



Product Service

# CERTIFICATE

No. B 16 06 22021 656

**Holder of Certificate:** Yaskawa Electric Corp.  
Tokyo Plant480 Kamifujisawa, Iruma  
Saitama 358-8555  
JAPAN**Production Facility(ies):** 48675**Certification Mark:****Product:** Electric Motors  
AC SPINDLE MOTOR**Model(s):** UA, FM7 and USA SERIES  
(See Attachment for Nomenclature)**Parameters:**  
Rated voltage: 200 Vac / 400 Vac  
Rated output power: 0.2 kW - 75 kW  
Protection class: I  
Degree of protection: IP44**Remark:**  
When installing / inserting the equipment, all requirements of the mentioned test standards must be fulfilled.**Tested according to:** EN 60034-1:2010  
EN 60034-5:2001/A1:2007

The product was tested on a voluntary basis and complies with the essential requirements. The certification mark shown above can be affixed on the product. It is not permitted to alter the certification mark in any way. In addition the certification holder must not transfer the certificate to third parties. See also notes overleaf.

**Test report no.:** 73504280-04**Valid until:** 2021-05-31**Date,** 2016-06-02

(Yoshio Sato)

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## Nomenclature

### 1) Standard

UA    K    A-    01    X    X    X    X    X    X  
A       B       C       D       E       F       G       H       I       J

- A: Kind of motor                          AC Spindle motor
- B: Cooling method                        K- Totally enclosed externally fan cooled type IP44
- C: Output power                          A- Standard Series  
    B- Winding Selection Series  
    AJ- Standard J Series  
    BJ- Winding Selection J Series

D: Motor capacity

A(KW)=S3 Output Power					
P3	0<A≤0.3	06	3.7<A≤5.5	30	22<A≤30
P7	0.3<A≤0.75	08	5.5<A≤7.5	37	30<A≤37
01	0.75<A≤1.1	11	7.5<A≤11	45	37<A≤45
02	1.1<A≤1.5	15	11<A≤15	55	45<A≤55
03	1.5<A≤2.2	19	15<A≤18.5	75	55<A≤75
04	2.2<A≤3.7	22	18.5<A≤22		

- E: Design Revision Order            A- Standard type  
    B- High speed type  
    C- Standard Type J Series  
    D- High Speed Type J Series
- F: Detector                                  Z- Magnetic pulse encoder type  
    S- Magnetic serial encoder type  
    R- Resolver type  
    N- Without detector
- G: Mounting                                1- Flange mounted type  
    3- Foot mounted type
- H: Detail of shaft extension            Blank or 0 – Standard (with keyway)  
    N- without keyway
- I: KD direction                             Blank or 0 – Standard (Left hand side facing the drive end)  
    R- Right hand side facing the drive end
- J: Supply voltage                         Blank- 200V  
    E- 400V

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2) Exclusive design for customer (Type A: Yaskawa form)

UA  
A
K  
B
A-  
C
01  
D
X  
E
X  
F
X  
G
X  
H
X  
I
X  
J
X  
K

- A: Kind of motor AC Spindle motor for exclusive customer
- B: Cooling method K- Totally enclosed externally fan cooled type IP44
- C: Output power  
 A- Standard Series  
 B- Winding Selection Series  
 AJ- Standard J Series  
 BJ- Winding Selection J Series

D: Motor capacity

A(KW)=S3 Output Power					
P3	0<A≤0.3	06	3.7<A≤5.5	30	22<A≤30
P7	0.3<A≤0.75	08	5.5<A≤7.5	37	30<A≤37
01	0.75<A≤1.1	11	7.5<A≤11	45	37<A≤45
02	1.1<A≤1.5	15	11<A≤15	55	45<A≤55
03	1.5<A≤2.2	19	15<A≤18.5	75	55<A≤75
04	2.2<A≤3.7	22	18.5<A≤22		

- E: Design Revision Order  
 A- Standard type  
 B- High speed type  
 C- Standard Type J Series  
 D- High Speed Type J Series
- F, G: Customer code  
 Alphabet character(s)
- H, I: Design revision order for customer  
 Alphameric character(s)
- J, K: Supply voltage  
 Blank – 200V  
 0E – 400V

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## 3) Exclusive design for customer (Type B: Exclusive customer form)

FM7-     A     037-     X     X     X     X-     X     X     X  
A            B            C            D            E            F            G            H            I            J

- A: Kind of motor                      AC Spindle motor for exclusive customer
- B: Output power                      A- 1500min<sup>-1</sup> base speed  
    B- 1000min<sup>-1</sup> base speed  
    C- 500min<sup>-1</sup> base speed

C: Motor capacity

S1 (kW)					
037	3.7	150	15.0	280	28.0
055	5.5	170	17.0	300	30.0
075	7.5	185	18.5	370	37.0
090	9.0	215	21.5	510	51.0
110	11.0	220	22.0		
120	12.0	270	27.0		

- D: Detector                              S- Magnetic serial encoder type  
    C- "C" axis encoder type
- E: Mounting                             1- Flange mounted type  
    3- Foot mounted type
- F: Vibration                              B- Vibration sensitivity grade V10  
    C- Vibration sensitivity grade V5  
    D- Vibration sensitivity grade V3
- G: Detail of shaft extension         0- Without keyway  
    1- with keyway
- H: Winding type                        E- Single winding
- I,J: Design revision for customer  
    Alphameric character(s)



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## 4) Exclusive design for customer

- |            |          |          |          |          |            |           |          |          |          |          |          |           |
|------------|----------|----------|----------|----------|------------|-----------|----------|----------|----------|----------|----------|-----------|
| <u>USA</u> | <u>I</u> | <u>K</u> | <u>M</u> | <u>J</u> | <u>-10</u> | <u>-x</u> | <u>x</u> | <u>x</u> | <u>x</u> | <u>x</u> | <u>x</u> | <u>-x</u> |
| A          | B        | C        | D        | E        | F          | G         | H        | I        | J        | K        | L        | M         |
- A: Kind of motor AC Spindle motor (synchronous type)
- B: Output power  
I- Standard series (3 leads)  
J- Winding selection series (6 leads)  
B- Winding selection series (9 leads)
- C: Cooling method  
K- Totally enclosed externally cooling fan type IP44  
W- Totally enclosed liquid-cooled type IP44
- D: Magnet material M- Nd-Fe-B magnet
- E: Motor series  
Blank - Standard series  
J - J series
- F: Motor Capacity  
(1) Standard

A (KW) = S1 Output power							
10	0≤A<2.0	1A	10≤A<12	2A	20≤A<22	3A	30≤A<32
20	2.0≤A<3.0	1B	12≤A<13	2B	22≤A<23	3B	32≤A<33
30	3.0≤A<4.0	1C	13≤A<14	2C	23≤A<24	3C	33≤A<34
40	4.0≤A<5.0	1D	14≤A<15	2D	24≤A<25	3D	34≤A<35
50	5.0≤A<6.0	1E	15≤A<16	2E	25≤A<26	3E	35≤A<36
60	6.0≤A<7.0	1F	16≤A<17	2F	26≤A<27	3F	36≤A<37
70	7.0≤A<8.0	1G	17≤A<18	2G	27≤A<28	3G	37≤A<38
80	8.0≤A<9.0	1H	18≤A<19	2H	28≤A<29	3H	38≤A<39
90	9.0≤A<10.0	1I	19≤A<20	2I	29≤A<30	3I	39≤A<40

- (2) Exception  
USAIKM-50-BK3x-x S1 output power : 6kW  
USAIKM-50-BK4x-x S1 output power : 7.3kW

- G,H: Customer code  
Alphabet character(s)
- I,J: Design revision order for customer  
Alphameric character(s)
- K: Supply voltage  
Blank - 200V  
0 - 400V
- L: Supply voltage  
Blank - 200V  
E - 400V
- M: Design number  
Blank, A to Z