

WINDING CONSTANT	TOL	SYM	VALUE	UNITS
DC RESISTANCE	± 10%	R	14.9	OHMS
VOLTAGE @ Fp	NOMINAL	Vp	34.9	VOLTS
CURRENT @ Fp	NOMINAL	Ip	2.3	AMPS
TORQUE SENSITIVITY	± 10%	Kt	0.79	N-m / A
BACK EMF CONSTANT	NOMINAL	Kb	0.79	V/Rad/Sec
INDUCTANCE *****	± 30%	L	3.4	mH

ACTUATOR PARAMETER	SYM	VALUE	UNITS
PEAK TORQUE *	Fp	1.85	N-m
CONTINUOUS STALL TORQUE **	Tcs	0.7	N-m
CONTINUOUS TORQUE WITH HEAT SINK	Tcs	0.98	N-m
ACTUATOR CONSTANT	Ka	0.2	N-m/√w
ELECT TIME CONSTANT	Te	0.23	milli-sec
POWER I2R@Fp	Pp	81.7	W
TOTAL STROKE(ANGULAR)	S	7.5	degree
CLEARANCE ON SIDE OF COIL	CL	0.38	mm
THERMAL RESISTANCE ***	θth	11.0	C / W
THERMAL RESISTANCE WITH HEAT SINK****	θth	5.4	C / W
MAX WINDING TEMP	Tmax	150	C
WEIGHT OF COIL ASSEMBLY	WTc	27	g
INERTIA OF COIL ASSEMBLY	Ic	5920	g-cm2
WEIGHT OF FIELD ASSEMBLY	Wtf	483	g
WEIGHT OF ACTUATOR	WTa	510	g

* 10 sec @ 25C ambient, 150C coil temp.
 ** 25C ambient, 150C coil temp.
 *** In free air.
 **** Measured with 250×250×10mm heat sink.
 ***** Measured with BK PRECISION 875B.

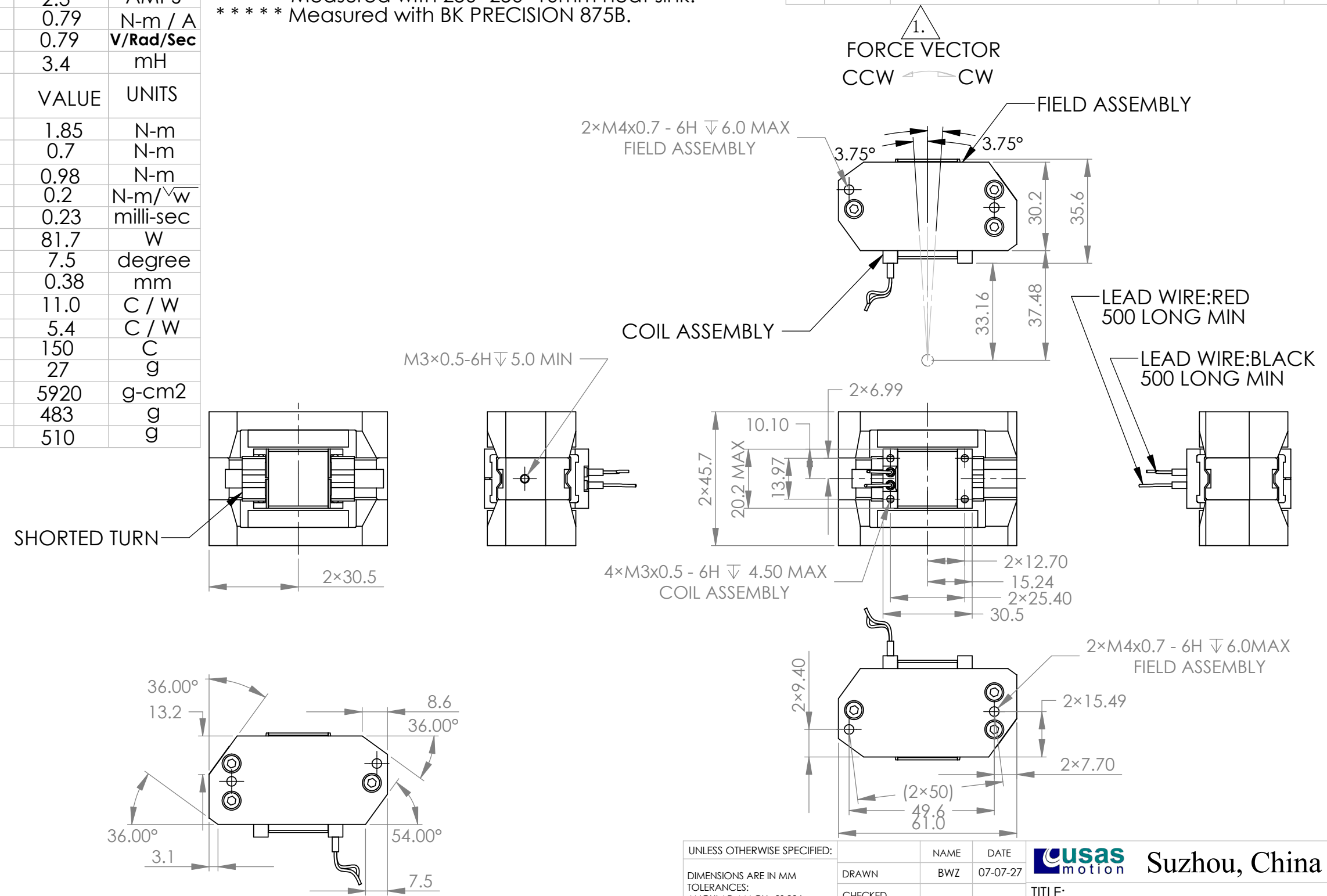
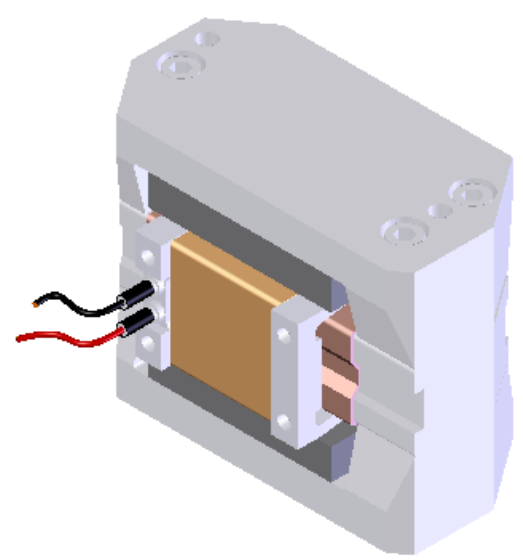
REV	ECO NO.	DESCRIPTION	DRN	APP'D	Q.A	DATE
X1	---	INITIAL RELEASE	BWZ	WYG	LBQ	07-07-27

D

C

B

A



2.INSULATION RESISANCE:100 MEGOHMS MINIMUM AT 500 VDC.
 1.A POSITIVE(+)VOLTAGE APPLIED TO THE RED LEAD WILL PRODUCE A FORCE ON THE COIL ASSEMBLY IN CLOCKWISE(CW) DIRECTION.
 NOTES:UNLESS OTHERWISE SPECIFIED

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UNLESS OTHERWISE SPECIFIED:		
DIMENSIONS ARE IN MM	NAME	DATE
TOLERANCES:	DRAWN	BWZ 07-07-27
ANGULAR: MACH ±0° 30'	CHECKED	
ONE PLACE DECIMAL ±0.25	ENG APPR.	WYG 07-07-27
TWO PLACE DECIMAL ±0.1	MFG APPR.	
INTERPRET GEOMETRIC TOLERANCING PER:	Q.A.	LBQ 07-07-27
ANSI Y14.5M-1982.	COMMENTS:	
DO NOT SCALE DRAWING		

usas motion Suzhou, China

ROTARY ACTUATOR

SIZE **A3** DWG. NO. **VRS0185-008-00A** REV **X1**

SCALE: 1:1.5 SHEET 1 OF 1