

Servo Motor Specifications

POSYS

Designed	Checked	Approved
<h1>Approved</h1>		

Model Name

1.Frameless Type

K A NZ - 04 B F 1 N 2

Product Type	Sense of Rotation		Series		Rated Power	Supply Voltage		Feedback		Special Sequence		Brake		Shaft end		
K	A	CW	NZ	Frameless	A3	30W	A	110Vac	C	2048PR 9Wire [INC]	1	Default	N	None[Std]	1	Round
		CCW	NQ	Frameless	A5	50W	B	220Vac	E	2500PR 9Wire [INC]	2	Special	B	Brake	2	Key way[Std]
	B		FZ	Frame	A8	80W	D	48Vdc	F	2500PR 15Wire [INC]	3	Special	S	Oil Seal	3	D-CUT
					01	100W	E	24Vdc	G	17M ABS			T	Brake & Seal		
					02	200W	G	380Vac	G	18M ABS EBI 1135						
					04	400W	J	75Vdc								
					06	600W	H	170Vdc								
					08	750W	R	42Vdc								
					10	1kW										

2.Frame Type

K A FZ - 04 B F 1 N 2 1

Product Type	Sense of Rotation		Series		Rated Power	Supply Voltage		Feedback		Special Sequence		Option1	Shaft end		Special Sequence2			
K	A	CW	NZ	Frameless	01	100W	A	110Vac	C	2048PR 9Wire [INC]	1	Default	N	None[Std]	1	Round	1	Default
		CCW	NQ	Frameless	02	200W	B	220Vac	E	2500PR 9Wire [INC]	2	Special	B	Brake	2	Key way[Std]	2	
	B		FZ	Frame	04	400W	D	48Vdc	F	2500PR 15Wire [INC]	3	Special	S	Oil Seal	3	D-CUT	3	
					06	750W	E	24Vdc	G	17M ABS			T	Brake & Seal				
							G	380Vac	G	18M ABS EBI 1135								
							J	75Vdc										
							H	170Vdc										
							R	42Vdc										

Brake specification

Applicable Brake (KANZ, KANQ)

Item	Unit	Applicable Motor Flange Size		
		40	60	80
Static friction torque	N •m	0.39	1.69	3.25
Rotor inertia	10 ⁻⁴ kg •m ²	0.0025	0.020	0.075
Armature suction time	ms	25	50	60
Armature release time	ms	20	15	15
Release voltage	DC, V	2 (at 20 °C)	2 (at 20 °C)	2 (at 20 °C)
excitation voltage	DC, V	24 ± 2.4	24 ± 2.4	24 ± 2.4
excitation current	DC, A	0.26	0.36	0.43

Detail specifications

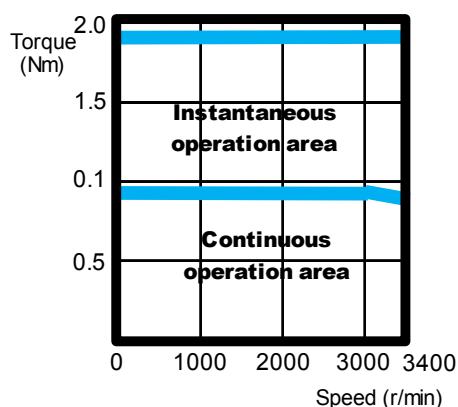
DATE	Type	Specification	Drawing No.	Remark
Z-Series				
2015.01.08	KANZ-A3D□1□□	KMDS10485	10100620 10100636	Normal Brake
2015.01.08	KANZ-A3DG1□□	KMDS10485	10100621 10100637	Normal (EBI1135) Brake (EBI1135)
2015.01.08	KANZ-A5D□2□□	KMDS10485	10100622 10100638	Normal Brake
2015.01.08	KANZ-A5DG2□□	KMDS10485	10100623 10100639	Normal (EBI1135) Brake (EBI1135)
2015.01.08	KANZ-A8D□2□□	KMDS10485	10100624 10100640	Normal Brake
2015.01.08	KANZ-A8DG2□□	KMDS10485	10100625 10100641	Normal (EBI1135) Brake (EBI1135)
2015.01.08	KANZ-01D□2□□	KMDS10485	10100626 10100642	Normal Brake
2015.01.02	KANZ-01DG2□□	KMDS10485	10100627 10100643	Normal (EBI1135) Brake (EBI1135)
2015.01.02	KANZ-02D□1□□	KMDS10485	10100628	Normal Brake
2015.01.02	KANZ-04D□2□□	KMDS10485	10100630	Normal Brake
FZ-Series				
2015.01.02	KAFZ-08D□2□□2	KMDS10485	30012001	Normal
2015.01.02	KAFZ-08D□2□□4	KMDS10485	30012002	Brake
Q-Series				
2015.01.02	KANQ-01D□1□□	KMDS10485	10100632 10100633	Normal Brake
2015.01.02	KANQ-04D□1□□	KMDS10485	10100634 10100635	Normal Brake

AC Servo Motor Specifications

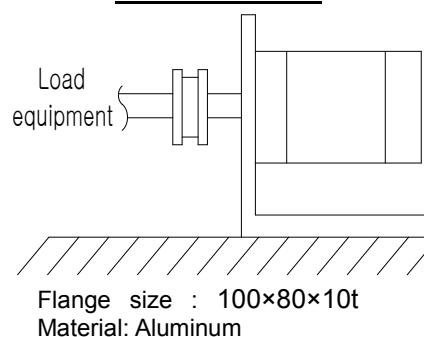
Item	Unit	KANZ-A3D□1□□	KANZ-A3D□1□□	Remarks
Flange size	mm	40	40	
Rated output	W	30	30	
Continuous Running Duty	%	100	100	
No. of poles		8	8	
Rated speed	r/min	3000	3000	
Maximum speed	r/min	3400	3400	
Rated torque	N·m	0.0955	0.0955	
	kgf·cm	0.974	0.974	
Maximum torque	N·m	0.19	0.19	
	kgf·cm	1.937	1.937	
Rated current	A _(rms)	1.4	1.4	±10%
Rotor inertia	$\times 10^{-4}$ kg·m ²	0.015	0.019	
	gf·cm·sec ²	0.0153	0.0194	
Elec. time constant	ms	0.68	0.68	
Mech. time constant	ms	2.16	2.73	
Rated power rate	kW/s	6.2	4.9	
Momentary maximum current	A(o-p)	3.96	3.96	±10%
Back EMF constant per phase	$\times 10^{-3}$ V _(rms) /min ⁻¹	2.58	2.58	±10%
Torque constant	N·m/A _(rms)	0.074	0.074	±10%
	kgf·cm/A _(rms)	0.755	0.755	±10%
Phase resistance	Ω	2.27	2.27	±10%
Phase inductance	mH	1.55	1.55	±20%
Insulation class		B	B	
Vibration class		V-15	V-15	
Oil seal		X / O	X / O	
Brake		X	O	
Structure		Totally-enclosed self-cooled	Totally-enclosed self-cooled	
Supply voltage	V DC	48	48	

1. These values are representative of the ideal sinusoidal operating conditions of the motors.
(at ambient temperature 20°C)
2. IP class of these motors are IP65 without connectors.
3. Rated torque is the allowable continuous torque value when measured in the conditions shown below.

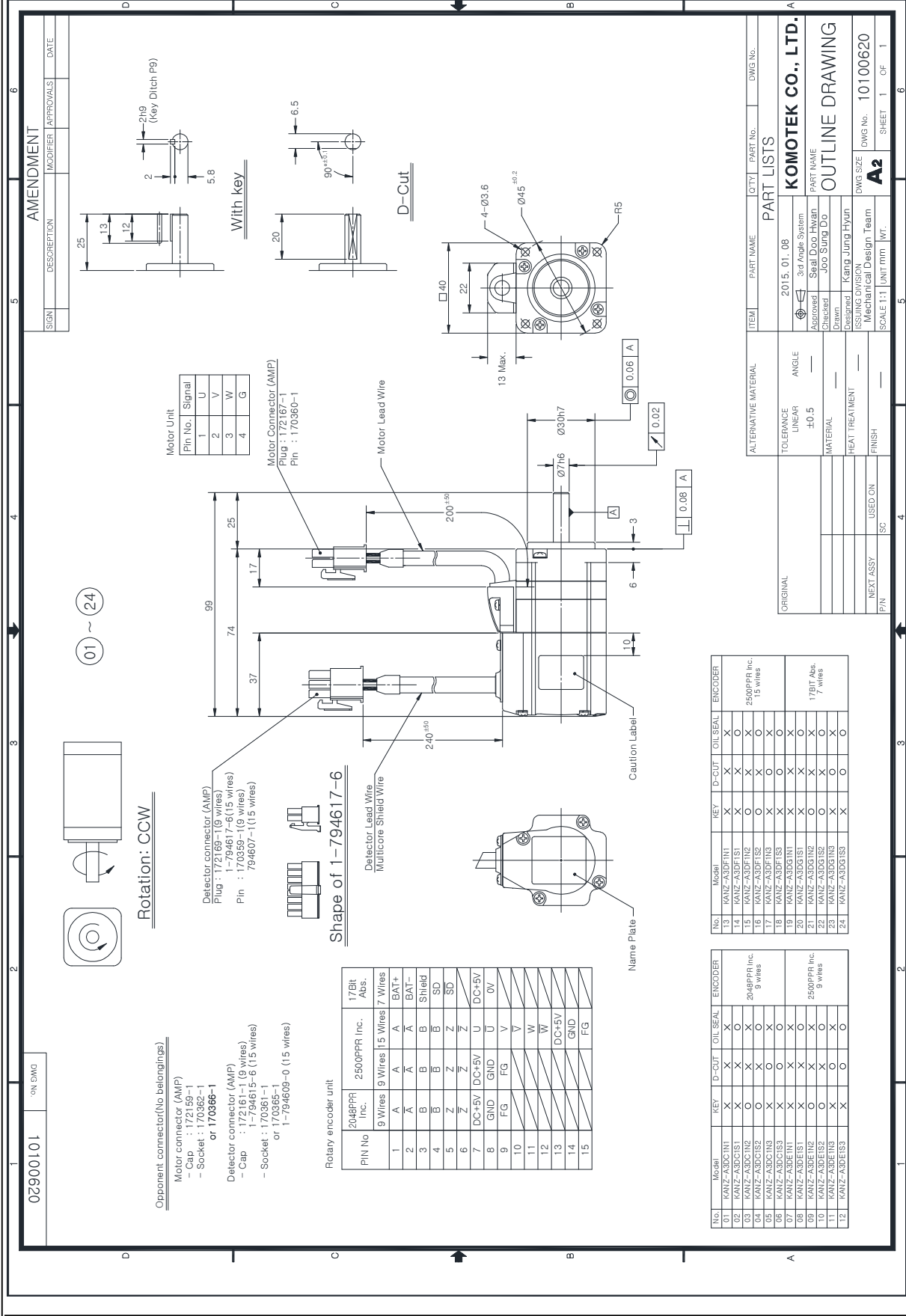
□ Characteristic curve



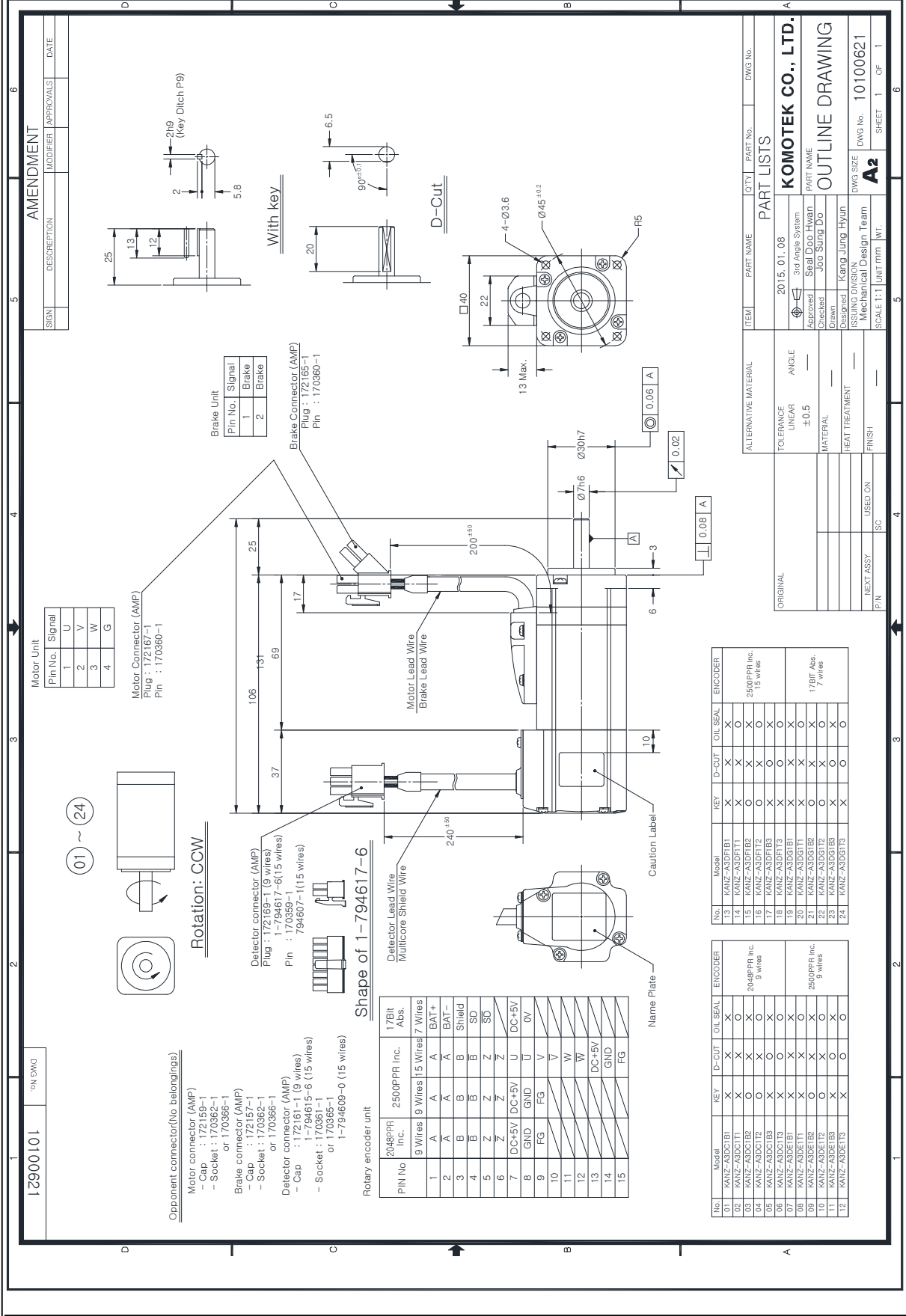
□ Test method



KANZ-A3D□1□□_Normal Model Outline Drawing



KANZ-A3D□1□□_ Brake Model Outline Drawing



SIGN	DESCRIPTION	MODIFIER	APPROVALS	DATE

Motor Unit

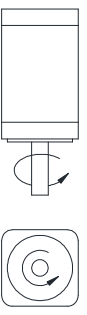
Pin No.	Signal
1	U
2	V
3	W
4	G

Motor Connector (AMP)
Plug : 172167-1
Pin : 170360-1

Brake Unit

Pin No.	Signal
1	Brake
2	Brake

Brake Connector (AMP)
Plug : 172165-1
Pin : 170360-1



Rotation: CCW

Detector connector (AMP)
Plug : 172169-1 (9 wires)
1-794617-6 (15 wires)
794607-1 (15 wires)
Pin : 170359-1



Shape of 1-794617-6

Rotary encoder unit

Pin No	2048PPR Inc.	9 Wires	2500PPR Inc.	15 Wires	17Bit Abs.	7 Wires
1	A	A	A	A	BAT+	BAT+
2	A	A	A	A	BAT-	BAT-
3	B	B	B	B	Shield	Shield
4	B	B	B	B	SD	SD
5	Z	Z	Z	Z	SD	SD
6	Z	Z	Z	Z	SD	SD
7	DC+5V	DC+5V	DC+5V	DC+5V	OV	OV
8	GND	GND	GND	GND	OV	OV
9	FG	FG	FG	FG	V	V
10	FG	FG	FG	FG	W	W
11					W	W
12					W	W
13					DC+5V	DC+5V
14					GND	GND
15					FG	FG

Name Plate

No.	Model	REV	D-CUT	OIL SEAL	ENCODER
13	KANZ-A3DF1B1	X	X	X	X
14	KANZ-A3DF1T1	X	X	X	X
15	KANZ-A3DF1B2	O	X	X	X
16	KANZ-A3DF1T2	O	X	X	X
17	KANZ-A3DF1B3	X	X	X	X
18	KANZ-A3DF1T3	X	X	X	X
19	KANZ-A3DG1B1	X	X	X	X
20	KANZ-A3DG1T1	X	X	X	X
21	KANZ-A3DG1B2	O	X	X	X
22	KANZ-A3DG1T2	O	X	X	X
23	KANZ-A3DG1B3	X	X	X	X
24	KANZ-A3DG1T3	X	X	X	X

No.	Model	REV	D-CUT	OIL SEAL	ENCODER
01	KANZ-A3DC1B1	X	X	X	X
02	KANZ-A3DC1T1	X	X	X	X
03	KANZ-A3DC1B2	O	X	X	X
04	KANZ-A3DC1T2	O	X	X	X
05	KANZ-A3DC1B3	X	X	X	X
06	KANZ-A3DC1T3	X	X	X	X
07	KANZ-A3DE1B1	X	X	X	X
08	KANZ-A3DE1T1	X	X	X	X
09	KANZ-A3DE1B2	O	X	X	X
10	KANZ-A3DE1T2	O	X	X	X
11	KANZ-A3DE1B3	X	X	X	X
12	KANZ-A3DE1T3	X	X	X	X

ITEM	PART NAME	QTY	PART No.	DWG No.

PART LISTS

2015. 01. 08	3rd Angle System	Seal Doo Hwan	Checked	Joo Sung Do	Drawn	Designed	Kang Jung Hyun

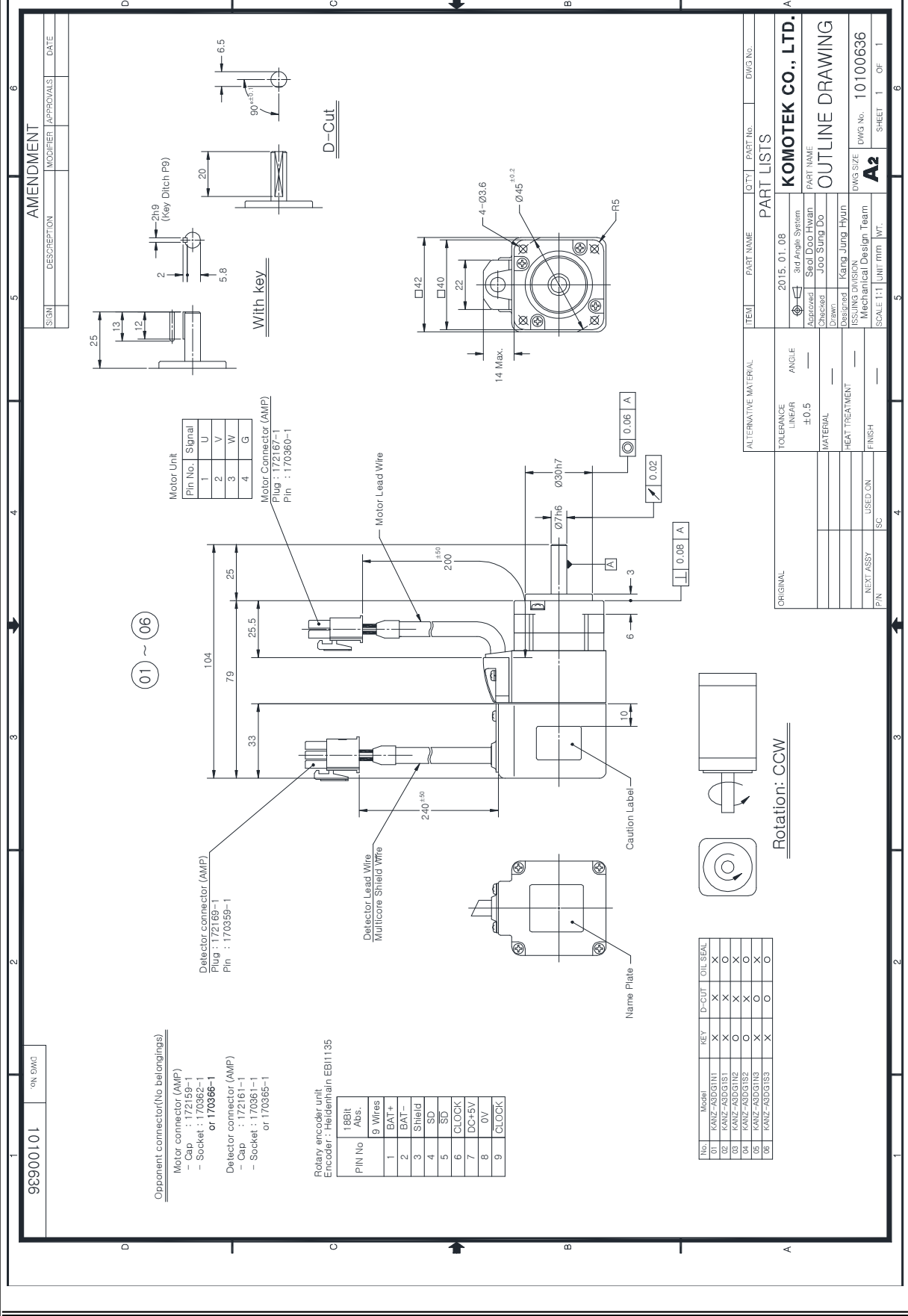
KOMOTEK CO., LTD.
PART NAME
OUTLINE DRAWING

ISSUING DIVISION	Mechanical Design Team	DWG No.	10100621

A2
SCALE 1:1 UNIT:mm IWT.
SHEET 1 OF 1

17900101 01N 5/10

KANZ-A3DG1 □ □ Normal Model Outline Drawing [Heidenhain EBI1135]



AMENDMENT

SIGN	DESCRIPTION	MODIFIER	APPROVALS	DATE

Motor Unit

Pin No.	Signal
1	U
2	V
3	W
4	G

Motor Connector (AMP)
 Plug : 172167-1
 Pin : 170360-1

Detector connector (AMP)
 Plug : 172169-1
 Pin : 170359-1

Opponent connector (No. belongings)

Motor connector (AMP)
 - Cap : 172159-1
 - Socket : 170362-1
 or 170366-1

Detector connector (AMP)
 - Cap : 172161-1
 - Socket : 170361-1
 or 170365-1

Rotary encoder unit
 Encoder : Heidenhain EBI1135

18Bit Abs.	9 Wires
1	BAT +
2	BAT -
3	Shield
4	SD
5	SP
6	CLOCK
7	DC+5V
8	0V
9	CLOCK

No.	Model	REV	D-CUT	OILSEAL
01	KANZ-A3DG1T1	X	X	X
02	KANZ-A3DG1S1	X	X	X
03	KANZ-A3DG1R2	O	X	X
04	KANZ-A3DG1S2	O	X	X
05	KANZ-A3DG1R3	X	O	X
06	KANZ-A3DG1S3	X	O	O

PART LISTS

ITEM	PART NAME	QTY	PART No.	DWG No.
2015.01.08	3rd Angle System			
	Seol Doo Hwan			
	Checked Joo Sung Do			
	Drawn Kang Jung Hyun			
	ISSUING DIVISION Mechanical Design Team			
	DWG No. 10100636			
	SCALE 1:1 UNIT mm WT.			

ALTERNATIVE MATERIAL

TOLERANCE	ANGLE
LINEAR ±0.5	

MATERIAL

HEAT TREATMENT

FINISH

ORIGINAL

NEXT ASSY USED ON P/N SC

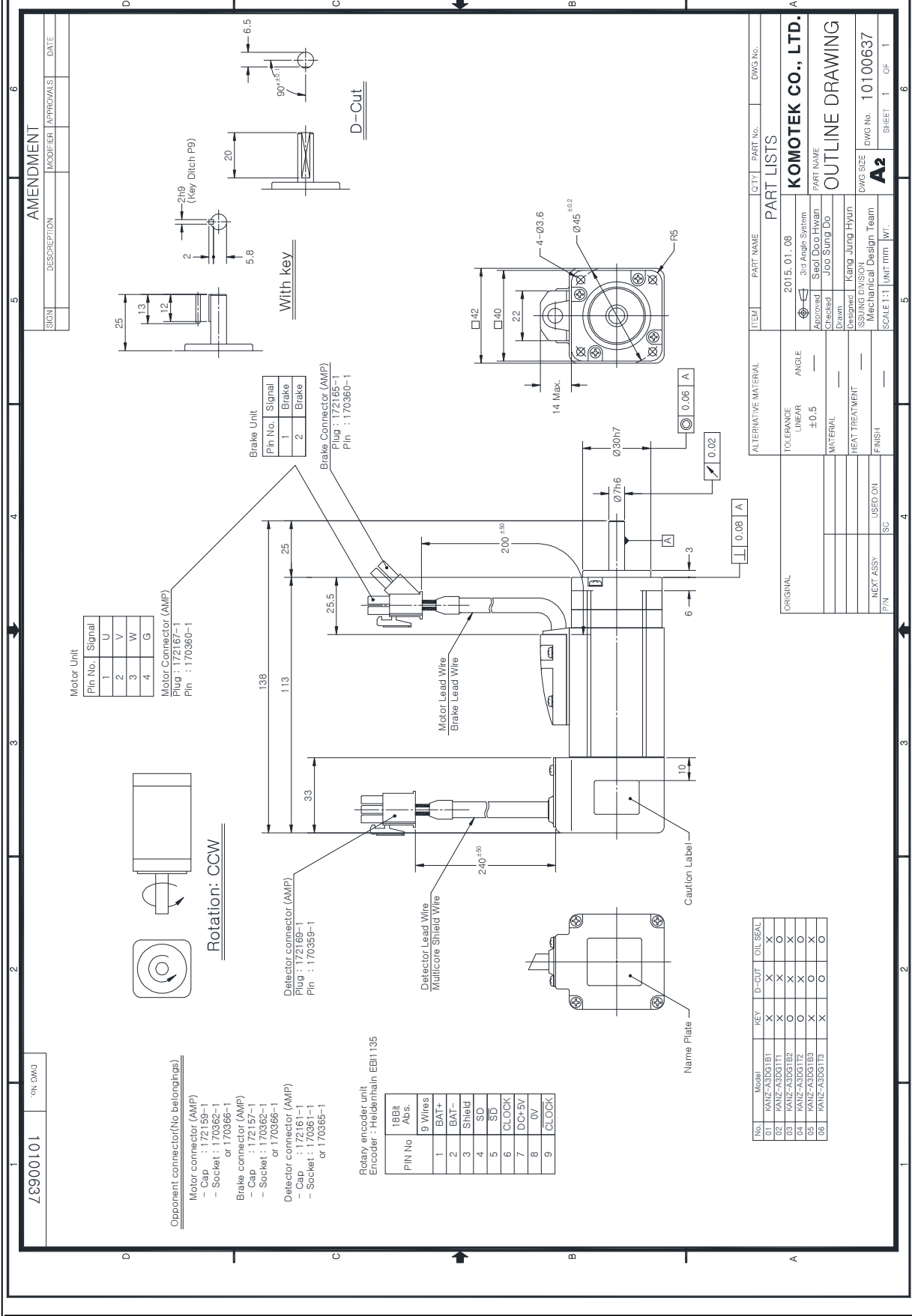
KOMOTEK CO., LTD.
 OUTLINE DRAWING

2015.01.08
 3rd Angle System
 Seol Doo Hwan
 Checked Joo Sung Do
 Drawn Kang Jung Hyun
 ISSUING DIVISION Mechanical Design Team
 DWG No. 10100636
 SCALE 1:1 UNIT mm WT.

Part Name: KANZ-A3DG1
 Part No.:
 DWG No.: 10100636
 Scale: 1:1
 Unit: mm
 Weight: WT.

9E900101 0N DWG

KANZ-A3DG1□□_ Brake Model Outline Drawing [Heidenhain EBI1135]

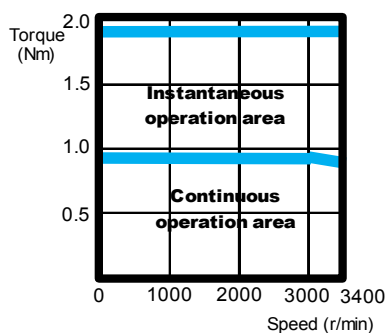


AC Servo Motor Specifications

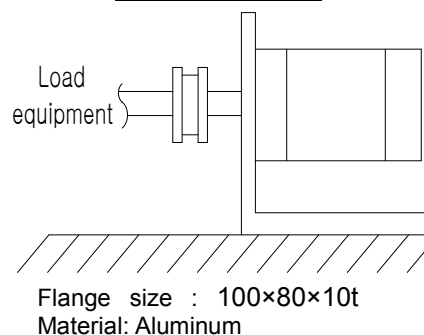
Item	Unit	KANZ-A5D□2□□	KANZ-A5D□2□□	Remarks
Flange size	mm	40	40	
Rated output	W	50	50	
Continuous Running Duty	%	100	100	
No. of poles		8	8	
Rated speed	r/min	3000	3000	
Maximum speed	r/min	3400	3400	
Rated torque	N·m	0.16	0.16	
	kgf·cm	1.63	1.63	
Maximum torque	N·m	0.32	0.32	
	kgf·cm	3.26	3.26	
Rated current	A _(rms)	1.92	1.92	±10%
Rotor inertia	$\times 10^{-4}$ kg·m ²	0.024	0.029	
	gf·cm·sec ²	0.024	0.030	
Elec. time constant	ms	0.76	0.76	
Mech. time constant	ms	1.44	1.74	
Rated power rate	kW/s	10.88	9.00	
Momentary maximum current	A(o-p)	5.43	5.43	±10%
Back EMF constant per phase	$\times 10^{-3}$ V _(rms) /min ⁻¹	3.01	3.01	±10%
Torque constant	N·m/A _(rms)	0.086	0.086	±10%
	kgf·cm/A _(rms)	0.877	0.877	±10%
Phase resistance	Ω	1.28	1.28	±10%
Phase inductance	mH	0.97	0.97	±20%
Insulation class		B	B	
Vibration class		V-15	V-15	
Oil seal		X	X	
Brake		X	O	
Structure		Totally-enclosed self-cooled	Totally-enclosed self-cooled	
Supply voltage	V DC	48	48	

1. These values are representative of the ideal sinusoidal operating conditions of the motors.
(at ambient temperature 20 °C)
2. IP class of these motors are IP65 without connectors.
3. Rated torque is the allowable continuous torque value when measured in the conditions shown below.

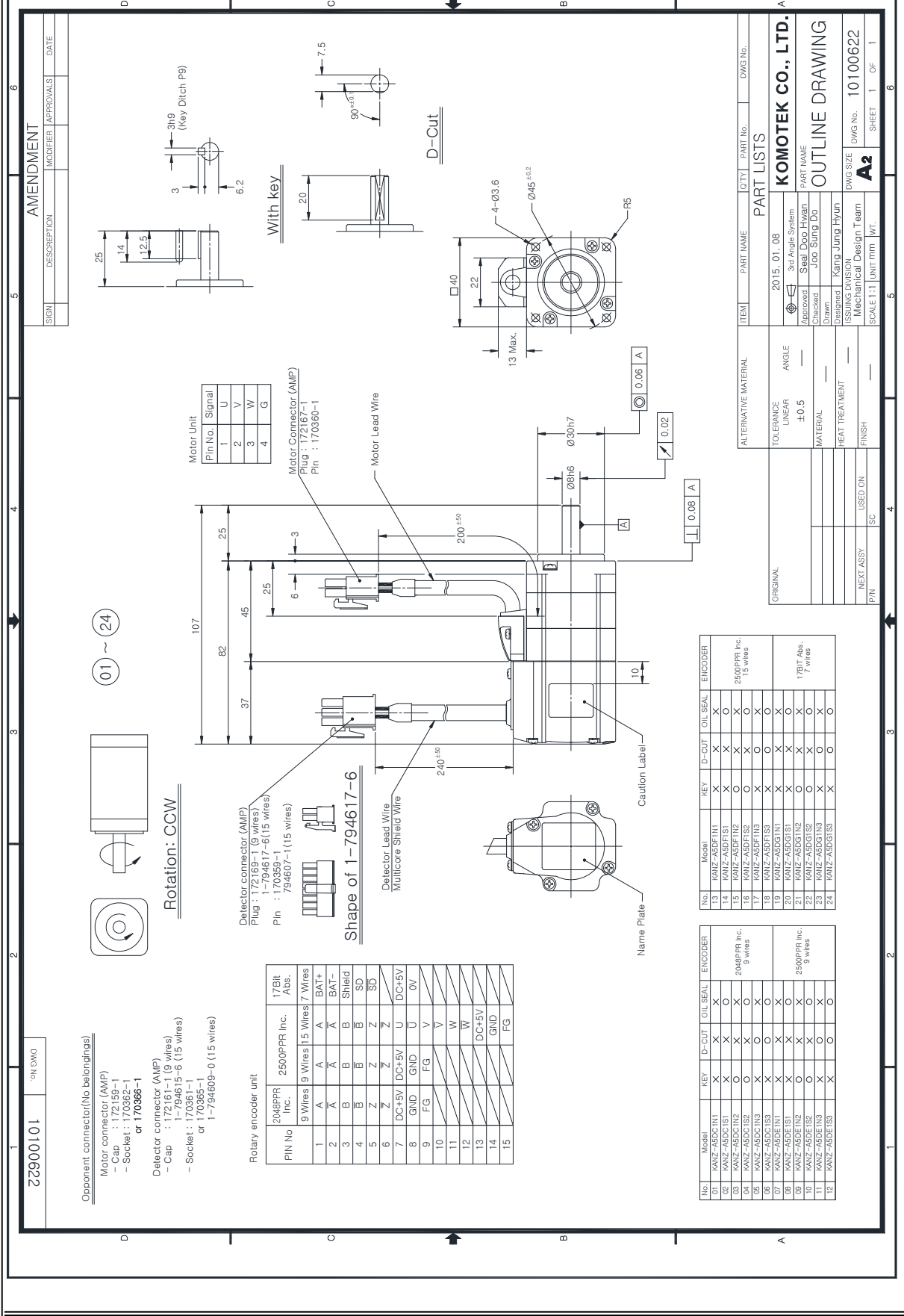
□ Characteristic curve



□ Test method



KANZ-A5D□2□□_Normal Model Outline Drawing



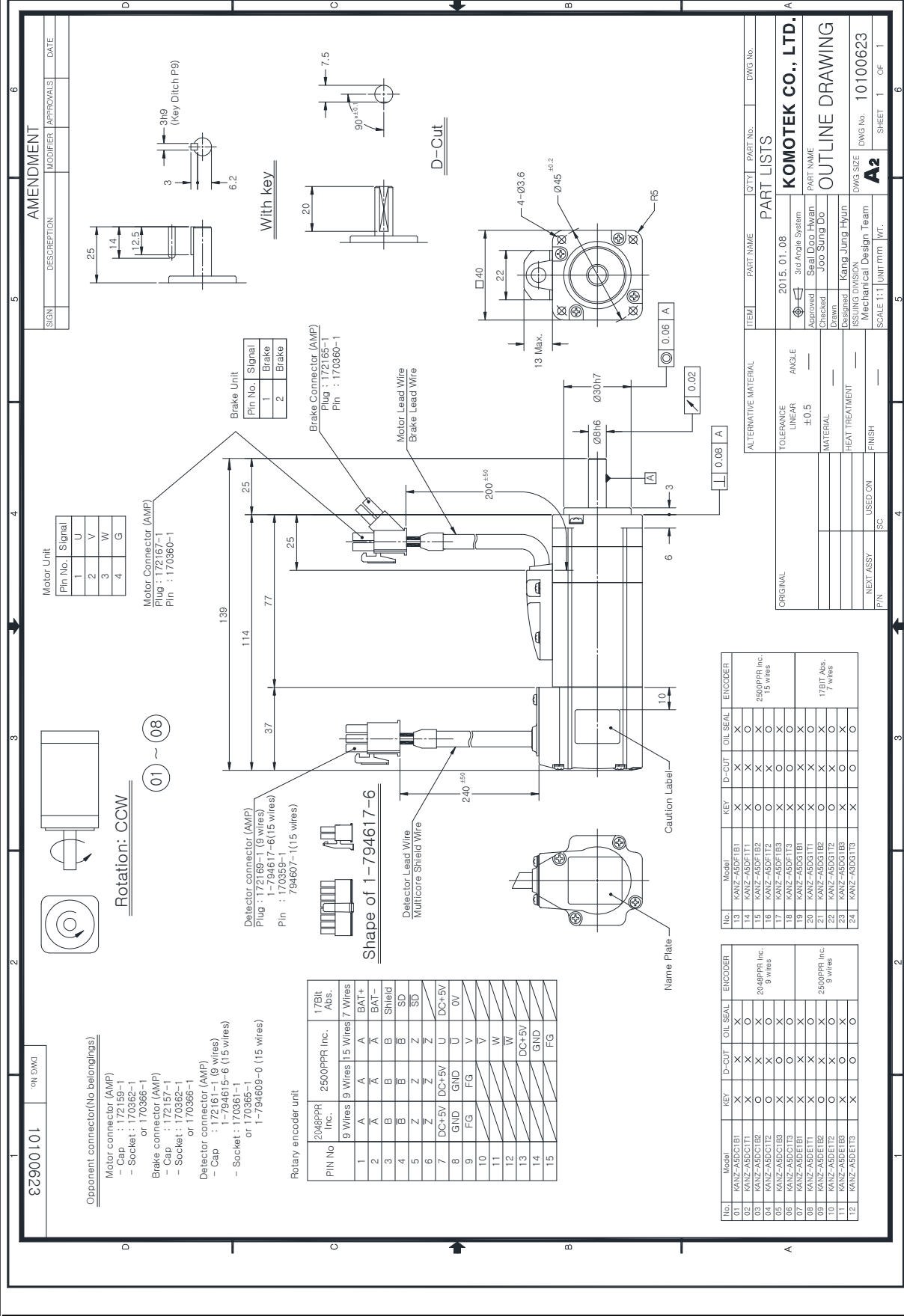
AMENDMENT	
SIGN	DESCRIPTION
MODIFIER	APPROVALS
DATE	

ITEM	PART NAME	QTY	PART No.	DWG No.
PART LISTS				
2015. 01. 08	3rd Angle System			
Approved	Seal	000	Hyun	
Checked	000	Sung Do		
Designed	Kang Jung Hyun			
ISSUING DIVISION Mechanical Design Team				
SCALE 1:1 UNIT mm				DWG No. 10100622
NEXT ASSY USED ON				SHEET 1 OF 1
P/N SC				

No.	Model	KEY	D-CUT	OIL SEAL	ENCODER
13	KANZ-A5DF11	X	X	X	X
14	KANZ-A5DF11	X	X	X	X
15	KANZ-A5DF12	X	X	X	X
16	KANZ-A5DF12	X	X	X	X
17	KANZ-A5DF13	X	X	X	X
18	KANZ-A5DF13	X	X	X	X
19	KANZ-A5DF11	X	X	X	X
20	KANZ-A5DG11	X	X	X	X
21	KANZ-A5DG12	X	X	X	X
22	KANZ-A5DG12	X	X	X	X
23	KANZ-A5DG13	X	X	X	X
24	KANZ-A5DG13	X	X	X	X

No.	Model	KEY	D-CUT	OIL SEAL	ENCODER
01	KANZ-ABDC11	X	X	X	X
02	KANZ-ABDC11	X	X	X	X
03	KANZ-ABDC12	X	X	X	X
04	KANZ-ABDC12	X	X	X	X
05	KANZ-ABDC13	X	X	X	X
06	KANZ-ABDC13	X	X	X	X
07	KANZ-ABDE11	X	X	X	X
08	KANZ-ABDE11	X	X	X	X
09	KANZ-ABDE12	X	X	X	X
10	KANZ-ABDE12	X	X	X	X
11	KANZ-ABDE13	X	X	X	X
12	KANZ-ABDE13	X	X	X	X

KANZ-A5D□2□□_ Brake Model Outline Drawing



AMENDMENT

SIGN	DESCRIPTION	MODIFIER	APPROVALS	DATE

Motor Unit

Pin No.	Signal
1	U
2	V
3	W
4	G

Motor Connector (AMP)
Plug : 172167-1
Pin : 170360-1

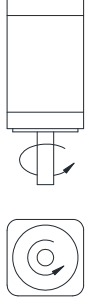
Brake Unit

Pin No.	Signal
1	Brake
2	Brake

Brake Connector (AMP)
Plug : 172168-1
Pin : 170360-1

Rotation: CCW

① ~ ⑧



10100623

- Opponent connector (No belongings)
- Motor connector (AMP)
 - Cap : 172159-1
 - Socket : 170362-1 or 170366-1
 - Brake connector (AMP)
 - Cap : 172157-1
 - Socket : 170362-1 or 170366-1
 - Detector connector (AMP)
 - Cap : 172161-1 (9 wires)
 - Socket : 170361-1 or 170365-1
 - 1-794615-6 (15 wires)
 - 1-794609-0 (15 wires)

Rotary encoder unit

PIN No	2048PPR Inc.	2500PPR Inc.	17Bit Abs.
1	A	A	A
2	A	A	BAT+
3	B	B	BAT-
4	B	B	Shield
5	Z	Z	SD
6	Z	Z	SD
7	DC+5V	DC+5V	U
8	GND	GND	U
9	FG	FG	V
10			W
11			W
12			W
13			DC+5V
14			GND
15			FG



No.	Model	KEY	D-CUT	OIL SEAL	ENCODER
13	KANZ-ADDF1B1	X	X	X	X
14	KANZ-ADDF1T1	X	X	X	X
15	KANZ-ADDF1B2	O	X	X	2500PPR Inc. 15 wires
16	KANZ-ADDF1T2	O	X	X	2500PPR Inc. 15 wires
17	KANZ-ADDF1B3	X	X	X	X
18	KANZ-ADDF1T3	X	X	X	X
19	KANZ-ADDB1B1	X	X	X	X
20	KANZ-ADDB1T1	X	X	X	X
21	KANZ-ADDB1B2	O	X	X	17BIT Abs. 7 wires
22	KANZ-ADDB1T2	O	X	X	17BIT Abs. 7 wires
23	KANZ-ADDB1B3	X	X	X	X
24	KANZ-ADDB1T3	X	X	X	X

No.	Model	KEY	D-CUT	OIL SEAL	ENCODER
01	KANZ-ASDC1B1	X	X	X	X
02	KANZ-ASDC1T1	X	X	X	X
03	KANZ-ASDC1B2	O	X	X	2048PPR Inc. 9 wires
04	KANZ-ASDC1T2	O	X	X	2048PPR Inc. 9 wires
05	KANZ-ASDC1B3	X	X	X	X
06	KANZ-ASDC1T3	X	X	X	X
07	KANZ-ASDB1B1	X	X	X	X
08	KANZ-ASDB1T1	X	X	X	X
09	KANZ-ASDB1B2	O	X	X	2500PPR Inc. 9 wires
10	KANZ-ASDB1T2	O	X	X	2500PPR Inc. 9 wires
11	KANZ-ASDB1B3	X	X	X	X
12	KANZ-ASDB1T3	X	X	X	X

PART LISTS

ITEM	PART NAME	QTY	PART No.	DWG No.
2015.01.08	3rd Angle System			
Approved	Seal Doo Hwan			
Checked	Joo Sung Do			
Drawn	Kang Jung Hyun			
ISSUING DIVISION	Mechanical Design Team			
DWG No.	10100623			
SCALE	1:1	UNIT	mm	WT.
NEXT ASSY USED ON				SC
P/N				
FINISH				
HEAT TREATMENT				
MATERIAL				
TOLERANCE				
LINEAR		ANGLE		
	±0.5			

ALTERNATIVE MATERIAL

ORIGINAL

KOMOTEK CO., LTD.
OUTLINE DRAWING

DWG No. 10100623
SCALE 1:1

SHEET 1 OF 1

KANZ-A5DG2□□_ Normal Model Outline Drawing [Heidenhain EBI1135]

8E900101 EN C/MG

SIGN	DESCRIPTION	MODIFIER	APPROVALS	DATE

6
5
4
3
2
1

1
2
3
4
5
6

AMENDMENT

A
B
C
D

Opponent connector(No belongings)

Motor connector (AMP)
 - Cap : 172159-1
 - Socket : 170362-1
 or 170366-1

Detector connector (AMP)
 - Cap : 172161-1
 - Socket : 170361-1
 or 170365-1

Motor Unit

Pin No.	Signal
1	U
2	V
3	W
4	G

Motor Connector (AMP)
 Plug : 172167-1
 Pin : 170360-1

Rotary encoder unit
 Encoder : Heidenhain EBI1135

PIN No	18Bit Abs.	9 Wires
1	BAT+	
2	BAT-	
3	Shield	
4	SD	
5	S \bar{S}	
6	CLOCK	
7	DC+5V	
8	0V	
9	CLOCK	

Rotation: CCW

Part Lists

ITEM	PART NAME	QTY	PART No.	DWG No.
2015_01_08	3rd Angle System			
Approved	Seol Doo Hyun			
Checked	Joo Sung Do			
Drawn				
Designed	Kang Jung Hyun			
ISSUING DIVISION	Mechanical Design Team			
SCALE: 1:1	UNIT: mm	WT.		

Part Lists

2015_01_08
 3rd Angle System
 Approved: Seol Doo Hyun
 Checked: Joo Sung Do
 Drawn: Kang Jung Hyun
 ISSUING DIVISION: Mechanical Design Team
 SCALE: 1:1 UNIT: mm WT.

No.	Model	KEY	D-CUT	OIL SEAL
01	KANZ-A5DG1N1	X	X	X
02	KANZ-A5DG1S1	X	X	X
03	KANZ-A5DG1R2	O	X	X
04	KANZ-A5DG1V2	O	X	X
05	KANZ-A5DG1S3	X	O	X
06	KANZ-A5DG1S3	X	O	X

Alternative Material

TOLERANCE	ANGLE
LINEAR ±0.5	
WATER	
HEAT TREATMENT	
FINISH	

Original

ALTERNATIVE MATERIAL	USE/ON	SC

Next Ass'y

PIN	USED ON	SC

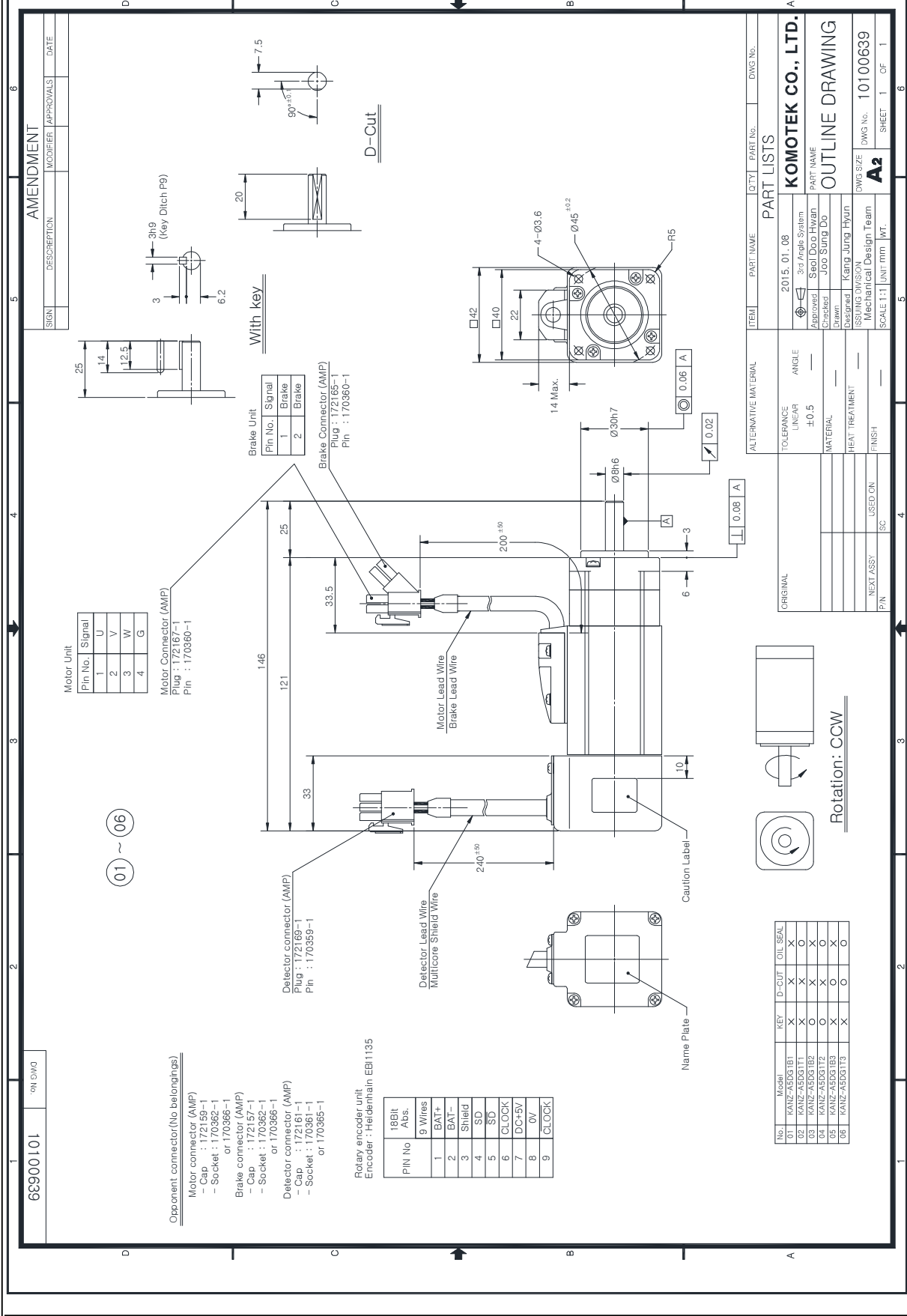
Part Lists

2015_01_08
 3rd Angle System
 Approved: Seol Doo Hyun
 Checked: Joo Sung Do
 Drawn: Kang Jung Hyun
 ISSUING DIVISION: Mechanical Design Team
 SCALE: 1:1 UNIT: mm WT.

Outline Drawing

DWG No. 10100638
 SHEET 1 OF 1

KANZ-A5DG2□□_ Brake Model Outline Drawing [Heidenhain EBI1135]



AMENDMENT

SIGN	DESCRIPTION	MODIFIER	APPROVALS	DATE

Motor Unit

Pin No.	Signal
1	U
2	V
3	W
4	G

Motor Connector (AMP)
Plug : 172167-1
Pin : 170360-1

Brake Unit

Pin No.	Signal
1	Brake
2	Brake

Brake Connector (AMP)
Plug : 172165-1
Pin : 170360-1

01 ~ 06

- Opponent connector (No belongings)
- Motor connector (AMP)
 - Cap : 172159-1
 - Socket : 170362-1
 - or 170366-1
 - Brake connector (AMP)
 - Cap : 172157-1
 - Socket : 170362-1
 - or 170366-1
 - Detector connector (AMP)
 - Cap : 172161-1
 - Socket : 170361-1
 - or 170365-1

Rotary encoder unit
Encoder : Heidenhain EBI1135

PIN No	18BIT Abs.	9 Wires
1	BAT+	
2	BAT-	
3	Shield	
4	SD	
5	CLOCK	
6	CLOCK	
7	DC+5V	
8	0V	
9	CLOCK	

PART LISTS

ITEM	PART NAME	QTY	PART No.	DWG No.
2015-01-08	3rd Angle System			
Approved	Seol Doo Hwan			
Checked	Joo Sung Do			
Drawn	Kang Jung Hyun			
ISSUING DIVISION	Mechanical Design Team			
DWG No.	10100639			
SCALE	1:1	UNIT	mm	WT.

ALTERNATIVE MATERIAL

TOLERANCE	LINEAR	ANGLE
±0.5		

MATERIAL

HEAT TREATMENT

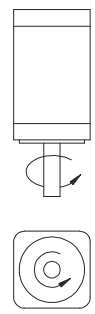
FINISH

ORIGINAL

NEXT ASSY

USED ON

PIN SC



No	Model	KEY	D-CUT	OIL SEAL
01	KANZ-A5DG1B1	X	X	X
02	KANZ-A5DG1T1	X	X	X
03	KANZ-A5DG1B2	O	X	X
04	KANZ-A5DG1T2	O	X	X
05	KANZ-A5DG1B3	X	X	X
06	KANZ-A5DG1T3	X	X	X

6ES90101

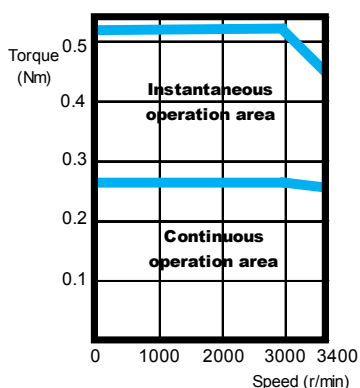
0N/DWG

AC Servo Motor Specifications

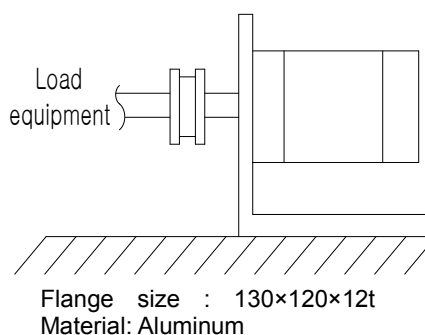
Item	Unit	KANZ-A8D□2□□	KANZ-A8D□2□□	Remarks
Flange size	mm	40	40	
Rated output	W	80	80	
Continuous Running Duty	%	100	100	
No. of poles		8	8	
Rated speed	r/min	3000	3000	
Maximum speed	r/min	3400	3400	
Rated torque	N·m	0.26	0.26	
	kgf·cm	2.65	2.65	
Maximum torque	N·m	0.52	0.52	
	kgf·cm	5.3	5.3	
Rated current	A _(rms)	2.6	2.6	±10%
Rotor inertia	×10 ⁻⁴ kg·m ²	0.039	0.049	
	gf·cm·sec ²	0.04	0.05	
Elec. time constant	ms	0.8	0.8	
Mech. time constant	ms	0.86	1.08	
Rated power rate	kW/s	17.7	14.1	
Momentary maximum current	A(o-p)	7.35	7.35	±10%
Back EMF constant per phase	×10 ⁻³ V _(rms) /min ⁻¹	3.79	3.79	±10%
Torque constant	N·m/A _(rms)	0.11	0.11	±10%
	kgf·cm/A _(rms)	1.12	1.12	±10%
Phase resistance	Ω	0.76	0.76	±10%
Phase inductance	mH	0.61	0.61	±20%
Insulation class		B	B	
Vibration class		V-15	V-15	
Oil seal		X / O	X / O	
Brake		X	O	
Structure		Totally-enclosed self-cooled	Totally-enclosed self-cooled	
Supply voltage	V DC	48	48	

1. These values are representative of the ideal sinusoidal operating conditions of the motors.
(at ambient temperature 20 °C)
2. IP class of these motors are IP65 without connectors.
3. Rated torque is the allowable continuous torque value when measured in the conditions shown below.

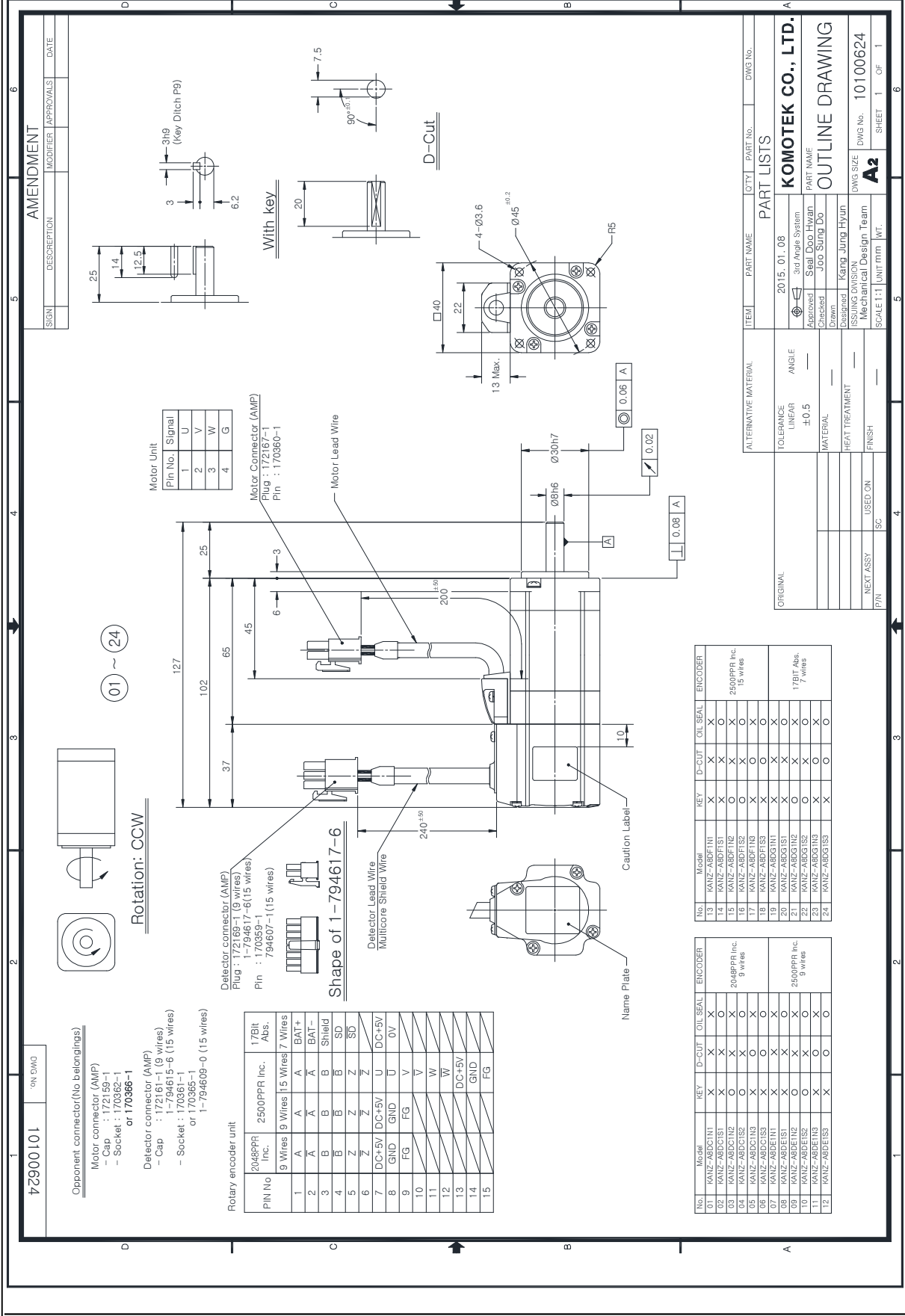
□ Characteristic curve



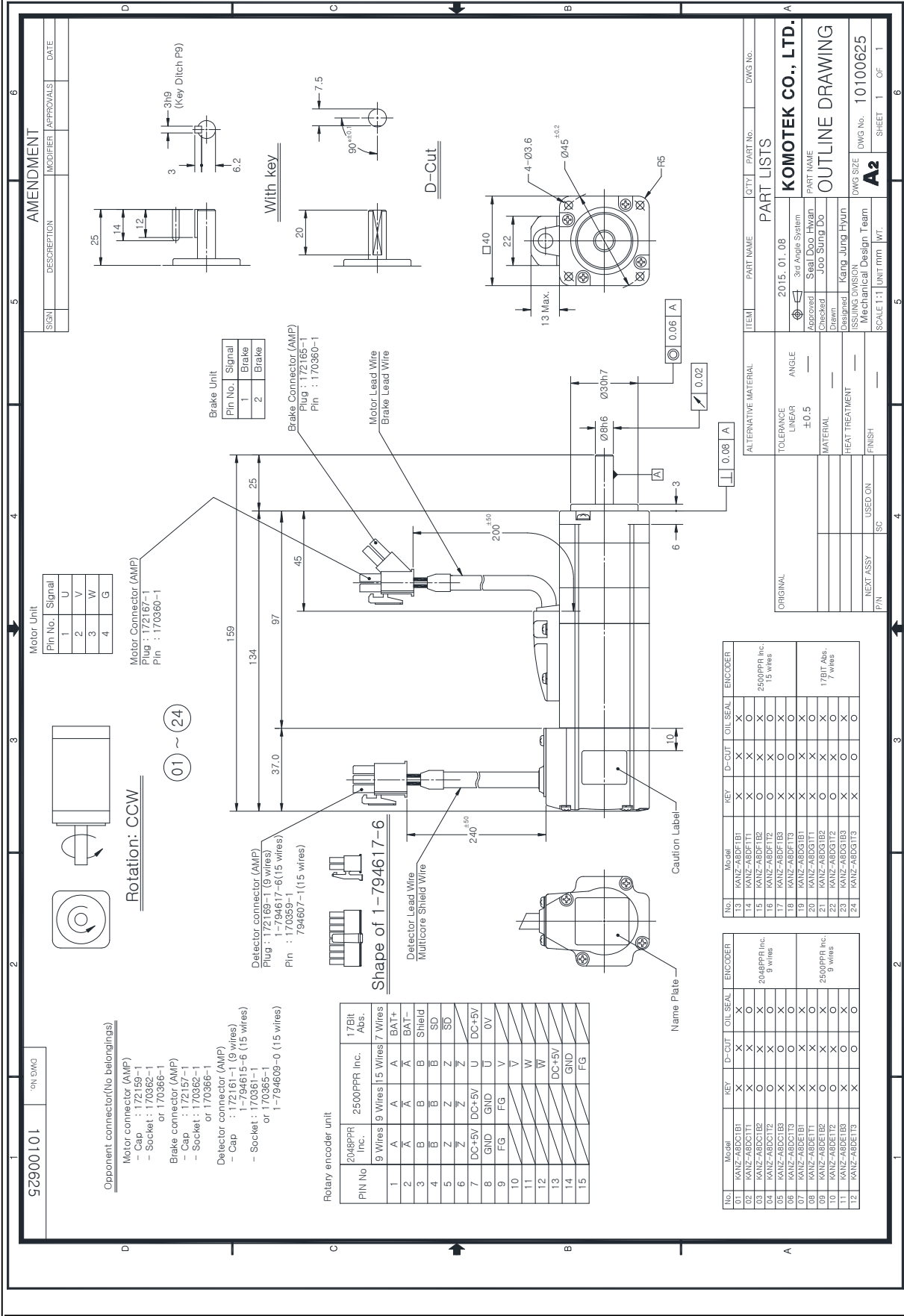
□ Test method



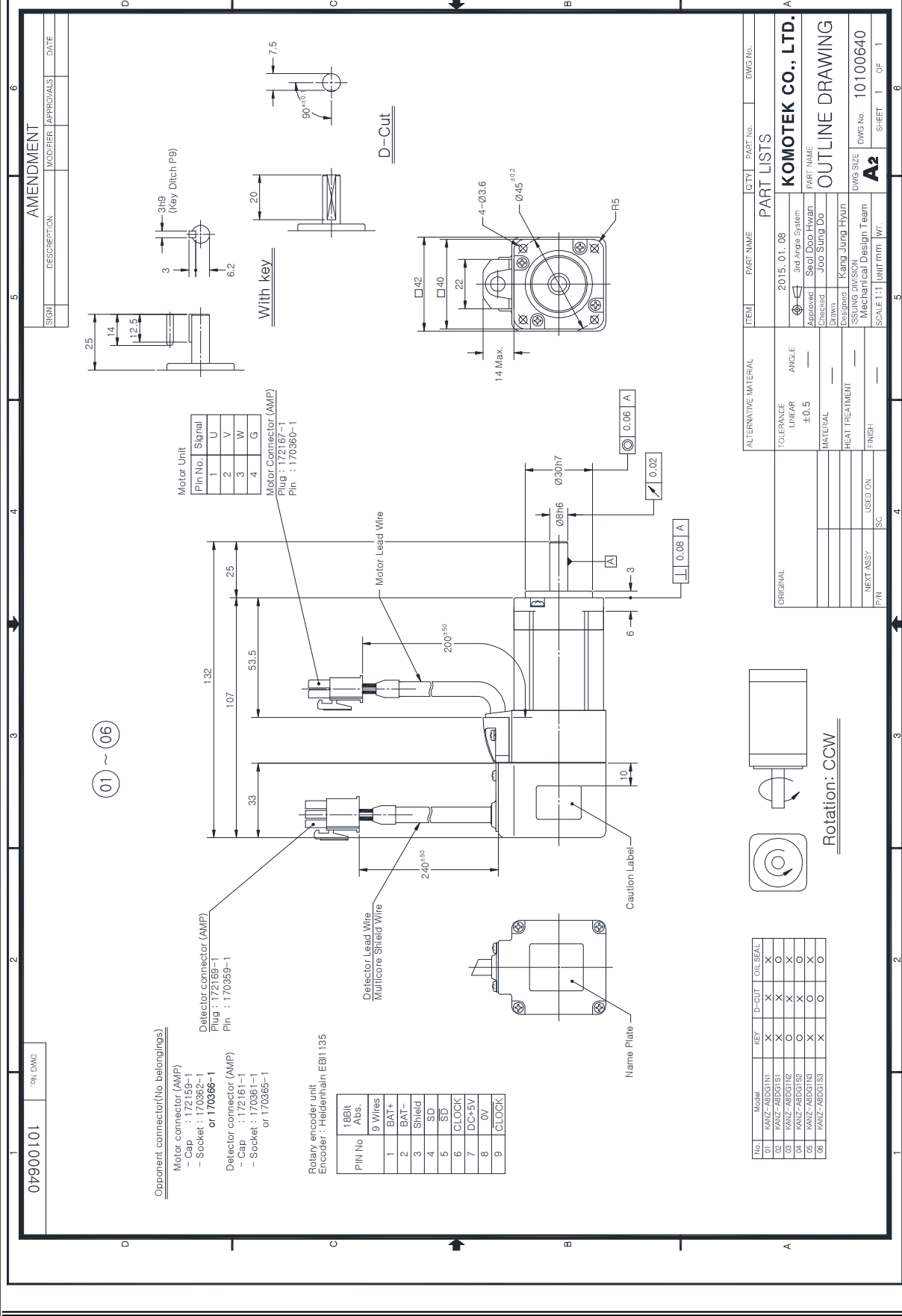
KANZ-A8D□2□□_Normal Model Outline Drawing



KANZ-A8D□2□□_ Brake Model Outline Drawing



KANZ-A8DG2 Normal Model Outline Drawing [Heidenhain EBI1135]



AMENDMENT

SIGN	DESCRIPTION	MODIFIER	APPROVALS	DATE

ITEM	PART NAME	QTY	PART No.	DWG No.

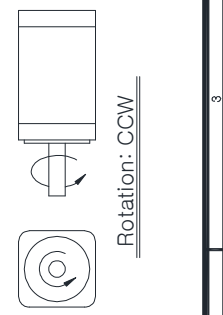
PART LISTS	
2015_01_08	KOMOTEK CO., LTD.
3rd Angle System	PART NAME
Approved	Seol Doo Hwan
Checked	Joo Sung Do
Drawn	Kang Jung Hyun
Disigned	Mechanical Design Team
ISSUING DIVISION	Mechanical Design Team
DWG No.	10100640
SCALE	1:1 UNIT:mm
SCALE	1:1 UNIT:mm
SCALE	1:1 UNIT:mm
SCALE	1:1 UNIT:mm

ALTERNATIVE MATERIAL	TOLERANCE	ANGLE
	LINEAR	
	±0.5	

MATERIAL	HEAT TREATMENT	FINISH

ORIGINAL	USED ON

P/N	SC



No.	Model	KEY	D-CUT	OIL SEAL
01	KANZ-A8DG2H1	X	X	X
02	KANZ-A8DG2H2	X	X	X
03	KANZ-A8DG2H3	X	X	X
04	KANZ-A8DG2H4	X	X	X
05	KANZ-A8DG2H5	X	X	X
06	KANZ-A8DG2H6	X	X	X

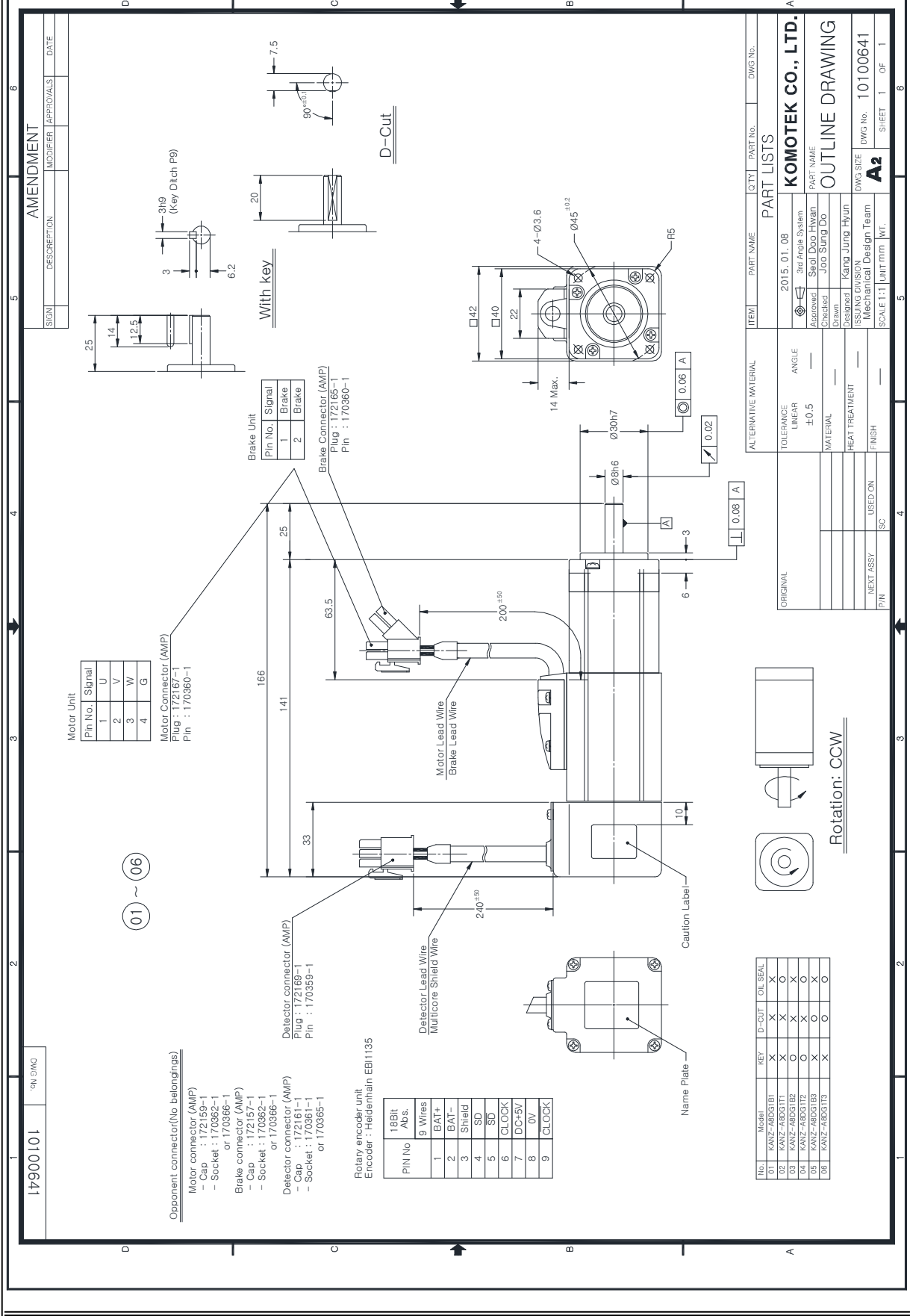
DWG No. 10100640

Opponent connector (No belongings)
 Motor connector (AMP)
 - Cap : 172159-1
 - Socket : 170362-1
 or 170365-1
 Detector connector (AMP)
 - Cap : 172161-1
 - Socket : 170361-1
 or 170365-1

Rotary encoder unit
 Encoder : Heidenhain EBI1135

PIN No	18BK Abs.	9 Wires
1	BAT+	
2	BAT-	
3	Shield	
4	SD	
5	SD	
6	CLOCK	
7	DC+5V	
8	0V	
9	CLOCK	

KANZ-A8DG2B □ Brake Model Outline Drawing [Heidenhain EBI1135]



AMENDMENT

NO.	DESCRIPTION	MODIFIER	APPROVALS	DATE

Motor Unit

Pin No.	Signal
1	U
2	V
3	W
4	G

Motor Connector (AMP)
Plug : 172187-1
Pin : 170360-1

Brake Unit

Pin No.	Signal
1	Brake
2	Brake

Brake Connector (AMP)
Plug : 172185-1
Pin : 170360-1

Detector connector (AMP)

Pin No.	Signal
1	
2	
3	
4	

Plug : 172189-1
Pin : 170359-1

Rotary encoder unit
Encoder : Heidenhain EBI1135

PIN No	18Bit Abs.	9 Wires
1	BAT+	
2	BAT-	
3	Shield	
4	SD	
5	SD	
6	CLOCK	
7	DC+5V	
8	0V	
9	CLOCK	

PART LISTS

ITEM	PART NAME	QTY	PART No.	DWG No.

2015. 01. 08
3rd Apple System
Approved : Seol Doo Hwan
Checked : Joo Sung Do
Drawn :
Designed : Kang Jung Hyun
ISSUING DIVISION : Mechanical Design Team
DWG No. : 10100641
SCALE : 1:1 UNIT:mm

ALTERNATIVE MATERIAL

TOLERANCE	ANGLE
LINEAR ±0.5	
MATERIAL	HEAT TREATMENT
FINISH	USED ON

ORIGINAL
NEXT ASSY
PIN

No.	Model	KEY	D-CUT	OIL SEAL
01	KANZ-A8DG2B	X	X	X
02	KANZ-A8DG2B	X	X	X
03	KANZ-A8DG2B	O	X	X
04	KANZ-A8DG2B	O	X	X
05	KANZ-A8DG2B	X	X	X
06	KANZ-A8DG2B	X	X	X

Rotation: CCW

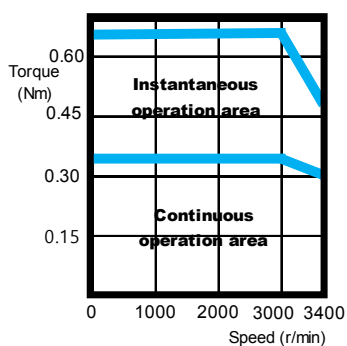
10100641

AC Servo Motor Specifications

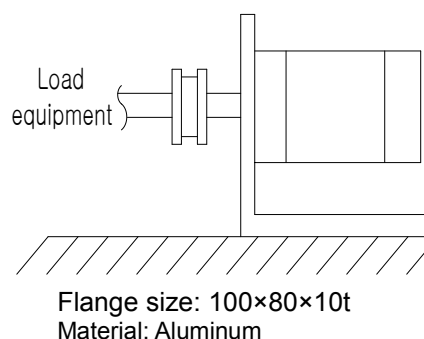
Item	Unit	KANZ-01D□2□□	KANZ-01D□2□□	Remarks
Flange size	mm	40	40	
Rated output	W	100	100	
Continuous Running Duty	%	100	100	
No. of poles		8	8	
Rated speed	r/min	3000	3000	
Maximum speed	r/min	3400	3400	
Rated torque	N·m	0.32	0.32	
	kgf·cm	3.26	3.26	
Maximum torque	N·m	0.64	0.64	
	kgf·cm	6.53	6.53	
Rated current	A _(rms)	3.45	3.45	±10%
Rotor inertia	$\times 10^{-4}$ kg·m ²	0.059	0.061	
	gf·cm·sec ²	0.060	0.062	
Elec. time constant	ms	0.79	0.79	
Mech. time constant	ms	1.24	1.28	
Rated power rate	kW/s	17.70	17.12	
Momentary maximum current	A(o-p)	9.76	9.76	±10%
Back EMF constant per phase	$\times 10^{-3}$ V _(rms) /min ⁻¹	3.52	3.52	±10%
Torque constant	N·m/A _(rms)	0.1	0.1	±10%
	kgf·cm/A _(rms)	1.02	1.02	±10%
Phase resistance	Ω	0.61	0.61	±10%
Phase inductance	mH	0.48	0.48	±20%
Insulation class		B	B	
Vibration class		V-15	V-15	
Oil seal		X	X	
Brake		X	O	
Structure		Totally-enclosed self-cooled	Totally-enclosed self-cooled	
Supply voltage	V DC	48	48	

1. These values are representative of the ideal sinusoidal operating conditions of the motors.
(at ambient temperature 20 °C)
2. IP class of these motors are IP65 without connectors.
3. Rated torque is the allowable continuous torque value when measured in the conditions shown below.

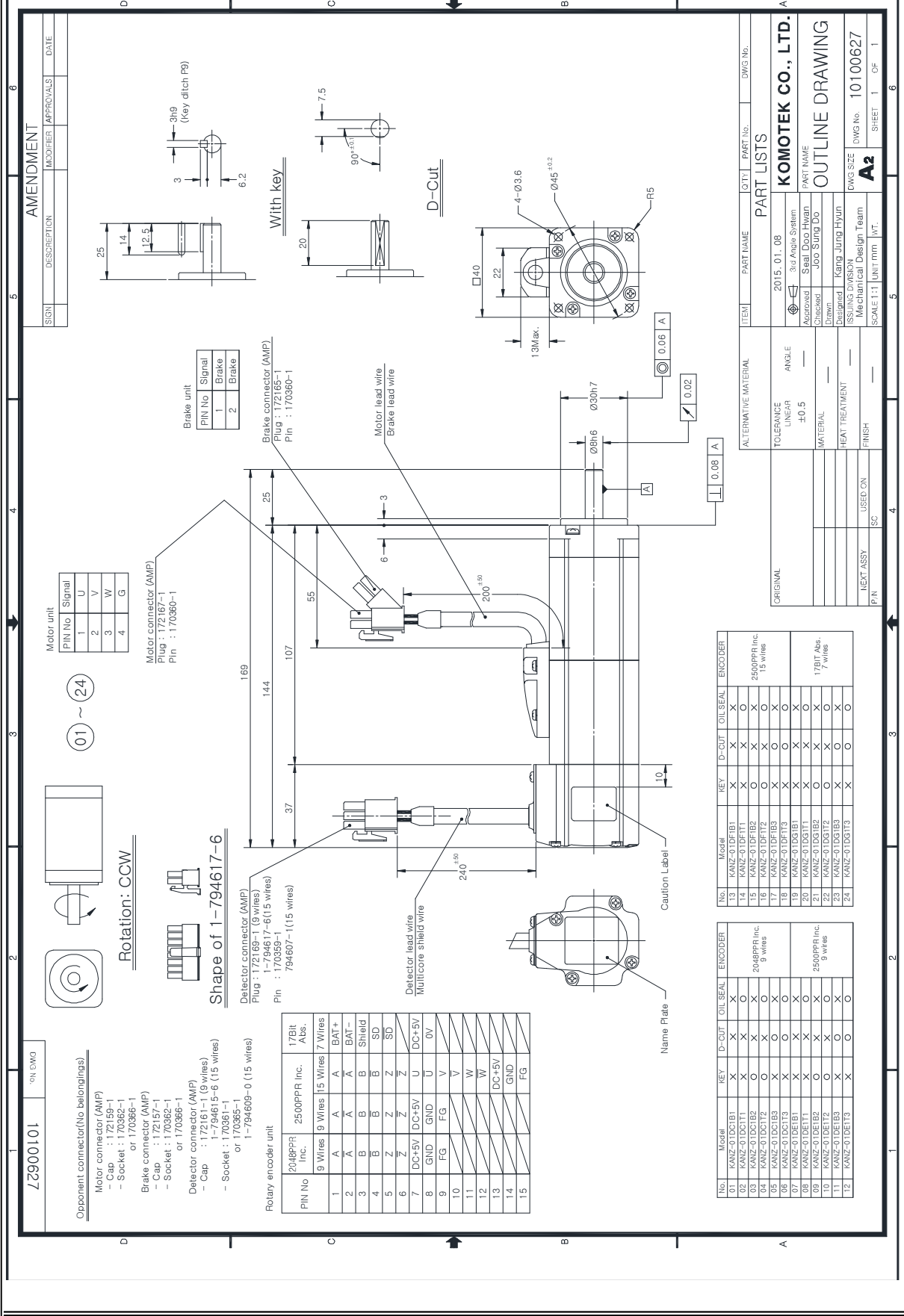
□ Characteristic curve



□ Test method



KANZ-01D□□□_ Brake Model Outline Drawing



SIGN	DESCRIPTION	MODIFIER	APPROVALS	DATE

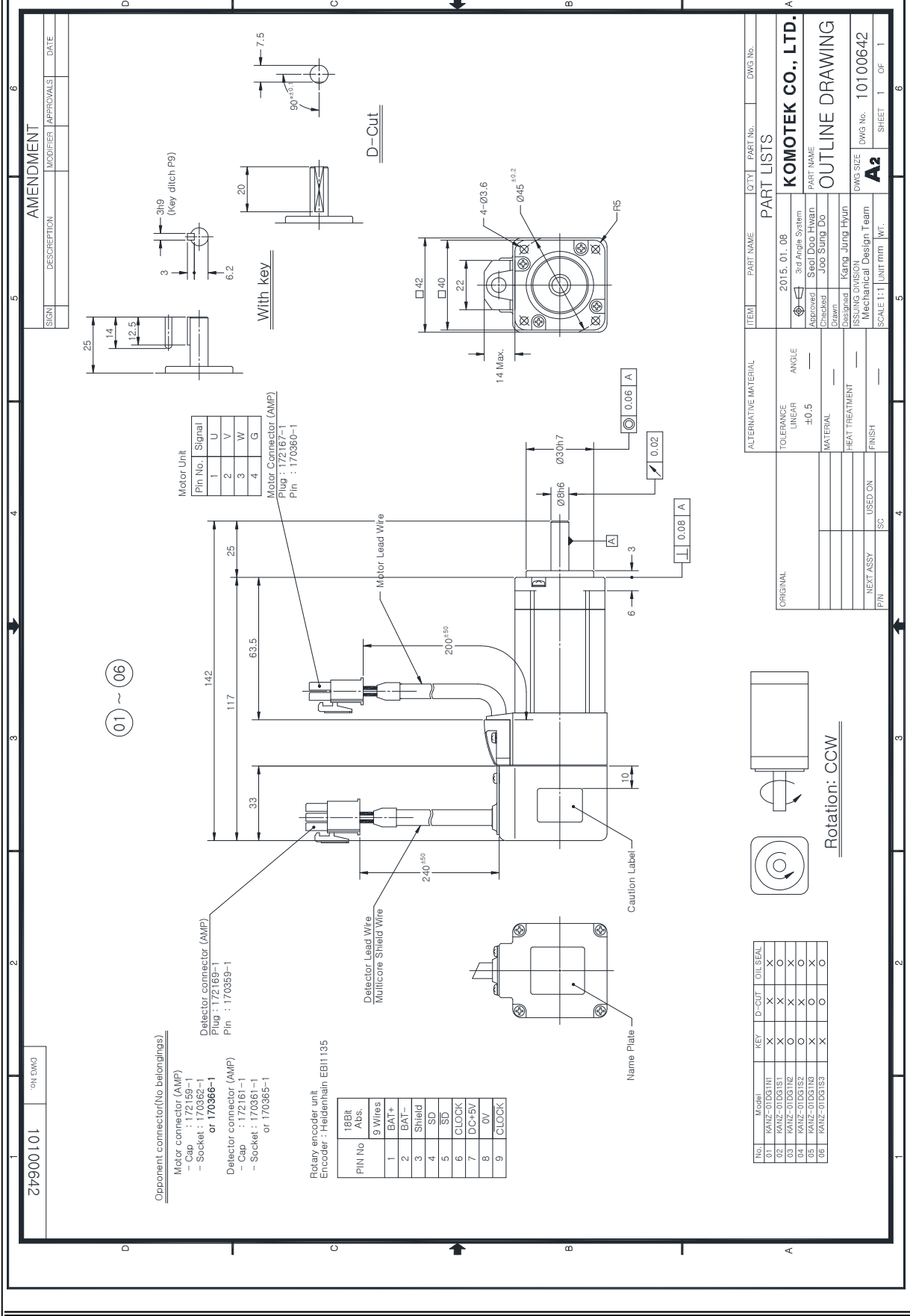
ITEM	PART NAME	QTY	PART No.	DWG No.

ALTERNATIVE MATERIAL	TOLERANCE	LINEAR	ANGLE

Model	REV	D-CUT	OIL SEAL	ENCODER
KANZ-01DFB1	X	X	X	X
KANZ-01DFT1	X	X	X	X
KANZ-01DFB2	X	X	X	X
KANZ-01DFT2	O	X	O	X
KANZ-01DFB3	X	O	X	X
KANZ-01DFT3	X	O	X	X
KANZ-01DGB1	X	X	X	X
KANZ-01DGT1	X	X	X	X
KANZ-01DGB2	X	X	X	X
KANZ-01DGT2	X	X	X	X
KANZ-01DGB3	X	X	X	X
KANZ-01DGT3	X	X	X	X

Model	REV	D-CUT	OIL SEAL	ENCODER
KANZ-01DEB1	X	X	X	X
KANZ-01DET1	X	X	X	X
KANZ-01DEB2	O	X	O	X
KANZ-01DET2	O	X	O	X
KANZ-01DEB3	X	O	X	X
KANZ-01DET3	X	O	X	X
KANZ-01DEB1	X	X	X	X
KANZ-01DET1	X	X	X	X
KANZ-01DEB2	X	X	X	X
KANZ-01DET2	X	X	X	X
KANZ-01DEB3	X	X	X	X
KANZ-01DET3	X	X	X	X

KANZ-01DG2 □ □ _Normal Model Outline Drawing [Heidenhain EBI1135]



AMENDMENT			
SIGN	DESCRIPTION	MODIFIER	APPROVALS
		DATE	

Pin No.	Signal
1	U
2	V
3	W
4	G

Motor Connector (AMP)
Plug : 170361-1
Pin : 170360-1

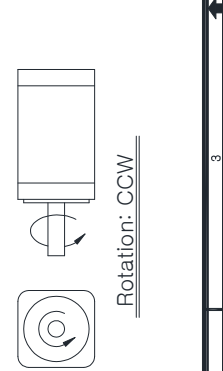
- Opponent connector(No belongings)
- Motor connector (AMP)
 - Cap : 172158-1
 - Socket : 170362-1 or 170366-1
 - Detector connector (AMP)
 - Cap : 172161-1
 - Socket : 170361-1 or 170365-1

Rotary encoder unit
Encoder : Heidenhain EBI1135

PIN No	18Bit Abs.	9 Wires
1	BAT+	
2	BAT-	
3	Shield	
4	SD	
5	SP	
6	CLOCK	
7	DC+5V	
8	0V	
9	CLOCK	

ITEM	PART NAME	QTY	PART No.	DWG No.
PART LISTS				
2015-01-08	3rd Angle System			
Approved	Seol Doo Hwan			
Checked	Joong Sung Do			
Drawn	Kang Jung Hyun			
OUTLINE DRAWING				
ISSUING DIVISION Mechanical Design Team				DWG No. 10100642
SCALE 1:1 UNIT mm				1 OF 1

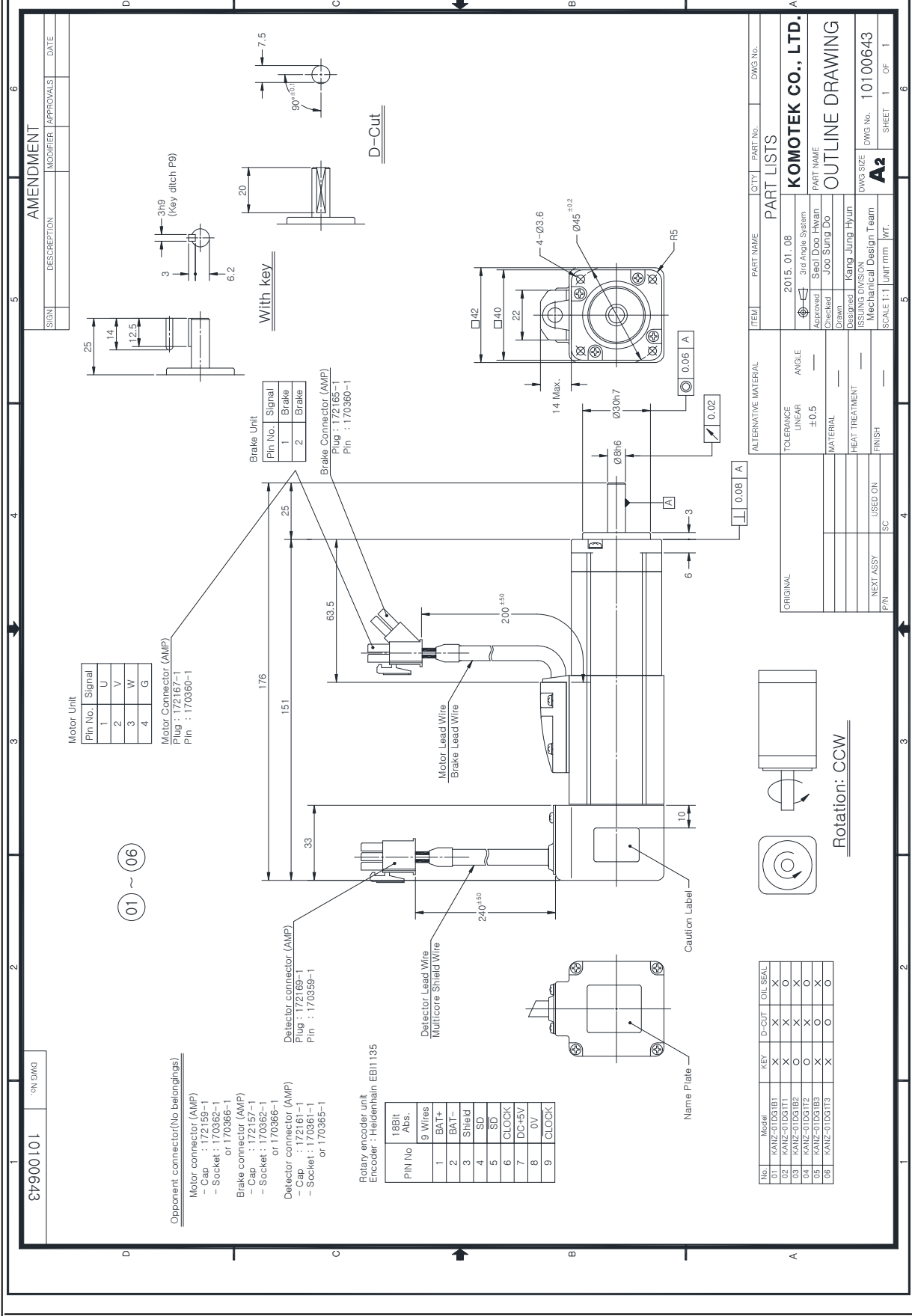
ALTERNATIVE MATERIAL	TOLERANCE	ANGLE
ORIGINAL	LINEAR ±0.5	—
NEXT ASSY	—	—
PIN	—	—



No.	Model	KEY	D-CUT	OIL SEAL
01	KANZ-01DG1N1	X	X	X
02	KANZ-01DG1N2	X	X	X
03	KANZ-01DG1S2	X	X	X
04	KANZ-01DG1N3	X	X	X
05	KANZ-01DG1N3	X	X	X
06	KANZ-01DG1S3	X	X	X

10100642

KANZ-01DG2 □ □_ Brake Model Outline Drawing [Heidenhain EBI1135]



AMENDMENT

SIGN	DESCRIPTION	MODIFIER	APPROVALS	DATE

Motor Unit

Pin No.	Signal
1	U
2	V
3	W
4	G

Motor Connector (AMP)
Plug : 172167-1
Pin : 170360-1

Brake Unit

Pin No.	Signal
1	Brake
2	Brake

Brake Connector (AMP)
Plug : 172165-1
Pin : 170360-1

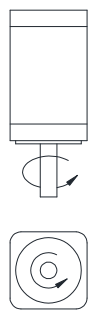
Detector connector (AMP)
Plug : 172169-1
Pin : 170359-1

Detector connector (AMP)
Cap : 172161-1
Socket : 170361-1
or 170365-1

Rotary encoder unit
Encoder : Heidenhain EBI1135

18Bit PIN No	Abs.
1	BAT+
2	BAT-
3	Shield
4	SD
5	SD
6	CLOCK
7	DC-BV
8	0V
9	CLOCK

No.	Model	KEY	D-CUT	OIL SEAL
01	KANZ-01DG1B1	X	X	X
02	KANZ-01DG1T1	X	X	X
03	KANZ-01DG1E2	O	X	X
04	KANZ-01DG1T2	O	X	X
05	KANZ-01DG1E3	X	O	X
06	KANZ-01DG1T3	X	O	O



PART LISTS

ITEM	PART NAME	Q'TY	PART No.	OWG No.
	2015_01_08			
	3rd Apple System			
	Spol Doo Hyun			
	Joo Sung Do			
	Drawn			
	Designed			
	Kang Jung Hyun			
	ISSUING DIVISION			
	Mechanical Design Team			
	SCALE 1:1	UNIT mm	WT.	

ALTERNATIVE MATERIAL

TOLERANCE	ANGLE
LINEAR	
±0.5	

MATERIAL

HEAT TREATMENT

FINISH

USED ON

SC

ORIGINAL

NEXT ASSY

P/N

Rotation: CCW

PART NAME
KOMOTEK CO., LTD.

PART NAME
OUTLINE DRAWING

DWG No. 10100643

SCALE 1:1

UNIT mm

WT.

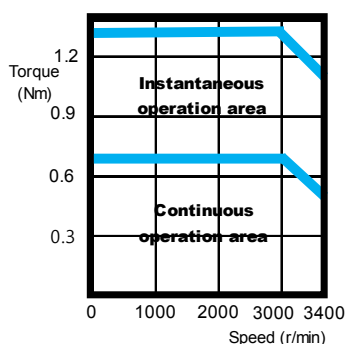
SHEET 1 OF 1

AC Servo Motor Specifications

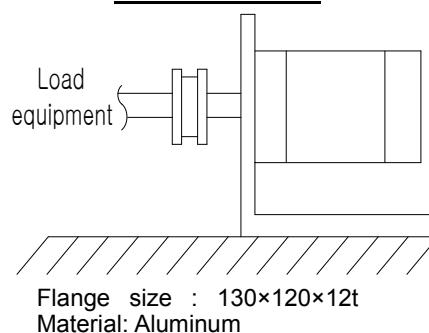
Item	Unit	KANZ-02D□1□□	KANZ-02D□1□□	Remarks
Flange size	mm	60	60	
Rated output	W	200	200	
Continuous Running Duty	%	100	100	
No. of poles		8	8	
Rated speed	r/min	3000	3000	
Maximum speed	r/min	3400	3400	
Rated torque	N·m	0.64	0.64	
	kgf·cm	6.53	6.53	
Maximum torque	N·m	1.28	1.28	
	kgf·cm	13.05	13.05	
Rated current	A _(rms)	6.72	6.72	±10%
Rotor inertia	×10 ⁻⁴ kg·m ²	0.19	0.21	
	gf·cm·sec ²	0.19	0.21	
Elec. time constant	ms	2.86	2.86	
Mech. time constant	ms	0.89	0.98	
Rated power rate	kW/s	21.98	19.89	
Momentary maximum current	A(o-p)	19.0	19.0	±10%
Back EMF constant per phase	×10 ⁻³ V _(rms) /min ⁻¹	3.62	3.62	±10%
Torque constant	N·m/A _(rms)	0.1	0.1	±10%
	kgf·cm/A _(rms)	1.02	1.02	±10%
Phase resistance	Ω	0.14	0.14	±10%
Phase inductance	mH	0.4	0.4	±20%
Insulation class		B	B	
Vibration class		V-15	V-15	
Oil seal		X	X	
Brake		X	O	
Structure		Totally-enclosed self-cooled	Totally-enclosed self-cooled	
Supply voltage	V DC	48	48	

1. These values are representative of the ideal sinusoidal operating conditions of the motors.
(at ambient temperature 20 °C)
2. IP class of these motors are IP65 without connectors.
3. Rated torque is the allowable continuous torque value when measured in the conditions shown below.

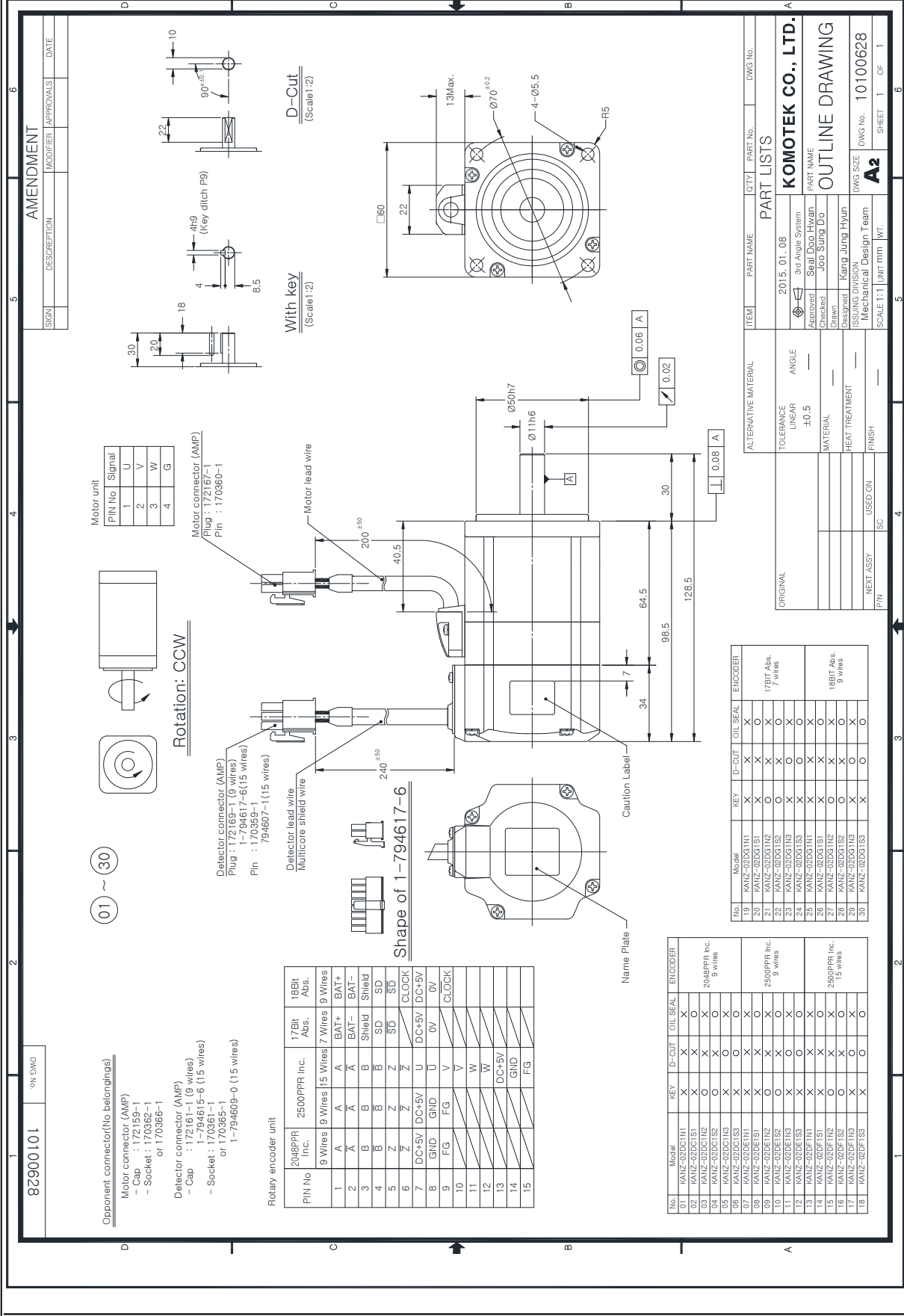
□ Characteristic curve



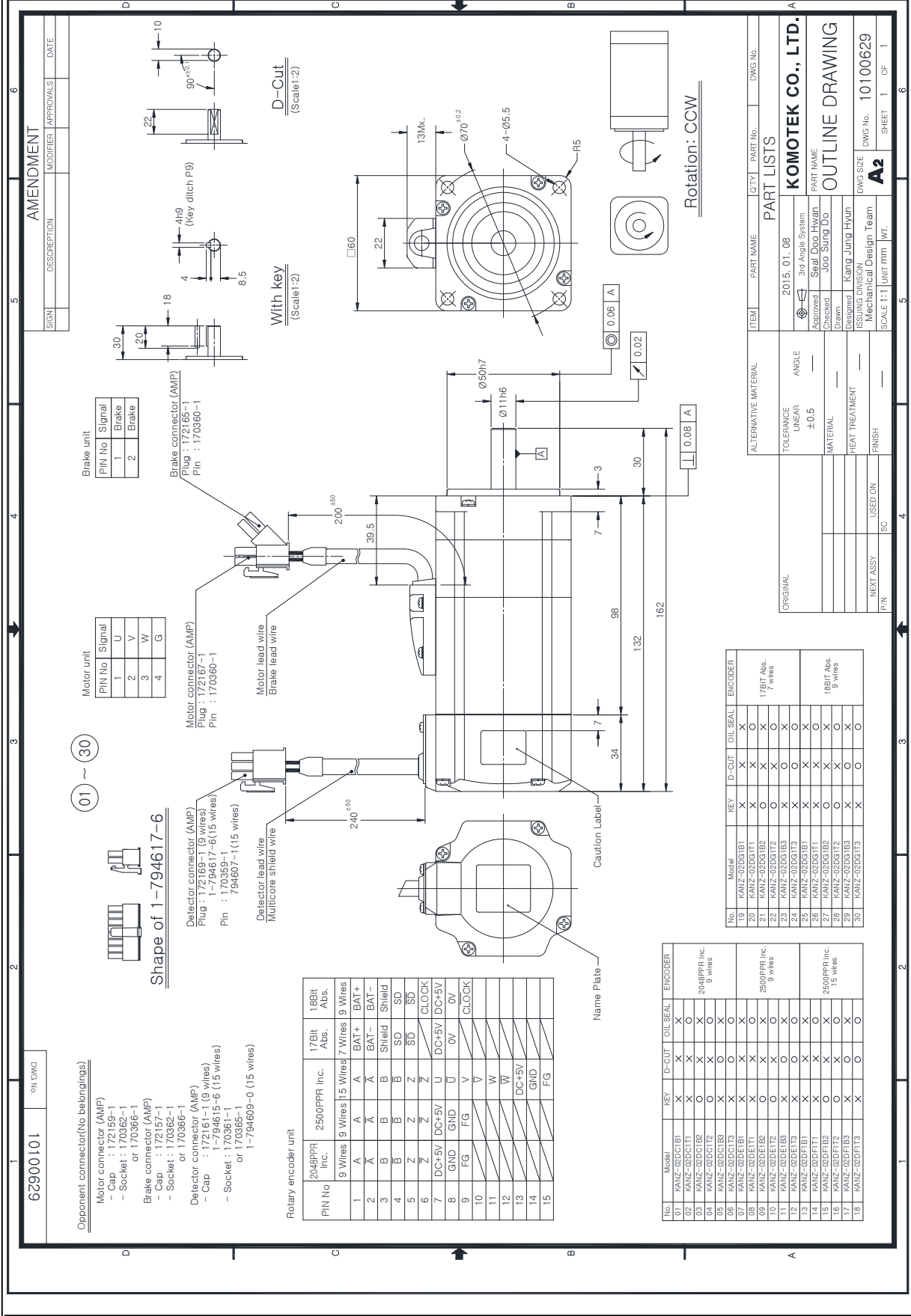
□ Test method



KANZ-02D□1□□_Normal Model Outline Drawing



KANZ-02D□1□□_ Brake Model Outline Drawing



AMENDMENT	
SIGN	DESCRIPTION
MODIFIER	APPROVALS
DATE	

Brake unit	
PIN No	Signal
1	Brake
2	Brake

Motor unit	
PIN No	Signal
1	U
2	V
3	W
4	G

01 ~ 30

Shape of 1-794617-6

- Opponent connector (No belongings)
- Motor connector (AMP)
 - Cap : 172159-1
 - Socket : 170362-1 or 170366-1
 - Brake connector (AMP)
 - Cap : 172157-1
 - Socket : 170362-1 or 170366-1
 - Detector connector (AMP)
 - Cap : 172161-1 (9 wires)
 - Socket : 1794615-6 (15 wires)
 - Socket : 170361-1 or 170365-1
 - Socket : 1794609-0 (15 wires)

Rotary encoder unit				
PIN No	2048PPR Inc. 9 Wires	2500PPR Inc. 15 Wires	17Bit Abs. 7 Wires	18Bit Abs. 9 Wires
1	A	A	BAT+	BAT+
2	A	A	BAT-	BAT-
3	B	B	Shield	Shield
4	B	B	SD	SD
5	Z	Z	SD	SD
6	Z	Z	CLOCK	CLOCK
7	DC+5V	DC+5V	U	DC+5V
8	GND	GND	U	0V
9	FG	FG	V	CLOCK
10	FG	FG	V	
11	W	W		
12	W	W		
13	DC+5V	DC+5V	GND	
14	GND	GND	FG	
15	FG	FG		

No.	Model	KEY	D-CUT	OIL SEAL	ENCODER
01	KANZ-02DC1B1	X	X	X	2048PPR Inc. 9 wires
02	KANZ-02DC1T1	X	X	X	2048PPR Inc. 9 wires
03	KANZ-02DC1B2	X	X	X	2500PPR Inc. 9 wires
04	KANZ-02DC1T2	X	X	X	2500PPR Inc. 9 wires
05	KANZ-02DC1B3	X	X	X	2500PPR Inc. 9 wires
06	KANZ-02DC1T3	X	X	X	2500PPR Inc. 9 wires
07	KANZ-02DE1B1	X	X	X	17Bit Abs. 7 wires
08	KANZ-02DE1T1	X	X	X	17Bit Abs. 7 wires
09	KANZ-02DE1B2	X	X	X	17Bit Abs. 7 wires
10	KANZ-02DE1T2	X	X	X	17Bit Abs. 7 wires
11	KANZ-02DE1B3	X	X	X	17Bit Abs. 7 wires
12	KANZ-02DE1T3	X	X	X	17Bit Abs. 7 wires
13	KANZ-02DF1B1	X	X	X	18Bit Abs. 9 wires
14	KANZ-02DF1T1	X	X	X	18Bit Abs. 9 wires
15	KANZ-02DF1B2	X	X	X	18Bit Abs. 9 wires
16	KANZ-02DF1T2	X	X	X	18Bit Abs. 9 wires
17	KANZ-02DF1B3	X	X	X	18Bit Abs. 9 wires
18	KANZ-02DF1T3	X	X	X	18Bit Abs. 9 wires

No.	Model	KEY	D-CUT	OIL SEAL	ENCODER
19	KANZ-02DG1B1	X	X	X	17Bit Abs. 7 wires
20	KANZ-02DG1T1	X	X	X	17Bit Abs. 7 wires
21	KANZ-02DG1B2	X	X	X	17Bit Abs. 7 wires
22	KANZ-02DG1T2	X	X	X	17Bit Abs. 7 wires
23	KANZ-02DG1B3	X	X	X	17Bit Abs. 7 wires
24	KANZ-02DG1T3	X	X	X	17Bit Abs. 7 wires
25	KANZ-02DG1B1	X	X	X	18Bit Abs. 9 wires
26	KANZ-02DG1T1	X	X	X	18Bit Abs. 9 wires
27	KANZ-02DG1B2	X	X	X	18Bit Abs. 9 wires
28	KANZ-02DG1T2	X	X	X	18Bit Abs. 9 wires
29	KANZ-02DG1B3	X	X	X	18Bit Abs. 9 wires
30	KANZ-02DG1T3	X	X	X	18Bit Abs. 9 wires

ITEM	PART NAME	QTY	PART No.	PART No.	DWG No.
PART LISTS					
2015. 01. 08	3rd Angle System				
Approved	Seal Doo Hwan				
Checked	Joo Sung Do				
Drawn	Kang Jung Hyun				
ISSUED DIVISION	Mechanical Design Team				
DWG No.	10100629				
DWG SIZE	A2				
SCALE	1:1				
UNIT	mm				
WT.					
SHEET	1				
OF	1				

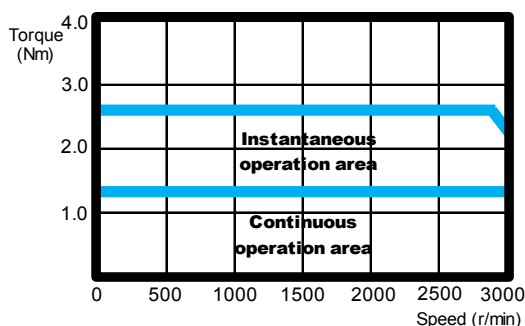
ALTERNATIVE MATERIAL	TOLERANCE	ANGLE	LINEAR	MATERIAL	HEAT TREATMENT	FINISH	USED ON	SC
ORIGINAL	±0.5							
NEXT ASSY								
P/N								

AC Servo Motor Specifications

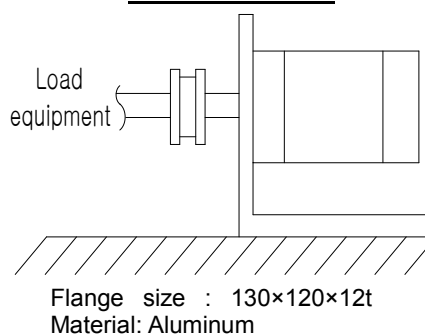
Item	Unit	KANZ-04D□2□□	KANZ-04D□2□□	Remarks
Flange size	mm	60	60	
Rated output	W	400	400	
Continuous Running Duty	%	100	100	
No. of poles		8	8	
Rated speed	r/min	3000	3000	
Maximum speed	r/min	3000	3000	
Rated torque	N·m	1.27	1.27	
	kgf·cm	13	13	
Maximum torque	N·m	2.54	2.54	
	kgf·cm	25.9	25.9	
Rated current	A _(rms)	10.21	10.21	±10%
Rotor inertia	×10 ⁻⁴ kg·m ²	0.33	0.35	
	gf·cm·sec ²	0.34	0.36	
Elec. time constant	ms	3.46	3.46	
Mech. time constant	ms	0.54	0.57	
Rated power rate	kW/s	49.84	46.99	
Momentary maximum current	A(o-p)	28.9	28.9	±10%
Back EMF constant per phase	×10 ⁻³ V _(rms) /min ⁻¹	4.6	4.6	±10%
Torque constant	N·m/A _(rms)	0.13	0.13	±10%
	kgf·cm/A _(rms)	1.33	1.33	±10%
Phase resistance	Ω	0.081	0.081	±10%
Phase inductance	mH	0.28	0.28	±20%
Insulation class		B	B	
Vibration class		V-15	V-15	
Oil seal		X / O	X / O	
Brake		X	O	
Structure		Totally-enclosed self-cooled	Totally-enclosed self-cooled	
Supply voltage	V DC	48	48	

1. These values are representative of the ideal sinusoidal operating conditions of the motors.
(at ambient temperature 20 °C)
2. IP class of these motors are IP65 without connectors.
3. Rated torque is the allowable continuous torque value when measured in the conditions shown below.

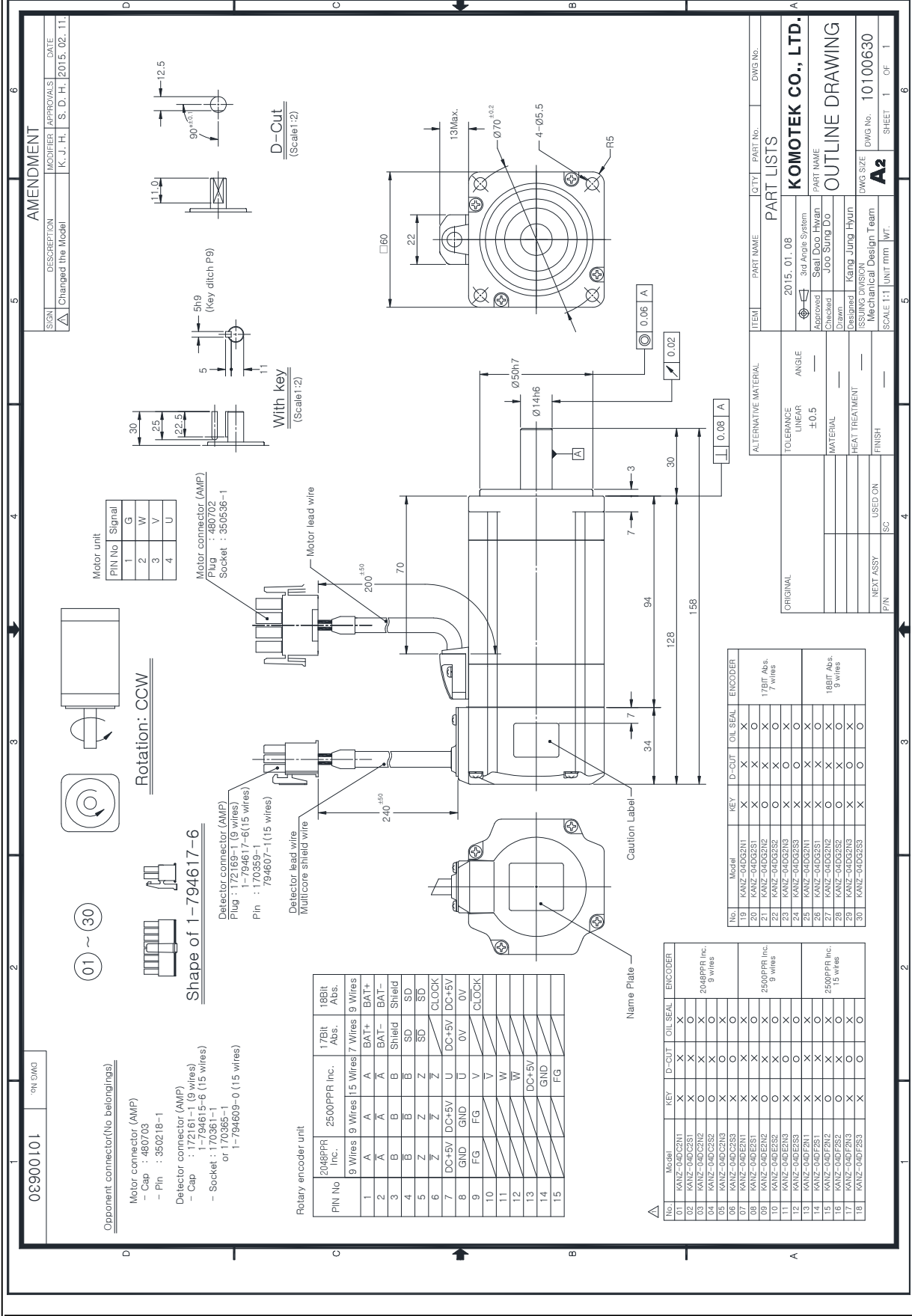
Characteristic curve



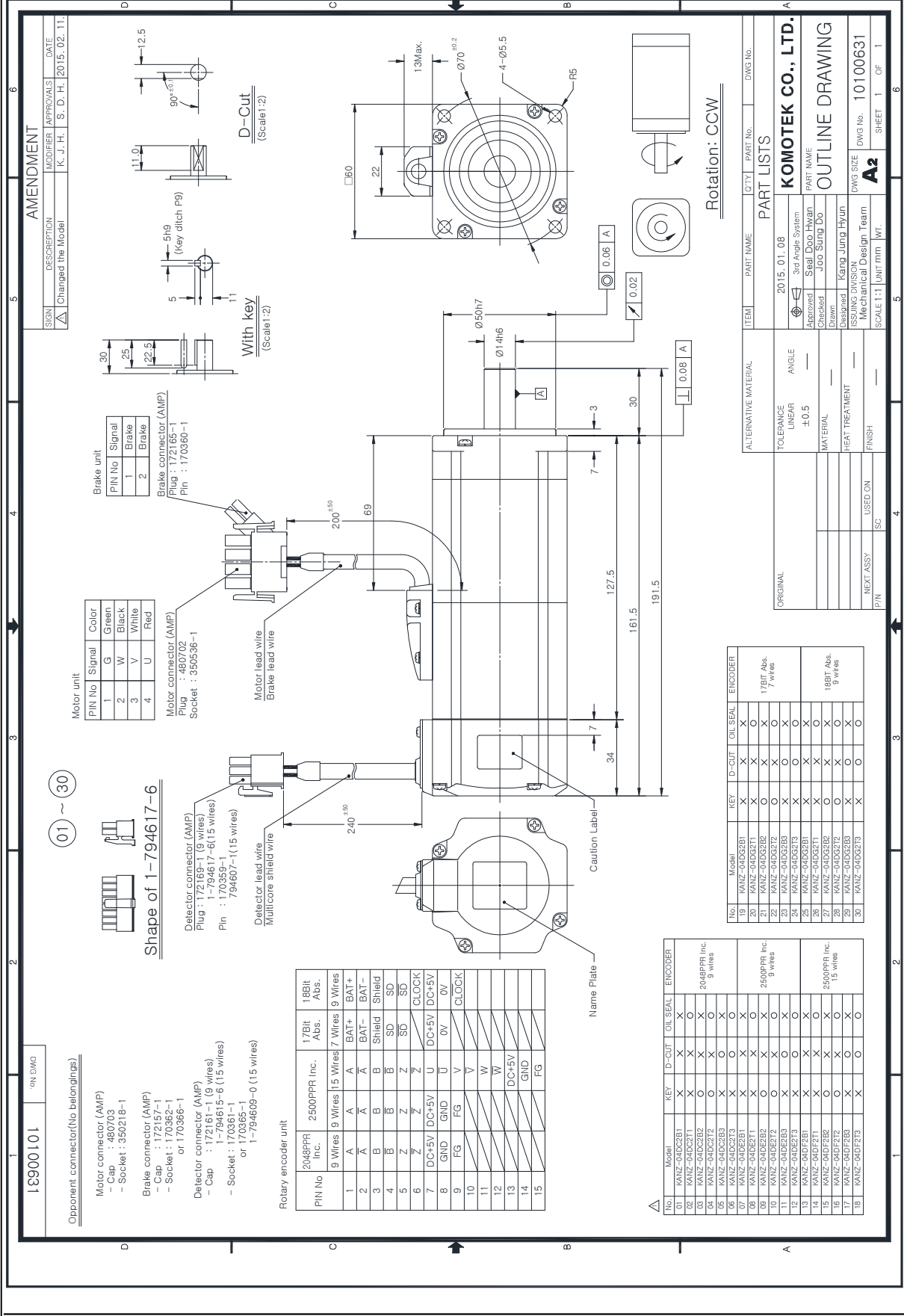
Test method



KANZ-04D□2□□_Normal Model Outline Drawing



KANZ-04D□□□_ Brake Model Outline Drawing



Rotation: CCW

ITEM	PART NAME	QTY	PART No.	DWG No.
PART LISTS				
2015. 01. 08				
3rd Angle System				
Approved Saal Doo Hwan				
Checked Joo Sung Do				
Drawn				
Designed Kang Jung Hyun				
ISSUING DIVISION Mechanical Design Team				
DWG No. 10100631				
SCALE 1:1 UNIT mm W/T				
A2				
SHEET 1 OF 1				

18bit Abs.	17BIT Abs.	7 wires	19BIT Abs.	9 wires
19	KANZ-04DQ2B1	X	X	X
20	KANZ-04DQ2T1	X	X	X
21	KANZ-04DQ3B2	O	X	X
22	KANZ-04DQ3T2	O	X	X
23	KANZ-04DQ3B3	X	O	X
24	KANZ-04DQ3T3	X	O	X
25	KANZ-04DQ3B1	X	X	O
26	KANZ-04DQ3T1	X	X	O
27	KANZ-04DQ3B2	X	X	O
28	KANZ-04DQ3T2	X	X	O
29	KANZ-04DQ3B3	X	X	O
30	KANZ-04DQ3T3	X	X	O

SIGN	DESCRIPTION	MODIFIER	APPROVALS	DATE
△	Changed the Model	K. J. H.	S. D. H.	2015. 02. 11.

1E900101 0N DWG

- Opponent connector (No belongs)
- Motor connector (AMP)
 - Cap : 480703
 - Socket : 350218-1
 - Brake connector (AMP)
 - Cap : 172157-1
 - Socket : 170362-1 or 170366-1
 - Detector connector (AMP)
 - Cap : 172169-1 (9 wires)
 - Cap : 1794617-6 (15 wires)
 - Socket : 170361-1 or 170365-1
 - Socket : 1794609-0 (15 wires)

PIN No	2048PPR Inc.		2500PPR Inc.		18BIT Abs.	17BIT Abs.
	9 Wires	9 Wires	15 Wires	7 Wires		
1	A	A	A	BAT+	BAT+	BAT+
2	A	A	A	BAT-	BAT-	BAT-
3	B	B	B	Shield	Shield	Shield
4	B	B	B	SD	SD	SD
5	Z	Z	Z	SD	SD	SD
6	Z	Z	Z	CLOCK	CLOCK	CLOCK
7	DC+5V	DC+5V	U	DC+5V	DC+5V	DC+5V
8	GND	GND	U	0V	0V	0V
9	FG	FG	V	CLOCK	CLOCK	CLOCK
10	FG	FG	V	W	W	W
11	W	W	W	W	W	W
12	W	W	W	W	W	W
13	DC+5V	DC+5V	U	DC+5V	DC+5V	DC+5V
14	GND	GND	U	GND	GND	GND
15	FG	FG	V	FG	FG	FG

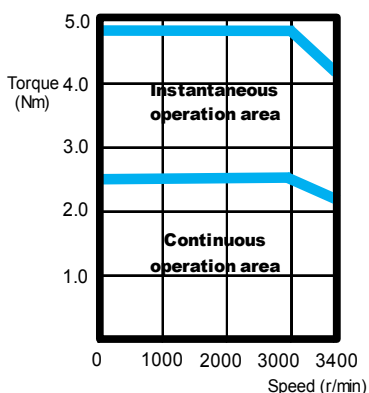
No.	Model	KEY	D-CUT	OIL SEAL	ENCODER
01	KANZ-04DC2B1	X	X	X	X
02	KANZ-04DC2T1	X	X	X	X
03	KANZ-04DC2B2	O	X	X	2048PPR Inc. 9 wires
04	KANZ-04DC2T2	O	X	X	2048PPR Inc. 9 wires
05	KANZ-04DC2B3	X	O	X	2500PPR Inc. 9 wires
06	KANZ-04DC2T3	X	O	X	2500PPR Inc. 9 wires
07	KANZ-04DC2B1	X	X	O	2500PPR Inc. 15 wires
08	KANZ-04DC2T1	X	X	O	2500PPR Inc. 15 wires
09	KANZ-04DC2B2	X	X	O	2500PPR Inc. 9 wires
10	KANZ-04DC2T2	X	X	O	2500PPR Inc. 9 wires
11	KANZ-04DC2B3	X	X	O	2500PPR Inc. 9 wires
12	KANZ-04DC2T3	X	X	O	2500PPR Inc. 9 wires
13	KANZ-04DF2B1	X	X	O	2500PPR Inc. 9 wires
14	KANZ-04DF2T1	X	X	O	2500PPR Inc. 9 wires
15	KANZ-04DF2B2	O	X	O	2500PPR Inc. 15 wires
16	KANZ-04DF2T2	O	X	O	2500PPR Inc. 15 wires
17	KANZ-04DF2B3	X	O	O	2500PPR Inc. 9 wires
18	KANZ-04DF2T3	X	O	O	2500PPR Inc. 9 wires

AC Servo Motor Specifications

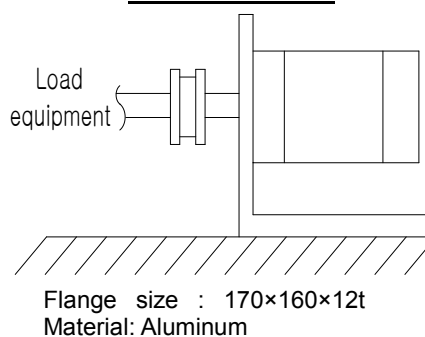
Item	Unit	KAFZ-08D□2□□2	KAFZ-08D□2□□4	Remarks
Flange size	mm	80	80	
Rated output	W	750	750	
Continuous Running Duty	%	100	100	
No. of poles		8	8	
Rated speed	r/min	3000	3000	
Maximum speed	r/min	3400	3400	
Rated torque	N·m	2.4	2.4	
	kgf·cm	24.47	24.47	
Maximum torque	N·m	4.8	4.8	
	kgf·cm	48.95	48.95	
Rated current	A _(rms)	22.3	22.3	±10%
Rotor inertia	×10 ⁻⁴ kg·m ²	0.96	1.05	
	gf·cm·sec ²	0.98	1.07	
Elec. time constant	ms	4.06	4.06	
Mech. time constant	ms	0.84	0.92	
Rated power rate	kW/s	61.18	55.94	
Momentary maximum current	A(o-p)	63.1	63.1	±10%
Back EMF constant per phase	×10 ⁻³ V _(rms) /min ⁻¹	4.02	4.02	±10%
Torque constant	N·m/A _(rms)	0.11	0.11	±10%
	kgf·cm/A _(rms)	1.12	1.12	±10%
Phase resistance	Ω	0.032	0.032	±10%
Phase inductance	mH	0.13	0.13	±20%
Insulation class		B	B	
Vibration class		V-15	V-15	
Oil seal		X / O	X / O	
Brake		X	O	
Structure		Totally-enclosed self-cooled	Totally-enclosed self-cooled	
Supply voltage	V DC	48	48	

1. These values are representative of the ideal sinusoidal operating conditions of the motors.
(at ambient temperature 20 °C)
2. IP class of these motors are IP65 without connectors.
3. Rated torque is the allowable continuous torque value when measured in the conditions shown below.

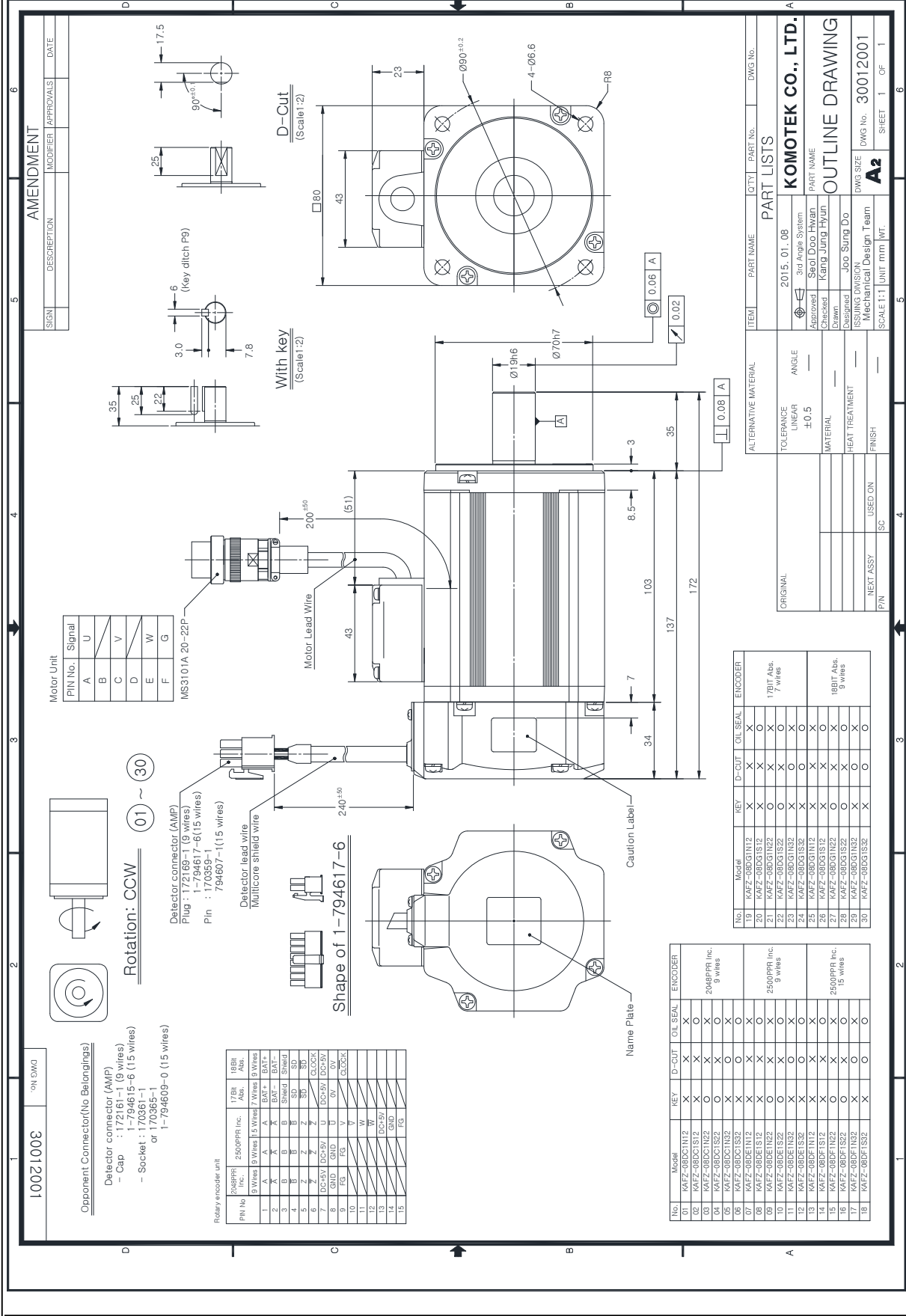
□ Characteristic curve



□ Test method



KAFZ-08D□□□2_Normal Model Outline Drawing

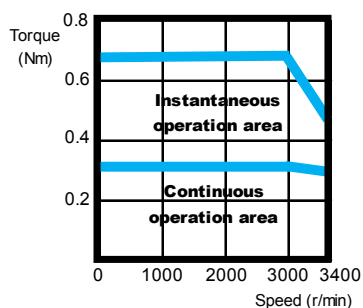


AC Servo Motor Specifications

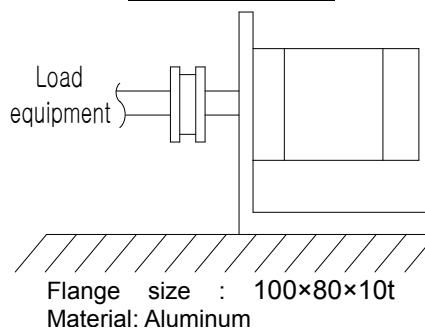
Item	Unit	KANQ-01D□1□□	KANQ-01D□1□□	Remarks
Flange size	mm	60	60	
Rated output	W	100	100	
Continuous Running Duty	%	100	100	
No. of poles		8	8	
Rated speed	r/min	3000	3000	
Maximum speed	r/min	3400	3400	
Rated torque	N·m	0.32	0.32	
	kgf·cm	3.26	3.26	
Maximum torque	N·m	0.64	0.64	
	kgf·cm	6.53	6.53	
Rated current	A _(rms)	3.3	3.3	±10%
Rotor inertia	×10 ⁻⁴ kg·m ²	0.11	0.14	
	gf·cm·sec ²	0.11	0.14	
Elec. time constant	ms	2.76	2.76	
Mech. time constant	ms	1.03	1.32	
Rated power rate	kW/s	9.49	7.46	
Momentary maximum current	A(o-p)	9.33	9.33	±10%
Back EMF constant per phase	×10 ⁻³ V _(rms) /min ⁻¹	3.98	3.98	±10%
Torque constant	N·m/A _(rms)	0.11	0.11	±10%
	kgf·cm/A _(rms)	1.12	1.12	±10%
Phase resistance	Ω	0.34	0.34	±10%
Phase inductance	mH	0.94	0.94	±20%
Insulation class		B	B	
Vibration class		V-15	V-15	
Oil seal		X / O	X / O	
Brake		X	O	
Structure		Totally-enclosed self-cooled	Totally-enclosed self-cooled	
Supply voltage	V DC	48	48	

1. These values are representative of the ideal sinusoidal operating conditions of the motors.
(at ambient temperature 20 °C)
2. IP class of these motors are IP65 without connectors.
3. Rated torque is the allowable continuous torque value when measured in the conditions shown below.

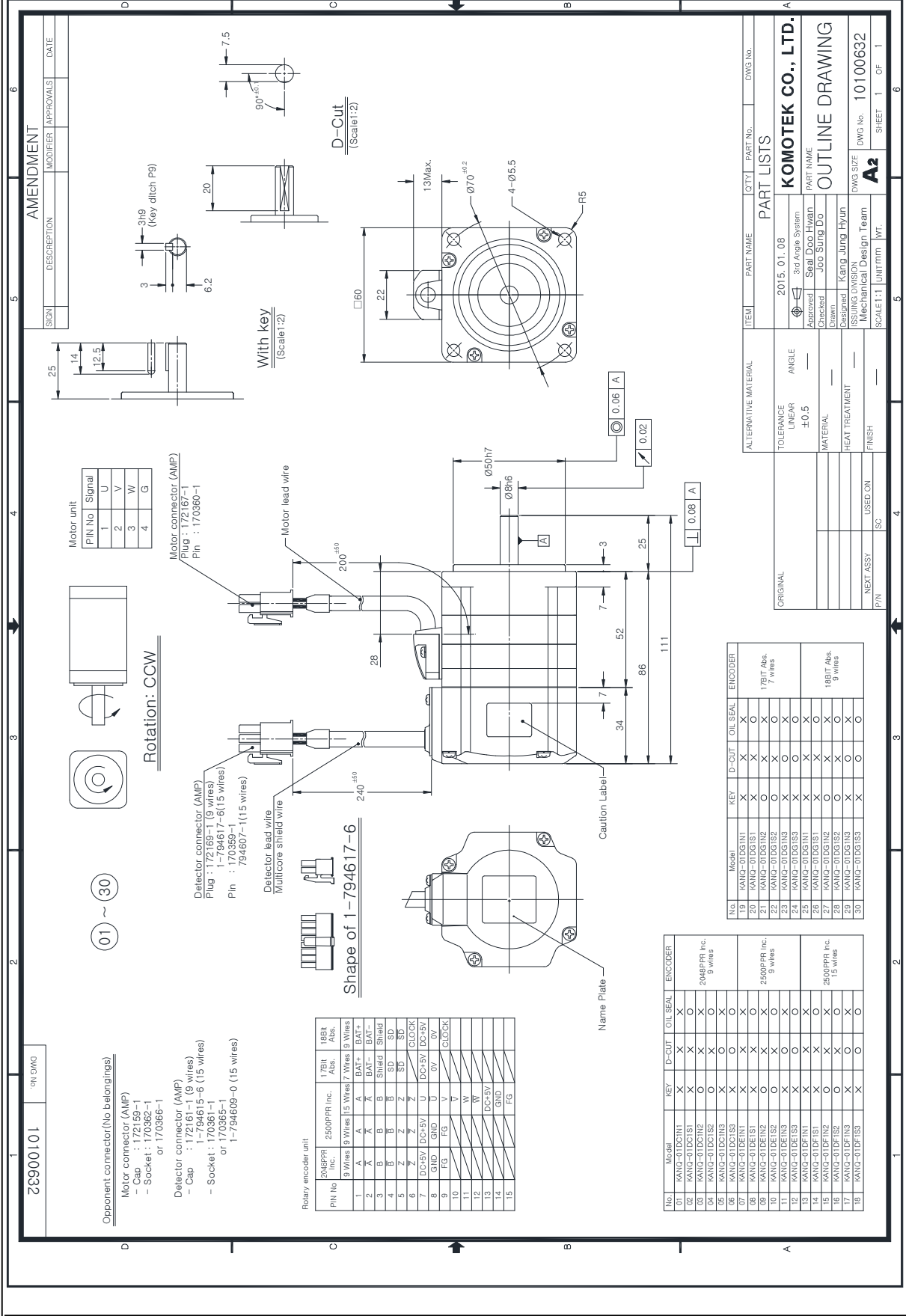
□ Characteristic curve



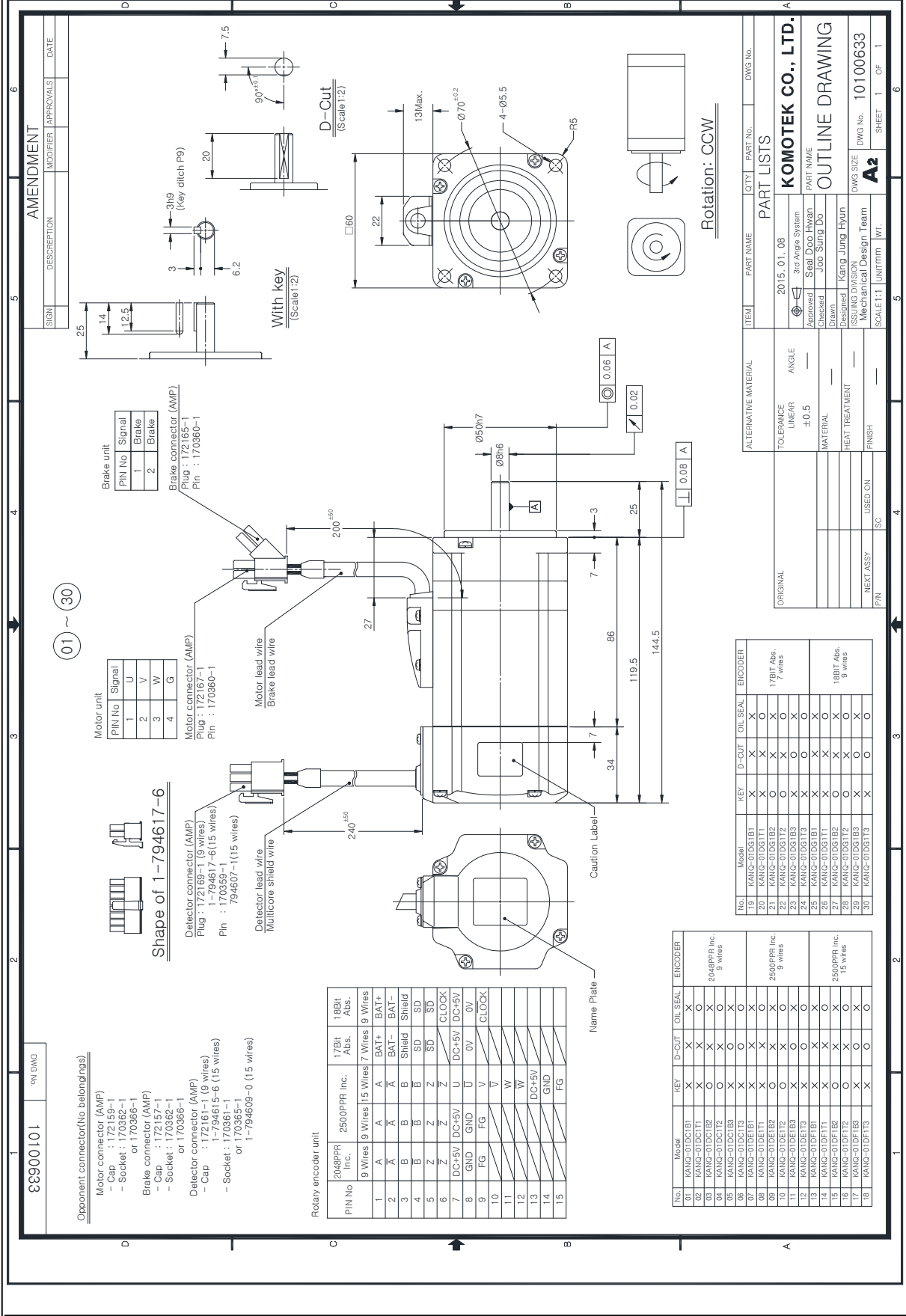
□ Test method



KANQ-01D□1□□_Normal Model Outline Drawing



KANQ-01D□1□□ Brake Model Outline Drawing



AMENDMENT

NO.	DESCRIPTION	MODIFIER	APPROVALS	DATE

Motor unit

PIN No	Signal
1	U
2	V
3	W
4	G

Brake unit

PIN No	Signal
1	Brake
2	Brake

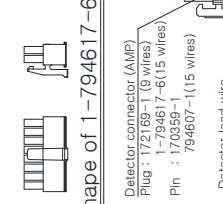
Brake connector (AMP)
 Plug : 172165-1
 Pin : 170360-1

Detector connector (AMP)
 Plug : 172169-1 (9 wires)
 794617-6 (15 wires)
 Pin : 170361-1

Detector lead wire
 Multicore shield wire
 794607-1 (15 wires)

Motor connector (AMP)
 Plug : 172167-1
 Pin : 170360-1

Motor lead wire
 Brake lead wire



Rotary encoder unit

PIN No	2048PPR Inc.	9 Wires	15 Wires	7 Wires	17Bit Abs.	18Bit Abs.
1	A	A	BAT+	BAT+	BAT+	BAT+
2	A	A	BAT-	BAT-	BAT-	BAT-
3	B	B	Shield	Shield	Shield	Shield
4	B	B	SD	SD	SD	SD
5	Z	Z	SD	SD	SD	SD
6	Z	Z	CLOCK	CLOCK	CLOCK	CLOCK
7	DC+5V	DC+5V	U	DC+5V	DC+5V	DC+5V
8	GND	GND	U	0V	0V	0V
9	FG	FG	V	CLOCK	CLOCK	CLOCK
10	W	W	W	W	W	W
12	W	W	W	W	W	W
13	DC+5V	DC+5V	DC+5V	DC+5V	DC+5V	DC+5V
14	GND	GND	GND	GND	GND	GND
15	FG	FG	FG	FG	FG	FG

No.	Model	KEY	D-CUT	OIL SEAL	ENCODER
01	KANQ-01DC1B1	X	X	X	2048PPR Inc. 9 wires
02	KANQ-01DC1B2	X	X	X	2048PPR Inc. 9 wires
03	KANQ-01DC1B3	X	X	X	2048PPR Inc. 9 wires
04	KANQ-01DC1B4	X	X	X	2048PPR Inc. 9 wires
05	KANQ-01DC1B5	X	X	X	2048PPR Inc. 9 wires
06	KANQ-01DC1B6	X	X	X	2048PPR Inc. 9 wires
07	KANQ-01DC1B7	X	X	X	2048PPR Inc. 9 wires
08	KANQ-01DC1B8	X	X	X	2048PPR Inc. 9 wires
09	KANQ-01DC1B9	X	X	X	2048PPR Inc. 9 wires
10	KANQ-01DC1B10	X	X	X	2048PPR Inc. 9 wires
11	KANQ-01DC1B11	X	X	X	2048PPR Inc. 9 wires
12	KANQ-01DC1B12	X	X	X	2048PPR Inc. 9 wires
13	KANQ-01DC1B13	X	X	X	2048PPR Inc. 9 wires
14	KANQ-01DF1B1	X	X	X	2500PPR Inc. 15 wires
15	KANQ-01DF1B2	X	X	X	2500PPR Inc. 15 wires
16	KANQ-01DF1B3	X	X	X	2500PPR Inc. 15 wires
17	KANQ-01DF1B4	X	X	X	2500PPR Inc. 15 wires
18	KANQ-01DF1B5	X	X	X	2500PPR Inc. 15 wires

No.	Model	KEY	D-CUT	OIL SEAL	ENCODER
19	KANQ-01DG1B1	X	X	X	17BIT Abs. 7 wires
20	KANQ-01DG1B2	X	X	X	17BIT Abs. 7 wires
21	KANQ-01DG1B3	X	X	X	17BIT Abs. 7 wires
22	KANQ-01DG1B4	X	X	X	17BIT Abs. 7 wires
23	KANQ-01DG1B5	X	X	X	17BIT Abs. 7 wires
24	KANQ-01DG1B6	X	X	X	17BIT Abs. 7 wires
25	KANQ-01DG1B7	X	X	X	17BIT Abs. 7 wires
26	KANQ-01DG1B8	X	X	X	17BIT Abs. 7 wires
27	KANQ-01DG1B9	X	X	X	17BIT Abs. 7 wires
28	KANQ-01DG1B10	X	X	X	17BIT Abs. 7 wires
29	KANQ-01DG1B11	X	X	X	17BIT Abs. 7 wires
30	KANQ-01DG1B12	X	X	X	17BIT Abs. 7 wires

PART LISTS

ITEM	PART NAME	QTY	PART No.	DWG No.
2015.01.08	3rd Angle System			
Approved	Seal Doo Hwan			
Checked	Joo Sung Do			
Drawn	Kang Jung Hyun			
DESIGNED DIVISION	MECHANICAL DESIGN Team			
ISSUING DIVISION				
DWG SIZE				
DWG No.	10100633			
SCALE:1:1	UNIT:mm	WT.		

ALTERNATIVE MATERIAL

TOLERANCE	ANGLE
LINEAR	—
	±0.5

FINISH

FINISH	USED ON	ISC

ORIGINAL

ROTATION: CCW

ES900101 '0N SING

Opponent connector (No belongings)

Motor connector (AMP)
 - Cap : 172159-1
 - Socket : 170362-1 or 170366-1

Brake connector (AMP)
 - Cap : 172157-1
 - Socket : 170362-1 or 170366-1

Detector connector (AMP)
 - Cap : 172161-1 (9 wires)
 - Socket : 170361-1 or 170365-1

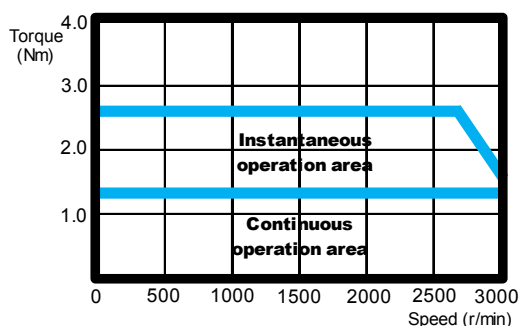
1-794609-0 (15 wires)

AC Servo Motor Specifications

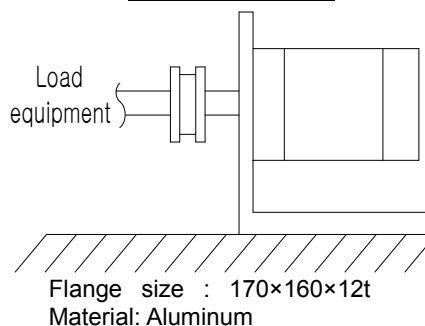
Item	Unit	KANQ-04D□1□□	KANQ-04D□1□□	Remarks
Flange size	mm	80	80	
Rated output	W	400	400	
Continuous Running Duty	%	100	100	
No. of poles		8	8	
Rated speed	r/min	3000	3000	
Maximum speed	r/min	3000	3000	
Rated torque	N·m	1.27	1.27	
	kgf·cm	13	13	
Maximum torque	N·m	2.54	2.54	
	kgf·cm	25.9	25.9	
Rated current	A _(rms)	9.7	9.7	±10%
Rotor inertia	×10 ⁻⁴ kg·m ²	0.62	0.74	
	gf·cm·sec ²	0.63	0.76	
Elec. time constant	ms	5.93	5.93	
Mech. time constant	ms	0.52	0.62	
Rated power rate	kW/s	26.5	22.2	
Momentary maximum current	A(o-p)	27.44	27.44	±10%
Back EMF constant per phase	×10 ⁻³ V _(rms) /min ⁻¹	5.2	5.2	±10%
Torque constant	N·m/A _(rms)	0.15	0.15	±10%
	kgf·cm/A _(rms)	1.53	1.53	±10%
Phase resistance	Ω	0.054	0.054	±10%
Phase inductance	mH	0.32	0.32	±20%
Insulation class		B	B	
Vibration class		V-15	V-15	
Oil seal		X / O	X / O	
Brake		X	O	
Structure		Totally-enclosed self-cooled	Totally-enclosed self-cooled	
Supply voltage	V DC	48	48	

1. These values are representative of the ideal sinusoidal operating conditions of the motors.
(at ambient temperature 20 °C)
2. IP class of these motors are IP65 without connectors.
3. Rated torque is the allowable continuous torque value when measured in the conditions shown below.

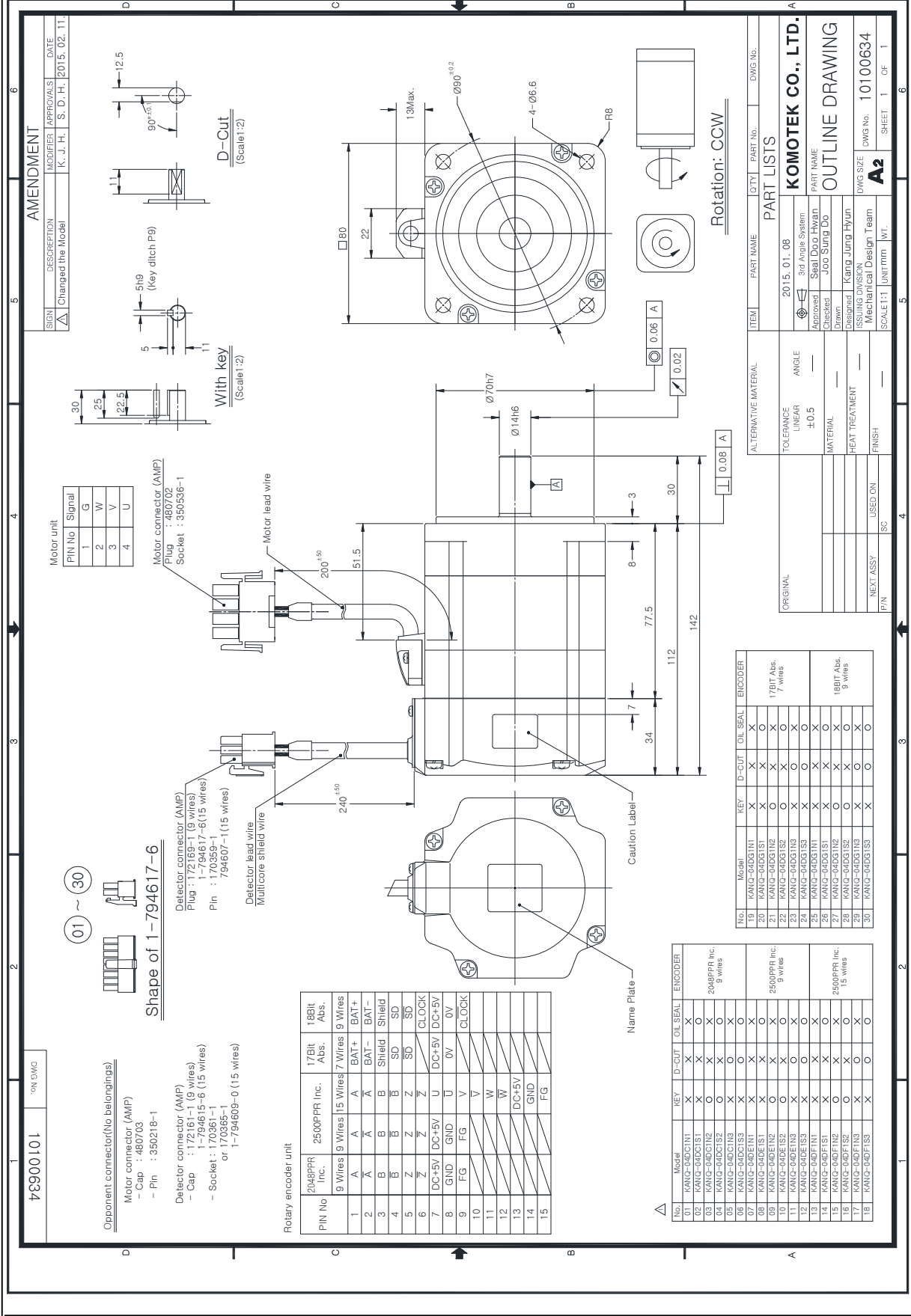
□ Characteristic curve



□ Test method



KANQ-04D□1□□_Normal Model Outline Drawing

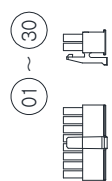


AMENDMENT

SIGN	DESCRIPTION	MODIFIER	APPROVALS	DATE
△	Changed the Model	K. J. H.	S. D. H.	2015. 02. 11.

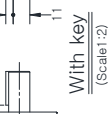
Motor unit

PIN No	Signal
1	G
2	W
3	V
4	U



Shape of 1-794617-6

- Opponent connector (No belongings)
- Motor connector (AMP)
 - Cap : 480703
 - Pin : 350218-1
 - Detector connector (AMP)
 - Cap : 172161-1 (9 wires)
 - Cap : 1794615-6 (15 wires)
 - Socket : 170361-1
 - or 170365-1
 - Pin : 1794609-0 (15 wires)



With key (Scale 1:2)



D-Cut (Scale 1:2)

Rotary encoder unit

PIN No	2048PPR Inc. 9 Wires	2500PPR Inc. 15 Wires	17Bit Abs. 7 Wires	18Bit Abs. 9 Wires
1	A	A	BAT+	BAT+
2	A	A	BAT-	BAT-
3	B	B	Shield	Shield
4	B	B	SD	SD
5	Z	Z	SD	SD
6	Z	Z	CLOCK	CLOCK
7	DC+5V	DC+5V	DC+5V	DC+5V
8	GND	GND	0V	0V
9	FG	FG	V	GLOCK
10				
11				
12				
13				
14				
15				

No.	Model	KEY	D-CUT	OIL SEAL	ENCODER
19	KANQ-04DC1N1	X	X	X	X
20	KANQ-04DC1S1	X	X	X	X
21	KANQ-04DC1N2	X	X	X	X
22	KANQ-04DC1S2	X	X	X	X
23	KANQ-04DC1N3	X	X	X	X
24	KANQ-04DC1S3	X	X	X	X
25	KANQ-04DC1N1	X	X	X	X
26	KANQ-04DC1S1	X	X	X	X
27	KANQ-04DC1N2	X	X	X	X
28	KANQ-04DC1S2	X	X	X	X
29	KANQ-04DC1N3	X	X	X	X
30	KANQ-04DC1S3	X	X	X	X

No.	Model	KEY	D-CUT	OIL SEAL	ENCODER
19	KANQ-04DC1N1	X	X	X	X
20	KANQ-04DC1S1	X	X	X	X
21	KANQ-04DC1N2	X	X	X	X
22	KANQ-04DC1S2	X	X	X	X
23	KANQ-04DC1N3	X	X	X	X
24	KANQ-04DC1S3	X	X	X	X
25	KANQ-04DC1N1	X	X	X	X
26	KANQ-04DC1S1	X	X	X	X
27	KANQ-04DC1N2	X	X	X	X
28	KANQ-04DC1S2	X	X	X	X
29	KANQ-04DC1N3	X	X	X	X
30	KANQ-04DC1S3	X	X	X	X

PART LISTS

ITEM	PART NAME	QTY	PART No.	DWG No.
2015. 01. 08	3rd Angle System			
Approved	Seal Doo Hwan			
Checked	Joo Sung Do			
Drawn	Kang Jung Hyun			
Designed	Kang Jung Hyun			
ISSUING DIVISION	Mechanical Design Team			
DWG No.	10100634			
SCALE	1:1			
UNIT	mm			
WT.				

ALTERNATIVE MATERIAL

TOLERANCE	LINEAR	ANGLE
±0.5		

ORIGINAL

FINISH	HEAT TREATMENT	MATERIAL

PART LISTS

ITEM	PART NAME	QTY	PART No.	DWG No.
2015. 01. 08	3rd Angle System			
Approved	Seal Doo Hwan			
Checked	Joo Sung Do			
Drawn	Kang Jung Hyun			
Designed	Kang Jung Hyun			
ISSUING DIVISION	Mechanical Design Team			
DWG No.	10100634			
SCALE	1:1			
UNIT	mm			
WT.				

OUTLINE DRAWING

FINISH	HEAT TREATMENT	MATERIAL

Rotary encoder unit

No.	Model	KEY	D-CUT	OIL SEAL	ENCODER
19	KANQ-04DC1N1	X	X	X	X
20	KANQ-04DC1S1	X	X	X	X
21	KANQ-04DC1N2	X	X	X	X
22	KANQ-04DC1S2	X	X	X	X
23	KANQ-04DC1N3	X	X	X	X
24	KANQ-04DC1S3	X	X	X	X
25	KANQ-04DC1N1	X	X	X	X
26	KANQ-04DC1S1	X	X	X	X
27	KANQ-04DC1N2	X	X	X	X
28	KANQ-04DC1S2	X	X	X	X
29	KANQ-04DC1N3	X	X	X	X
30	KANQ-04DC1S3	X	X	X	X

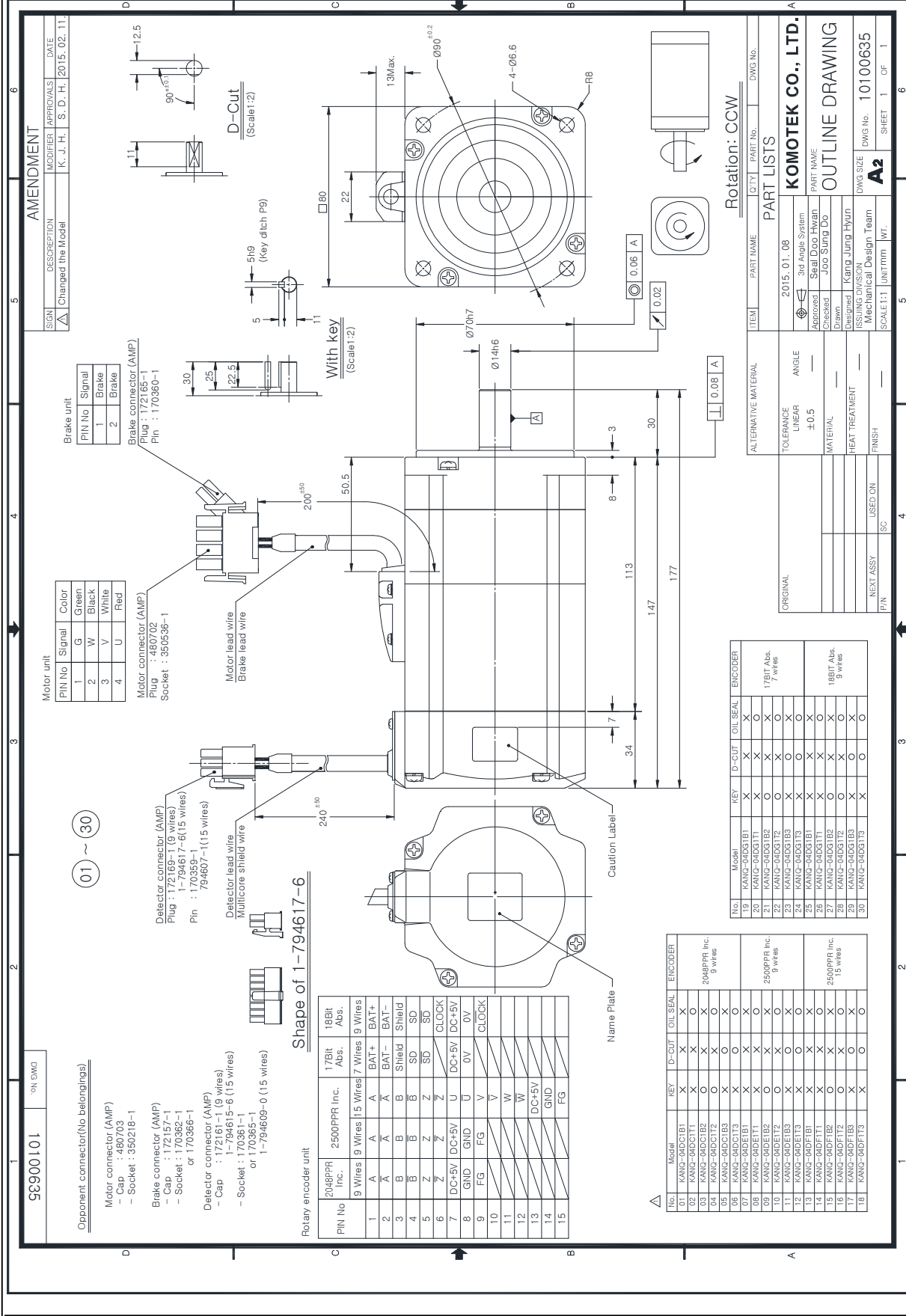
Part Lists

ITEM	PART NAME	QTY	PART No.	DWG No.
2015. 01. 08	3rd Angle System			
Approved	Seal Doo Hwan			
Checked	Joo Sung Do			
Drawn	Kang Jung Hyun			
Designed	Kang Jung Hyun			
ISSUING DIVISION	Mechanical Design Team			
DWG No.	10100634			
SCALE	1:1			
UNIT	mm			
WT.				

Rotary encoder unit

No.	Model	KEY	D-CUT	OIL SEAL	ENCODER
19	KANQ-04DC1N1	X	X	X	X
20	KANQ-04DC1S1	X	X	X	X
21	KANQ-04DC1N2	X	X	X	X
22	KANQ-04DC1S2	X	X	X	X
23	KANQ-04DC1N3	X	X	X	X
24	KANQ-04DC1S3	X	X	X	X
25	KANQ-04DC1N1	X	X	X	X
26	KANQ-04DC1S1	X	X	X	X
27	KANQ-04DC1N2	X	X	X	X
28	KANQ-04DC1S2	X	X	X	X
29	KANQ-04DC1N3	X	X	X	X
30	KANQ-04DC1S3	X	X	X	X

KANQ-04D 1 1 1 Brake Model Outline Drawing



AMENDMENT

SIGN	DESCRIPTION	MODIFIER	APPROVALS	DATE
△	Changed the Model	K. J. H.	S. D. H.	2015. 02. 11.

Motor unit

PIN No	Signal	Color
1	G	Green
2	W	Black
3	V	White
4	U	Red

Motor connector (AMP)
Pin : 480702
Plug : 170360-1

Brake unit

PIN No	Signal	Color
1	Brake	
2	Brake	

Brake connector (AMP)
Pin : 170360-1

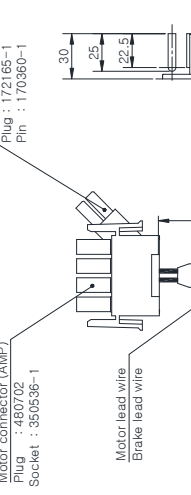
Opponent connector (No. belongings)

Motor connector (AMP)
- Cap : 480703
- Socket : 350218-1

Brake connector (AMP)
- Cap : 172157-1
- Socket : 170362-1 or 170366-1

Detector connector (AMP)
- Cap : 172161-1 (9 wires)
- Socket : 170361-1 or 170365-1

Detector connector (AMP)
- Cap : 172169-1 (9 wires)
- Socket : 1794617-6 (15 wires)
- Cap : 1794615-6 (15 wires)
- Socket : 170361-1 or 1794609-0 (15 wires)



Rotary encoder unit

PIN No	2048PPR Inc.	9 Wires	15 Wires	7 Wires	9 Wires	18BIT Abs.
1	A	A	A	BAT+	BAT+	BAT+
2	A	A	A	BAT-	BAT-	BAT-
3	B	B	B	Shield	Shield	Shield
4	B	B	B	SD	SD	SD
5	Z	Z	Z	SD	SD	SD
6	Z	Z	Z	CLOCK	CLOCK	CLOCK
7	DC+5V	DC+5V	U	DC+5V	DC+5V	DC+5V
8	GND	GND	U	0V	0V	0V
9	FG	FG	V	CLOCK	CLOCK	CLOCK
10			V			
11			W			
12			W			
13			DC+5V			
14			GND			
15			FG			

No.	Model	KEY	D-CUT	OIL SEAL	ENCODER
01	KANQ-04DCT1	X	X	X	2048PPR Inc. 9 wires
02	KANQ-04DCT11	X	X	X	2048PPR Inc. 9 wires
03	KANQ-04DCT12	O	X	X	2500PPR Inc. 9 wires
04	KANQ-04DCT13	O	X	X	2500PPR Inc. 9 wires
05	KANQ-04DCT14	X	O	X	17BIT Abs. 7 wires
06	KANQ-04DCT15	X	O	X	18BIT Abs. 9 wires
07	KANQ-04DCT16	X	X	X	17BIT Abs. 7 wires
08	KANQ-04DCT17	X	X	X	18BIT Abs. 9 wires
09	KANQ-04DCT18	X	X	X	17BIT Abs. 7 wires
10	KANQ-04DCT19	X	X	X	18BIT Abs. 9 wires
11	KANQ-04DCT20	X	X	X	17BIT Abs. 7 wires
12	KANQ-04DCT21	X	X	X	18BIT Abs. 9 wires
13	KANQ-04DCT22	X	X	X	17BIT Abs. 7 wires
14	KANQ-04DCT23	X	X	X	18BIT Abs. 9 wires
15	KANQ-04DCT24	X	X	X	17BIT Abs. 7 wires
16	KANQ-04DCT25	X	X	X	18BIT Abs. 9 wires
17	KANQ-04DCT26	X	X	X	17BIT Abs. 7 wires
18	KANQ-04DCT27	X	X	X	18BIT Abs. 9 wires

Part Lists

ITEM	PART NAME	QTY	PART No.	DWG No.
1	3rd Angle System			
2	Seal Doo Hwan			
3	Joo Sung Do			
4	Kang Jung Hyun			
5	Mechanical Design Team			

Part Lists

ALTERNATIVE MATERIAL	TOLERANCE	ANGLE
ORIGINAL	LINEAR	—
	±0.5	—
	MATERIAL	—
	HEAT TREATMENT	—
	FINISH	—

Rotation: CCW

ITEM	PART NAME	QTY	PART No.	DWG No.
1	2015. 01. 08			
2	3rd Angle System			
3	Seal Doo Hwan			
4	Joo Sung Do			
5	Kang Jung Hyun			
6	Mechanical Design Team			

Part Lists

ITEM	PART NAME	QTY	PART No.	DWG No.
1	2015. 01. 08			
2	3rd Angle System			
3	Seal Doo Hwan			
4	Joo Sung Do			
5	Kang Jung Hyun			
6	Mechanical Design Team			

Part Lists

ITEM	PART NAME	QTY	PART No.	DWG No.
1	2015. 01. 08			
2	3rd Angle System			
3	Seal Doo Hwan			
4	Joo Sung Do			
5	Kang Jung Hyun			
6	Mechanical Design Team			

Part Lists

ITEM	PART NAME	QTY	PART No.	DWG No.
1	2015. 01. 08			
2	3rd Angle System			
3	Seal Doo Hwan			
4	Joo Sung Do			
5	Kang Jung Hyun			
6	Mechanical Design Team			