

# **ABB BALDOR RELIANCE III**

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## **Customer information packet**

### ECP4115T

50HP, 1775RPM, 3PH, 60HZ, 326T, 1272M, TEFC, F1

Class - CLI GP A,B,C,D

Division - Division II

**Specifications**

|                                       |                                                          |
|---------------------------------------|----------------------------------------------------------|
| <b>Enclosure</b>                      | TEFC                                                     |
| <b>Frame</b>                          | 326T                                                     |
| <b>Frame Material</b>                 | Iron                                                     |
| <b>Frequency</b>                      | 60.00 Hz                                                 |
| <b>Haz Area Class and Group</b>       | CLI GP A,B,C,D                                           |
| <b>Haz Area Division</b>              | Division II                                              |
| <b>Motor Letter Type</b>              | Three Phase                                              |
| <b>Output @ Frequency</b>             | 50.000 HP @ 60 HZ                                        |
| <b>Phase</b>                          | 3                                                        |
| <b>Synchronous Speed @ Frequency</b>  | 1800 RPM @ 60 HZ                                         |
| <b>Voltage @ Frequency</b>            | 460.0 V @ 60 HZ<br>230.0 V @ 60 HZ                       |
| <b>Agency Approvals</b>               | CCSA US<br>CSA EEV<br>NEMA PREMIUM<br>NEMA_PREMIUM<br>UR |
| <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>Constant Torque Speed Range</b>    | 0.8                                                      |
| <b>Current @ Voltage</b>              | 58.000 A @ 460.0 V<br>116.000 A @ 230.0 V                |
| <b>Design Code</b>                    | A                                                        |
| <b>Drip Cover</b>                     | No Drip Cover                                            |
| <b>Duty Rating</b>                    | CONT                                                     |
| <b>Efficiency @ 100% Load</b>         | 94.5 %                                                   |
| <b>Electrically Isolated Bearing</b>  | Not Electrically Isolated                                |
| <b>Feedback Device</b>                | NO FEEDBACK                                              |

**Part Detail**

|                     |            |
|---------------------|------------|
| <b>Revision</b>     | J          |
| <b>Type</b>         | AC         |
| <b>Mech. spec.</b>  | 12F904     |
| <b>Base</b>         |            |
| <b>Status</b>       | PRD/A      |
| <b>Elec. spec.</b>  | 12WGZ279   |
| <b>Layout</b>       | 12LYF904   |
| <b>Eff. date</b>    | 10-16-2025 |
| <b>CD Diagram</b>   | CD0180     |
| <b>Poles</b>        | 04         |
| <b>Leads</b>        | 9#8        |
| <b>Proprietary</b>  | False      |
| <b>Created date</b> | 02-03-2021 |

|                               |                             |
|-------------------------------|-----------------------------|
| Front Shaft Indicator         | None                        |
| Haz Area Temp Code            | T3                          |
| Heater Indicator              | No Heater                   |
| High Voltage Full Load Amps   | 58.0 a                      |
| Insulation Class              | F                           |
| Inverter Code                 | Inverter Duty               |
| KVA Code                      | H                           |
| Lifting Lugs                  | Standard Lifting Lugs       |
| Locked Bearing Indicator      | Locked Bearing              |
| Max Speed                     | 2700 rpm                    |
| Motor Lead Quantity/Wire Size | 9 @ 6 AWG                   |
| Motor Lead Termination        | Flying Leads                |
| Motor Standards               | NEMA                        |
| Motor Type                    | 1272M                       |
| Mounting Arrangement          | F1                          |
| Number of Poles               | 4                           |
| Overall Length                | 30.28 IN                    |
| Power Factor                  | 85                          |
| Product Family                | Super-E Chemical Processing |
| Pulley End Bearing Type       | Ball                        |
| Pulley Face Code              | Standard                    |
| Pulley Shaft Indicator        | Standard                    |
| Rodent Screen                 | None                        |
| Service Factor                | 1.15                        |
| Shaft Diameter                | 2.125 IN                    |
| Shaft Ground Indicator        | No Shaft Grounding          |
| Shaft Rotation                | Reversible                  |
| Shaft Slinger Indicator       | Shaft Slinger               |
| Speed                         | 1775 rpm                    |
| Speed Code                    | Single Speed                |
| Starting Method               | Direct on line              |
| Thermal Device - Bearing      | None                        |
| Thermal Device - Winding      | None                        |
| Vibration Sensor Indicator    | No Vibration Sensor         |



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

**Nameplate**
**NP3241**

|            |              |                    |      |           |            |                         |           |                          |
|------------|--------------|--------------------|------|-----------|------------|-------------------------|-----------|--------------------------|
| CAT.NO.    | ECP4115T     | P/N                |      |           |            |                         | ENCLOSURE | TEFC                     |
| SPEC.      | 12F904Z279G1 | CC                 | 010A | FRAME     | 326T       | S/N                     |           |                          |
| HP         | 50           | CLASS              | F    | HZ        | 60         | DES                     | A         |                          |
| RPM        | 1775         | RPM MAX            | 2700 | PH        | 3          | KVA-CODE                | H         |                          |
| VOLT       | 230/460      | MOTOR WEIGHT       | 641  |           |            |                         |           |                          |
| AMP        | 116/58       | SER.F.             | 1.15 | PF        | 85         | ODE BRG                 | 6312      | DE BRG 6312              |
| RATING     | 40C AMB-CONT | NEMA-NOM-EFF       | 94.5 | GREASE    | POLYREX EM |                         |           |                          |
|            |              |                    |      | INV.TYPE  | PWM        |                         |           |                          |
| TEMP CODE  | T3           | INVERTER-TEMP-CODE | 200  |           |            |                         |           |                          |
| TEMP =     | 200          | C HP FR            | 60   | C HP TO   | 90         |                         |           |                          |
| CT HZ FROM | 0.8          | CT HZ TO           | 60   |           |            |                         |           |                          |
| HTR-VOLTS  |              | HTR-AMPS           |      | HTR-WATTS |            | MAX. SPACE HEATER TEMP. |           | VT HZ FROM O VT HZ TO 60 |

**AC Induction Motor Performance Data**

Record # 86839

Preliminary Data Sheet

| Winding: 12WGZ279-R006 |    |         | Type: 1272M                              |                     | Enclosure: TEFC           |           |             |
|------------------------|----|---------|------------------------------------------|---------------------|---------------------------|-----------|-------------|
| Nameplate Data         |    |         | 460 V, 60 Hz:<br>High Voltage Connection |                     |                           |           |             |
| Rated Output (HP)      |    | 50      | Full Load Torque                         |                     | 147.8 LB-FT               |           |             |
| Volts                  |    | 230/460 | Start Configuration                      |                     | direct on line            |           |             |
| Full Load Amps         |    | 116/58  | Breakdown Torque                         |                     | 475 LB-FT                 |           |             |
| R.P.M.                 |    | 1775    | Pull-up Torque                           |                     | 210 LB-FT                 |           |             |
| Hz                     | 60 | Phase   | 3                                        | Locked-rotor Torque |                           | 240 LB-FT |             |
| NEMA Design Code       |    | A       | KVA Code                                 |                     | H                         |           |             |
| Service Factor (S.F.)  |    | 1.15    | Starting Current                         |                     | 413 A                     |           |             |
| NEMA Nom. Eff.         |    | 94.5    | Power Factor                             |                     | 85                        |           |             |
| Rating - Duty          |    | 40C     | AMB-CONT                                 |                     | Temp. Rise @ Rated Load   |           | 68°C        |
| S.F. Amps              |    | 132/68  |                                          |                     | Temp. Rise @ S.F. Load    |           | 88°C        |
|                        |    |         |                                          |                     | Locked-rotor Power Factor |           | 29.7        |
|                        |    |         |                                          |                     | Rotor inertia             |           | 9.59 lb-ft² |

**Load Characteristics 460 V, 60 Hz, 50 HP**

| % of Rated Load | 25   | 50   | 75   | 100  | 125  | 150  | S.F. |
|-----------------|------|------|------|------|------|------|------|
| Power Factor    | 52   | 73   | 82   | 86   | 87   | 87   | 87   |
| Efficiency      | 91.5 | 94.4 | 94.8 | 94.6 | 94   | 93.2 | 94.1 |
| Speed           | 1794 | 1788 | 1782 | 1776 | 1769 | 1761 | 1770 |
| Line amperes    | 24.8 | 33.9 | 45.3 | 57.9 | 71.6 | 87.5 | 66.1 |

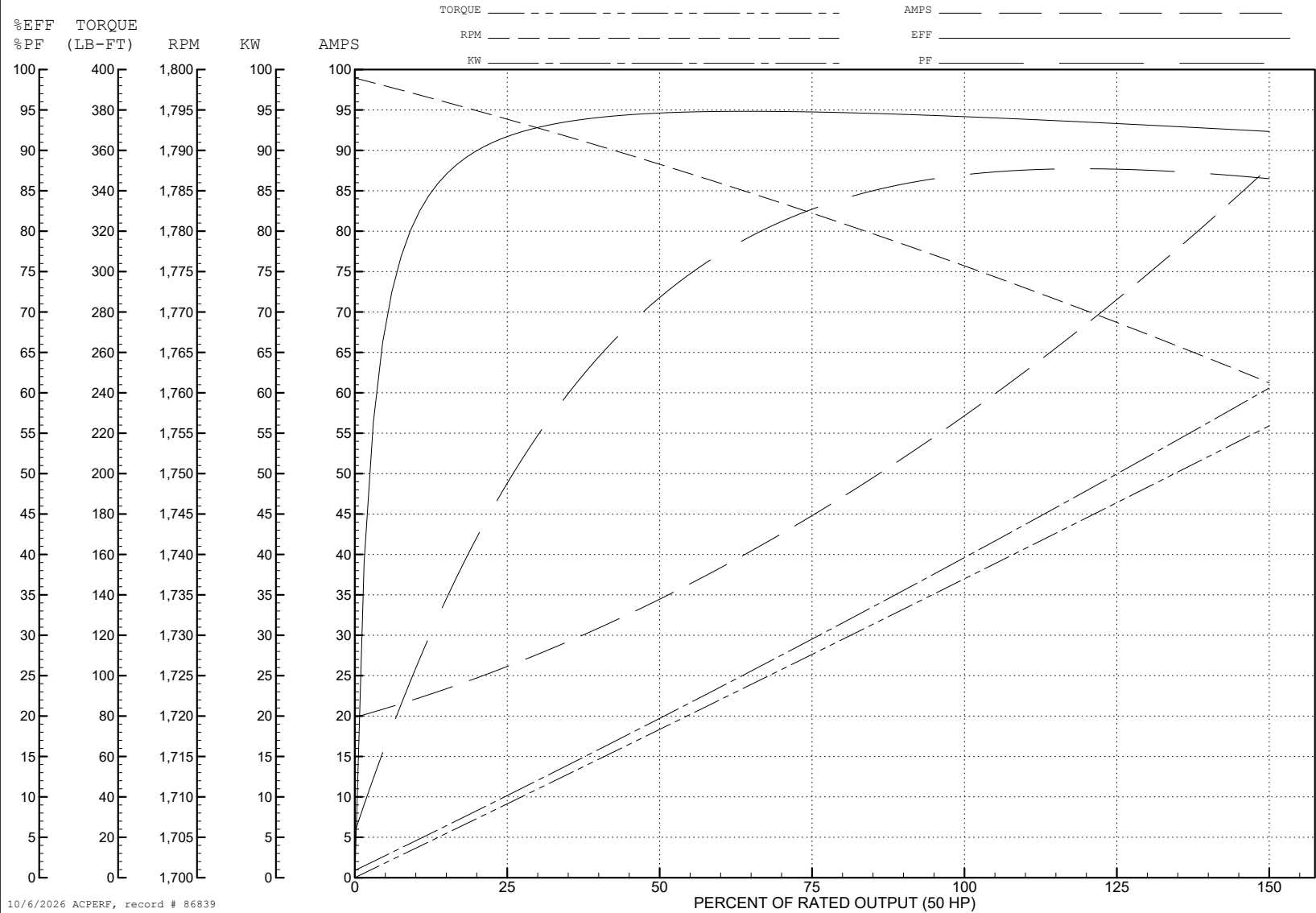
ABB Motors and Mechanical Inc.

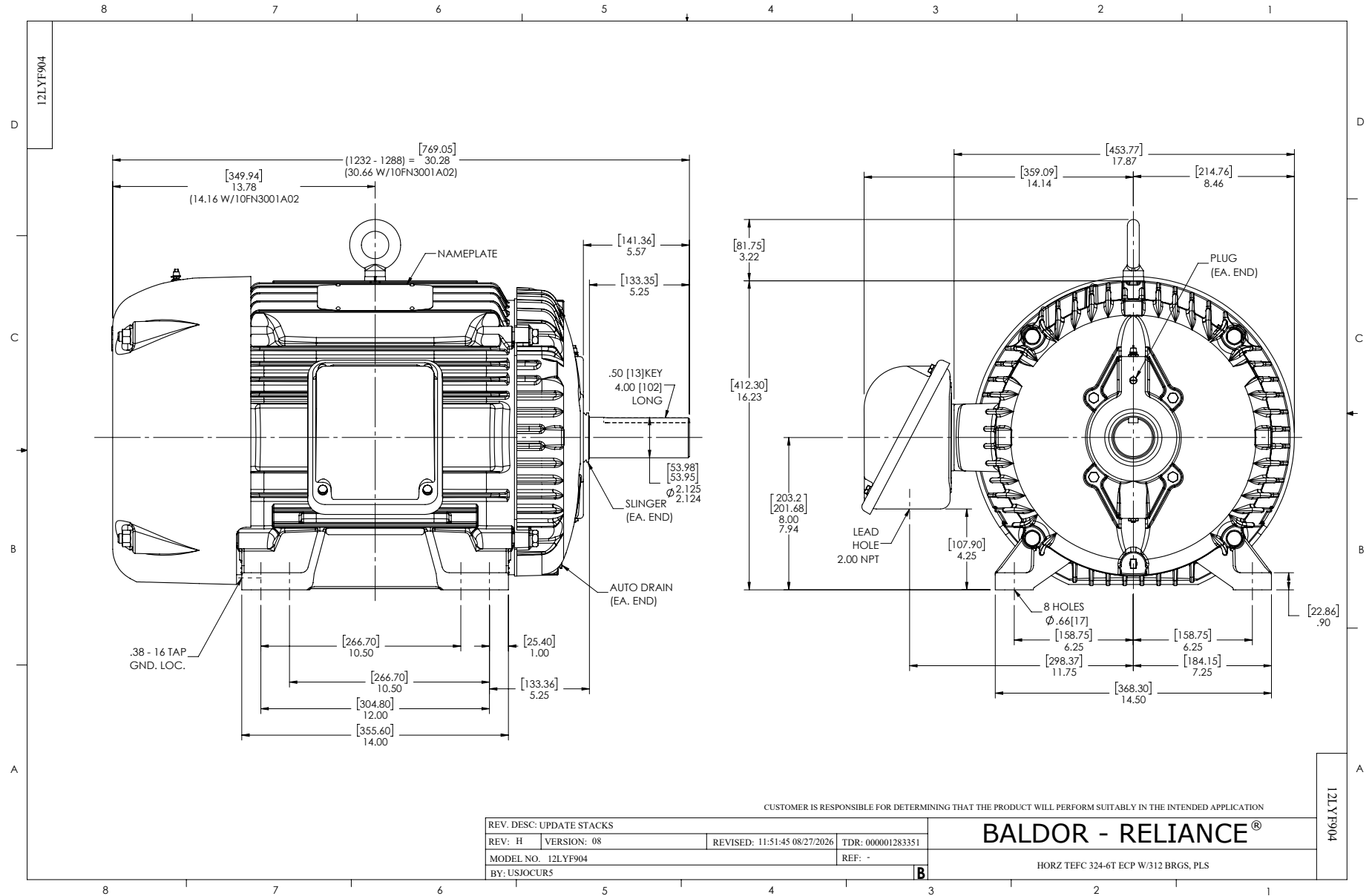
WINDING # 12WGZ279

Typical performance - not guaranteed values.

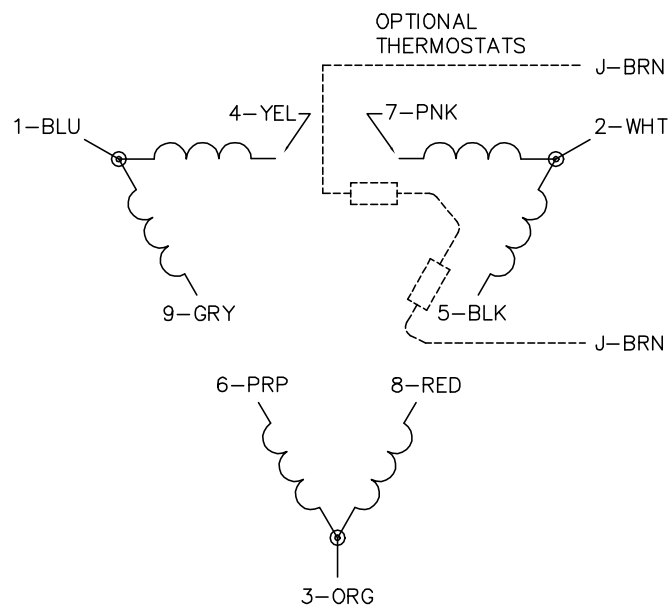
50 HP 3 PH 60 HZ 1775 RPM 460 V 1272M

TORQUES (LB-FT): PO=475 PU=210 LR=240 LRA=413

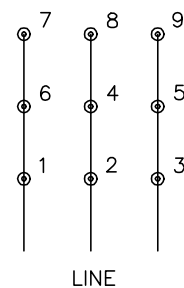




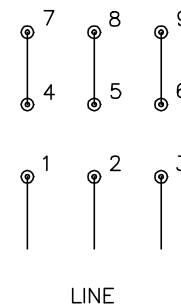
CD0180



LOW VOLTAGE  
(2D)



HIGH VOLTAGE  
(1D)



**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: ADD CLASS CONN00000007

REV. LTR: D

VERSION: 01

TDR: 000001099922

FILE: \AAA\00005\148

REVISED: 10: 25: 29 02/19/2019

BY: ENBRIRO

MTL: -



**BALDOR - RELIANCE®**

3PH, DV, 9 LEADS, DELTA CONNECTION

SH 1 of 1

CD0180