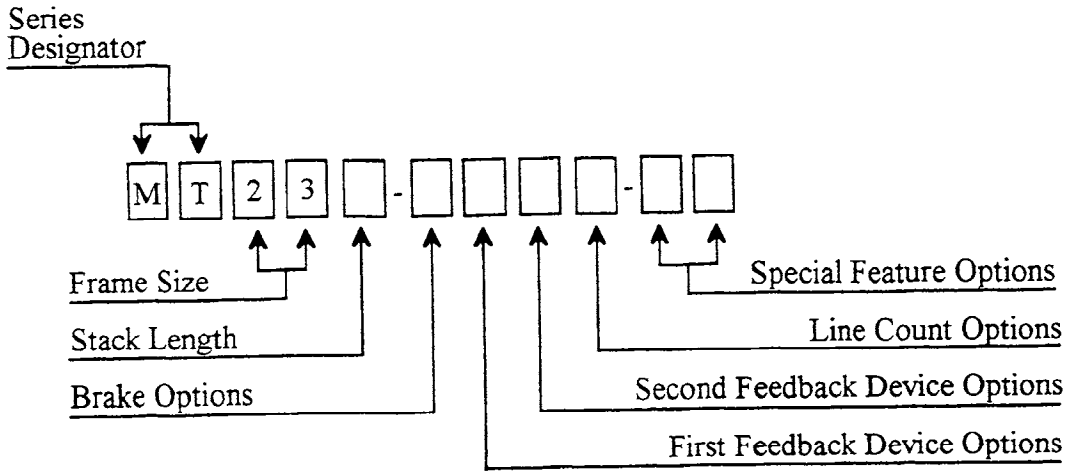
Westamp MT23 DC Brush Type Motor Model Number Definition

August 26, 1993



STACK LENGTH

1
3
5
see data sheets

BRAKE OPTIONS

0 = None
A = 24 Volts
B = 90 Volts

SECOND FEEDBACK DEVICE OPTIONS

Same as First Feedback Device

SPECIAL FEATURE OPTIONS

Any special features that differ from the standard configuration. (Consult factory for available options).

FIRST FEEDBACK DEVICE OPTIONS

0 = None
A = Encoder type 23B
B = Encoder type 77L
E = No Device-with Encoder Mounting Hardware
R = No Device-with Resolver Mounting Hardware
P = Resolver type 21BRCX
S = Resolver type 11-BHW

LINE COUNT OPTIONS

0 = None
1 = 250
2 = 500
3 = 600
4 = 650
5 = 1000
6 = 2000

Westamp MT23x Brush Motors

DATA SHEET

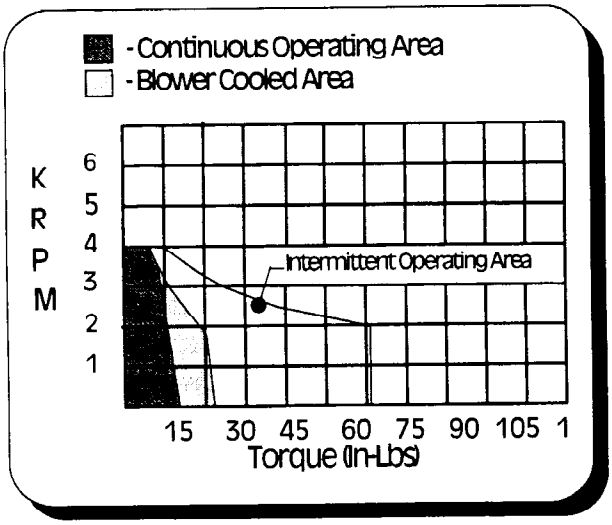
Motor Parameter	Unit	MT231	MT233	MT235
General				
No Load Voltage Gradient	Volts/KRPM	25	38	36
Maximum Terminal Voltage	Volts	100	140	140
Max Operating Speed	RPM	4,000	3,700	4,000
Continuous Stall Torque TENV***	IN-LBS	14	26	40
Continuous Stall Torque (Blower Cooled***)	IN-LBS	26	49	71
Continuous Stall Current TENV***	AMPS	7	8.6	13.2
Torque Sensitivity (K_t)	IN-LBS/AMP	2	3.1	3
Peak Stall Torque**	IN-LBS	66	124	195
Current at Peak Stall Torque**	AMPERES	34	47	75
Theoretical Acceleration at Peak Torque	RAD/SEC^2	6,200	8,200	9,600
Armature Inductance	mHenries	5	6.5	3.3
Armature Resistance Less Brushes**	OHMS	1	0.82	0.45
Mechanical				
Armature Inertia	IN-LBS-SEC^2	0.01	0.02	0.02
Mechanical Time Constant	millisec	25	15	13
Motor Weight	LBS	12	16	20
Static Friction Torque	IN-LBS	1.3	1.3	1.8
Thermal				
Insulation Class	N/A	F	F	F
Maximum Ambient Temp.	°C	40	40	40
Thermal Time Constant**	Minutes*	40	50	60
Tachometer				
Voltage Gradient	Volts/KRPM	7	7	7
Ripple	Percent Cycles/Rev	1 25	1 25	1 25
Armature Resistance	Ohms	24	24	24
Armature Inductance	mHenries*	36	36	36
Maximum Current	Amperes	0.035	0.035	0.035

* Tolerance plus or minus 10%

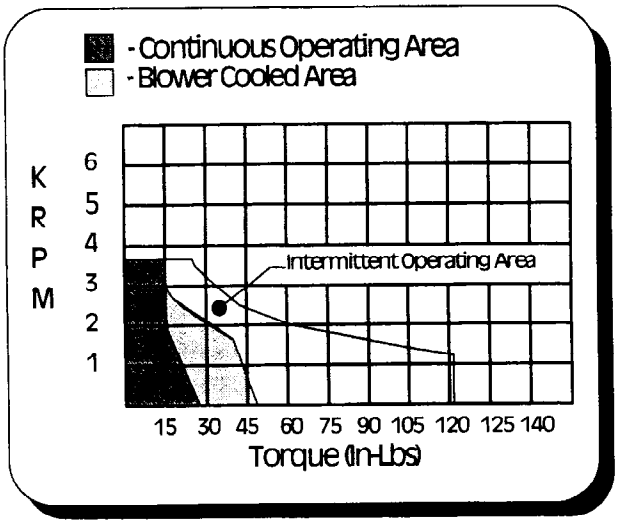
** At 25°C

*** At 40°C Ambient

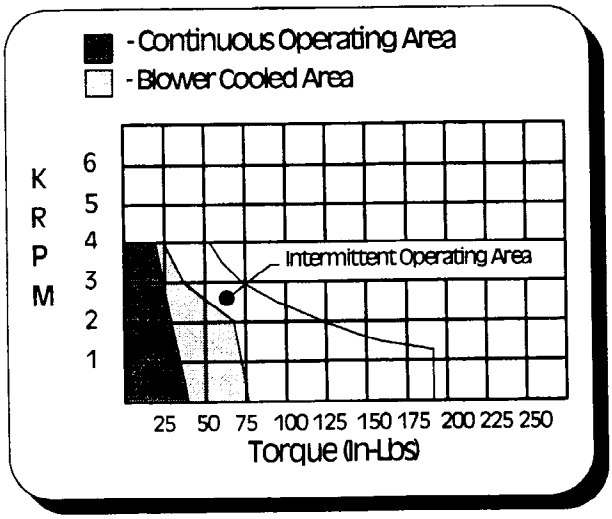
MT23x Speed vs Torque Curves



MT233



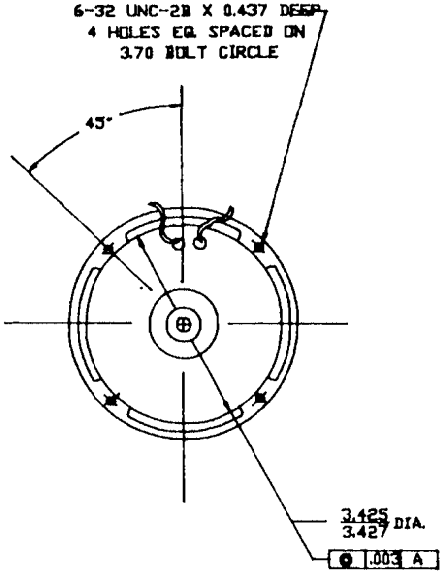
MT231

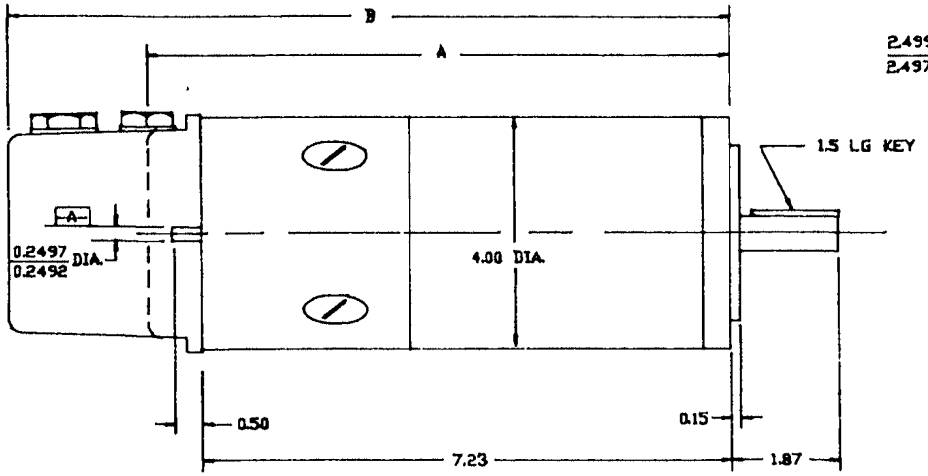


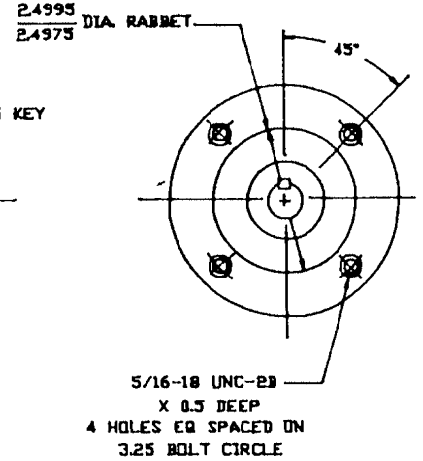
MT235

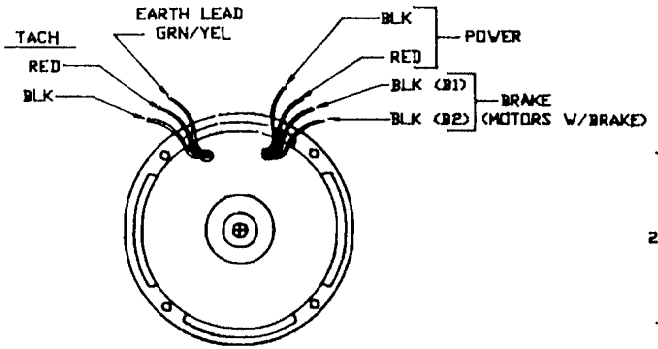
DIMENSIONS		
A	W/ STANDARD COVER	8.23
B	W/ LONG COVER	10.66

* FOR MOTORS WITH BRAKE ADD 1.77 TO LENGTH

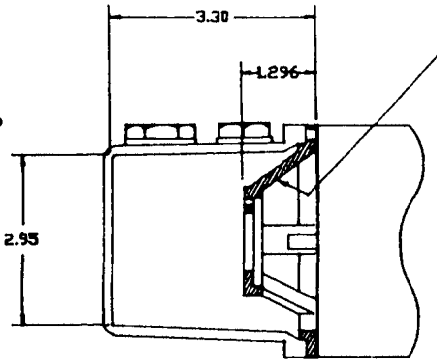






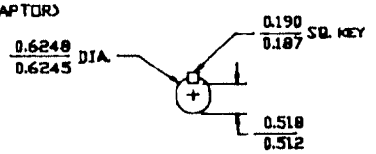


WIRING DETAIL



ENCODER/RESOLVER HOUSING DETAIL

ENCODER (LBL) ELECTRICAL CONNECTIONS	
WIRE COLOR	FUNCTIONS
WHITE	+ 5Vdc
BLACK	GROUND
RED	A
PINK	$\bar{A}$
GREEN	B
BLUE	$\bar{B}$
YELLOW	Z
ORANGE	$\bar{Z}$
SHIELD	FLOATING



SHAFT DETAIL
SCALE 1/1

1. WHEN A POSITIVE VOLTAGE IS APPLIED TO THE RED ARMATURE LEAD WITH RESPECT TO THE BLACK LEAD, THE DIRECTION OF ROTATION OF THE MOTOR SHAFT WHEN FACING THE OUTPUT SHAFT END OF THE MOTOR SHALL BE COUNTERCLOCKWISE AND THE VOLTAGE ON THE RED TACHOMETER LEAD SHALL BE POSITIVE WITH RESPECT TO THE BLACK LEAD.

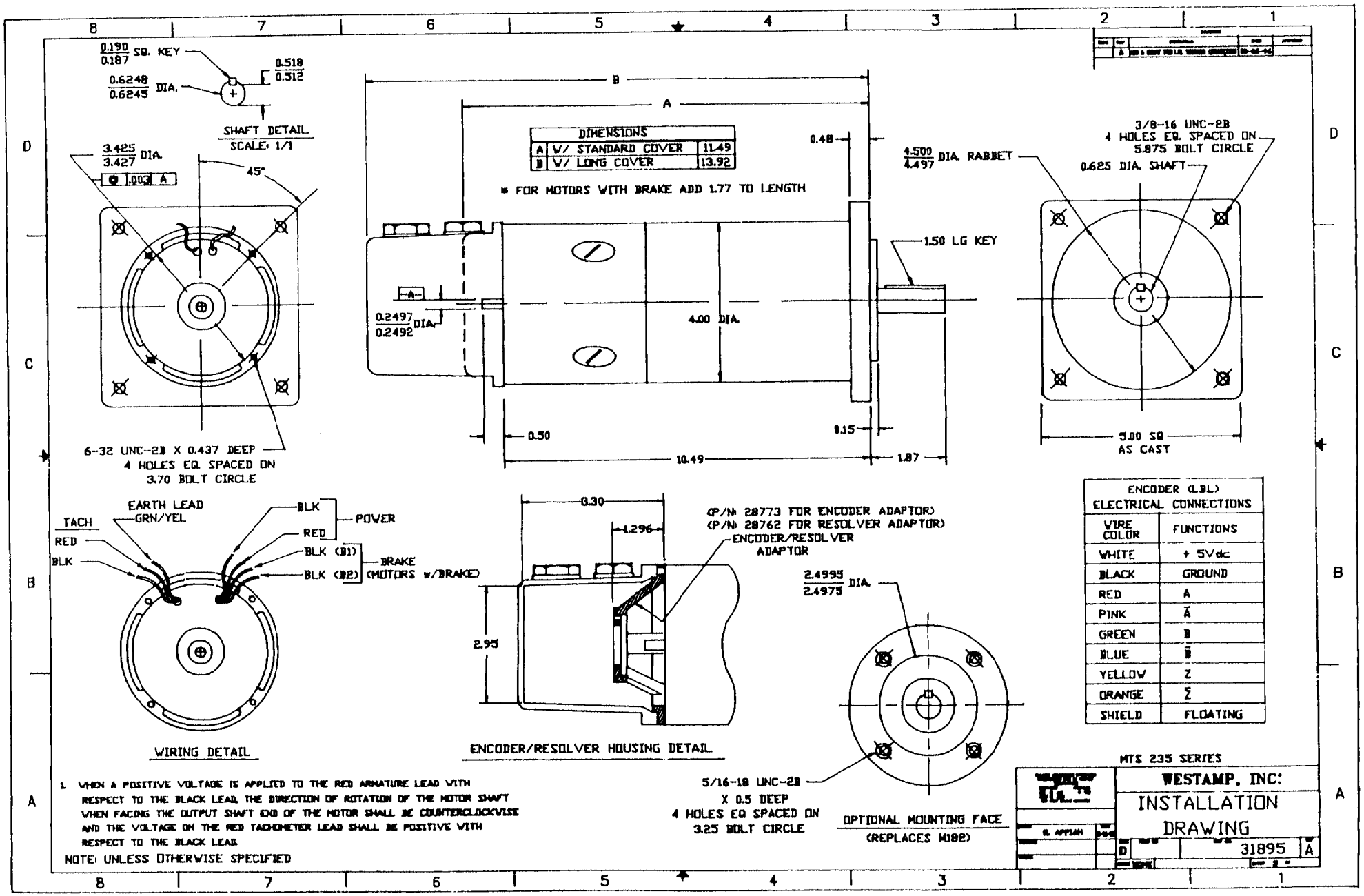
NOTE: UNLESS OTHERWISE SPECIFIED

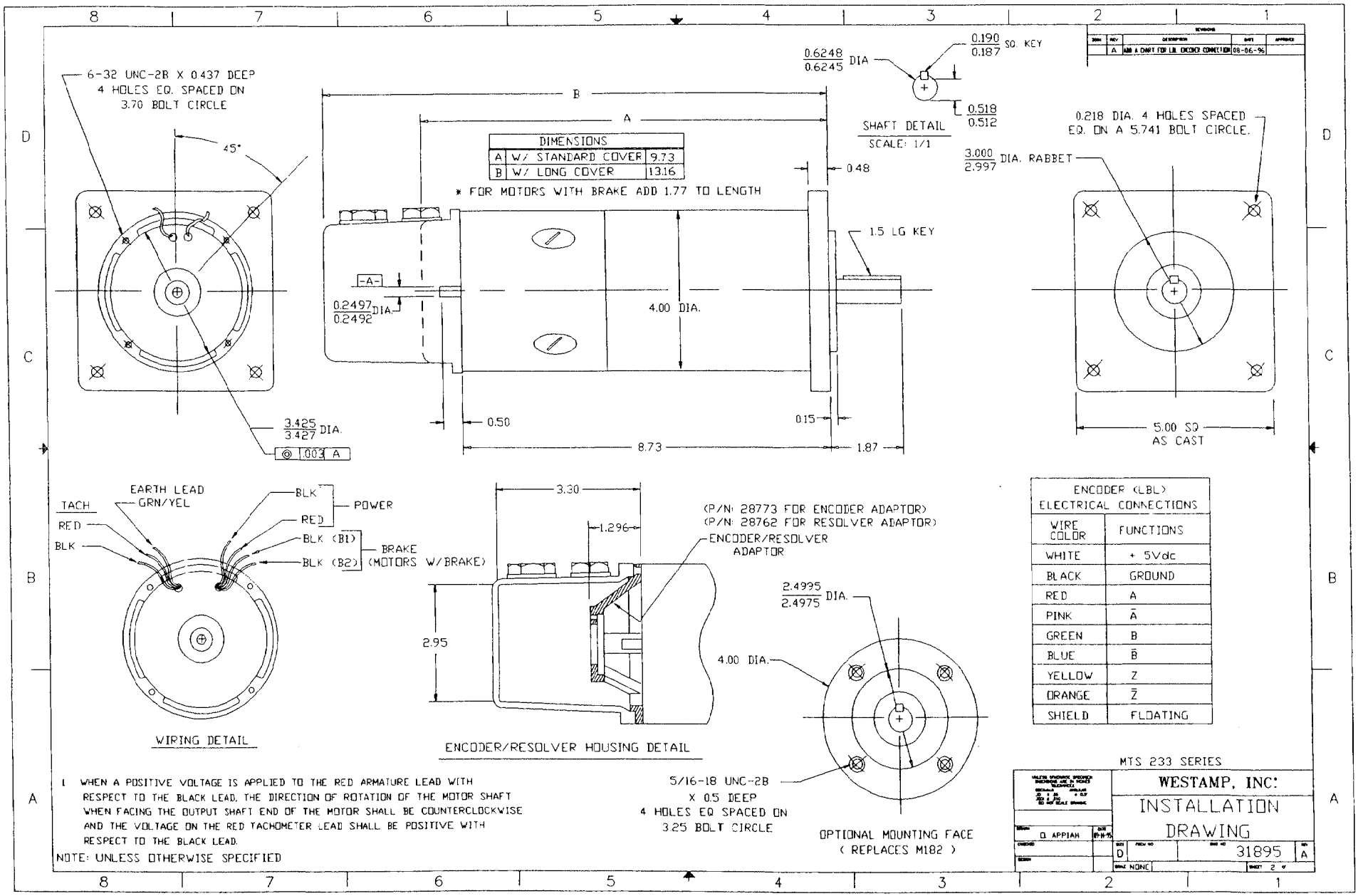
MTS231 SERIES

WESTAMP, INC.

INSTALLATION DRAWING

31895 A


0.190/0.187 SQ. KEY
0.6248/0.6245 DIA.
0.518/0.512
SHAFT DETAIL
SCALE: 1/1
3.425/3.427 DIA.
.003 A
45°
6-32 UNC-2B X 0.437 DEEP
4 HOLES EQ. SPACED ON
3.70 BOLT CIRCLE
B
A
DIMENSIONS
A W/ STANDARD COVER 11.49
B W/ LONG COVER 13.92
* FOR MOTORS WITH BRAKE ADD 1.77 TO LENGTH
0.48
4.500/4.497 DIA. RABBET
1.50 LG KEY
0.2497/0.2492 DIA.
4.00 DIA.
0.50
0.15
10.49
1.87
3/8-16 UNC-2B
4 HOLES EQ. SPACED ON
5.875 BOLT CIRCLE
0.625 DIA. SHAFT
5.00 SQ
AS CAST
TACH
EARTH LEAD
GRN/YEL
RED
BLK
BLK
RED
POWER
BLK (B1)
BLK (B2)
BRAKE
(MOTORS w/BRAKE)
WIRING DETAIL
0.30
1.296
(P/N 28773 FOR ENCODER ADAPTOR)
(P/N 28762 FOR RESOLVER ADAPTOR)
ENCODER/RESOLVER
ADAPTOR
2.95
ENCODER/RESOLVER HOUSING DETAIL
2.4995/2.4975 DIA.
5/16-18 UNC-2B
X 0.5 DEEP
4 HOLES EQ SPACED ON
3.25 BOLT CIRCLE
OPTIONAL MOUNTING FACE
(REPLACES M18B)
ENCODER (LBL)
ELECTRICAL CONNECTIONS
WIRE COLOR | FUNCTIONS
WHITE | + 5Vdc
BLACK | GROUND
RED | A
PINK | Ā
GREEN | B
BLUE | B̄
YELLOW | Z
ORANGE | Z̄
SHIELD | FLOATING
1. WHEN A POSITIVE VOLTAGE IS APPLIED TO THE RED ARMATURE LEAD WITH RESPECT TO THE BLACK LEAD, THE DIRECTION OF ROTATION OF THE MOTOR SHAFT WHEN FACING THE OUTPUT SHAFT END OF THE MOTOR SHALL BE COUNTERCLOCKWISE AND THE VOLTAGE ON THE RED TACHOMETER LEAD SHALL BE POSITIVE WITH RESPECT TO THE BLACK LEAD.
NOTE: UNLESS OTHERWISE SPECIFIED
MTS 235 SERIES
WESTAMP, INC.
INSTALLATION
DRAWING
D
31895
A



ENCODER (LBL) ELECTRICAL CONNECTIONS	
WIRE COLOR	FUNCTIONS
WHITE	+ 5Vdc
BLACK	GROUND
RED	A
PINK	$\bar{A}$
GREEN	B
BLUE	$\bar{B}$
YELLOW	Z
ORANGE	$\bar{Z}$
SHIELD	FLOATING

1. WHEN A POSITIVE VOLTAGE IS APPLIED TO THE RED ARMATURE LEAD WITH RESPECT TO THE BLACK LEAD, THE DIRECTION OF ROTATION OF THE MOTOR SHAFT WHEN FACING THE OUTPUT SHAFT END OF THE MOTOR SHALL BE COUNTERCLOCKWISE AND THE VOLTAGE ON THE RED TACHOMETER LEAD SHALL BE POSITIVE WITH RESPECT TO THE BLACK LEAD.

NOTE: UNLESS OTHERWISE SPECIFIED

REV	DESCRIPTION	DATE	APPROVED
A	ADD A CHART FOR LBL ENCODER CONNECTION	08-06-96	

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INSTALLATION DRAWING

D. APPIAH

SIZE D | DWG NO 31895 | REV A

SCALE NONE | SHEET 2 of