/L (Dual hole)	DWG SIZE
CHKD BY	R.G.KIM	SCALE	1/9			A4 (19)
CHKD BY	-	PROJEC'N	3rd Angle	TITLE	OUTLINE	
DSND BY	J.H.JEON	DATE	2022.05.25	REF. NO		Sheet No. of
				DWG NO	LM-T2165B3PTV09	Revision No. 0



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							1-4 ±0.1 6-30 ±0.5	
2							4-18 ±0.2 30-120 ±0.8	
3							18-63 ±0.3 120-315 ±1.2	
4							63-250 ±0.5 315-1000 ±2.0	
5							250- ±0.8 1000- ±3.0	

1	TERMINAL BLOCK	STD	M6					7
1	GROUND TERMINAL LUG	CU	--					6
8	BOX+FRAME HEX BOLT	S45C	M6					5
1	BOX GASKET	NBR	--					4
1	COVER GASKET (O-RING)	NBR	--					3
1	CONDUIT BOX COVER	CAST	--					2
1	CONDUIT BOX	CAST	--					1
Q'TY	DESCRIPTION	MATERIAL	DIMENSION		WEIGHT	PART NO.	REMARK	NO.
APPD BY	S.Y.KIM	UNIT	mm	SUBJECT	FR.160-180 (CAST IRON, T-BLOCK)			DWG SIZE A3 (1:2)
CHKD BY	I.K.KIM	SCALE	1/2	TITLE TERMINAL BOX ASS'Y				
CHKD BY	-	PROJEC'N	3rd Angle					
DSND BY	주유림	DATE	2021-12-17					
 HD HYUNDAI ELECTRIC				REF. NO	Sheet No. of			
				DWG NO	3M-241780(T)			Revision No. 0