



Jun, 29, 2016

ALPHA Corporation

HOUSING HARDWARE DIVISION

# TEST REPORT

## DIGITAL LOCK WS200 Endurance Test for Unlocking/Locking by Card

### NOTE

1. Test sample    Part no. 9QA17-07000  
                    Part name WS200  
                    Quantity n=1
2. Test method
  - 1) Date                      Dec. 2 to 13, 2013
  - 2) Testing Machine    • Jig to press start button   • Jig to hold card  
                                 • Stabilized power supply • Thermostatic bath
  - 3) Method                Use ISO15693-typed Card.  
                                 • Install lock case and WS200 body on test stand.  
                                 < 1cycle for locking/unlocking >  
                                 (1) Press start button. ⇒ Card reading mode starts.  
                                 (2) Hold card over the screen and get authentication.  
                                        ⇒ It is electrically locked.  
                                 (3) Press start button. ⇒ Card reading mode starts.  
                                 (4) Hold card over the screen and get authentication.  
                                        ⇒ It is electrically unlocked.  
                                 • Perform the above locking/unlocking cycle for designated times  
                                        (200,000 cycles in total) under the following conditions.  
                                 ① 160,000cycles at normal temperature (15°C~25°C)  
                                 ② 20,000cycles at high temperature (80°C)  
                                 ③ 20,000cycles at low temperature (-30°C)
  - 4) Judgment criterion   (1) It can be locked/unlocked within the communication range,  
                                        15mm for card and 5mm for tag after the test.  
                                 (2) It can be locked/unlocked by 10-key keypad operation  
                                        after the test.  
                                 (3) The locking/unlocking torque by mechanical key should be  
                                        20N · cm or under after the test.  
                                 (4) It can operate 160,000cycles at normal temperature,  
                                        20,000cycles at high temperature, and 20,000cycles at low  
                                        temperature.

### 3. Test results.

**PASSED**