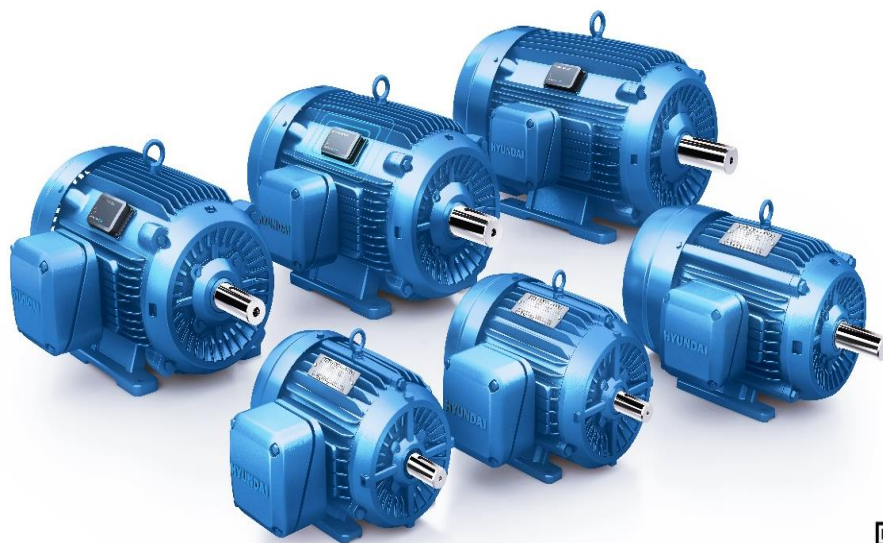


Customer :
Project Name :
Project No. :
Revision No. :

SPECIFICATION for INDUCTION MOTOR



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

AC INDUCTION MOTOR DATA SHEET

Catalog No.	HES20-18-160M/L	Item No.		Rev. No.	[]
Project Name		Project No.		Quantity	sets

GENERAL SPECIFICATION			PERFORMANCE DATA		
Frame Size	160L		Rated Output	15 kW	20 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	460 V	
Number of Phases	3		Current	Full Load	24.8 A
Insulation Class	F			Locked-rotor**	850 %
Temp. Rise at full load (by resistance method)			Efficiency		
	at 1.0 S.F	80 deg. C		50% Load	90.0 %
Motor Location	☐ Indoor ☐ Outdoor			75% Load	92.0 %
Altitude	Less than 1,000 meter			100% Load	93.0 %
Relative Humidity	Less than 80 %		Power Factor(p.u)		
Ambient Temp.	40 deg. C (Max.)			50% Load	0.665
Duty Type	Continuous (S1)			75% Load	0.765
Service Factor	1.15			100% Load	0.815
Mounting	B3		Speed at Full Load	1775 r.p.m	
Bearing	Type	Anti-Friction	Torque		
	DE/N-DE	6309ZC3 / 6309ZC3		Full Load	59.53 lb.ft
	Lubricant	Grease(Polyrex-EM)		Locked-rotor**	200 %
External Thrust	Not applicable			Breakdown**	260 %
Coupling Method	☒ Direct ☐ V-belt		Moment of Inertia (J)		
Shaft Extension	Single			Load(Max.)	130.873 lb.ft2
Terminal	Main	Cast Iron		Motor	2.634 lb.ft2
Box	Aux.	No	Sound Pressure Level (No-load & mean value at 1m from motor)		
	Location	Refer to Outline Drawing		70 dB(A)	
Application			Vibration	2.8 mm/s (r.m.s)	
Area classification	Hazardous		Permissible number of consecutive starts	Cold 3 times	
Type of Ex-Protection	Class I&II, Division 2			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.

	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				
SPARE PARTS	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.

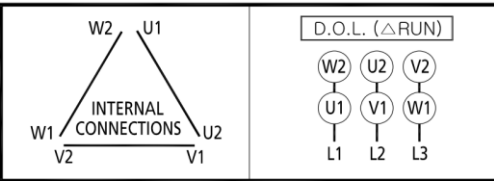
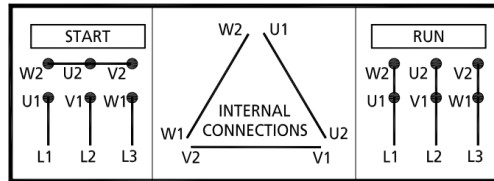
MAIN NAMEPLATE

4.72

2.36

CROWN TRITON G2 IEC    			
Premium Efficiency AC 3 Phase Motor		Metric	
15kW (20HP)	4P	460V	Encl. IP55(TEFC)
UL Model	HLS165SR288V	S.F.	1.15
Frame	160L	Duty	S1(CONT)
UL Type	HLS	Code	K
Bearing	Drive 6309ZC3	Amb.	40°C
	Opp. 6309ZC3	S.F.1.00(10:1 C.T., 20:1 V.T., NEMA-MG1 Part31)	
Usable at	50Hz 20HP 380V 29.8A 1475rpm S.F.: 1.15 Eff.: 92.1% Code: K		
	50Hz 20HP 400/415V 29.0/29.0A 1475/1475rpm S.F.: 1.15 Eff.: 92.1/92.1% Code: J/K		
CSA Certified for	Model TPO1528916LH004A10JT300001	Type	PJP
	CLASS I, Div. 2, Gr. A, B, C & D	CLASS II, Div. 2 Gr. E, F & G	Temp. Code
	CLASS I, Zone 2, Gr. IIA, IIB, & IIC	(Gr. E: Up to 200FR)	(sine wave)
No.	-	Date	-
4M-133043 IEC60034-1		IEC 60034-30-1(IE3)	
Made in Vietnam H4 Designed By HYUNDAI, Korea		 HD HYUNDAI ELECTRIC	

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.  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.  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	A4 (1:1)
CHKD BY	I.K.KIM	SCALE	NONE	NAMEPLATE DRAWING			
CHKD BY	R.G.KIM	PROJEC'N	3rd Angle				
DSND BY	S.H.LEE	DATE	2024.06.07				
 HD HYUNDAI ELECTRIC				REF. NO	4M-133043 / 4M-137622	Sheet No.	of
				DWG NO	NP-HES20-18-160M/L	Revision No.	0

Type : PJP

Full Load Torque : 59.53 lb.ft

Load moment of Inertia (J) : 130.873 lb.ft2

Motor moment of Inertia (J) : 2.634 lb.ft2

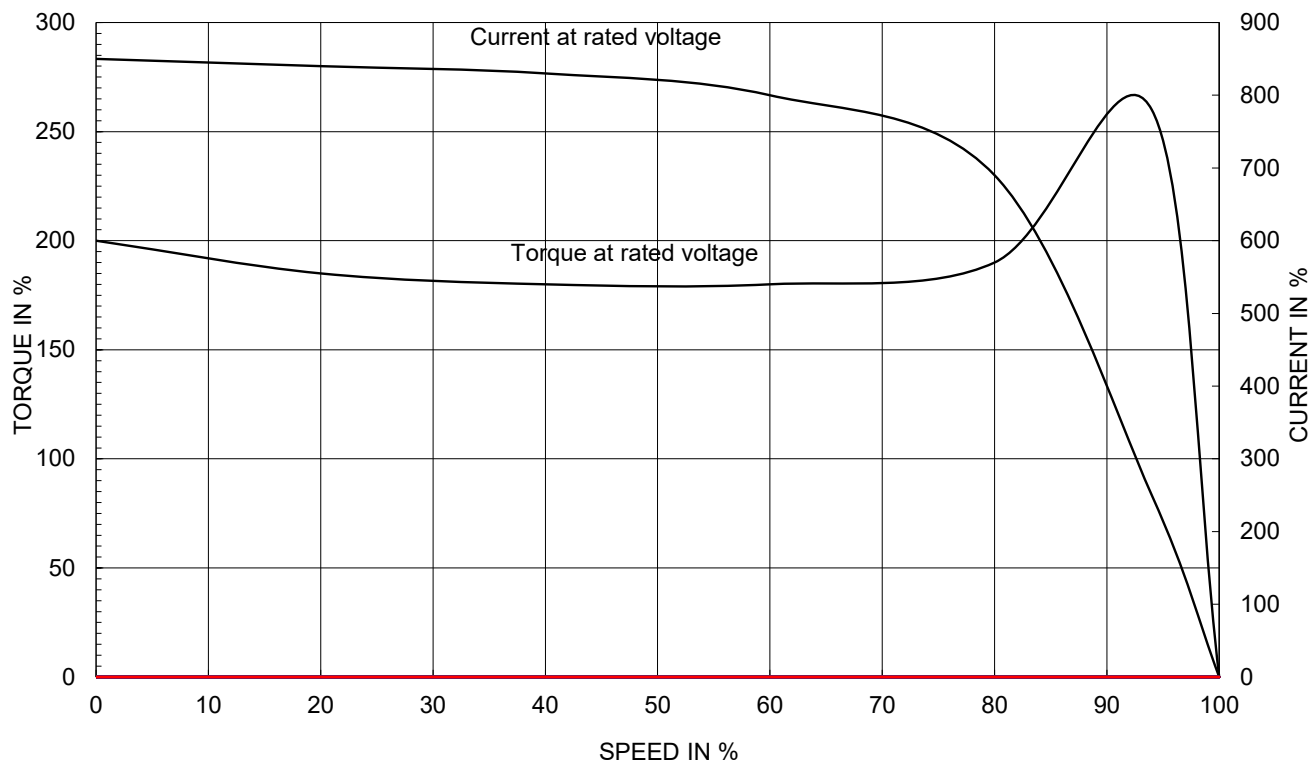
15kW 20HP 4 P 60 Hz

Speed at Full Load : 1775 RPM

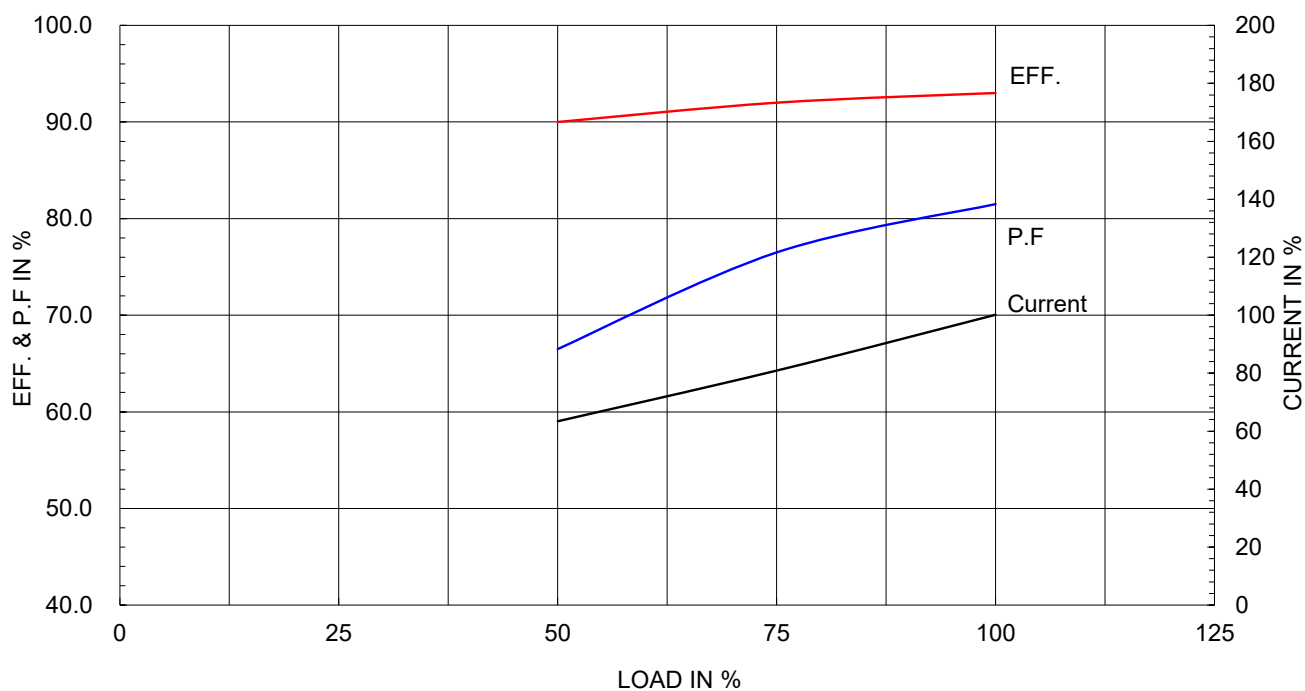
Rated Voltage 460V

Full Load Current 24.8A

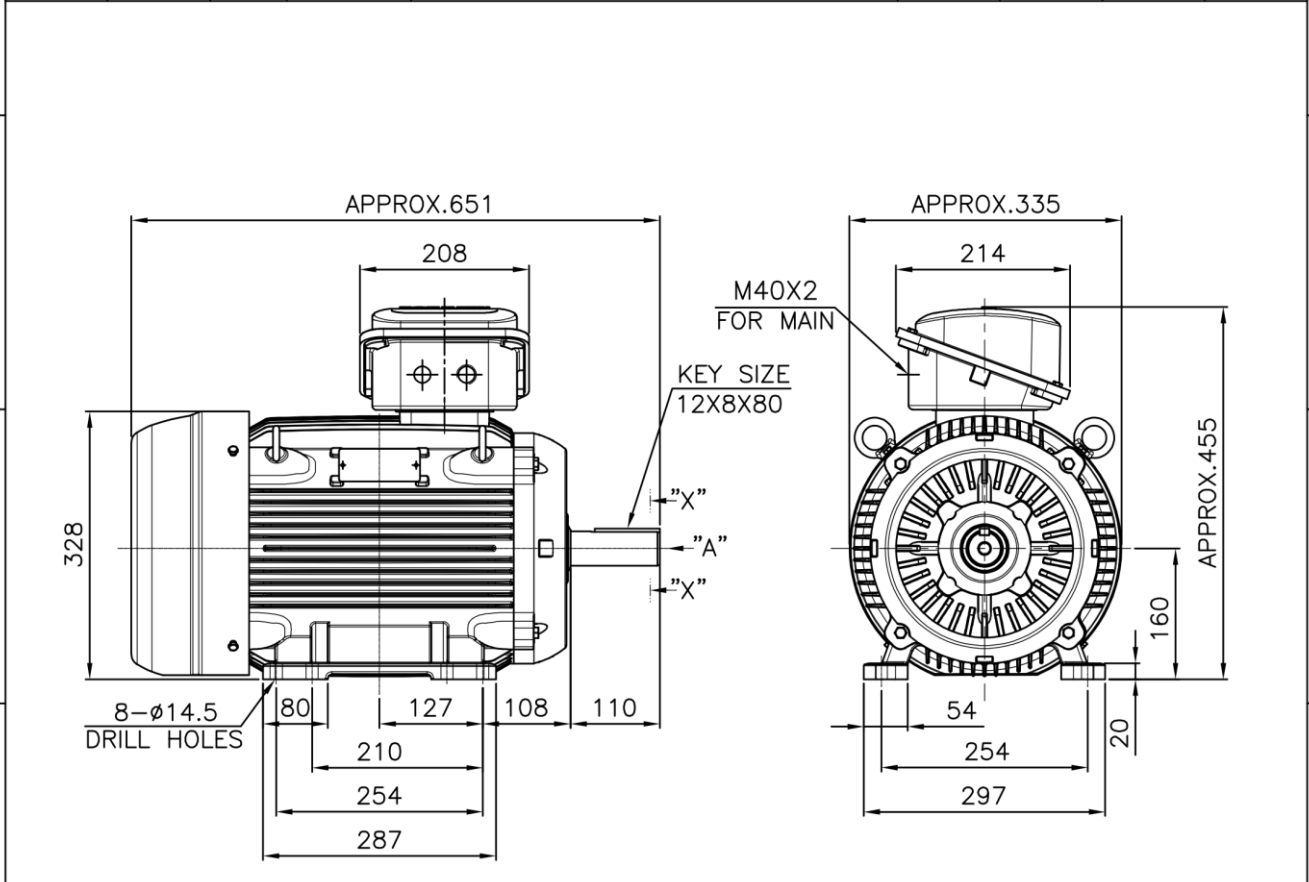
SPEED VS TORQUE & CURRENT CURVE



OUTPUT VS EFF., P.F & CURRENT CURVE



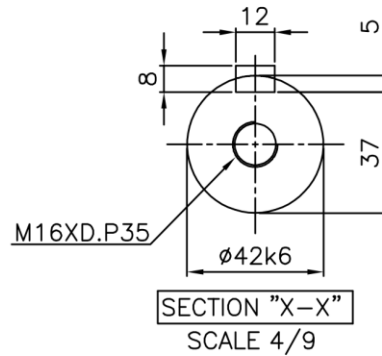
1	2	3	4
▽	50S	REV	DATE
▽▽	12.5S		
▽▽▽	3.2S		
▽▽▽▽	0.4S		



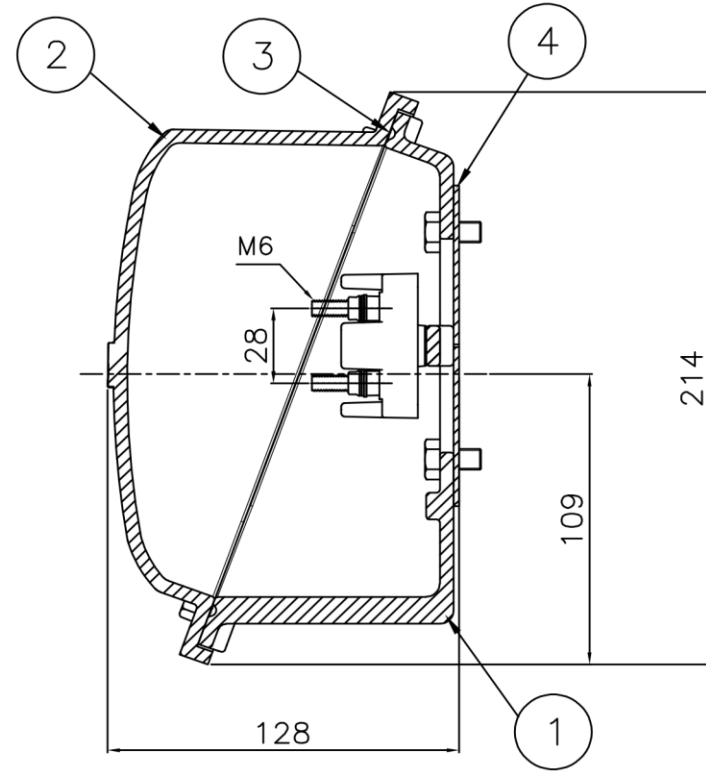
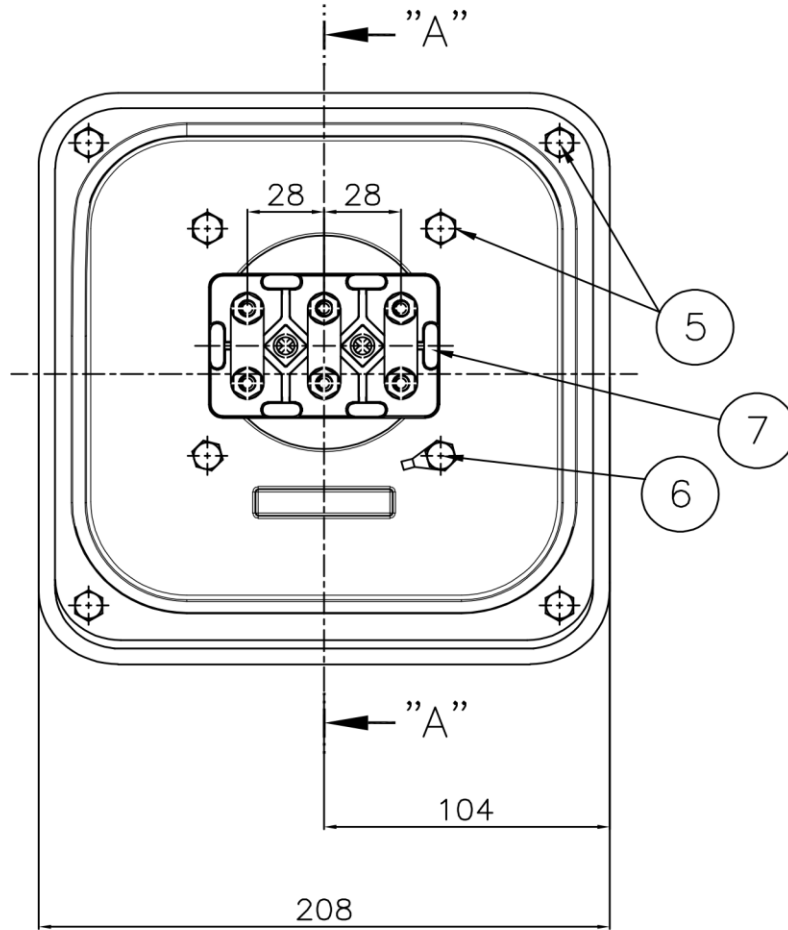
NOTE

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"

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	
CHKD BY	I.K.KIM	SCALE	1/2	TITLE	TERMINAL BOX ASS'Y				
CHKD BY	-	PROJEC'N	3rd Angle	REF. NO		Sheet No.	of		
DSND BY	주유림	DATE	2021-12-17	DWG NO	3M-241780(T)	Revision No.	0		

일반가공공차		일반재공공차	
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

▽	50S
▽▽	12.5S
▽▽▽	3.2S
▽▽▽▽	0.4S

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