

# ABB BALDOR RELIANCE III

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## Customer information packet

### D5005R

C1811ATZ, 5HP, 1750RPM, 500, 300, DPG, F1

**Specifications**

|                                 |                       |
|---------------------------------|-----------------------|
| <b>Armature Voltage</b>         | 500 V                 |
| <b>Base Speed</b>               | 1750 rpm              |
| <b>Enclosure</b>                | DP                    |
| <b>Field Voltage</b>            | 300 V                 |
| <b>Frame</b>                    | C1811ATZ              |
| <b>Output Power</b>             | 5.000 HP              |
| <b>Agency Approvals</b>         | CCSA US               |
| <b>Ambient Temperature</b>      | 40 °C                 |
| <b>Armature Current</b>         | 9.0 a                 |
| <b>Drip Cover</b>               | No Drip Cover         |
| <b>Duty Rating</b>              | CONT                  |
| <b>Feedback Device</b>          | NO FEEDBACK           |
| <b>Field Winding Type</b>       | STR SHUNT             |
| <b>Frame Prefix</b>             | C                     |
| <b>Heater Indicator</b>         | No Heater             |
| <b>Insulation Class</b>         | F                     |
| <b>Lifting Lugs</b>             | Standard Lifting Lugs |
| <b>Motor Standards</b>          | NEMA                  |
| <b>Mounting Arrangement</b>     | F1                    |
| <b>Overall Length</b>           | 26.38 IN              |
| <b>Service Factor</b>           | 1.00                  |
| <b>Shaft Diameter</b>           | 1.375 IN              |
| <b>Shaft Ground Indicator</b>   | No Shaft Grounding    |
| <b>Shaft Slinger Indicator</b>  | No Slinger            |
| <b>Thermal Device - Bearing</b> | None                  |

**Part Detail**

|                     |            |
|---------------------|------------|
| <b>Revision</b>     | -          |
| <b>Type</b>         | DC         |
| <b>Mech. spec.</b>  |            |
| <b>Base</b>         |            |
| <b>Status</b>       | PRD/A      |
| <b>Elec. spec.</b>  | G2112D B   |
| <b>Layout</b>       | 609980-001 |
| <b>Eff. date</b>    | 12-18-2019 |
| <b>CD Diagram</b>   | 406770-006 |
| <b>Poles</b>        | 00         |
| <b>Leads</b>        |            |
| <b>Proprietary</b>  | False      |
| <b>Created date</b> | 12-17-2019 |

**Nameplate**

| 000613006HP     |                  |             |            |      |       |     |  |  |  |
|-----------------|------------------|-------------|------------|------|-------|-----|--|--|--|
| CAT.NO.         | D5005R           | SPEC NO.    | T18S1334   |      |       |     |  |  |  |
| FR              | C1811ATZ         | HP          | 5          | DUTY | CONT  |     |  |  |  |
| ENCL.           | DP               | RPM         | 1750/2300  |      | S.F.  | 1.0 |  |  |  |
| ENCL MOD        | GUARDED          | VOLTS       | 500        |      | INSUL | F   |  |  |  |
| MAX SAFE SPEED  | 04500            | AMPS        | 9.00       |      | AMB.  | 40  |  |  |  |
| FIELD DATA      |                  | SER.NO.     |            |      |       |     |  |  |  |
| WINDING         | STR SHUNT        | POWER CODE  | D          |      |       |     |  |  |  |
| VOLTS           | 300              | D.E. BRG.   | 40BC02J30X |      |       |     |  |  |  |
| MAX AMPS @ 25 C | 1.01             | O.D.E. BRG. | 30BC02J30X |      |       |     |  |  |  |
| HOT AMPS        | .72/.47          | MIN. AMB.   | 0          |      | TYPE  | TR  |  |  |  |
|                 | BRUSH:419904051E |             |            |      |       |     |  |  |  |

# INDUSTRIAL DIRECT CURRENT MOTORS AND GENERATORS - RPM III

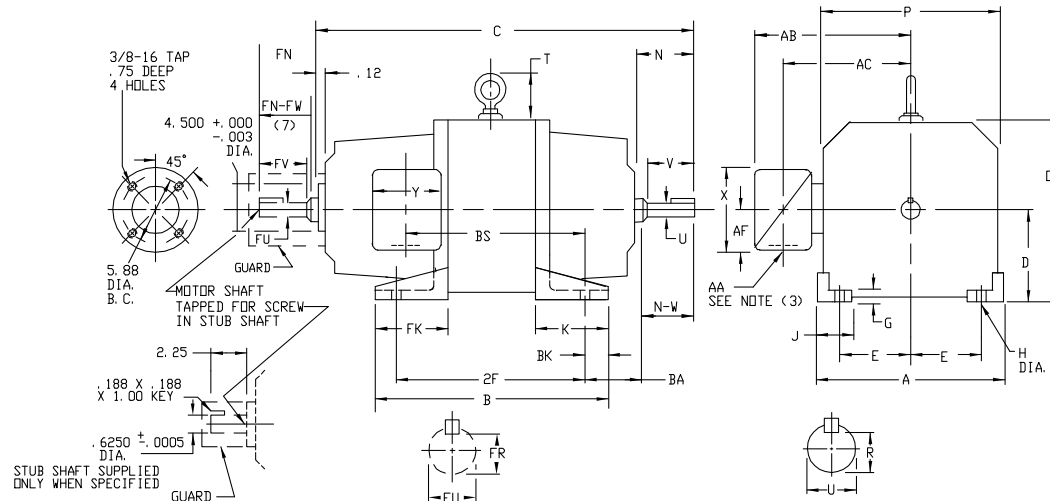
MOUNTING: FOOT  
METHOD OF DRIVE: COUPLED OR BELTED

ENCLOSURE: DRIP-PROOF FULLY-GUARDED  
D SPLASHPROOF, TOTALLY ENCLOSED

COOLING: SELF-VENTILATED  
NON-VENTILATED

ACCESSORIES: PROVISION FOR  
TACHOMETER MOUNTING  
ONLY WHEN SPECIFIED

FRAMES C180ATZ



- (1) "D" DIMENSION WILL NOT BE EXCEEDED. SHIMS UP TO .06 INCHES IN THICKNESS ARE USUALLY REQUIRED FOR COUPLED OR GEARED MACHINES.
  - (2) "U" AND "F" - VARY 4,000 - .0005
  - (3) TERMINAL BOX VARY TERMINAL FOR LEAD OUTLET AT TOP, SIDES OR BOTTOM.  
FOR "X/P" TERMINAL BOX DIMENSIONS SEE 609989-1.  
FOR MILL, TYPE TERMINAL BOX DIMENSIONS SEE 609989-2.
  - (4) "W" AND "F" - VARY 4,000 - .0005
  - (5) AA CONDUIT, TERMINAL BOX PROVIDED WITH DOUBLE KNEECUT.
  - (6) AA PIPE TAP
  - (7) OPPOSITE DRIVE END SHAFT SUPPLIED ONLY WHEN SPECIFIED.
  - (8) WHEN THE MOTOR APPLICATION DOES NOT REQUIRE THE USE OF DDP, DRIVE END, ADD .25 TO "C" DIM. FOR BRACKET COVER.
- TERMINAL BOX LOCATED ON OPPOSITE SIDE WHEN F-2,  
W-4, W-5, W-7 OR 8, M-4, M-5, M-6, M-7, M-8, M-9, M-10, M-11, M-12, M-13, M-14, M-15, M-16, M-17, M-18, M-19, M-20, M-21, M-22, M-23, M-24, M-25, M-26, M-27, M-28, M-29, M-30, M-31, M-32, M-33, M-34, M-35, M-36, M-37, M-38, M-39, M-40, M-41, M-42, M-43, M-44, M-45, M-46, M-47, M-48, M-49, M-50, M-51, M-52, M-53, M-54, M-55, M-56, M-57, M-58, M-59, M-60, M-61, M-62, M-63, M-64, M-65, M-66, M-67, M-68, M-69, M-70, M-71, M-72, M-73, M-74, M-75, M-76, M-77, M-78, M-79, M-80, M-81, M-82, M-83, M-84, M-85, M-86, M-87, M-88, M-89, M-90, M-91, M-92, M-93, M-94, M-95, M-96, M-97, M-98, M-99, M-100, M-101, M-102, M-103, M-104, M-105, M-106, M-107, M-108, M-109, M-110, M-111, M-112, M-113, M-114, M-115, M-116, M-117, M-118, M-119, M-120, M-121, M-122, M-123, M-124, M-125, M-126, M-127, M-128, M-129, M-130, M-131, M-132, M-133, M-134, M-135, M-136, M-137, M-138, M-139, M-140, M-141, M-142, M-143, M-144, M-145, M-146, M-147, M-148, M-149, M-150, M-151, M-152, M-153, M-154, M-155, M-156, M-157, M-158, M-159, M-160, M-161, M-162, M-163, M-164, M-165, M-166, M-167, M-168, M-169, M-170, M-171, M-172, M-173, M-174, M-175, M-176, M-177, M-178, M-179, M-180, M-181, M-182, M-183, M-184, M-185, M-186, M-187, M-188, M-189, M-190, M-191, M-192, M-193, M-194, M-195, M-196, M-197, M-198, M-199, M-200, M-201, M-202, M-203, M-204, M-205, M-206, M-207, M-208, M-209, M-210, M-211, M-212, M-213, M-214, M-215, M-216, M-217, M-218, M-219, M-220, M-221, M-222, M-223, M-224, M-225, M-226, M-227, M-228, M-229, M-230, M-231, M-232, M-233, M-234, M-235, M-236, M-237, M-238, M-239, M-240, M-241, M-242, M-243, M-244, M-245, M-246, M-247, M-248, M-249, M-250, M-251, M-252, M-253, M-254, M-255, M-256, M-257, M-258, M-259, M-260, M-261, M-262, M-263, M-264, M-265, M-266, M-267, M-268, M-269, M-270, M-271, M-272, M-273, M-274, M-275, M-276, M-277, M-278, M-279, M-280, M-281, M-282, M-283, M-284, M-285, M-286, M-287, M-288, M-289, M-290, M-291, M-292, M-293, M-294, M-295, M-296, M-297, M-298, M-299, M-300, M-301, M-302, M-303, M-304, M-305, M-306, M-307, M-308, M-309, M-310, M-311, M-312, M-313, M-314, M-315, M-316, M-317, M-318, M-319, M-320, M-321, M-322, M-323, M-324, M-325, M-326, M-327, M-328, M-329, M-330, M-331, M-332, M-333, M-334, M-335, M-336, M-337, M-338, M-339, M-340, M-341, M-342, M-343, M-344, M-345, M-346, M-347, M-348, M-349, M-350, M-351, M-352, M-353, M-354, M-355, M-356, M-357, M-358, M-359, M-360, M-361, M-362, M-363, M-364, M-365, M-366, M-367, M-368, M-369, M-370, M-371, M-372, M-373, M-374, M-375, M-376, M-377, M-378, M-379, M-380, M-381, M-382, M-383, M-384, M-385, M-386, M-387, M-388, M-389, M-390, M-391, M-392, M-393, M-394, M-395, M-396, M-397, M-398, M-399, M-400, M-401, M-402, M-403, M-404, M-405, M-406, M-407, M-408, M-409, M-410, M-411, M-412, M-413, M-414, M-415, M-416, M-417, M-418, M-419, M-420, M-421, M-422, M-423, M-424, M-425, M-426, M-427, M-428, M-429, M-430, M-431, M-432, M-433, M-434, M-435, M-436, M-437, M-438, M-439, M-440, M-441, M-442, M-443, M-444, M-445, M-446, M-447, M-448, M-449, M-450, M-451, M-452, M-453, M-454, M-455, M-456, M-457, M-458, M-459, M-460, M-461, M-462, M-463, M-464, M-465, M-466, M-467, M-468, M-469, M-470, M-471, M-472, M-473, M-474, M-475, M-476, M-477, M-478, M-479, M-480, M-481, M-482, M-483, M-484, M-485, M-486, M-487, M-488, M-489, M-490, M-491, M-492, M-493, M-494, M-495, M-496, M-497, M-498, M-499, M-500, M-501, M-502, M-503, M-504, M-505, M-506, M-507, M-508, M-509, M-510, M-511, M-512, M-513, M-514, M-515, M-516, M-517, M-518, M-519, M-520, M-521, M-522, M-523, M-524, M-525, M-526, M-527, M-528, M-529, M-530, M-531, M-532, M-533, M-534, M-535, M-536, M-537, M-538, M-539, M-540, M-541, M-542, M-543, M-544, M-545, M-546, M-547, M-548, M-549, M-550, M-551, M-552, M-553, M-554, M-555, M-556, M-557, M-558, M-559, M-560, M-561, M-562, M-563, M-564, M-565, M-566, M-567, M-568, M-569, M-570, M-571, M-572, M-573, M-574, M-575, M-576, M-577, M-578, M-579, M-580, M-581, M-582, M-583, M-584, M-585, M-586, M-587, M-588, M-589, M-590, M-591, M-592, M-593, M-594, M-595, M-596, M-597, M-598, M-599, M-600, M-601, M-602, M-603, M-604, M-605, M-606, M-607, M-608, M-609, M-610, M-611, M-612, M-613, M-614, M-615, M-616, M-617, M-618, M-619, M-620, M-621, M-622, M-623, M-624, M-625, M-626, M-627, M-628, M-629, M-630, M-631, M-632, M-633, M-634, M-635, M-636, M-637, M-638, M-639, M-640, M-641, M-642, M-643, M-644, M-645, M-646, M-647, M-648, M-649, M-650, M-651,

MOTOR WEIGHT MAY VARY 15% FOR NON-STANDARD RATINGS AND/OR ACCESSORIES.

IF MOUNTING CLEARANCE DETAILS ARE REQUIRED,  
CONSULT FACTORY.

DIMENSIONS ARE IN INCHES

| FRAME             | A    | D(1) | E    | G   | H   | J    | O    | P    | T    | BA   | K    | FK   | BK  |
|-------------------|------|------|------|-----|-----|------|------|------|------|------|------|------|-----|
| C1811ATZ-C1812ATZ | 9.00 | 4.50 | 3.75 | .31 | .44 | 1.50 | 8.88 | 8.75 | 1.88 | 2.75 | 4.38 | 4.38 | .50 |

| FRAME    | C(8)  | B     | BS    | 2F    | DRIVE END SHAFT AND KEY |      |        |      |       |      |      |      | OPPOSITE DRIVE END SHAFT AND KEY (7) |        |      |       |      |       |     |  | WT. LBS. |
|----------|-------|-------|-------|-------|-------------------------|------|--------|------|-------|------|------|------|--------------------------------------|--------|------|-------|------|-------|-----|--|----------|
|          |       |       |       |       | N                       | N-W  | U(2)   | V    | R(4)  | SQ.  | LGTH | FN   | FN-FW                                | FU(2)  | FV   | FR(4) | SQ.  | LGTH. |     |  |          |
| C1811ATZ | 23.94 | 14.00 | 11.00 | 12.50 | 3.00                    | 2.75 | 1.3750 | 2.50 | 1.201 | .312 | 1.75 | 2.44 | 2.25                                 | 1.1250 | 2.00 | .986  | .250 | 1.38  | 175 |  |          |
| C1812ATZ | 25.44 | 15.50 | 12.50 | 14.00 | 3.00                    | 2.75 | 1.3750 | 2.50 | 1.201 | .312 | 1.75 | 2.44 | 2.25                                 | 1.1250 | 2.00 | .986  | .250 | 1.38  | 210 |  |          |

| STEEL TERMINAL BOX DIMENSIONS |              |               |      |      |      |      |      |                |                 |      |      |      |      |      |                |
|-------------------------------|--------------|---------------|------|------|------|------|------|----------------|-----------------|------|------|------|------|------|----------------|
| FRAME                         | MAX.<br>AMPS | STANDARD SIZE |      |      |      |      |      | PART<br>NUMBER | ONE SIZE LARGER |      |      |      |      |      | PART<br>NUMBER |
|                               |              | AA(5)         | AB   | AC   | AF   | X    | Y    |                | AA(5)           | AB   | AC   | AF   | X    | Y    |                |
| C180ATZ                       | 40           | 3/4 & 1"      | 7.31 | 5.75 | 1.94 | 4.38 | 5.00 | 705028-1-R     | 1-1/4 & 1-1/2   | 8.31 | 6.31 | 2.50 | 5.50 | 6.12 | 705029-1-R     |
|                               | 96           | 1-1/4 & 1-1/2 | 8.31 | 6.31 | 2.50 | 5.50 | 6.12 | 705029-1-R     | 2" & 2-1/2      | 9.44 | 6.69 | 3.19 | 7.00 | 7.62 | 705030-1-R     |

[illegible]

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

|                                     |                              |                   |
|-------------------------------------|------------------------------|-------------------|
| REV. DESC: REVISE "D" DIM TOLERANCE |                              |                   |
| REV. LTR: B                         | VERSION: 02                  | TDR: 000001158210 |
| FILE: \\RGG\00031\202               | REVISED: 01:10:53 01/13/2021 | BY: RGGNAS        |
| MTL: -                              |                              |                   |

BALDOR - RELIANCE®

DIMENSION DRAWING,C180ATZ,DPP,TENV,FOOT MTG.

SH 1 of 1

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                               |                                                                                                |            |  |                   |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|------------------------------------------------------------------------------------------------|------------|--|-------------------|
| 406770-006                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                               |                                                                                                | 406770-006 |  |                   |
| <div>CONNECTION DIAGRAM<br/>D-C MOTOR - STRAIGHT SHUNT</div> <div><div><div><div><div>W1</div><div>&lt;NOTE 6&gt;</div></div><div><div>H1</div><div>H2</div></div></div><div><div><div>SHUNT FIELD</div><div>INTER-COIL</div><div>ARMATURE</div></div><div><div>F1</div><div>A1</div><div>AX2</div><div>A2</div><div>F2</div></div></div><div><div>&lt;NOTE 3&gt;</div><div>&lt;CAUTION-SEE NOTE 1&gt;</div><div>&lt;NOTE 4&gt;</div></div></div><div><div>THREE WIRE RTD</div><div><div>TD1</div><div>TD2</div><div>TD3</div></div><div>&lt;NOTE 5&gt;</div></div></div> <div><div>ARMATURE AND FIELD EXTERNAL CONNECTIONS</div><div>WARNING- SEE NOTE 7 FOR GROUNDING INSTRUCTIONS</div><div><div><div>A1</div><div>A2</div><div>F1</div><div>F2</div></div><div><div>CCW</div><div>ROTATION</div></div><div><div>A1</div><div>A2</div><div>F1</div><div>F2</div></div><div><div>CW</div><div>ROTATION</div></div></div><div>ROTATION FACING COMMUTATOR END</div></div> <div><div>1. CAUTION — ARMATURE MAY HAVE MULTIPLE LEADS. CONNECT ALL LUGS WITH THE SAME MARKING TOGETHER.</div><div>2. OPTIONAL CONTROL SIGNAL LEAD IS MARKED AX2. ALWAYS TAKE INTERPOLE DROP BETWEEN A2 AND AX2. NOTE: NEMA DESIGNATION FOR AX2 IS LETTER C.</div><div>3. SPACE HEATERS, WHEN PROVIDED, WILL HAVE LEADS MARKED H1 AND H2, H3, H4, ETC.</div><div>4. THERMAL PROTECTOR, WHEN PROVIDED, WILL HAVE LEADS MARKED P1 AND P2, P3, P4, ETC.</div><div>5. WINDING RTD'S, WHEN PROVIDED, WILL HAVE LEADS MARKED TD1, TD2, &amp; TD3.</div><div>6. BRUSH WEAR SENSOR, WHEN PROVIDED, WILL HAVE LEAD MARKED W1.</div><div>7. WARNING — MOTOR MUST BE GROUNDED TO PREVENT SERIOUS INJURIES TO PERSONNEL. GROUND THE MOTOR PER IEC, NATIONAL ELECTRICAL CODE AND ANY APPLICABLE LOCAL ELECTRICAL CODES. A TAPPED HOLE IS PROVIDED IN THE CONDUIT BOX, ON THE FOOT. FRAME BRACE OR OPPOSITE OPPOSITE DRIVE END BRACKET, ADJACENT TO THE TERMINAL BOX FOR MOTOR GROUNDING. GROUND LEAD, WHEN PROVIDED, WILL BE GREEN.</div></div> <div><div>CUSTOMER</div><div>CUSTOMER ORDER NO.</div><div>RELIANCE</div><div>S.D. NO.</div></div> |                               |                                                                                                |            |  |                   |
| REV. DESC: UPDATE LOGO AND TITLEBLOCK: LOADED TO BUS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                               | <div>BALDOR</div> <div>D-C MOTOR CONNECTION DIAGRAM, STRAIGHT SHUNT</div> <div>SH 1 of 1</div> |            |  |                   |
| REV. LTR: -                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | VERSION: 00                   |                                                                                                |            |  | TDR: 000000781086 |
| FILE: \RSN\00026\515                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | REVISED: 02: 41:08 02/01/2013 |                                                                                                |            |  |                   |
| MTL: -                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | BY: MGHPC                     |                                                                                                |            |  |                   |