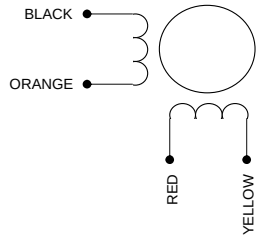
MOTOR PART NUMBER		GENERIC P/N : CTP3_NLF__KAA00 GENERIC P/N : CTP3_NLF__KEE00				GENERIC P/N : CTP3_NLS__KAA00 GENERIC P/N : CTP3_NLS__KEE00		
CTP31		...1...72.....	...1...45.....	...1...28.....	...1...09.....	...1...56.....	...1...35.....	...1...22.....
CTP32		...2...73.....	...2...46.....	...2...28.....	...2...11.....	...2...58.....	...2...36.....	...2...23.....
CTP33		...3...75.....	...3...47.....	...3...29.....	...3...13.....	...3...59.....	...3...37.....	...3...23.....
RESISTANCE PER PHASE ± 10%	ohms ± 10%							
CTP31		0.34	0.79	2.02	19.50	0.53	1.29	3.21
CTP32		0.41	1.01	2.53	16.10	0.65	1.63	4.00
CTP33		0.45	1.08	2.73	13.80	0.70	1.74	4.31
INDUCTANCE PER PHASE ± 20%	mH ± 20%							
CTP31		2.3	5.8	16.0	150.0	1.9	4.9	13.0
CTP32		3.4	9.1	24.0	150.0	2.8	7.6	19.0
CTP33		4.0	10.0	27.0	140.0	3.2	8.4	21.0
RATED CURRENT PER PHASE *	amps							
CTP31		7.2	4.5	2.8	0.9	5.6	3.5	2.2
CTP32		7.3	4.6	2.8	1.1	5.8	3.6	2.3
CTP33		7.5	4.7	2.9	1.3	5.9	3.7	2.3
HOLDING TORQUE, MIN *	oz-in / N-m TYP							
CTP31		537 / 3.79				437 / 3.09		
CTP32		1045 / 7.38				846 / 5.97		
CTP33		1492 / 10.54				1188 / 8.39		
DETENT TORQUE, MAX	oz-in / N-m TYP							
CTP31		22 / 0.16						
CTP32		30 / 0.21						
CTP33		38 / 0.27						
ROTOR MOMENT OF INERTIA	oz-in-s^2 / kg-cm^2							
CTP31		.0185 / 1.31						
CTP32		.0370 / 2.61						
CTP33		.0555 / 3.92						
STEP ANGLE *	deg ± 3%	1.8						
STEPS PER REVOLUTION *	-	200						
AMBIENT TEMPERATURE RANGE	deg C							
OPERATING		-20 ~ +40						
STORAGE		-40 ~ +85						
BEARING TYPE	-	BALL BEARING						
INSULATION RESISITANCE AT 500VDC	Mohms	100 MEGOHMS						
DIELECTRIC WITHSTANDING VOLTAGE	vac	500 FOR 1 SECOND						
WEIGHT	lb / kg							
CTP31		4.0 / 1.8						
CTP32		6.5 / 3.0						
CTP33		9.1 / 4.1						
LEADWIRES	-	AWG 22						
TEMPERATURE CLASS	-	B (130°C MAX)						
RoHS	-	COMPLIANT						

* ENERGIZE AT RATED CURRENT PER PHASE, 2 PHASE

CTP3_NLF__KAA00			
BLACK	ORANGE	RED	YELLOW
+	-	+	-
-	+	+	-
-	+	-	+
+	-	-	+
+	-	+	-

CW ↓ ↑ CCW

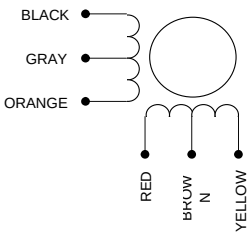
VIEWED FROM OUTPUT SHAFT



CTP3_NLS__KAA00				
BLACK	ORANGE	RED	YELLOW	GRAY / BROWN
-		-		+
	-	-		+
	-		-	+
-			-	+
-		-		+

CW ↓ ↑ CCW

VIEWED FROM OUTPUT SHAFT



FINAL	CTP3	MATERIAL : -----				DESIGN GROUP	
NEXT ASSY	USED ON	FINISH : -----					
ORIGINAL APPLICATION		TOLERANCES					
INTERPRET DRAWING PER		UNLESS OTHERWISE SPECIFIED					
ANSI Y14.5 UNLESS OTHERWISE		FRAC DIM ± -----		X.XXX DIM ± -----		DIMENSIONS : INCHES	
SPECIFIED . ALL DIM RFS.		X.XX DIM ± -----		ANGLES ± -----		[MM]	
DO NOT SCALE DWG		APPROVALS	DATE	APPROVALS	DATE		
		DWN BY		DSG ENG			
		CHK BY		INDL ENG			
THIRD ANGLE PROJECTION		DSGN		Q.A.			

DANAHER MOTION

TITLE: 6/29/2007

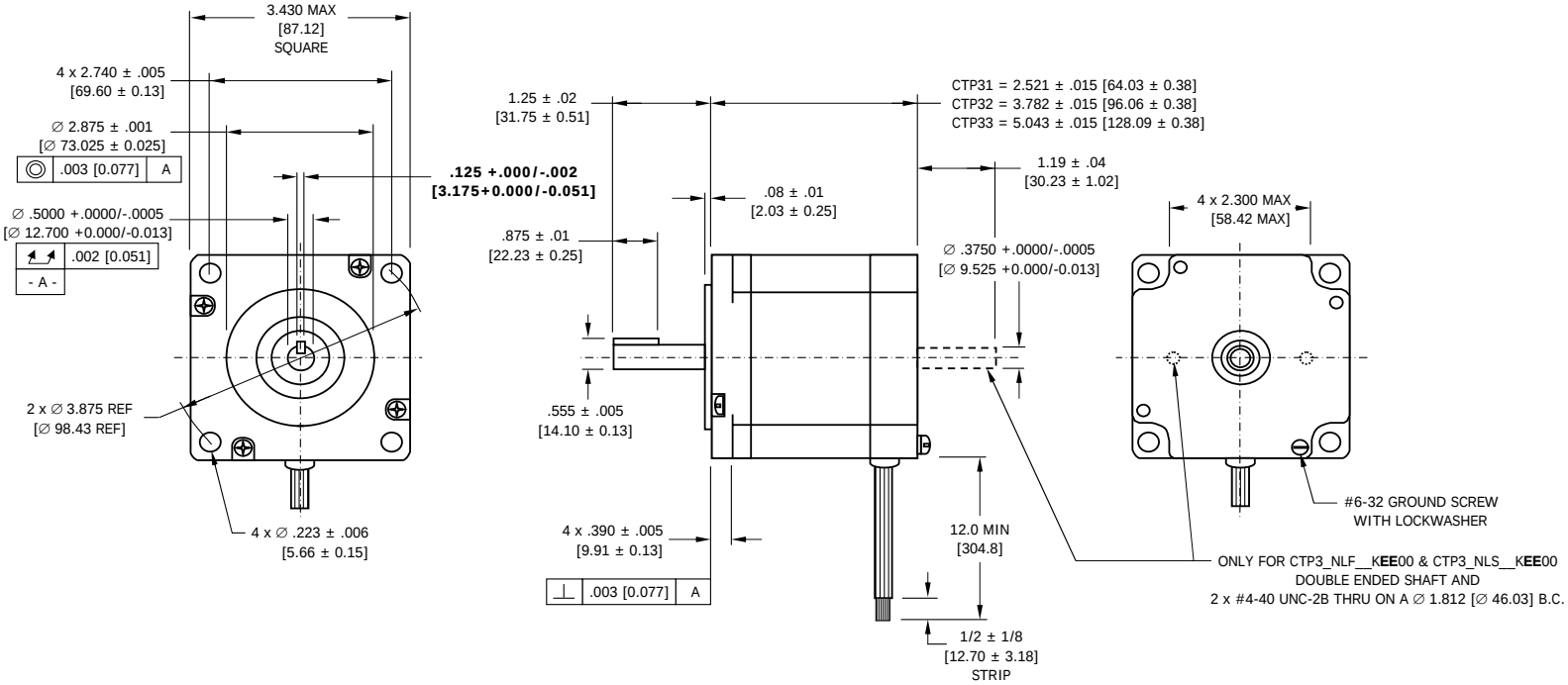
PRODUCT SPECIFICATION

(NEMA 34 HYBRID STEPPER MOTOR)

DWG NO

CTP3

SHEET 1 OF 2



FINAL	CTP3	MATERIAL : -----			DESIGN GROUP		DANAHER MOTION
NEXT ASSY	USED ON	FINISH : -----					
ORIGINAL APPLICATION		TOLERANCES					TITLE: 6/29/2007
INTERPRET DRAWING PER ANSI Y14.5 UNLESS OTHERWISE SPECIFIED . ALL DIM RFS.		UNLESS OTHERWISE SPECIFIED FRAC DIM ± ----- X.XXX DIM ± ----- DIMENSIONS : INCHES X.XX DIM ± ----- ANGLES ± ----- [MM]					**PRODUCT SPECIFICATION (NEMA 34 HYBRID STEPPER MOTOR)**
DO NOT SCALE DWG		APPROVALS		DATE	APPROVALS		DATE	DWG NO
		DWN BY			DSG ENG			**CTP3**
		CHK BY			INDL ENG			
THIRD ANGLE PROJECTION		DSGN			Q.A.			SHEET 2 OF 2