

**BALDOR® • RELIANCE** 

**Product Information Packet**

**EM3558T-57**

**2HP,1445RPM,3PH,50HZ,145T,3528M,TEFC,F1**

| Part Detail |         |             |            |             |        |               |            |
|-------------|---------|-------------|------------|-------------|--------|---------------|------------|
| Revision:   | E       | Status:     | PRD/A      | Change #:   |        | Proprietary:  | No         |
| Type:       | AC      | Elec. Spec: | 35WGN364   | CD Diagram: | CD0022 | Mfg Plant:    |            |
| Mech. Spec: | 35AA001 | Layout:     | 35LYAA001  | Poles:      | 04     | Created Date: | 12-22-2015 |
| Base:       | RG      | Eff. Date:  | 03-13-2018 | Leads:      | 6#18   |               |            |

| Specs                           |                         |                                |                   |
|---------------------------------|-------------------------|--------------------------------|-------------------|
| Catalog Number:                 | EM3558T-57              | Insulation Class:              | F                 |
| Enclosure:                      | TEFC                    | Inverter Code:                 | Inverter Ready    |
| Frame:                          | 145T                    | KVA Code:                      | K                 |
| Frame Material:                 | Steel                   | Lifting Lugs:                  | No Lifting Lugs   |
| Output @ Frequency:             | 2.000 HP @ 50 HZ        | Locked Bearing Indicator:      | No Locked Bearing |
| Synchronous Speed @ Frequency:  | 1500 RPM @ 50 HZ        | Motor Lead Quantity/Wire Size: | 6 @ 18 AWG        |
| Voltage @ Frequency:            | 400.0 V @ 50 HZ         | Motor Lead Exit:               | Ko Box            |
|                                 | 230.0 V @ 50 HZ         | Motor Lead Termination:        | Flying Leads      |
| XP Class and Group:             | None                    | Motor Type:                    | 3528M             |
| XP Division:                    | Not Applicable          | Mounting Arrangement:          | F1                |
| Agency Approvals:               | UR                      | Power Factor:                  | 73                |
|                                 | WEEE                    | Product Family:                | General Purpose   |
|                                 | CSA                     | Pulley End Bearing Type:       | Ball              |
|                                 | CE                      | Pulley Face Code:              | Standard          |
| Auxillary Box:                  | No Auxillary Box        | Pulley Shaft Indicator:        | Standard          |
| Auxillary Box Lead Termination: | None                    | Rodent Screen:                 | None              |
| Base Indicator:                 | Rigid                   | RoHS Status:                   | ROHS COMPLIANT    |
| Bearing Grease Type:            | Polyrex EM (-20F +300F) | Shaft Extension Location:      | Pulley End        |

|                                       |                           |                                    |                     |
|---------------------------------------|---------------------------|------------------------------------|---------------------|
| <b>Blower:</b>                        | None                      | <b>Shaft Ground Indicator:</b>     | No Shaft Grounding  |
| <b>Current @ Voltage:</b>             | 3.400 A @ 400.0 V         | <b>Shaft Rotation:</b>             | Reversible          |
|                                       | 5.900 A @ 230.0 V         | <b>Shaft Slinger Indicator:</b>    | No Slinger          |
| <b>Design Code:</b>                   | B                         | <b>Speed Code:</b>                 | Single Speed        |
| <b>Drip Cover:</b>                    | No Drip Cover             | <b>Motor Standards:</b>            | NEMA                |
| <b>Duty Rating:</b>                   | CONT                      | <b>Starting Method:</b>            | Direct on line      |
| <b>Electrically Isolated Bearing:</b> | Not Electrically Isolated | <b>Thermal Device - Bearing:</b>   | NONE (OLD)          |
| <b>Feedback Device:</b>               | NO FEEDBACK               | <b>Thermal Device - Winding:</b>   | None                |
| <b>Front Face Code:</b>               | Standard                  | <b>Vibration Sensor Indicator:</b> | No Vibration Sensor |
| <b>Front Shaft Indicator:</b>         | None                      | <b>Winding Thermal 1:</b>          | None                |
| <b>Heater Indicator:</b>              | No Heater                 | <b>Winding Thermal 2:</b>          | None                |

| Nameplate NP2716L |                             |  |      |   |                |      |   |        |      |    |  |
|-------------------|-----------------------------|--|------|---|----------------|------|---|--------|------|----|--|
| CAT NO            | EM3558T-57                  |  |      |   |                |      |   |        |      |    |  |
| SPEC.             | 35AA001N364G1               |  |      |   |                |      |   |        |      |    |  |
| HP                | 2                           |  |      |   |                |      |   | PH     | 3    |    |  |
| VOLTS             | 230/400                     |  |      |   |                |      |   |        |      |    |  |
| AMP               | 5.9/3.4                     |  |      |   |                |      |   |        |      |    |  |
| RPM               | 1445                        |  |      |   |                |      |   |        |      |    |  |
| FRAME             | 145T                        |  |      |   | HZ             | 50   |   |        | I.P. | 54 |  |
| SER.F.            | 1.15                        |  | CODE | K |                | DES  | B |        | CL   | F  |  |
| NOM.EFF.          | 85.3                        |  |      |   | %              |      |   | (100%) |      |    |  |
| PF                | 73                          |  |      |   | USABLE AT 208V |      |   |        |      |    |  |
| RATING            | 40C AMB-CONT                |  |      |   |                |      |   | CC     |      |    |  |
| DE BRG            | 6205                        |  |      |   | ODE            | 6203 |   |        |      |    |  |
| ENCL              | TEFC                        |  | SN   |   |                |      |   |        |      |    |  |
| BLANK             | IE3 - 84.9 (75%) 83.1 (50%) |  |      |   |                |      |   |        |      |    |  |
|                   |                             |  |      |   |                |      |   |        |      |    |  |
|                   |                             |  |      |   |                |      |   |        |      |    |  |

| Parts List    |  |          |
|---------------|--|----------|
| Part Number   | Description                              | Quantity |
| SA312742      | SA 35AA001N364G1                         | 1.000 EA |
| RA300182      | RA 35AA001N364G1                         | 1.000 EA |
| NS2512A01     | INSULATOR, CONDUIT BOX X                 | 1.000 EA |
| 35CB3009      | 35 CB W/1.09 DIA. LEAD HOLE @ 6:         | 1.000 EA |
| 36GS1000SP    | GASKET-CONDUIT BOX, .06 THICK #SV-330 LE | 1.000 EA |
| 51XB1016A07   | 10-16 X 7/16 HXWSSLD SERTYB              | 2.000 EA |
| 11XW1032G06   | 10-32 X .38, TAPTITE II, HEX WSHR SLTD U | 1.000 EA |
| 35EP3122A00   | MASTER ODE,203 BRG,.683SH,#26 DRN,GRSR,F | 1.000 EA |
| HW4500A01     | 1641B(ALEMITE)400 UNIV, GREASE FITT      | 1.000 EA |
| HW5100A03     | WAVY WASHER (W1543-017)                  | 1.000 EA |
| 35EP3123F00   | MASTER DE,205 BRG,.998SH,#26 DRN,GRSR    | 1.000 EA |
| HW4500A01     | 1641B(ALEMITE)400 UNIV, GREASE FITT      | 1.000 EA |
| XY1032A02     | 10-32 HEX NUT DIRECTIONAL SERRATION      | 4.000 EA |
| 51XB1214A16   | 12-14X1.00 HXWSSLD SERTYB                | 1.000 EA |
| 35FH4005A84SP | IEC FH W/GRSR, NO DIMPLES PRIMED         | 1.000 EA |
| 51XW1032A06   | 10-32 X .38, TAPTITE II, HEX WSHR SLTD S | 3.000 EA |
| 35CB4521GX    | CONDUIT BOX LID KIT **ORDER INDIV PARTS  | 1.000 EA |
| 51XW0832A07   | 8-32 X .44, TAPTITE II, HEX WSHR SLTD SE | 4.000 EA |
| HW2501D13     | KEY, 3/16 SQ X 1.375                     | 1.000 EA |
| HA7000A01     | KEY RETAINER 7/8" DIA SHAFT              | 1.000 EA |
| 85XU0407S04   | 4X1/4 U DRIVE PIN STAINLESS              | 2.000 EA |
| MJ1000A02     | GREASE, POLYREX EM EXXON (USe 4824-15A)  | 0.050 LB |
| 35FN3002A05SP | EXFN, PLASTIC, 6.376 OD, .638 ID         | 1.000 EA |
| HA3100A18     | THRUBOLT 10-32 X 9.250                   | 4.000 EA |

| <b>Parts List (continued)</b> |   |                 |
|-------------------------------|---|-----------------|
| <b>Part Number</b>            | <b>Description</b>                      | <b>Quantity</b> |
| HA4067A01                     | PUSH IN DRAIN FITTING (BLACK)           | 1.000 EA        |
| HA4067A01                     | PUSH IN DRAIN FITTING (BLACK)           | 1.000 EA        |
| MG1000G27                     | MED CHARCOAL METALLIC GREY 400-0096     | 0.017 GA        |
| LB1119N                       | WARNING LABEL                           | 1.000 EA        |
| LC0034                        | CONNECTION LABEL                        | 1.000 EA        |
| MN416A01                      | TAG-INSTAL-MAINT no wire (1200/bx) 5/18 | 1.000 EA        |
| NP2716L                       | ALUM SUPER-E NEMA IE3 UL CSA CC CE      | 1.000 EA        |
| 36PA1000                      | PKG GRP, PRINT PK1016A06                | 1.000 EA        |
| PE-0000001                    | ZRTG PE ASSEMBLY                        | 1.000 EA        |
| FE-0000001                    | ZRTG FE ASSEMBLY                        | 1.000 EA        |

**AC Induction Motor Performance Data**

Record # 54645 - Typical performance - not guaranteed values

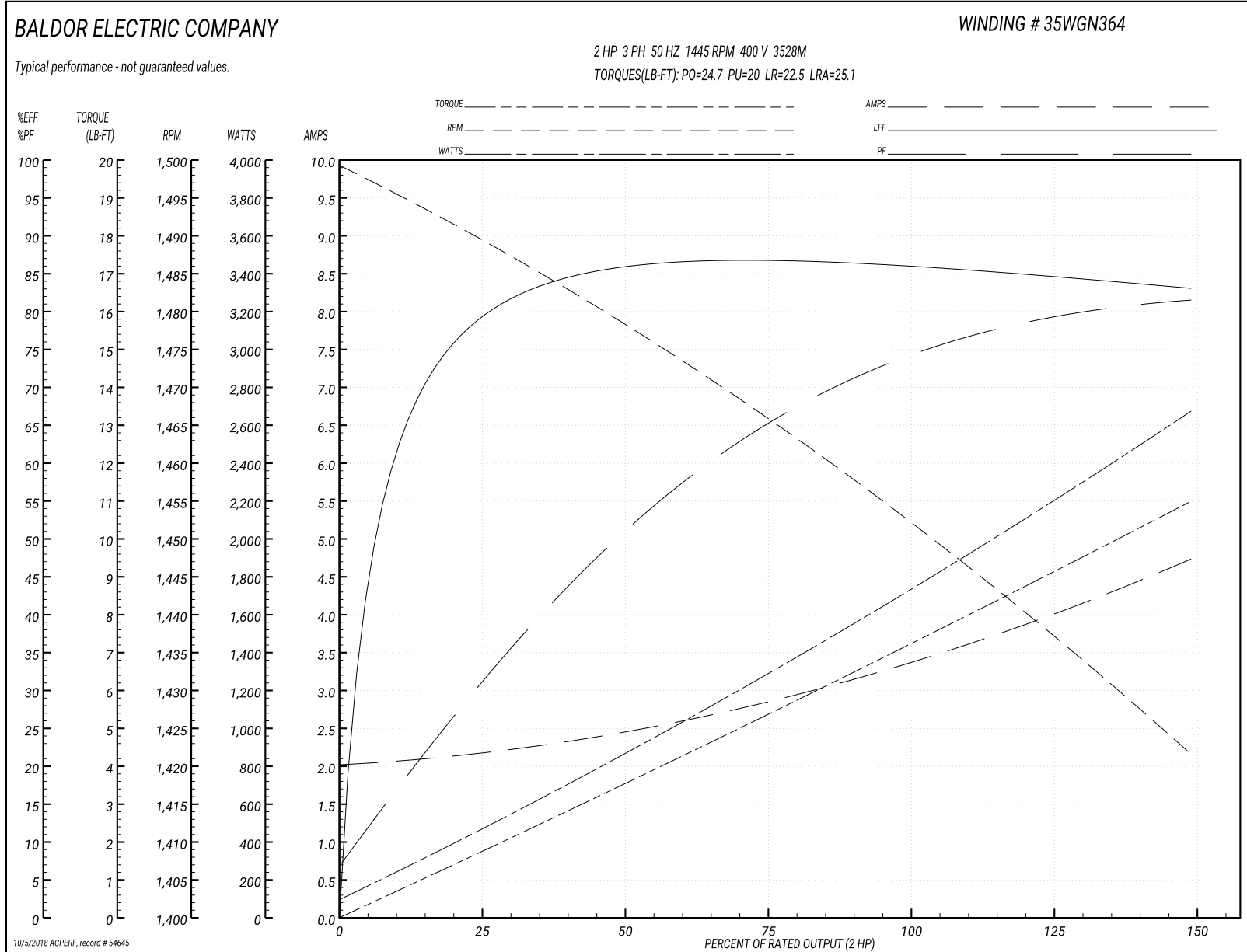
|                               |                    |                        |
|-------------------------------|--------------------|------------------------|
| <b>Winding:</b> 35WGN364-R004 | <b>Type:</b> 3528M | <b>Enclosure:</b> TEFC |
|-------------------------------|--------------------|------------------------|

| Nameplate Data        |              |              |    | 400 V, 50 Hz:<br>High Voltage Connection |                          |
|-----------------------|--------------|--------------|----|--|--------------------------|
| Rated Output (HP)     | 2            |              |    | Full Load Torque                         | 7.12 LB-FT               |
| Volts                 | 230/400      |              |    | Start Configuration                      | direct on line           |
| Full Load Amps        | 5.9/3.4      |              |    | Breakdown Torque                         | 24.7 LB-FT               |
| R.P.M.                | 1445         |              |    | Pull-up Torque                           | 20 LB-FT                 |
| Hz                    | 50           | Phase        | 3  | Locked-rotor Torque                      | 22.5 LB-FT               |
| NEMA Design Code      | B            | KVA Code     | K  | Starting Current                         | 25.1 A                   |
| Service Factor (S.F.) | 1.15         |              |    | No-load Current                          | 2.05 A                   |
| NEMA Nom. Eff.        | 85.3         | Power Factor | 73 | Line-line Res. @ 25°C                    | 7.21 Ω                   |
| Rating - Duty         | 40C AMB-CONT |              |    | Temp. Rise @ Rated Load                  | 67°C                     |
| S.F. Amps             |              |              |    | Temp. Rise @ S.F. Load                   | 81°C                     |
|                       |              |              |    | Locked-rotor Power Factor                | 56.6                     |
|                       |              |              |    | Rotor inertia                            | 0.165 LB-FT <sup>2</sup> |

Load Characteristics 400 V, 50 Hz, 2 HP

| % of Rated Load | 25   | 50   | 75   | 100  | 125  | 150  | S.F. |
|-----------------|------|------|------|------|------|------|------|
| Power Factor    | 31   | 51   | 65   | 73   | 79   | 82   | 77   |
| Efficiency      | 78.4 | 85.5 | 86.9 | 86.1 | 84.9 | 83   | 85.4 |
| Speed           | 1490 | 1479 | 1466 | 1453 | 1437 | 1422 | 1443 |
| Line amperes    | 2.14 | 2.41 | 2.85 | 3.37 | 4.01 | 4.71 | 3.75 |

Performance Graph at 400V, 50Hz, 2.0HP Typical performance - Not guaranteed values





**AC Induction Motor Performance Data**

Record # 64312 - Typical performance - not guaranteed values

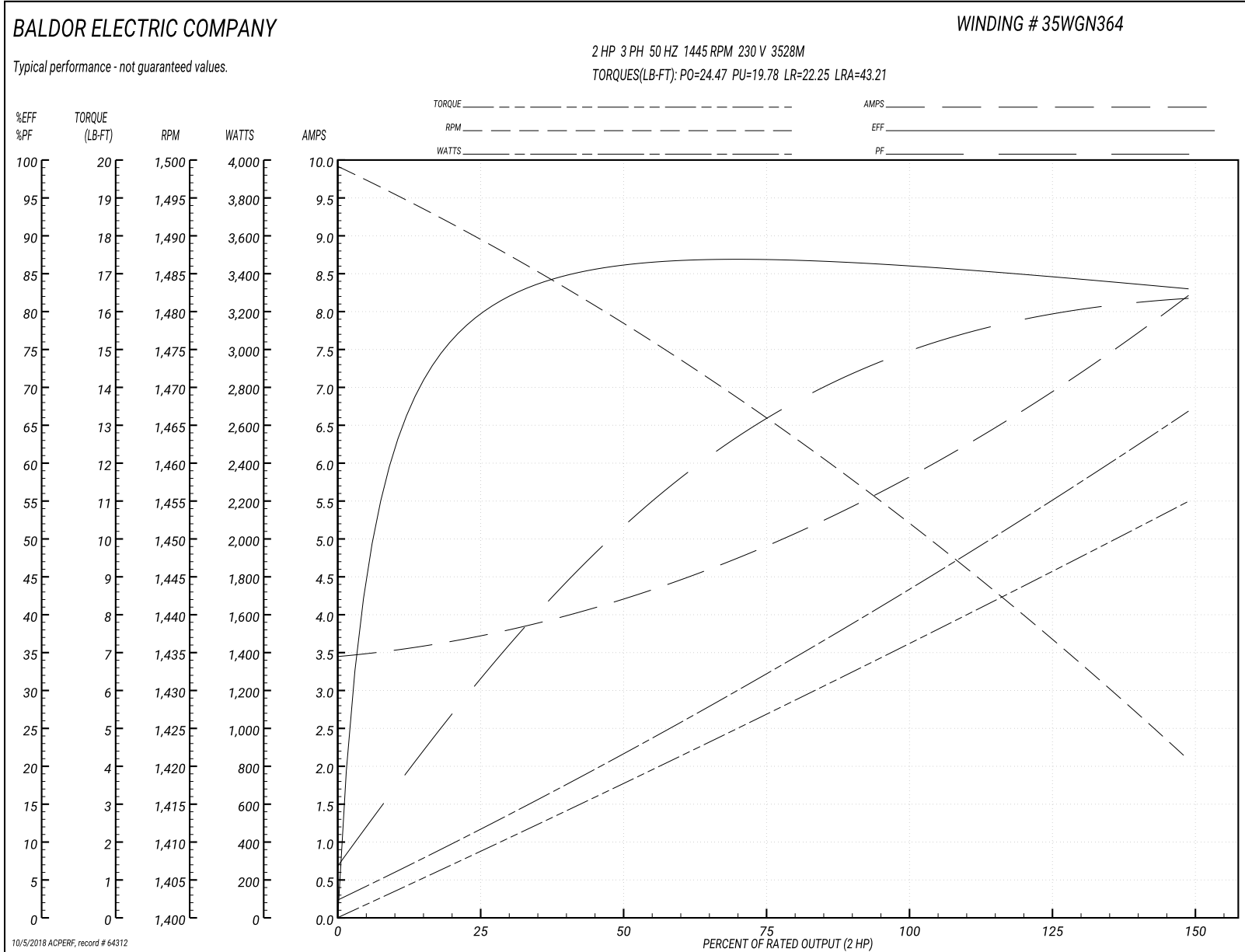
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|-------------------------------|--------------------|------------------------|
| <b>Winding:</b> 35WGN364-R004 | <b>Type:</b> 3528M | <b>Enclosure:</b> TEFC |
|-------------------------------|--------------------|------------------------|

| Nameplate Data        |              |              |    | 230 V, 50 Hz:<br>Low Voltage Connection |                          |
|-----------------------|--------------|--------------|----|---|--------------------------|
| Rated Output (HP)     | 2            |              |    | Full Load Torque                        | 7.12 LB-FT               |
| Volts                 | 230/400      |              |    | Start Configuration                     | direct on line           |
| Full Load Amps        | 5.9/3.4      |              |    | Breakdown Torque                        | 24.47 LB-FT              |
| R.P.M.                | 1445         |              |    | Pull-up Torque                          | 19.78 LB-FT              |
| Hz                    | 50           | Phase        | 3  | Locked-rotor Torque                     | 22.25 LB-FT              |
| NEMA Design Code      | B            | KVA Code     | K  | Starting Current                        | 43.21 A                  |
| Service Factor (S.F.) | 1.15         |              |    | No-load Current                         | 3.5 A                    |
| NEMA Nom. Eff.        | 85.3         | Power Factor | 73 | Line-line Res. @ 25°C                   | 2.4 Ω                    |
| Rating - Duty         | 40C AMB-CONT |              |    | Temp. Rise @ Rated Load                 | 67°C                     |
| S.F. Amps             |              |              |    | Temp. Rise @ S.F. Load                  | 82°C                     |
|                       |              |              |    | Locked-rotor Power Factor               | 56.5                     |
|                       |              |              |    | Rotor inertia                           | 0.165 LB-FT <sup>2</sup> |

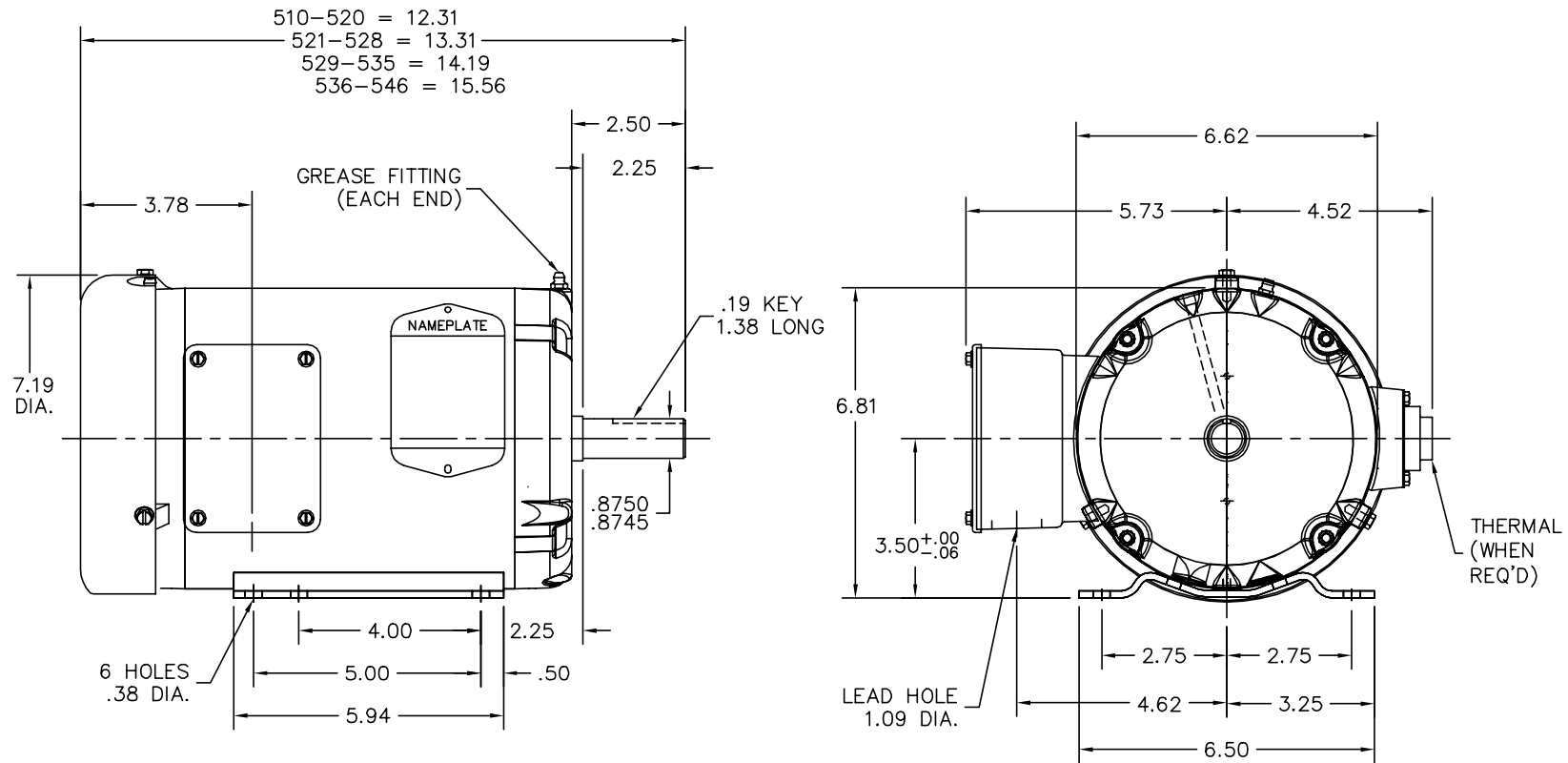
Load Characteristics 230 V, 50 Hz, 2 HP

| % of Rated Load | 25   | 50   | 75   | 100  | 125  | 150  | S.F. |
|-----------------|------|------|------|------|------|------|------|
| Power Factor    | 32   | 52   | 66   | 74   | 79   | 82   | 77   |
| Efficiency      | 78.7 | 85.7 | 86.9 | 86.1 | 84.8 | 82.8 | 85.3 |
| Speed           | 1490 | 1479 | 1466 | 1453 | 1437 | 1421 | 1443 |
| Line amperes    | 3.66 | 4.13 | 4.9  | 5.82 | 6.94 | 8.17 | 6.49 |

Performance Graph at 230V, 50Hz, 2.0HP Typical performance - Not guaranteed values



35LYAA001



CUSTOMER IS RESPONSIBLE FOR DETERMINING THAT BALDOR'S PRODUCT WILL PERFORM SUITABLY IN THE INTENDED APPLICATION.

|                              |                              |                   |
|------------------------------|------------------------------|-------------------|
| REV. DESC: REPLACE ENDPLATES |                              |                   |
| REV. LTR: C                  | VERSION: 03                  | TDR: 000001063670 |
| FILE: \AAA\00168\387         | REVISED: 09:30:05 03/14/2018 | BY: USJOBUR22     |
| MTL: -                       | ⊙ □                          |                   |

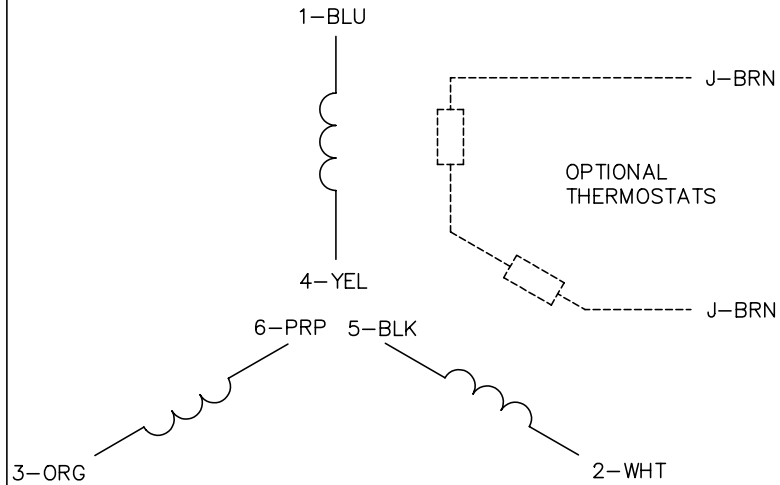
**BALDOR**

STD HORZ 143-5T TEFC 35M W/1.09 LEAD HOLE

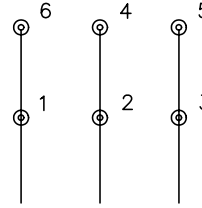
SH 1 of 1

35LYAA001

CD0022

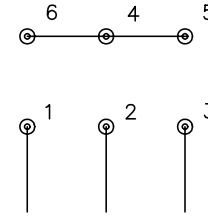


LOW VOLTAGE  
(1D)



LINE

HIGH VOLTAGE  
(1Y)



LINE

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.

REV. DESC: REVISE TO SHOW OPTIONAL COLORS

REV. LTR: F

BY: JLP

REVISED: 01/21/99 3:54

TDR: 0171435

CD0022

FILE: AAA00005144

MDL: -

MTL: -

**BALDOR ELECTRIC Co.**

3PH, DV, 6 LEADS, DELTA/WYE CONNECTION

CD0022