

# PRODUCT INFORMATION PACKET



Model No: 645A  
Catalog No: 645A

OEM Replacement Motor, 1/3 HP, 1 Ph, 60 Hz, 208-230 V, 1120 RPM, 1 Speed, 48 Frame, ENCLOSED



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**Nameplate Specifications**

Output HP	1/3 Hp	Output KW	0.25 kW
Frequency	60 Hz	Voltage	208-230 V
Current	1.2 A	Speed	1120 rpm
Service Factor	1	Phase	1
Duty	Air Over	Insulation Class	B
Frame	48Y	Enclosure	Totally Enclosed
Thermal Protection	Automatic	Ambient Temperature	40 °C
UL	Recognized	CSA	Y
CE	N	Number of Speeds	1

**Technical Specifications**

Electrical Type	Permanent Split Capacitor	Starting Method	Across The Line
Poles	6	Rotation	Reversible
Mounting	Extended Studs	Motor Orientation	Shaft Down
Drive End Bearing	Sleeve	Opp Drive End Bearing	Sleeve
Frame Material	Rolled Steel	Shaft Type	Flat
Overall Length	6.24 in	Frame Length	3.62 in
Shaft Diameter	0.500 in	Shaft Extension	2.0 in
Outline Drawing	F48Y81A01-S01	Connection Drawing	614131-346

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4 3 2 1

REV	ECO	REV BY	DATE	APPD	DATE
C	0002675	Keyla Palomo	10-28-2008	Mario Arguelles	10-28-2008

GENERAL INFORMATION:

SHAFT RUNOUT: .001[.03] T.I.R. PER INCH LENGTH OF EXTENSION

END PLAY: .010 TO .063 [.25 TO 1.60]

BEARINGS: SLEEVE

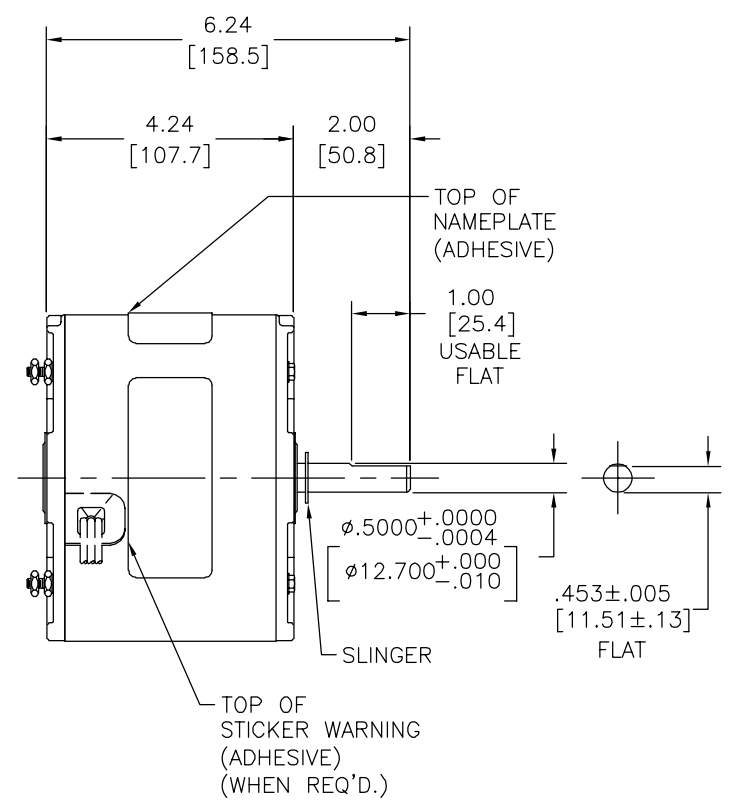
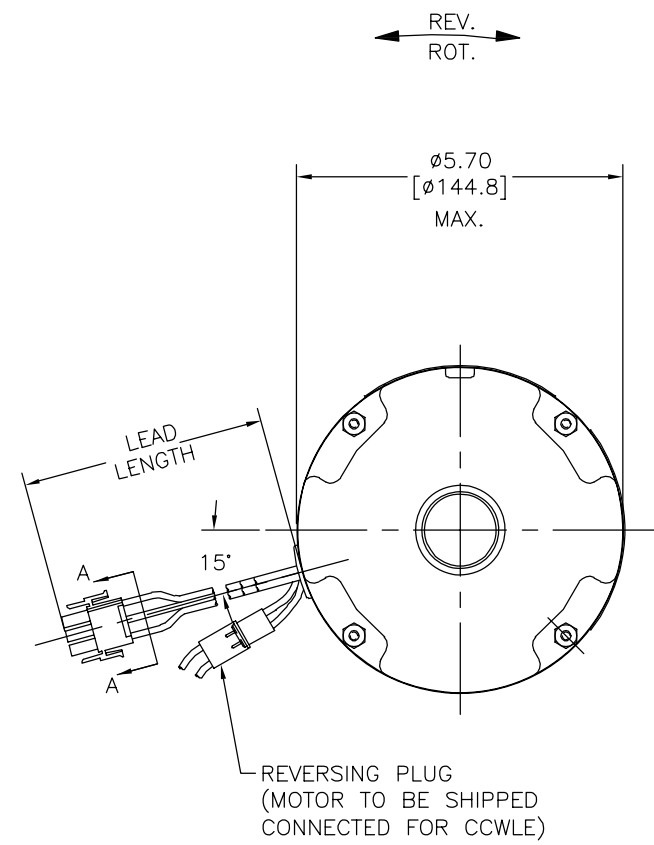
MOUNTING POSITION: SHAFT DOWN

ELECTRICAL DATA:

OVERLOAD PROTECTOR: AUTOMATIC RESET (T.I. 7AM 034)

LEADS: NO. 18 GA. .03[.8] THK. XLP 125°C INSUL.

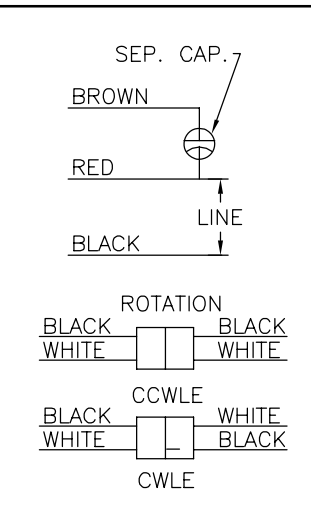
GROUND LEAD: NO. 18 GA. .03[.8] THK. 125°C INSUL.



NAMEPLATE DATA:

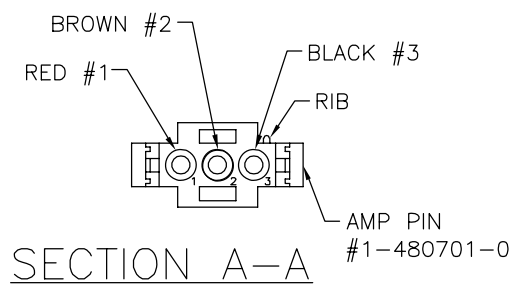
EXTERNAL CONNECTION DIAGRAM

MODEL NO.: F48Y81A01  
 CUST. P/N: 645A  
 HP: 1/3  
 ROT.: REVERSIBLE  
 RPM: 1120  
 TYPE: UF  
 FRAME: 48Y  
 VOLTS: 208-230  
 PH: 1  
 AMPS: 1.2  
 HZ: 60  
 INS.: B  
 AMB.: 40° C  
 DUTY: AIR OVER  
 CAP.: 5 MFD/370 V  
 ENCL: ENCLOSED  
 UL LOGO  
 CSA LOGO  
 THERMALLY PROTECTED



NOTE:  
 - 4X EXTRA HEX NUTS 7555A19H01 ON LEAD END. (FINGER TIGHT)

BLACK/WHITE	5.0/7.0 [127/178]	AMP PIN #350218-1
BROWN	46.0/50.0 [1168/1270]	AMP PIN #350218-1
RED	46.0/50.0 [1168/1270]	AMP PIN #350218-1
NEGRO	46.0/50.0 [1168/1270]	AMP PIN #350218-1
COLOR	LENGTH	TERMINAL OR STRIP LENGTH



MAIN FRAME - OLE	ENCLOSED
END FRAME - OLE	ENCLOSED
MAIN FRAME - LE	ENCLOSED
END FRAME - LE	ENCLOSED

CUSTOMER	DISTRIBUTION SERVICES
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PERFORMANCE CURVE NO.	TORQUE @ --- RPM (25°C)	APPROVED SAMPLE	UL COMPONENT FILE #	CCN #	CSA FILE #	CLASS #
C32651	18.3 OZ. FT.	0603182A	E46412	PRGY2	LR43341	4211-01

GEOMETRIC CHARACTERISTICS & SYMBOLS  
 ▽ FLATNESS  
 — STRAIGHTNESS  
 < ANGULARITY  
 ⊥ PERPENDICULARITY (SQUARENESS)  
 // PARALLELISM  
 ○ ROUNDNESS (CIRCULARITY)  
 Ⓞ CYLINDRICITY  
 △ PROFILE OF ANY SURFACE  
 ∩ PROFILE OF ANY LINE  
 ↗ RUNOUT  
 ⊕ TRUE POSITION  
 ⊙ CONCENTRICITY  
 = SYMMETRY

A.O. SMITH PROVIDES TECHNICAL ASSISTANCE TO OUR CUSTOMERS IN SEVERAL AREAS. SINCE A.O. SMITH DOES NOT RECEIVE ALL DATA CONCERNING THE USE AND APPLICATION OF THE MOTOR, THE SUITABILITY OF THE MOTOR FOR THE APPLICATION MUST BE DETERMINED BY THE CUSTOMER.

DIMENSIONS WITHOUT TOLERANCES ARE FOR REFERENCE ONLY.

DR BY: kkgel 2-16-2007  
 APPD: dcao 03-07-2007  
 EDS DATE 01-21-2007  
 FORMAT REV F  
 THIRD ANGLE PROJECTION  
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**AC Smith** **ELECTRICAL PRODUCTS COMPANY**  
 Innovation has a name. A DIVISION OF A. O. SMITH CORPORATION

DESCRIPTION: **OUTLINE**

SIZE: C DWG NO: F48Y81A01  
 SCALE: NONE SHEET 1

4 3 2 1

4 3 2 1

REVISION:	ECO	REVISADO POR:	FECHA:	APROBADO POR:	FECHA:
C	0002675	Keyla Palomo	10-28-2008	Mario Arguelles	10-28-2008

INFORMACION GENERAL:

OSCILACION DE FLECHA: .001[.03] POR EXTENSION EN LARGO POR PULGADA

JUEGO AXIAL: .010 A .063 [.25 A 1.60]

BALEROS: MANGA

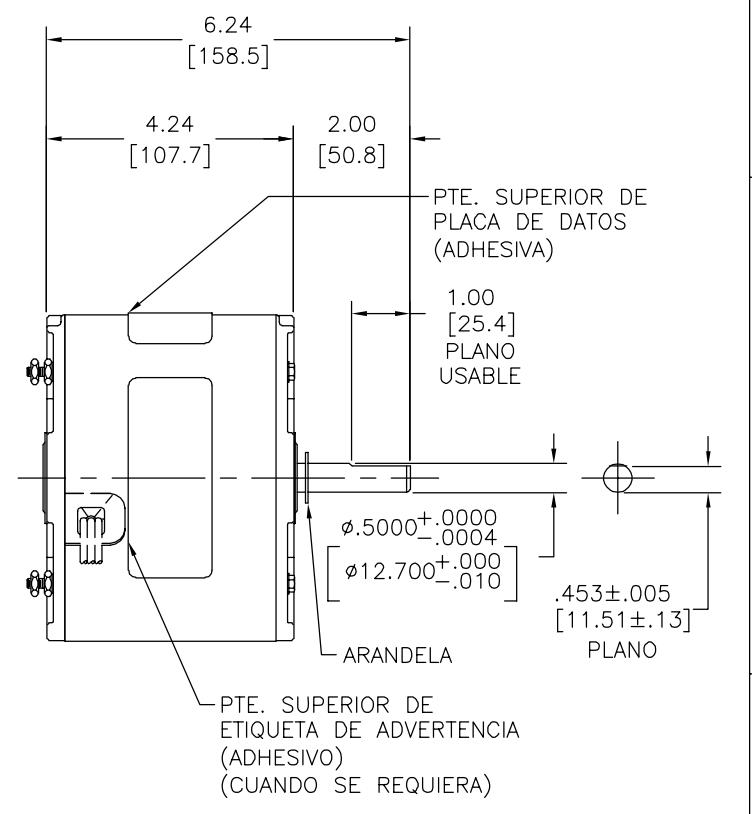
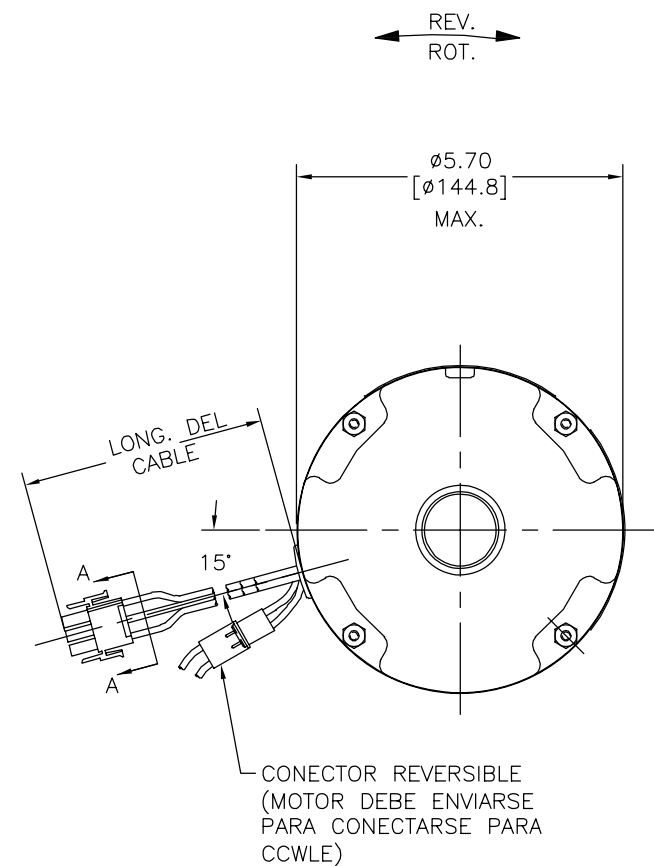
POSICION DEL MONTAJE: FLECHA HACIA ABAJO

INFORMACION ELECTRICA:

PROTECTOR DE SOBRECARGA: REINICIO AUTOMATICO (T.I. 7AM 034)

CABLES: NO. 18 GA. .03[.8] THK. XLP 125°C INSUL.

CABLE DE TIERRA: NO. 18 GA. .03[.8] THK. 125°C INSUL.



INFORMACION DE PLACA DE DATOS

MODEL NO.: F48Y81A01

CUST. P/N: 645A

HP: 1/3

ROT.: REVERSIBLE

RPM: 1120

TYPE: UF

FRAME: 48Y

VOLTS: 208-230

PH: 1

AMPS: 1.2

HZ: 60

INS.: B

AMB.: 40° C

DUTY: AIR OVER

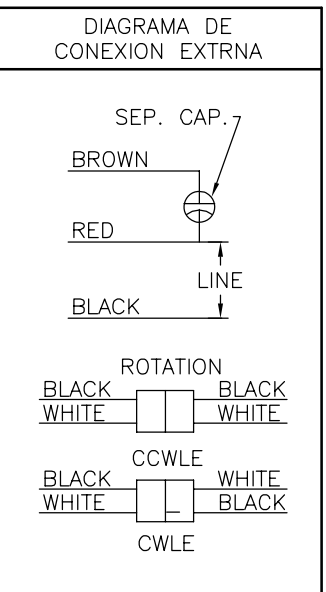
CAP.: 5 MFD/370 V

ENCL: ENCLOSED

UL LOGO

CSA LOGO

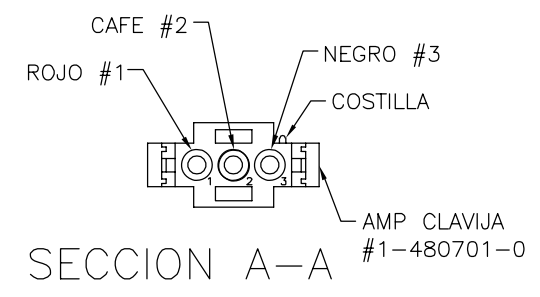
THERMALLY PROTECTED



NOTA:

- 4X EXTRA TUERCAS HEXAGNALES 7555A19H01 EN PARTE FRONTAL. (TRINQUETE APRETADO)

NEGRO/BLANCO	5.0/7.0 [127/178]	PERNO AMP #350218-1
CAFE	46.0/50.0 [1168/1270]	PERNO AMP #350218-1
ROJO	46.0/50.0 [1168/1270]	PERNO AMP #350218-1
BLACK	46.0/50.0 [1168/1270]	PERNO AMP #350218-1
COLOR	LONGITUD	TERMINAL O LONGITUD DE DESFORRE



CARCASA - LOC	ENCERRADO
TAPA - LOC	ENCERRADO
CARCASA - LC	ENCERRADO
TAPA - LC	ENCERRADO

CLIENTE	DISTRIBUTION SERVICES
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CURVAS DE FUNCIONAMIENTO	TORSION @ RPM (25°C)	MUESTRA APROBADA	COMPONENTE UL	CSA
C32651	18.3 OZ. FT.	0603182A	#ARCHIVO PRGY2	LR43341 4211-01

CARACTERISTICAS DE GEOMETRIA Y SIMBOLOS

- PLANICIDAD
- RECTITUD
- ANGULARIDAD
- PERPENDICULARIDAD (A ESCUADRA)
- PARALELISMO
- REDONDEZ (CIRCULARIDAD)
- CILINDRICIDAD
- PERFIL DE CUALQUIER SUPERFICIE
- PERFIL DE CUALQUIER LINEA
- VARIACION
- POSICION REAL
- CONCENTRICIDAD
- SIMETRIA

A.O. SMITH PROVEE ASISTENCIA TECNICA A NUESTROS CLIENTES EN VARIAS AREAS. DESDE QUE A.O. SMITH NO RECIBE TODOS LOS DATOS EN RELACION AL USO Y A LA APLICACION DEL MOTOR, LA APLICACION ADECUADA DEL MOTOR DEBE SER DETERMINADA POR EL CLIENTE.

DIMENSIONES SIN TOLERANCIA SON DE REFERENCIA SOLAMENTE

DIBUJADO POR: kkuigel 2-16-2007

APROBADO POR: dcao 03-07-2007

TERCER ANGULO DE PROYECCION

FECHA EDS: 01-21-2007

REV. FORMATO: F

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**AC Smith** ELECTRICAL PRODUCTS COMPANY

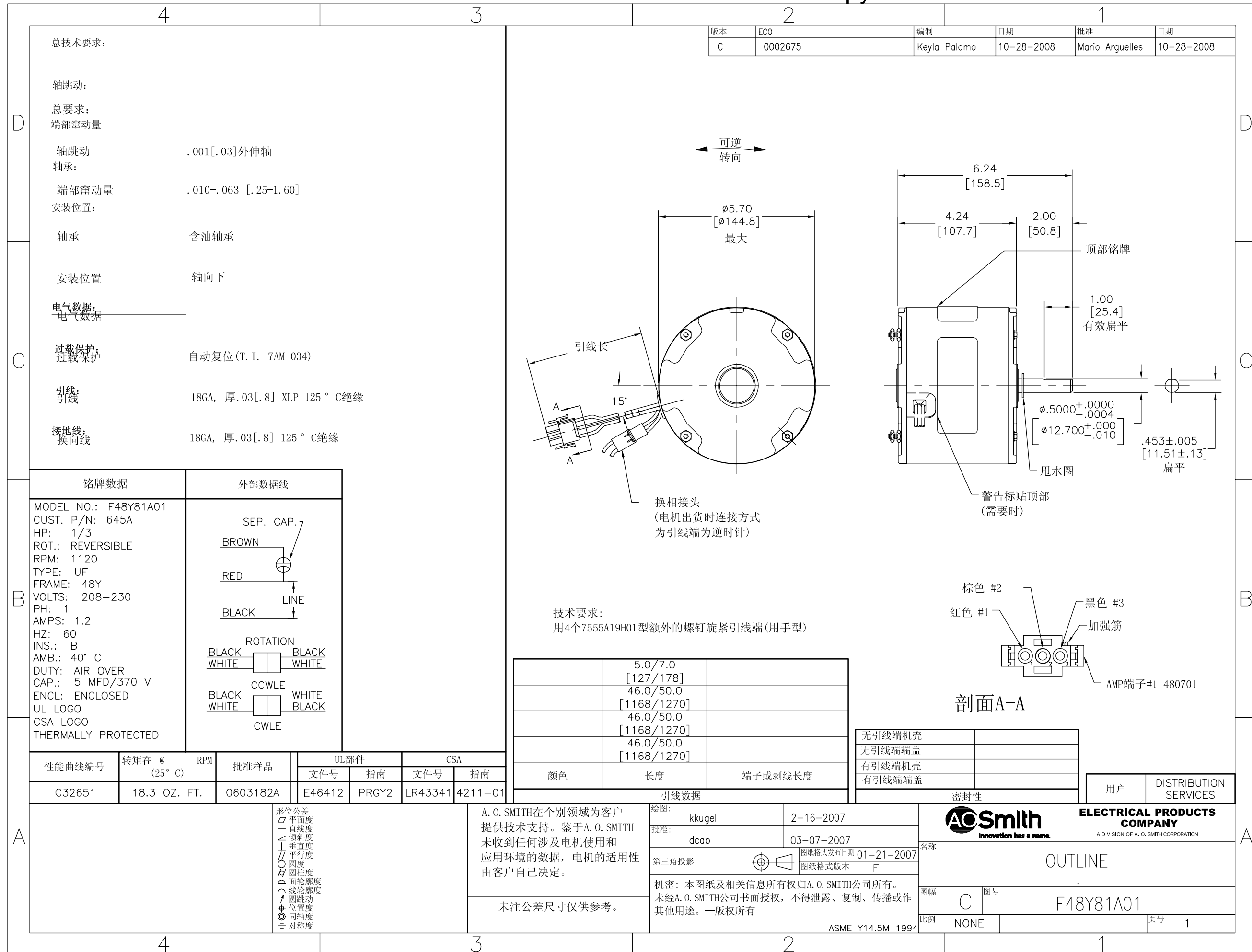
Innovation has a name. A DIVISION OF A. O. SMITH CORPORATION

DESCRIPCION: OUTLINE

TAMAÑO: C NUMERO DE DIBUJO: F48Y81A01

ESCALA: NONE HOJA: 1

4 3 2 1



总技术要求:

轴跳动:  
总要求:  
端部窜动量

轴跳动 .001[.03]外伸轴  
轴承:  
端部窜动量 .010-.063 [.25-1.60]  
安装位置:  
轴承 含油轴承  
安装位置 轴向下

电气数据:  
电气数据

过载保护:  
过载保护 自动复位(T. I. 7AM 034)

引线:  
引线 18GA, 厚.03[.8] XLP 125° C绝缘

接地线:  
换向线 18GA, 厚.03[.8] 125° C绝缘

版本	ECO	编制	日期	批准	日期
C	0002675	Keyla Palomo	10-28-2008	Mario Arguelles	10-28-2008

铭牌数据	外部数据线
MODEL NO.: F48Y81A01 CUST. P/N: 645A HP: 1/3 ROT.: REVERSIBLE RPM: 1120 TYPE: UF FRAME: 48Y VOLTS: 208-230 PH: 1 AMPS: 1.2 HZ: 60 INS.: B AMB.: 40° C DUTY: AIR OVER CAP.: 5 MFD/370 V ENCL: ENCLOSED UL LOGO CSA LOGO THERMALLY PROTECTED	SEP. CAP. BROWN RED LINE BLACK ROTATION BLACK WHITE WHITE BLACK CCWLE BLACK WHITE WHITE BLACK CWLE

性能曲线编号	转矩在 @ --- RPM (25° C)	批准样品	UL部件		CSA	
			文件号	指南	文件号	指南
C32651	18.3 OZ. FT.	0603182A	E46412	PRGY2	LR43341	4211-01

	5.0/7.0	
	[127/178]	
	46.0/50.0	
	[1168/1270]	
	46.0/50.0	
	[1168/1270]	
	46.0/50.0	
	[1168/1270]	
颜色	长度	端子或剥线长度
引线数据		

无引线端机壳	
无引线端端盖	
有引线端机壳	
有引线端端盖	

用户	DISTRIBUTION SERVICES
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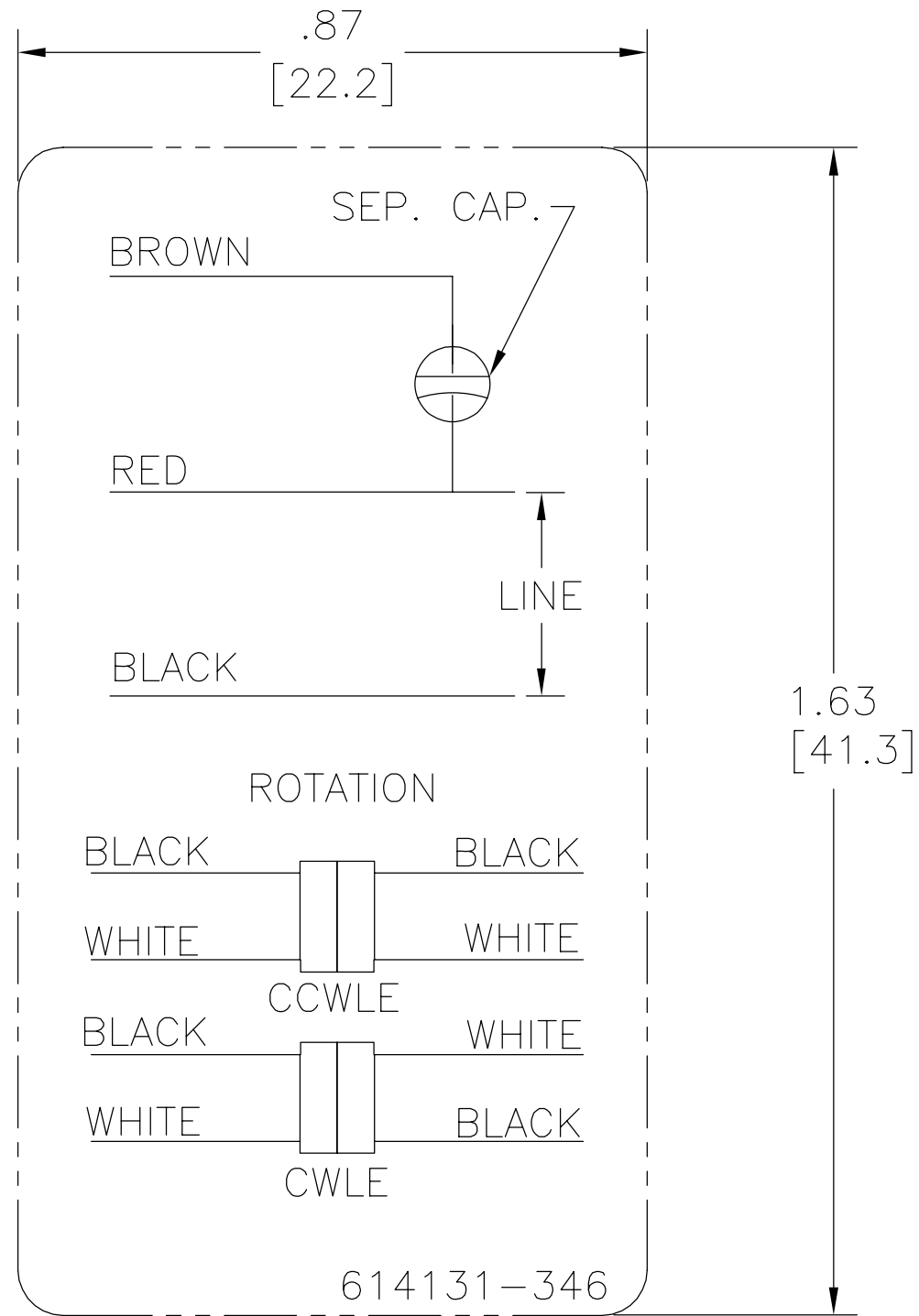
形位公差 ▽ 平面度 — 直线度 ∠ 倾斜度 ⊥ 垂直度 ∥ 平行度 ○ 圆度 ⊘ 圆柱度 面轮廓度 线轮廓度 Ⓢ 圆跳动 ⊕ 位置度 ⊙ 同轴度 ≡ 对称度	A. O. SMITH在个别领域为客户 提供技术支持。鉴于A. O. SMITH 未收到任何涉及电机使用和 应用环境的数据, 电机的适用性 由客户自己决定。  未注公差尺寸仅供参考。
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绘图: kkgel 批准: dcao 第三角投影	2-16-2007 03-07-2007 图纸格式发布日期 01-21-2007 图纸格式版本 F
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--

REV	ECO	REV BY	DATE	APPD	DATE
B	0004268	Lara Grado	02-05-2009	C. Contreras	02-05-2009



NOTES:

1. FOR USE WITH 614129 NAMEPLATE BLANK
2. — — — — — INDICATES DIMENSION LIMITS
3. DIE TO BE MADE FROM MASTER SUPPLIED BY A. O. SMITH CORPORATION
4. DIE MUST PRODUCE A LEGIBLE IMPRESSION.

GEOMETRIC CHARACTERISTICS & SYMBOLS

- ▭ FLATNESS
- STRAIGHTNESS
- ∠ ANGULARITY
- ⊥ PERPENDICULARITY (SQUARENESS)
- // PARALLELISM
- ROUNDNESS (CIRCULARITY)
- ⊘ CYLINDRICITY
- ⌒ PROFILE OF ANY SURFACE
- ⌒ PROFILE OF ANY LINE
- ↑ RUNOUT
- ⊕ TRUE POSITION
- ◎ CONCENTRICITY
- ≡ SYMMETRY

UNLESS OTHERWISE SPECIFIED  
DIM. TOLERANCES ARE AS FOLLOWS:

INCH	±.1	±.02	±.005	±.0005
mm	±0.5	±0.13	±0.013	

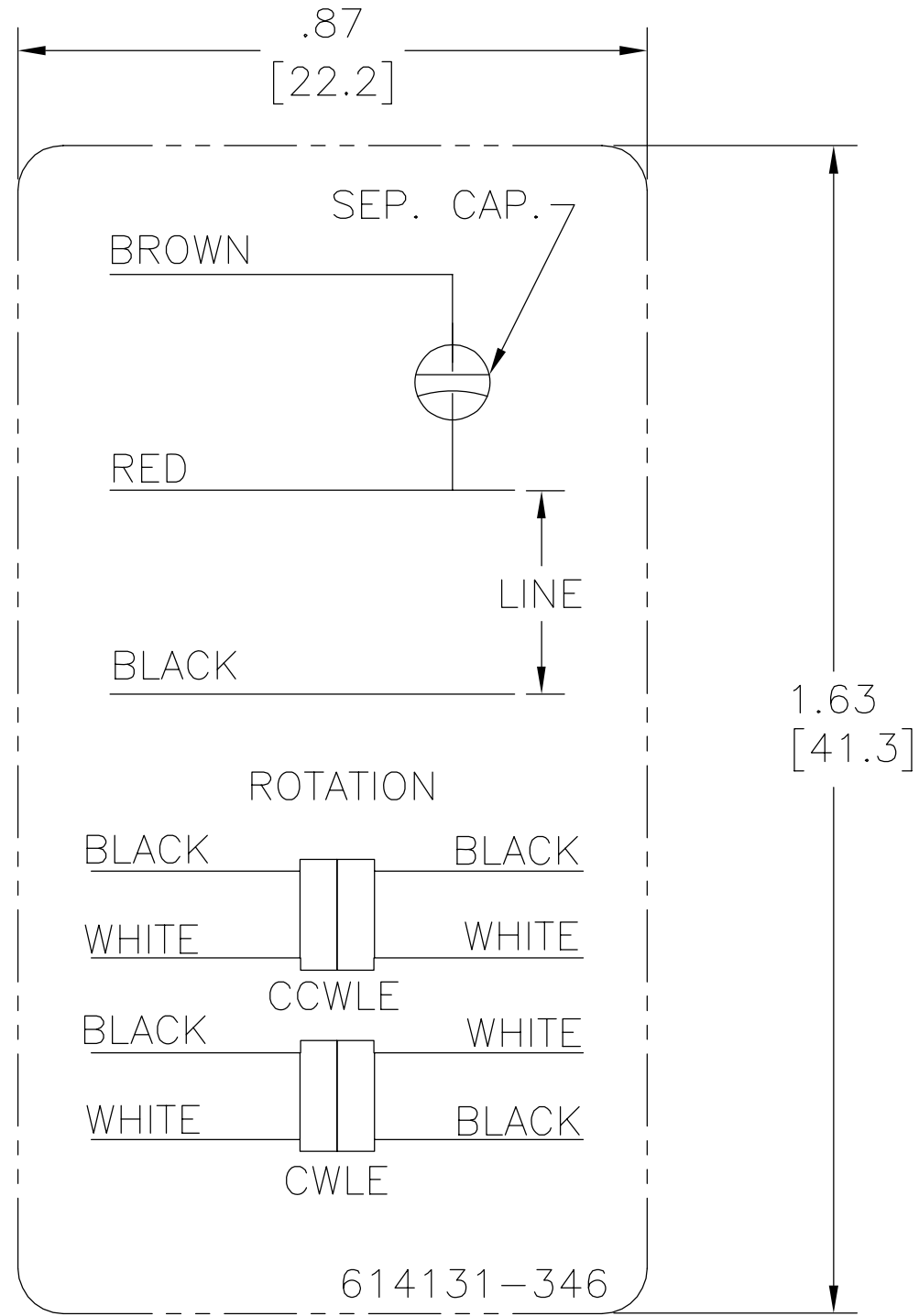
ANG. ±.50 DEG  
REMOVE BURRS & BREAK SHARP EDGES:  
INCH .003-.015 mm 0.1-0.4  
CORNER FILLETS TO:  
INCH .020 mm 0.5  
MACHINE SURFACES:  
INCH 125 mm 3.2

METRIC DIMS. SHOWN IN [BRACKETS]

DR BY:	L. Grado	02-05-2009
APPD:	C. Contreras	02-05-2009
THIRD ANGLE PROJECTION		EDS DATE 01-21-2007 FORMAT REV F
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		<b>ELECTRICAL PRODUCTS COMPANY</b> <small>A DIVISION OF A. O. SMITH CORPORATION</small>	
DESCRIPTION CONN DIAGRAM-EXTERNAL			
SIZE A	DWG NO 614131-346		
SCALE NONE			SHEET 1

REVISION:	ECO	REVISADO POR:	FECHA:	APROBADO POR:	FECHA:
B	0004268	Lara Grado	02-05-2009	C. Contreras	02-05-2009



NOTAS:

1. PARA USAR CON 614129 PLACA DE DATOS EN BLANCO.
2. — — — — — INDICA LIMITES DE DIMENSION
3. EL MOLDE DEBE ESTAR HECHO DESDE EL PROVEEDOR PRINCIPAL POR A. O. SMITH CORPORATION
4. EL MOLDE DEBE PRODUCIR UNA IMPRESION LEGIBLE.

CARACTERISTICAS DE GEOMETRIA Y SIMBOLOS

- ▭ PLANICIDAD
- RECTITUD
- ∠ ANGULARIDAD
- ⊥ PERPENDICULARIDAD (A ESCUADRA)
- // PARALELISMO
- REDONDEZ (CIRCULARIDAD)
- ⊘ CILINDRICIDAD
- ⊖ PERFIL DE CUALQUIER SUPERFICIE
- ⌒ PERFIL DE CUALQUIER LINEA
- ↑ VARIACION
- ⊕ POSICION REAL
- ◎ CONCENTRICIDAD
- ≡ SIMETRIA

A MENOS QUE SE ESPECIFIQUE DE OTRA MANERA, LAS TOLERANCIAS DE LAS DIMS; SON LAS SIGUIENTES:

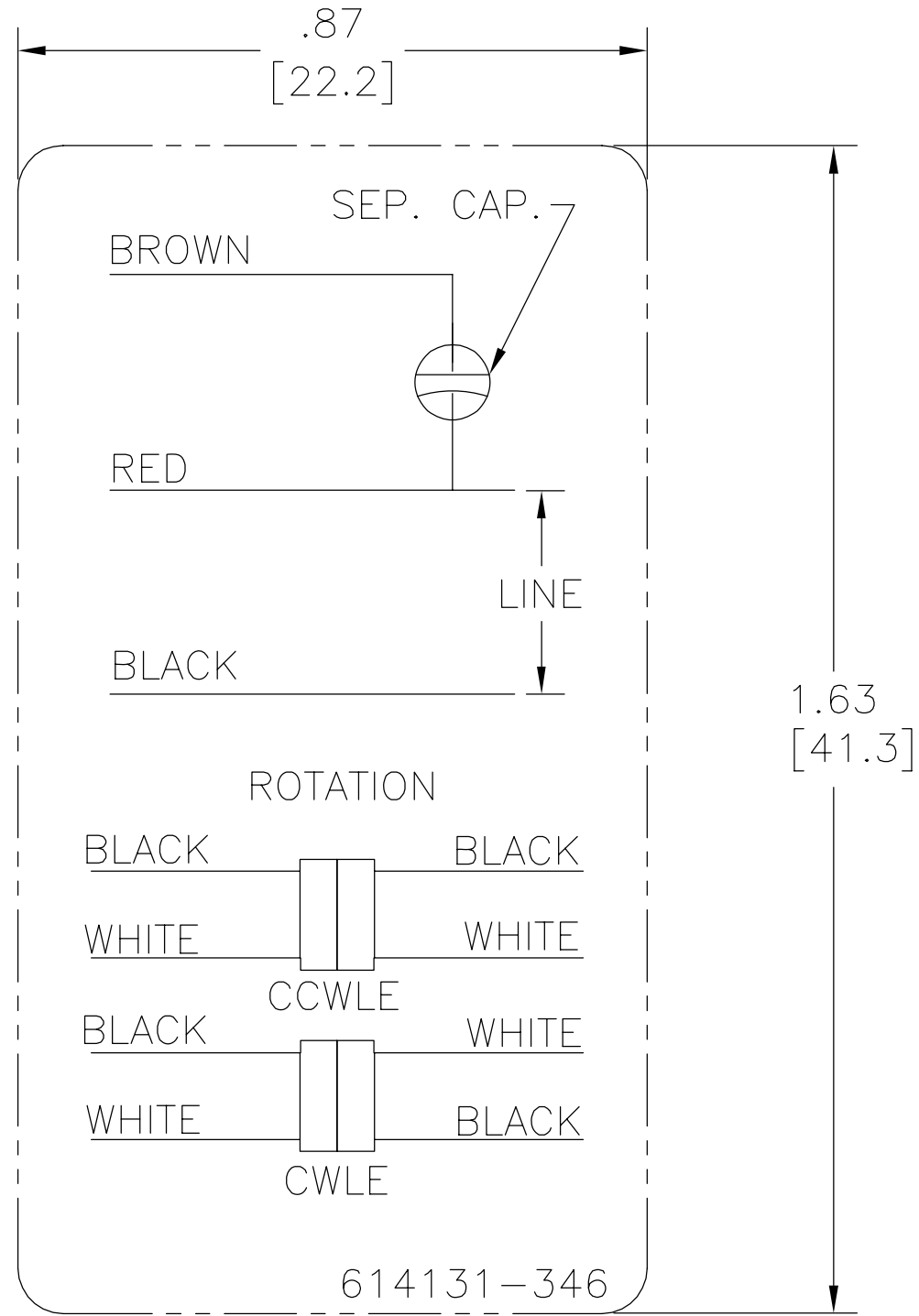
	X	XX	XXX	XXXX
PULG	±.1	±.02	±.005	±.0005
mm	±0.5	±0.13	±0.013	

ANG. ±.50 GRADOS  
 ELIMINAR REBABAS Y ORILLAS FILOSAS DEL BORDE.  
 PULG .003-.015 mm 0.1-0.4  
 FILETEAR ESQUINA: PULG .020 mm 0.5  
 MAQUINAR SUPERFICIES  
 PULG 125 mm 3.2  
 DIMS METRICAS MOSTRADAS [PARENTESIS]

DIBUJADO POR:	L. Grado	02-05-2009
APROBADO POR:	C. Contreras	02-05-2009
TERCER ANGULO DE PROYECCION		FECHA EDS: 01-21-2007 REV. FORMATO: F
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		<b>ELECTRICAL PRODUCTS COMPANY</b> <small>A DIVISION OF A. O. SMITH CORPORATION</small>	
DESCRIPCION: CONN DIAGRAM-EXTERNAL			
TAMAÑO: A	NUMERO DE DIBUJO: 614131-346		
ESCALA: NONE			HOJA: 1

??	ECO	??	??	??
B	0004268	Lara Grado	02-05-2009	C. Contreras 02-05-2009



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??:	L. Grado	02-05-2009
??:	C. Contreras	02-05-2009
?????	⊕	01-21-2007
?????	⊕	F
??:	A.O.SMITH	
??:	A.O.SMITH	
?????	--	
	ASME Y14.5M 1994	

		<b>ELECTRICAL PRODUCTS COMPANY</b> <small>A DIVISION OF A. O. SMITH CORPORATION</small>	
CONN DIAGRAM-EXTERNAL			
??	A	??	614131-346
??	NONE	??	1