

# ABB BALDOR RELIANCE III

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## Customer information packet

### EM3710T-58

7.5HP, 1460RPM, 3PH, 50HZ, 213T, 3736M, TEFC, F

Class - None

Division - Not Applicable

**Specifications**

|                                       |                                               |
|---------------------------------------|-----------------------------------------------|
| <b>Enclosure</b>                      | TEFC                                          |
| <b>Frame</b>                          | 213T                                          |
| <b>Frame Material</b>                 | Steel                                         |
| <b>Frequency</b>                      | 50.00 Hz                                      |
| <b>Haz Area Class and Group</b>       | None                                          |
| <b>Haz Area Division</b>              | Not Applicable                                |
| <b>Motor Letter Type</b>              | Three Phase                                   |
| <b>Output @ Frequency</b>             | 7.500 HP @ 50 HZ                              |
| <b>Phase</b>                          | 3                                             |
| <b>Synchronous Speed @ Frequency</b>  | 1500 RPM @ 50 HZ                              |
| <b>Voltage @ Frequency</b>            | 400.0 V @ 50 HZ                               |
| <b>Agency Approvals</b>               | C UR US<br>CE<br>CURUS<br>IE3<br>UKCA<br>WEEE |
| <b>Ambient Temperature</b>            | 40 °C                                         |
| <b>Auxiliary Box</b>                  | NO AUXILLARY BOX                              |
| <b>Auxiliary Box Lead Termination</b> | None                                          |
| <b>Base Indicator</b>                 | Rigid                                         |
| <b>Bearing Grease Type</b>            | Polyrex EM (-20F +300F)                       |
| <b>Blower</b>                         | None                                          |
| <b>Current @ Voltage</b>              | 10.800 A @ 400.0 V                            |
| <b>Design Code</b>                    | B                                             |
| <b>Drip Cover</b>                     | No Drip Cover                                 |
| <b>Duty Rating</b>                    | CONT                                          |
| <b>Efficiency @ 100% Load</b>         | 89.6 %                                        |
| <b>Electrically Isolated Bearing</b>  | Not Electrically Isolated                     |
| <b>Feedback Device</b>                | NO FEEDBACK                                   |
| <b>Front Face Code</b>                | Standard                                      |
| <b>Front Shaft Indicator</b>          | None                                          |

**Part Detail**

|                     |            |
|---------------------|------------|
| <b>Revision</b>     | K          |
| <b>Type</b>         | AC         |
| <b>Mech. spec.</b>  | 37A001     |
| <b>Base</b>         |            |
| <b>Status</b>       | PRD/A      |
| <b>Elec. spec.</b>  | 37WGS060   |
| <b>Layout</b>       | 37LYA001   |
| <b>Eff. date</b>    | 11-05-2025 |
| <b>CD Diagram</b>   | CD0382     |
| <b>Poles</b>        | 04         |
| <b>Leads</b>        | 6#14       |
| <b>Proprietary</b>  | False      |
| <b>Created date</b> | 12-22-2015 |

|                                      |                       |
|--------------------------------------|-----------------------|
| <b>Heater Indicator</b>              | No Heater             |
| <b>High Voltage Full Load Amps</b>   | 10.8 a                |
| <b>Insulation Class</b>              | F                     |
| <b>Inverter Code</b>                 | Inverter Ready        |
| <b>KVA Code</b>                      | H                     |
| <b>Lifting Lugs</b>                  | Standard Lifting Lugs |
| <b>Locked Bearing Indicator</b>      | No Locked Bearing     |
| <b>Motor Lead Exit</b>               | Ko Box                |
| <b>Motor Lead Quantity/Wire Size</b> | 6 @ 14 AWG            |
| <b>Motor Lead Termination</b>        | Flying Leads          |
| <b>Motor Standards</b>               | NEMA                  |
| <b>Motor Type</b>                    | 3736M                 |
| <b>Mounting Arrangement</b>          | F1                    |
| <b>Number of Poles</b>               | 4                     |
| <b>Overall Length</b>                | 19.01 IN              |
| <b>Power Factor</b>                  | 82                    |
| <b>Product Family</b>                | General Purpose       |
| <b>Pulley End Bearing Type</b>       | Ball                  |
| <b>Pulley Face Code</b>              | Standard              |
| <b>Pulley Shaft Indicator</b>        | Standard              |
| <b>Rodent Screen</b>                 | None                  |
| <b>RoHS Status</b>                   | ROHS COMPLIANT        |
| <b>Service Factor</b>                | 1.15                  |
| <b>Shaft Diameter</b>                | 1.375 IN              |
| <b>Shaft Extension Location</b>      | Pulley End            |
| <b>Shaft Ground Indicator</b>        | No Shaft Grounding    |
| <b>Shaft Rotation</b>                | Reversible            |
| <b>Shaft Slinger Indicator</b>       | No Slinger            |
| <b>Speed</b>                         | 1460 rpm              |
| <b>Speed Code</b>                    | Single Speed          |
| <b>Starting Method</b>               | Wye Start - Delta Run |
| <b>Thermal Device - Bearing</b>      | None                  |
| <b>Thermal Device - Winding</b>      | None                  |
| <b>Vibration Sensor Indicator</b>    | No Vibration Sensor   |



|                   |      |
|-------------------|------|
| Winding Thermal 1 | None |
| Winding Thermal 2 | None |

**Nameplate**

| NP2716L        |                        |      |          |     |      |      |   |    |  |
|----------------|------------------------|------|----------|-----|------|------|---|----|--|
| CAT NO         | EM3710T-58             |      |          |     |      |      |   |    |  |
| SPEC.          | 37A001S060G1           |      |          |     |      |      |   |    |  |
| HP             | 7.5/5.5KW              |      |          |     |      | PH   | 3 |    |  |
| VOLTS          | 400                    |      |          |     |      |      |   |    |  |
| AMP            | 10.8                   |      |          |     |      |      |   |    |  |
| R.P.M. (1/MIN) | 1460                   |      |          |     |      |      |   |    |  |
| FRAME          | 213T                   |      | HZ       | 50  |      | I.P. |   | 44 |  |
| SER.F.         | 1.15                   | CODE | H        | DES | B    | CL   |   | F  |  |
| NOM.EFF.       | 89.6                   |      | % (100%) |     |      |      |   |    |  |
| PF             | 82                     |      |          |     |      |      |   |    |  |
| RATING         | 40C AMB-S1 CONT        |      |          |     | CC   |      |   |    |  |
| DE BRG         | 6307                   |      | ODE      |     | 6206 |      |   |    |  |
| ENCL           | TEFC                   | SN   |          |     |      |      |   |    |  |
| BLANK          | IE3-90.7(75%)90.6(50%) |      |          |     |      |      |   |    |  |
|                | IC411 58KG             |      |          |     |      |      |   |    |  |

**AC Induction Motor Performance Data**

Record # 54637

Typical performance - not guaranteed values

| Winding: 37WGS060-R011 |          |              | Type: 3736M                           |                           | Enclosure: TEFC       |              |        |
|------------------------|----------|--------------|---------------------------------------|---------------------------|-----------------------|--------------|--------|
| Nameplate Data         |          |              | 400 V, 50 Hz:<br>Single Voltage Motor |                           |                       |              |        |
| Rated Output (HP)      |          | 7.5          | Full Load Torque                      |                           | 26.9 LB-FT            |              |        |
| Volts                  |          | 400          | Start Configuration                   |                           | direct on line        |              |        |
| Full Load Amps         |          | 10.8         | Breakdown Torque                      |                           | 72.1 LB-FT            |              |        |
| R.P.M.                 |          | 1460         | Pull-up Torque                        |                           | 36.6 LB-FT            |              |        |
| Hz                     | 50 Phase | 3            | Locked-rotor Torque                   |                           | 44.4 LB-FT            |              |        |
| NEMA Design Code       |          | B            | KVA Code                              | H                         | Starting Current      |              | 70.4 A |
| Service Factor (S.F.)  |          | 1.15         | No-load Current                       |                           | 4.62 A                |              |        |
| NEMA Nom. Eff.         |          | 89.6         | Power Factor                          | 82                        | Line-line Res. @ 25°C |              | 1.49 Ω |
| Rating - Duty          |          | 50C AMB-CONT |                                       | Temp. Rise @ Rated Load   |                       | 74°C         |        |
| S.F. Amps              |          |              |                                       | Temp. Rise @ S.F. Load    |                       | 93°C         |        |
|                        |          |              |                                       | Locked-rotor Power Factor |                       | 43           |        |
|                        |          |              |                                       | Rotor inertia             |                       | 0.885 LB-FT2 |        |

**Load Characteristics 400 V, 50 Hz, 7.5 HP**

| % of Rated Load | 25   | 50   | 75   | 100  | 125  | 150  | S.F. |
|-----------------|------|------|------|------|------|------|------|
| Power Factor    | 45   | 67   | 77   | 82   | 84   | 84   | 83   |
| Efficiency      | 87   | 90.5 | 90.7 | 89.6 | 88.1 | 86   | 88.7 |
| Speed           | 1492 | 1483 | 1474 | 1463 | 1451 | 1437 | 1456 |
| Line amperes    | 5.17 | 6.66 | 8.66 | 11   | 13.6 | 16.7 | 12.6 |

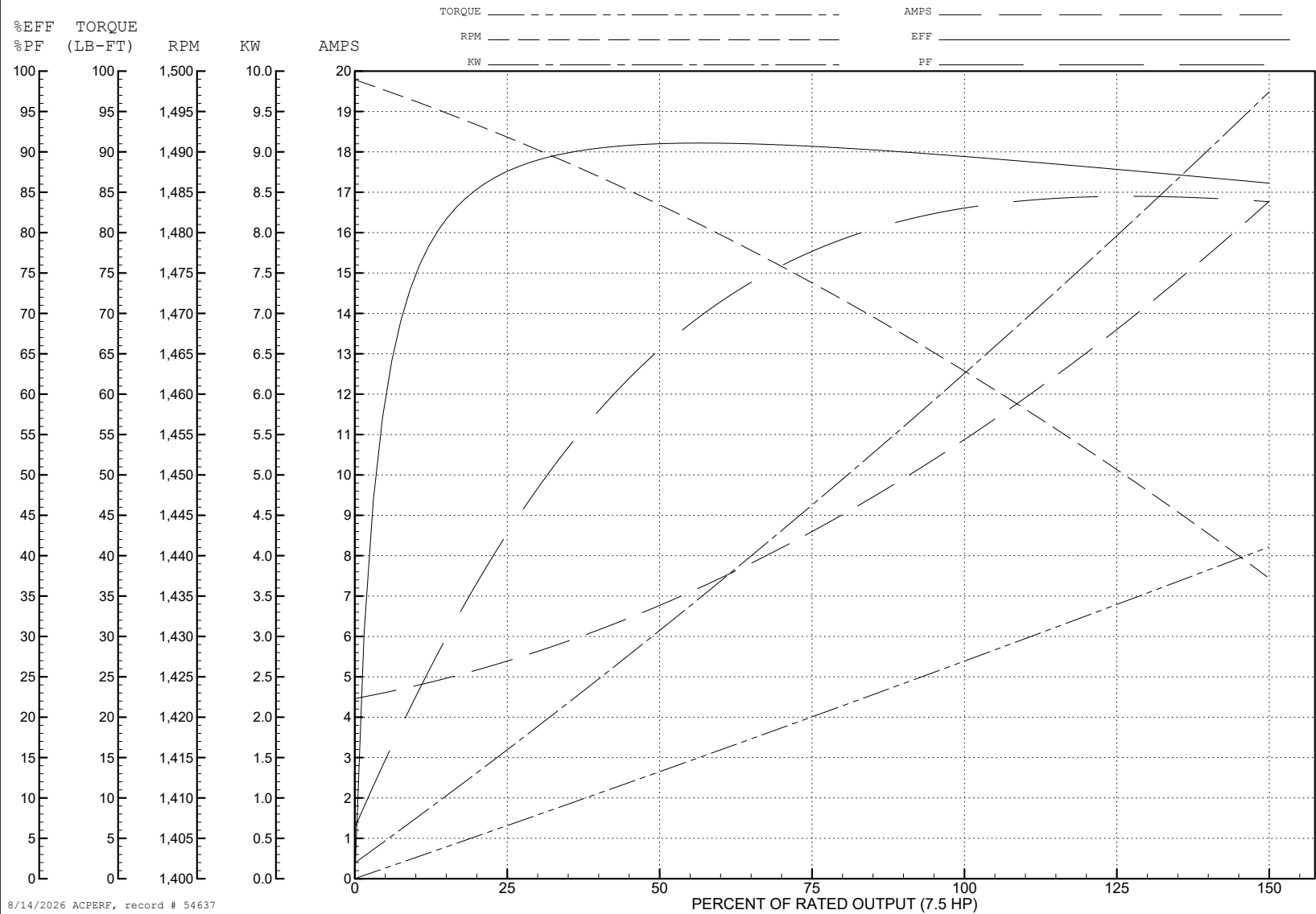
ABB Motors and Mechanical Inc.

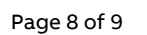
WINDING # 37WGS060

Typical performance - not guaranteed values.

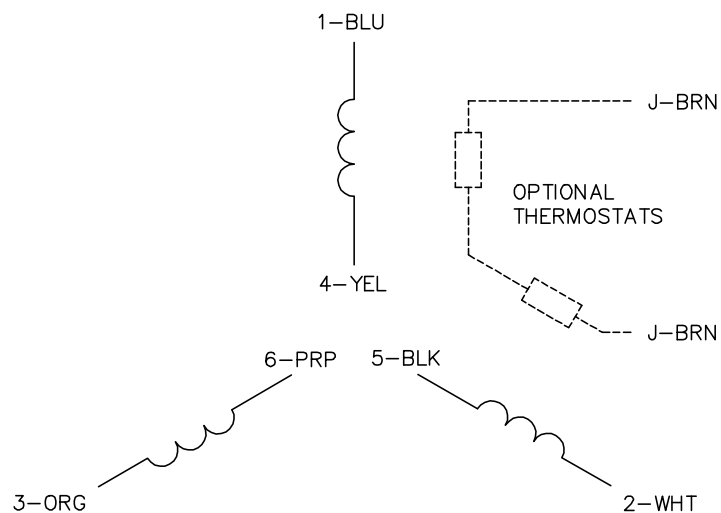
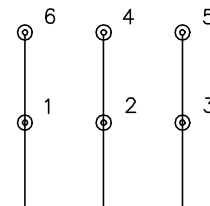
7.5 HP 3 PH 50 HZ 1460 RPM 400 V 3736M

TORQUES (LB-FT): PO=72.1 PU=36.6 LR=44.4 LRA=70.4

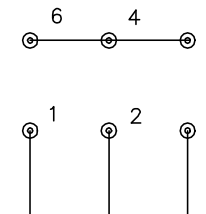




CD0382


 RUN CONNECTION  
(1D)


LINE

 START CONNECTION  
(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.
5. FOR ACROSS-THE-LINE STARTING, USE 'RUN' CONNECTION.

REV. DESC: ADD CLASS CONN00000007

REV. LTR: F

VERSION: 01

TDR: 000001099922

FILE: \AAA\00005\243

REVISED: 09:05:32 02/19/2019

BY: ENBRIRO

MTL: -


**BALDOR - RELIANCE®**

3PH, SV, 6 LEADS, Y START/D RUN

SH 1 of 1

CD0382