ABB BALDOR RELIANCE

# Customer information packet

## CEWDM23934T

20HP, 1765RPM, 3PH, 60HZ, 256TC, 3952M, TEFC
Class -
Division - Not Applicable

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## Specifications

| | |
|---|---|
| **Enclosure** | TEFC |
| **Frame** | 256TC |
| **Frame Material** | Steel |
| **Frequency** | 60.00 Hz |
| **Haz Area Division** | Not Applicable |
| **Motor Letter Type** | Three Phase |
| **Output @ Frequency** | 20.000 HP @ 60 HZ |
| **Phase** | 3 |
| **Synchronous Speed @ Frequency** | 1800 RPM @ 60 HZ |
| **Voltage @ Frequency** | 230.0 V @ 60 HZ |
| | 460.0 V @ 60 HZ |
| **Agency Approvals** | CSA |
| | UR |
| | CSA EEV |
| **Ambient Temperature** | 40 °C |
| **Auxiliary Box** | NO AUXILLARY BOX |
| **Auxiliary Box Lead Termination** | None |
| **Base Indicator** | Rigid |
| **Bearing Grease Type** | Polyrex EM (-20F +300F) |
| **Blower** | None |
| **Current @ Voltage** | 52.000 A @ 208.0 V |
| | 48.000 A @ 230.0 V |
| | 24.000 A @ 460.0 V |
| **Design Code** | A |
| **Drip Cover** | No Drip Cover |
| **Duty Rating** | CONT |
| **Efficiency @ 100% Load** | 93.0 % |
| **Electrically Isolated Bearing** | Not Electrically Isolated |
| **Feedback Device** | NO FEEDBACK |
| **Front Face Code** | Standard |
| **Front Shaft Indicator** | None |
| **Heater Indicator** | No Heater |

## Part Detail

| | |
|---|---|
| **Revision** | BE |
| **Type** | AC |
| **Mech. spec.** | 39R098 |
| **Base** | |
| **Status** | PRD/A |
| **Elec. spec.** | 39WGW766 |
| **Layout** | 39LYR098 |
| **Eff. date** | 01-22-2025 |
| **CD Diagram** | CD0180 |
| **Poles** | 04 |
| **Leads** | 9#12 |
| **Proprietary** | False |
| **Created date** | 01-01-0001 |

| | |
|---|---|
| **High Voltage Full Load Amps** | 24.0 a |
| **Insulation Class** | F |
| **Inverter Code** | Inverter Ready |
| **KVA Code** | H |
| **Lifting Lugs** | Standard Lifting Lugs |
| **Locked Bearing Indicator** | Locked Bearing |
| **Motor Lead Exit** | Ko Box |
| **Motor Lead Quantity/Wire Size** | 9 @ 12 AWG |
| **Motor Lead Termination** | Flying Leads |
| **Motor Standards** | NEMA |
| **Motor Type** | 3952M |
| **Mounting Arrangement** | F1 |
| **Number of Poles** | 4 |
| **Overall Length** | 23.57 IN |
| **Power Factor** | 84 |
| **Product Family** | Wash Down |
| **Pulley End Bearing Type** | Sealed Bearing |
| **Pulley Face Code** | C-Face |
| **Pulley Shaft Indicator** | Standard |
| **Rodent Screen** | None |
| **Service Factor** | 1.15 |
| **Shaft Diameter** | 1.625 IN |
| **Shaft Extension Location** | Pulley End |
| **Shaft Ground Indicator** | No Shaft Grounding |
| **Shaft Rotation** | Reversible |
| **Shaft Slinger Indicator** | Shaft Slinger |
| **Speed** | 1765 rpm |
| **Speed Code** | Single Speed |
| **Starting Method** | Direct on line |
| **Thermal Device - Bearing** | None |
| **Thermal Device - Winding** | None |
| **Vibration Sensor Indicator** | No Vibration Sensor |

**Nameplate**

| NP1669L | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **CAT.NO.** | CEWDM23934T | | | | | | | | |
| **SPEC.** | 39R098W766G1 | | | | | | | | |
| **HP** | 20 | | | | | | | | |
| **VOLTS** | 230/460 | | | | | | | | |
| **AMP** | 48/24 | | | | | | | | |
| **RPM** | 1765 | | | | | | | | |
| **FRAME** | 256TC | **HZ** | 60 | | | **PH** | 3 | | |
| **SER.F.** | 1.15 | **CODE** | H | **DES** | A | **CLASS** | F | | |
| **NEMA-NOM-EFF** | 93 | **PF** | 84 | | | | | | |
| **RATING** | 40C AMB-CONT | | | | | | | | |
| **CC** | 010A | | | | | | | | |
| **DE** | 6309 | **ODE** | 6208 | | | | | | |
| **ENCL** | TEFC | **SN** | | | | | | | |
| **BLANK** | 20:1 CT 20:1 VT | | | | | | | | |

**Parts List**

| Part number | Description | Quantity |
|---|---|---|
| SA086801 | SA 39R098W766G1 | 1.000 ea |
| RA079829 | RA 39R098W766G1 | 1.000 ea |
| MJ5002A01 | SILICON RUBBER SEALANT, 732CL 10.3 OZ TU | 0.025 ea |
| 09GS1017 | GASKET, CONDUIT BOX, .125 THICK BLACK NE | 1.000 ea |
| 39EP1100A08LP5 | FR ENDPLATE, MACH W/EPOXY PRIMER & MG102 | 1.000 ea |
| HW4032A01 | BLACK DRAIN PLUG FOR WASH DOWN MOTORS | 3.000 ea |
| 37FN3002C02 | EXFN, PLASTIC, 6.00 OD, 1.503 ID | 1.000 ea |
| HW2500A25 | WOODRUFF KEY USA #1008 #BLOW CARBON STEE | 1.000 ea |
| MG1025W01 | WILKOFAST, 781.01, SIGNAL WHITE #9003 | 0.070 ga |
| HA6016WP | ADAPTER, CONDUT BOX, W/WHITE EPOXY, PRIM | 1.000 ea |
| 09GS1006 | GASKET, CONDUIT BOX, NEOP-1/16 THICK-BLA | 1.000 ea |
| 19XW2520A16 | SCREW,1/4-20X1 TAPTITE-II OR ROLOC 91 | 2.000 ea |
| HW1001A25 | LOCKWASHER 1/4, ZINC PLT .493 OD, .255 I | 2.000 ea |
| HW5100A08 | W3118-035 WVY WSHR (WB) | 1.000 ea |
| HW2502G25 | #303 SS,SQ KEY 3/8 X 2.880 | 1.000 ea |
| MJ5001A27 | 32220KN GRAY SEALER *MIN BUY 4 QTS=1GAL | 0.031 qt |
| LB1164 | LABEL,WARNING AND DRAIN | 1.000 ea |
| 39EP1500A04P | PU ENDPLATE, MACH W/EPOXY PRIMER | 1.000 ea |
| HW4600B53 | SEAL 1.688 X 2.275 X 0.312 SINGLE LIP DB | 1.000 ea |
| 10XN2520S28 | 1/4-20X 1 3/4 HEX HD SS X | 4.000 ea |
| HA3154S02 | THRUBOLT STUD 3/8-16 X 15.875 SS | 4.000 ea |
| LB1624 | COMBINED WARNING LABEL, ISO/ANSI PICTOGR | 1.000 ea |
| XY3816S12 | 3/8-16 HEX FINISHED NUT SS | 8.000 ea |
| HA2101A05 | SS SPACER,SCH 40,.25" SS PIPE,.625" LONG | 3.000 ea |
| 09FH4000A23MLP5 | FAN COVER, MACH W/MG1025L14 | 1.000 ea |
| 10XN2520S16 | 1/4-20 X 1 HEX HEAD SS | 3.000 ea |
| 09CB3501P | CONDUIT BOX LID FOR 09CB3001 & 09CB3002 | 1.000 ea |
| 12GS1002 | GASKET, CONDUIT BOX LID, NEOP | 1.000 ea |
| 19XT2520S12 | 1/4-20X3/4 HWH NO SLOT TY.23 18-8 S.S. | 2.000 ea |
| HW1001S25 | WASHER, 1/4 SPLT LK, STAINLESS STEEL | 2.000 ea |
| HW4600B44 | V-RING SLINGER 1.500 X 1.810 X .28 VITON | 1.000 ea |

| | | |
|---|---|---|
| HW4600B44 | V-RING SLINGER 1.500 X 1.810 X .28 VITON | 1.000 ea |
| MJ1000A02 | GREASE, POLYREX EM EXXON | 0.085 lb |
| HW4032A01 | BLACK DRAIN PLUG FOR WASH DOWN MOTORS | 3.000 ea |
| 85XU0407S04 | 4X1/4 U DRIVE PIN STAINLESS | 2.000 ea |
| LC0181 | CONNECTION LABEL | 1.000 ea |
| NP1669L | SS WD SUPER-E UL PREM REV MTG | 1.000 ea |
| 40PA1000 | PACKAGING GROUP | 1.000 ea |
| MN416A01 | TAG-INSTAL-MAINT no wire (2500 bx)11/25 | 1.000 ea |
| LD7020D09 | LEAD SET, 12AWG, 9 LEAD, 20" LONG LEADS | 1.000 ea |
| HA5027A01 | HA4066A01 T-DRAIN X2 BAGGED | 1.000 ea |
| 09CB3002A54P | CB 1.25 DIA LD HL, 2.63 MTG, .31-18 GND | 1.000 ea |
| WD1000B25 | GND LUG, BURNDY L125HP OR T&B L125HP-BB | 1.000 ea |
| 19XW3118G08 | .31-18X.50,HEX WSHR HD,TAPTITE 2,GREEN | 1.000 ea |

**AC Induction Motor Performance Data**
Record # 32188
Typical performance - not guaranteed values

| **Winding:** 39WGW766-R006 | **Type:** 3952M | **Enclosure:** TEFC |
|---|---|---|

| **Nameplate Data** | | | | **460 V, 60 Hz: High Voltage Connection** | |
|---|---|---|---|---|---|
| **Rated Output (HP)** | | | 20 | **Full Load Torque** | 60 LB-FT |
| **Volts** | | | 230/460 | **Start Configuration** | direct on line |
| **Full Load Amps** | | | 48/24 | **Breakdown Torque** | 183 LB-FT |
| **R.P.M.** | | | 1765 | **Pull-up Torque** | 79 LB-FT |
| **Hz** | 60 | **Phase** | 3 | **Locked-rotor Torque** | 120 LB-FT |
| **NEMA Design Code** | A | **KVA Code** | H | **Starting Current** | 171 A |
| **Service Factor (S.F.)** | | | 1.15 | **No-load Current** | 8.5 A |
| **NEMA Nom. Eff.** | 93 | **Power Factor** | 84 | **Line-line Res. @ 25ºC** | 0.4083 Ω |
| **Rating - Duty** | | | 40C AMB-CONT | **Temp. Rise @ Rated Load** | 70°C |
| **S.F. Amps** | | | | **Temp. Rise @ S.F. Load** | 84°C |
| | | | | **Locked-rotor Power Factor** | 32.6 |
| | | | | **Rotor inertia** | 2.27 LB-FT2 |

**Load Characteristics 460 V, 60 Hz, 20 HP**

| **% of Rated Load** | **25** | **50** | **75** | **100** | **125** | **150** | **S.F.** |
|---|---|---|---|---|---|---|---|
| **Power Factor** | 45 | 67 | 79 | 84 | 86 | 87 | 85 |
| **Efficiency** | 89.6 | 92.9 | 93.5 | 93.2 | 92.5 | 91.6 | 92.8 |
| **Speed** | 1791 | 1784 | 1776 | 1767 | 1758 | 1748 | 1762 |
| **Line amperes** | 10.17 | 13.79 | 18.39 | 23.89 | 28.78 | 34.6 | 26.82 |

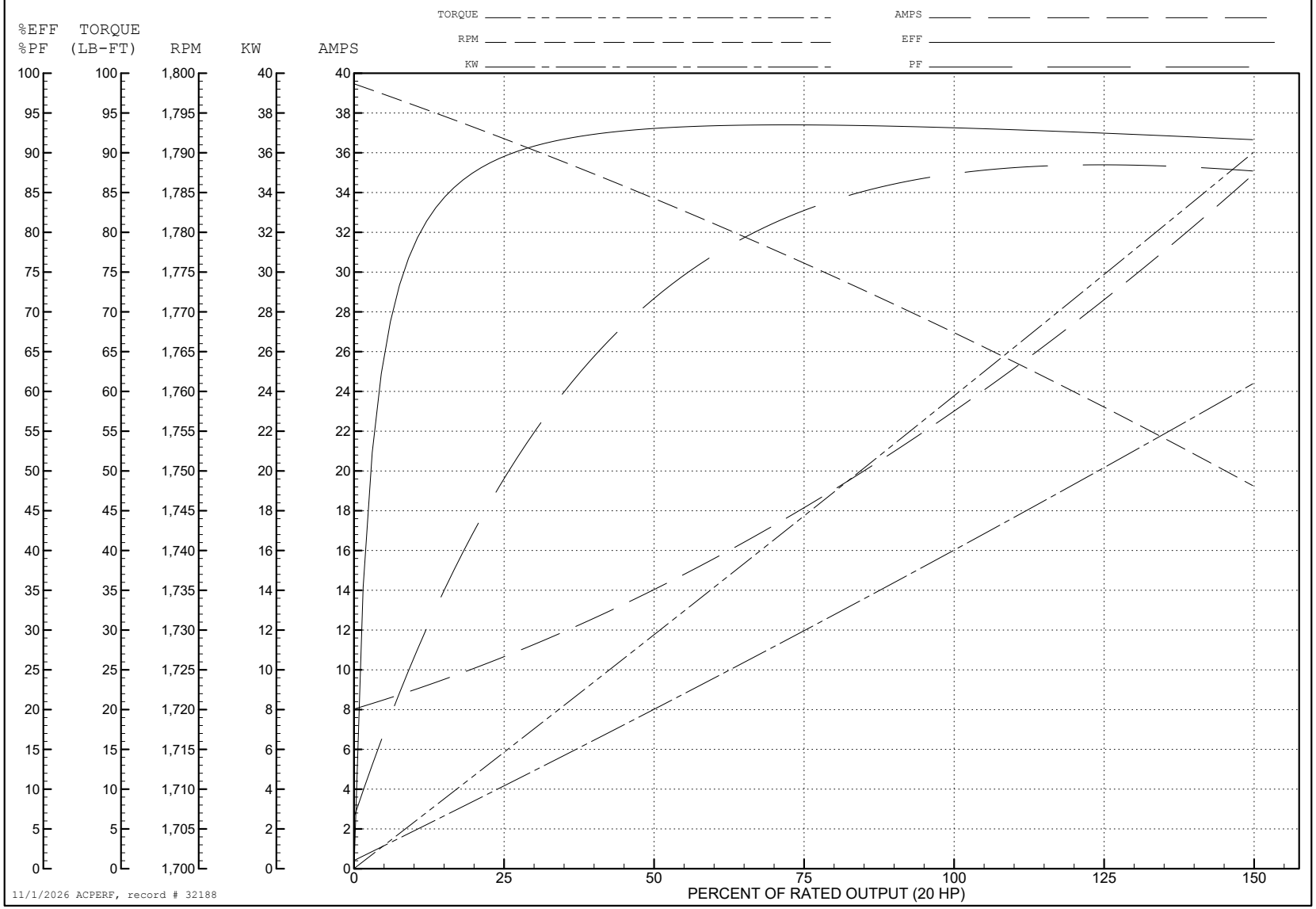
ABB Motors and Mechanical Inc.

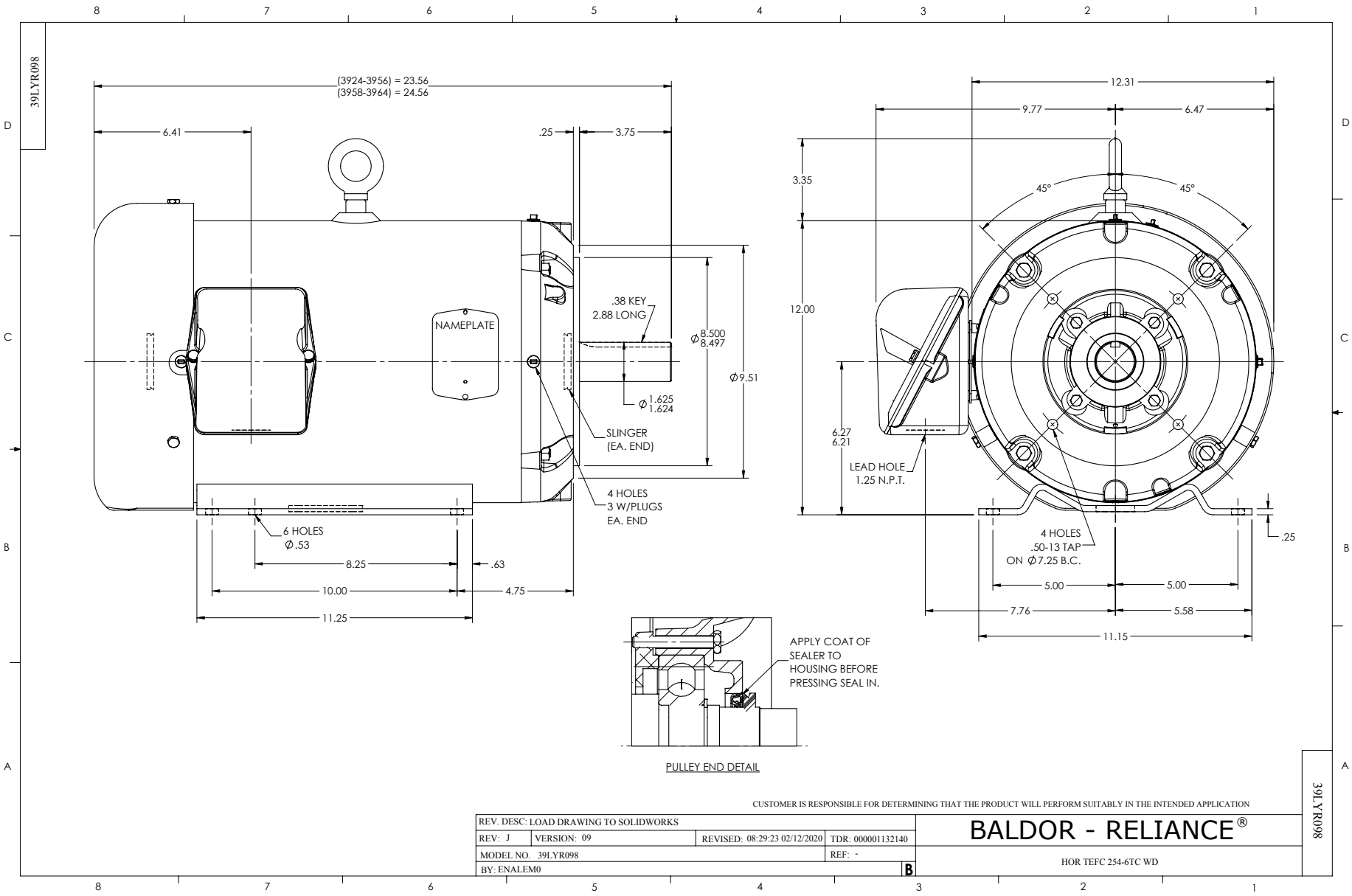
WINDING # 39WGW766

20 HP 3 PH 60 HZ 1765 RPM 460 V 3952M

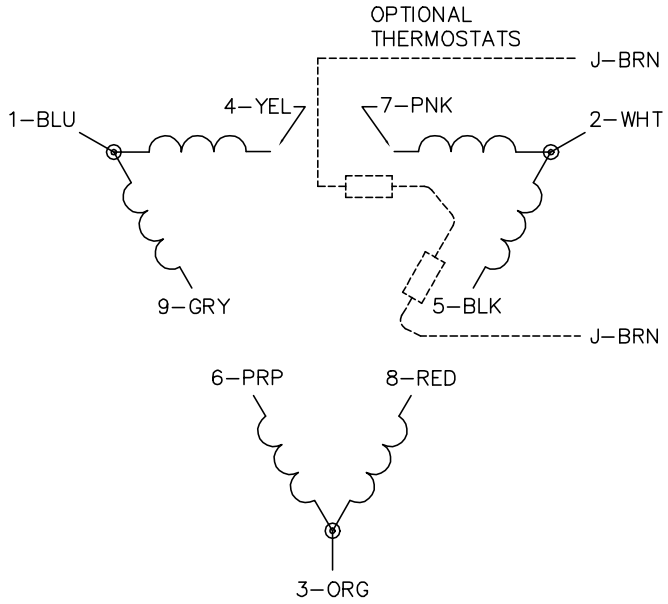
Typical performance - not guaranteed values.

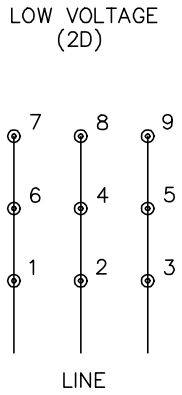
TORQUES(LB-FT): PO=183 PU=79 LR=120 LRA=171

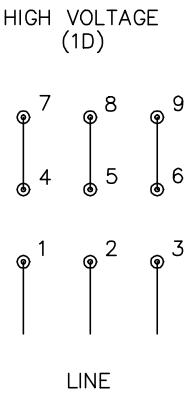



39LYR098
(3924-3956) = 23.56
(3958-3964) = 24.56
6.41
.25
3.75
NAMEPLATE
.38 KEY
2.88 LONG
Ø 8.500
8.497
Ø9.51
Ø 1.625
1.624
SLINGER
(EA. END)
4 HOLES
3 W/PLUGS
EA. END
6 HOLES
Ø .53
8.25
.63
10.00
4.75
11.25
12.31
9.77
6.47
3.35
45°
45°
12.00
6.27
6.21
LEAD HOLE
1.25 N.P.T.
4 HOLES
.50-13 TAP
ON Ø7.25 B.C.
.25
5.00
5.00
7.76
5.58
11.15
APPLY COAT OF
SEALER TO
HOUSING BEFORE
PRESSING SEAL IN.
PULLEY END DETAIL
CUSTOMER IS RESPONSIBLE FOR DETERMINING THAT THE PRODUCT WILL PERFORM SUITABLY IN THE INTENDED APPLICATION
REV. DESC: LOAD DRAWING TO SOLIDWORKS
REV: J
VERSION: 09
REVISED: 08:29:23 02/12/2020
TDR: 000001132140
MODEL NO. 39LYR098
REF: -
BY: ENALEM0
B
BALDOR - RELIANCE®
HOR TEFC 254-6TC WD
39LYR098

CD0180




NOTES:

1. INTERCHANGE ANY TWO LINE LEADS TO REVERSE ROTATION.
2. OPTIONAL THERMOSTATS ARE PROVIDED WHEN SPECIFIED.
3. ACTUAL NUMBER OF INTERNAL PARALLEL CIRCUITS MAY BE A MULTIPLE OF THOSE SHOWN ABOVE.
4. LEAD COLORS ARE OPTIONAL. LEADS MUST ALWAYS BE NUMBERED AS SHOWN.

CD0180

| | | |
|---|---|---|
| REV. DESC: ADD CLASS CONN00000007 | | |
| REV. LTR: D | VERSION: 01 | TDR: 000001099922 |
| FILE: \AAA\00005\148 | REVISED: 10:25:29 02/19/2019 | BY: ENBRIR0 |
| MTL: – | | |

BALDOR - RELIANCE®

3PH, DV, 9 LEADS, DELTA CONNECTION

SH 1 of 1