NIDEC MOTOR CORPORATION
8050 WEST FLORISSANT AVE.
ST. LOUIS, MO 63136

DATE: 12/11/2014

P.O. NO.: CW89
Order/Line NO.: 20547 MN 100

TO:

Model Number: CW89
Catalog Number:
Horiz. XP Premium Eff. Config.
CONF,MOTOR,HORIZ XP PRE EFF

REVISIONS:
(NONE)

ALL DOCUMENTS HEREIN ARE CONSIDERED CERTIFIED BY NIDEC MOTOR CORPORATION.
THANK YOU FOR YOUR ORDER AND THE OPPORTUNITY TO SERVE YOU.

Features:

```
Horsepower ..............  00100.00 ~ KW: 74.6
Enclosure ...............  TEFC
Poles ...................  04 ~ RPM: 1800
Frame Size ..............  405~T
Phase/Frequency/Voltage..  3~060~230/460 ~ Random Wound
Service Factor ..........  1.15
Insulation Class ........  Class "F" ~ Insulife 2000
Altitude In Feet (Max) ..  3300 Ft.(1000 M)
Ambient In Degree C (Max)  +40 C
Assembly Position .......  "F-1" Assembly Position
Efficiency Class ........  Premium Efficiency
Application .............  Unknown
Customer Part Number ....
Hazardous Location Info:
Division 1 ~ Class I ~ Group D
Class II N/A ~ Group N/A ~ T2B Temp Code
"AK" Dimension (Inches).. NA
Temperature Rise (Sine Wave): "B" Rise @ 1.0 SF (Resist)
Starting Method .........  Direct-On-Line Start
Duty Cycle ..............  Continuous Duty
Efficiency Value ........  95.4 % ~ NEMA Nominal
Load Inertia (lb-ft2): NEMA ~ NEMA Inertia: 441.00 ~ 1.00
Number Of Starts Per Hour: NEMA
Motor Type Code .........  LCE
Rotor Inertia (LB-FT²)        23.0 LB-FT²
Qty. of Bearings PE (Shaft)   1
Qty. of Bearings SE (OPP)     1
Bearing Number PE (Shaft)     6217-J/C3
Bearing Number SE (OPP)       6214-J/C3
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Accessories:
Direct Connected To Load
Corro-Duty
.
Standard Leadtime: REFER TO OFFICE
Est. Weight (lbs ea): 1225 ~ F.O.B.: St. Louis, MO

USE THE DATA PROVIDED BELOW TO SELECT THE APPROPRIATE DIMENSION PRINT

Horsepower	100
Pole(s)	04
Voltage(s)	460-230
Frame Size	405T
Shaft U Diameter	2.875
Outlet Box AF	4.56
Outlet Box AA	3.00

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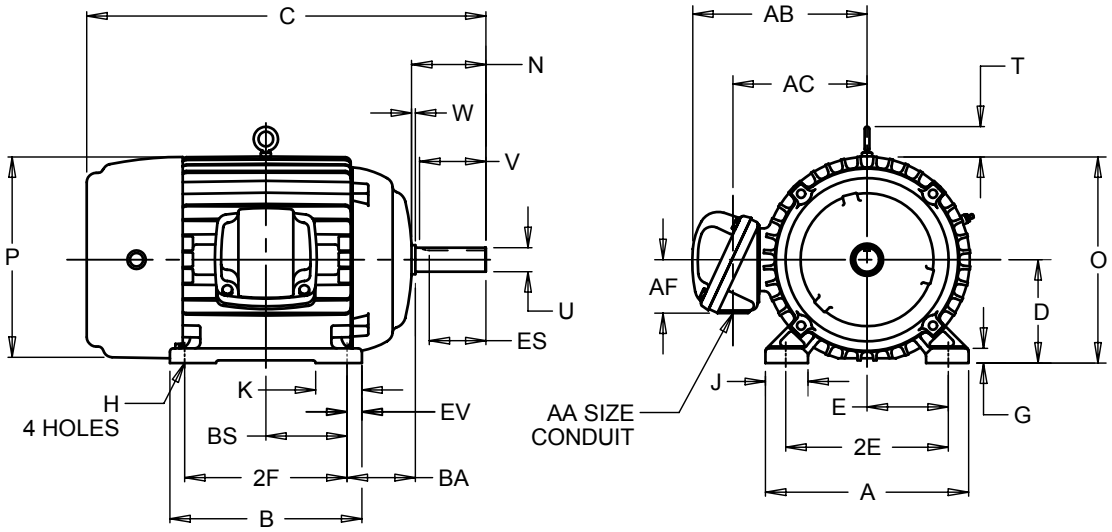
EFFECTIVE: 27-MAY-11	HORIZONTAL MOTORS TEFC-EXPLOSION PROOF FRAME: 400T BASIC TYPE: LC, NC	PRINT: 07-2698
SUPERSEDES: 10-OCT-08		SHEET: 1 OF 1



ALL DIMENSIONS ARE IN INCHES AND MILLIMETERS

	UNITS	A	B	C	D -.06	E	2E ±.03	G	H +.05	J	K	N
	IN	19.75	16.75	38.00	10.00	8.00	16.00	1.38	.81	3.75	5.00	7.38
	MM	502	425	965	254	203	406	35	21	95	127	187

	UNITS	O	P [2]	T	U -.001	V MIN	W	AA	AB	AC	AF	BA
	IN	20.44	20.88	2.94	2.875	7.00	.13	3.00	19.06	13.88	4.56	6.63
	MM	519	530	75	73.03	178	3		484	353	116	168

	UNITS	BS	ES MIN	EV	SQ KEY
	IN	6.88	5.66	1.50	.750
	MM	175	144	38	19.05

	FRAME	UNITS	2F ±.03
	404T	IN	12.25
		MM	311
	405T	IN	13.75
		MM	349

1: ALL ROUGH DIMENSIONS MAY VARY .25" DUE TO CASTING AND/OR FABRICATION VARIATIONS.
2: LARGEST MOTOR WIDTH.
3: TOLERANCES SHOWN ARE IN INCHES ONLY.
4: STANDARD ASSEMBLY POSITION F-1 IS SHOWN F-2 IS PROVIDED WHEN SPECIFIED. CONDUIT OPENINGS MAY BE LOCATED IN STEPS OF 90º REGARDLESS OF LOCATION.
STANDARD AS SHOWN WITH CONDUIT OPENING DOWN

Nidec Motor Corporation
St. Louis, Missouri

INFORMATION DISCLOSED ON THIS DOCUMENT IS CONSIDERED PROPRIETARY AND SHALL NOT BE REPRODUCED OR DISCLOSED WITHOUT WRITTEN CONSENT OF NIDEC MOTOR CORPORATION

ISSUED BY	M. CHAUDHARI
APPROVED BY	R. KING

IHP_DP_NMCA (MAR-2011) SOLIDEDGE

NAMEPLATE DATA

CATALOG NUMBER:				NAMEPLATE PART #:	2022000-002		
MODEL	CW89	FR	405T	TYPE	LCE	ENCL	TEFC
SHAFT END BRG	6217-J/C3 - QTY 1			OPP END BRG	6214-J/C3 - QTY 1		
PH	3	MAX AMB	40 C	ID#			
INSUL CLASS	F	Asm. Pos.	F1	DUTY	CONT		

HP	100		RPM	1780		HP		RPM	
VOLTS	460	230				VOLTS			
FL AMPS	225.0	113.0				FL AMPS			
SF AMPS	259.0	129.0				SF AMPS			
SF	1.15	DESIGN	B	CODE	G	SF		DESIGN	CODE
NEMA NOM EFFICIENCY	95.4	NOM PF	87.1	KiloWatt	74.6	NEMA NOM EFFICIENCY		NOM PF	
GUARANTEED EFFICIENCY	94.5	MAX KVAR	22.7	HZ	60	GUARANTEED EFFICIENCY		MAX KVAR	HZ

HAZARDOUS LOCATION DATA (IF APPLICABLE):

DIVISION	1	CLASS I	I	GROUP I	D
TEMP CODE	T2B	CLASS II		GROUP II	

VFD DATA (IF APPLICABLE):

VOLTS			
AMPS			
TORQUE 1		TORQUE 2	
VFD LOAD TYPE 1		VFD LOAD TYPE 2	
VFD HERTZ RANGE 1		VFD HERTZ RANGE 2	
VFD SPEED RANGE 1		VFD SPEED RANGE 2	
SERVICE FACTOR		FL SLIP	
NO. POLES	4	MAGNETIZING AMPS	66.9
VECTOR MAX RPM		Encoder PPR	
Radians / Seconds		Encoder Volts	

TEAO DATA (IF APPLICABLE):

HP (AIR OVER)		HP (AIR OVER M/S)		RPM (AIR OVER)		RPM (AIR OVER M/S)	
FPM AIR VELOCITY		FPM AIR VELOCITY M/S		FPM AIR VELOCITY SEC			

ADDITIONAL NAMEPLATE DATA:

Decal / Plate	WD=158803	Customer PN	
Notes		Non Rev Ratchet	
Max Temp Rise	80C RISE/RES@1.00SF	OPP/Upper Oil Cap	GREASE
Thermal (WDG)		SHAFT/Lower Oil Cap	GREASE
Altitude			
Regulatory Notes		Regulatory Compliance	
COS		Marine Duty	
Balance		Arctic Duty	
3/4 Load Eff.	95.6	Inrush Limit	
Motor Weight (LBS)	556.15 KG	Direction of Rotation	
Sound Level		Special Note 1	
Vertical Thrust (LBS)		Special Note 2	
Thrust Percentage		Special Note 3	
Bearing Life		Special Note 4	
Starting Method		Special Note 5	
Number of Starts		Special Note 6	
200/208V 60Hz Max Amps		SH Max. Temp.	
190V 50 hz Max Amps		SH Voltage	
380V 50 Hz Max Amps		SH Watts	
NEMA Inertia		Load Inertia	
Sumpheater Voltage		Sumpheater Wattage	
Special Accessory Note 1		Special Accessory Note 16	
Special Accessory Note 2		Special Accessory Note 17	
Special Accessory Note 3		Special Accessory Note 18	
Special Accessory Note 4		Special Accessory Note 19	
Special Accessory Note 5		Special Accessory Note 20	
Special Accessory Note 6		Special Accessory Note 21	
Special Accessory Note 7		Special Accessory Note 22	
Special Accessory Note 8		Special Accessory Note 23	
Special Accessory Note 9		Special Accessory Note 24	
Special Accessory Note 10		Special Accessory Note 25	
Special Accessory Note 11		Special Accessory Note 26	
Special Accessory Note 12		Special Accessory Note 27	
Special Accessory Note 13		Special Accessory Note 28	
Special Accessory Note 14		Special Accessory Note 29	
Special Accessory Note 15		Special Accessory Note 30	

NIDEC MOTOR CORPORATION

ST. LOUIS, MO

TYPICAL NAMEPLATE DATA
ACTUAL MOTOR NAMEPLATE LAYOUT MAY VARY
SOME FIELDS MAY BE OMITTED

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MOTOR PERFORMANCE

MODEL NO.	CATALOG NO.	PHASE	TYPE	FRAME
CW89	NA	3	LCE	405T

ORDER NO.	20547	LINE NO.	

MPI:	129024	129025
HP:	100	100
POLES:	4	4
VOLTS:	460	230
HZ:	60	60
SERVICE FACTOR:	1.15	1.15
EFFICIENCY (%):		
S.F.	95	95
FULL	95.4	95.4
3/4	95.6	95.6
1/2	95.1	95.1
1/4	92.2	92.2
POWER FACTOR (%):		
S.F.	87.6	87.6
FULL	87.1	87.1
3/4	84.8	84.8
1/2	78.2	78.2
1/4	58.9	58.9
NO LOAD	4.9	4.9
LOCKED ROTOR	27.5	27.5
AMPS:		
S.F.	129	259
FULL	113	225
3/4	87	173
1/2	63	126
1/4	43	86
NO LOAD	33.4	66.9
LOCKED ROTOR	716.9	1433.8
NEMA CODE LETTER	G	G
NEMA DESIGN LETTER	B	B
FULL LOAD RPM	1780	1780
NEMA NOMINAL EFFICIENCY (%)	95.4	95.4
GUARANTEED EFFICIENCY (%)	94.5	94.5
MAX KVAR	22.6	22.7
AMBIENT (°C)	40	40
ALTITUDE (FASL)	3300	3300
SAFE STALL TIME-HOT (SEC)	30	30
SOUND PRESSURE (DBA @ 1M)	87	87
TORQUES:		
BREAKDOWN{% F.L.}	241	241
LOCKED ROTOR{% F.L.}	165	165
FULL LOAD{LB-FT}	294.7	294.7

NEMA Nominal and Guaranteed Efficiencies are up to 3,300 feet above sea level and 25 ° C ambient

The Above Data Is Typical, Sinewave Power Unless Noted Otherwise

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ST. LOUIS, MO

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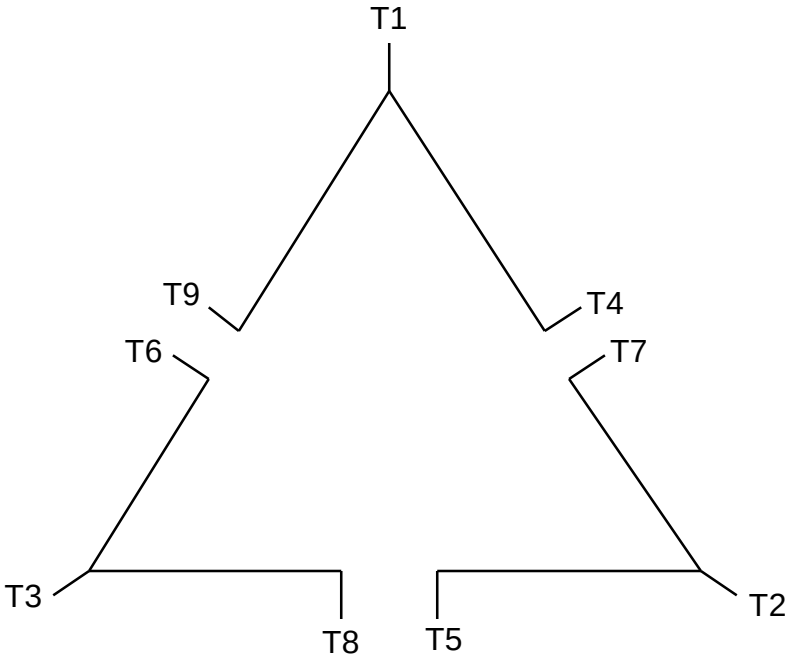
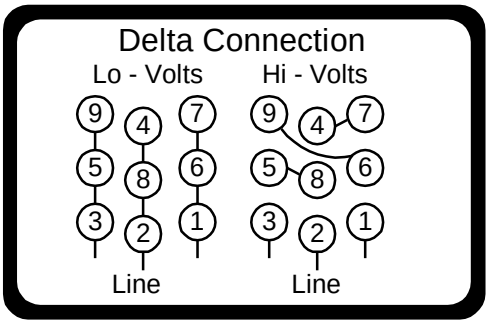
A109145

Motor Wiring Diagram

9 Lead, Dual Voltage (DELTA Conn.)





To reverse direction of rotation interchange connections L1 and L2.

Each lead may have one or more cables comprising that lead.
In such case each cable will be marked with the appropriate lead number.

Connection Plate: A109145
Connection Decal: 344122