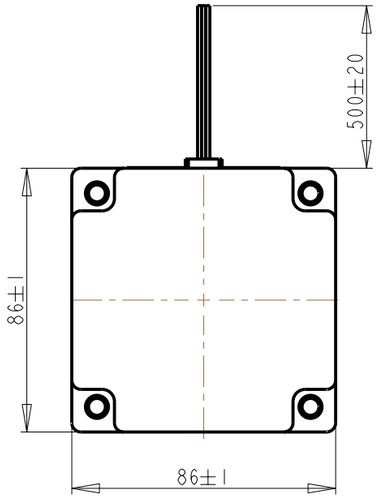
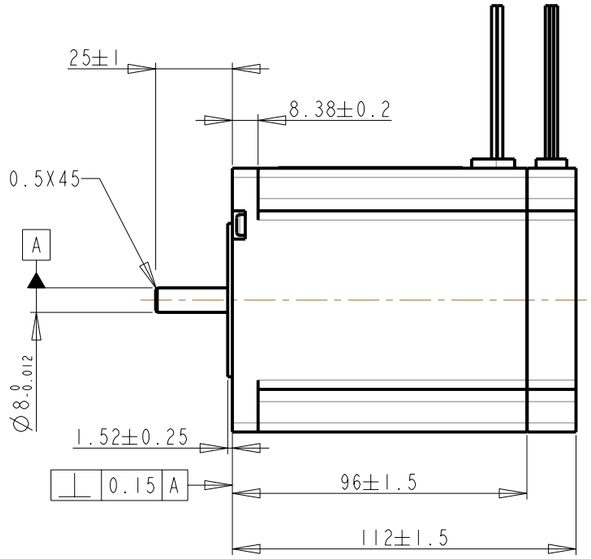
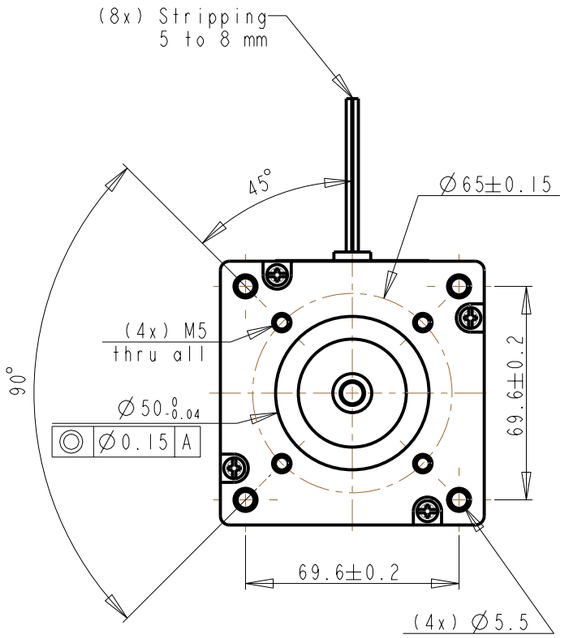
**NOTA:**
The product has to be conform with the directives 2002/95/CE + 2002/96/CE

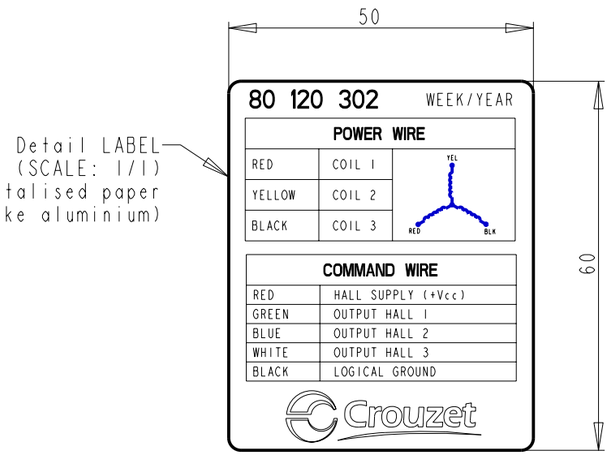



## ELECTRICAL SPECIFICATIONS

| | |
|---|---|
| Winding definition | 6 parallel windings of 9 turns dia 0.6lmm |
| Number of poles | 8 |
| Number of phase | 3 |
| Rated voltage (VDC) | 24 |
| Rated speed (RPM) | 1162±5% |
| Rated torque (N.m) | 2.224 |
| Rated power (W) | 271 |
| Peak torque (N.m) | 8.247 |
| Peak current (A) | 65.6 |
| Line to line resistance (Ohms) | 0.15 ±10% |
| Line to line inductance (mH) | 0.50 ±20% |
| Torque constant (Nm/A) | 0.130 ±10% |
| Back E.M.F. (Vrms/KRPM) | 9.4 ±10% |
| Rotor inertia (g.cm²) | 1600 ±10% |




Detail LABEL
(SCALE: 1/1)
metalised paper
(like aluminium)

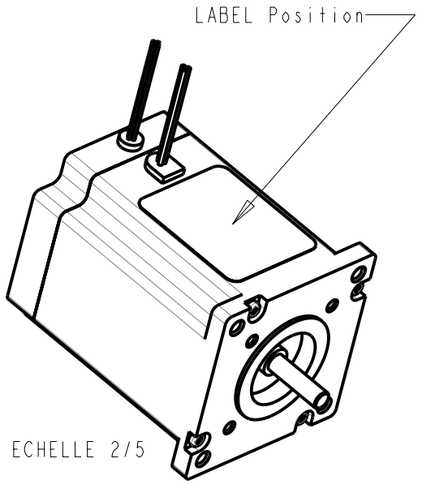
| SWITCHING TIMING | | | | | | | |
|---|---|---|---|---|---|---|---|
| ROTATION : VIEWED FRONT OF THE OUTPUT SHAFT | | | | | | | |
| DIRECTION | | SENSOR OUTPUT | | | COIL | | |
| CCW | CW | Hall1 | Hall2 | Hall3 | Coil1 | Coil2 | Coil3 |
| ↓ | ↑ | 1 | 0 | 1 | - | + | nc |
| | | 1 | 0 | 0 | - | nc | + |
| | | 1 | 1 | 0 | nc | - | + |
| | | 0 | 1 | 0 | + | - | nc |
| | | 0 | 1 | 1 | + | nc | - |
| | | 0 | 0 | 1 | nc | + | - |
| nc = Not Connected | | | | | | | |
| CW = clockwise rotation | | | | | | | |
| CCW = counter clockwise rotation | | | | | | | |

## ELECTRIC CONNECTION

| Lead No. | Lead Color | Lead Gauge | FUNCTION | DESCRIPTION |
|---|---|---|---|---|
| 1 | Red | UL1332 22AWG | Vcc | +4.5 Vdc TO 24 Vdc |
| 2 | Green | | HALL 1 | 20 mA Max |
| 3 | Blue | | HALL 2 | 20 mA Max |
| 4 | White | | HALL 3 | 20 mA Max |
| 5 | Black | | GND | GROUND FOR HALL SENSORS |
| 6 | Red | AWM3135 16AWG | COIL 1 | |
| 7 | Yellow | | COIL 2 | |
| 8 | Black | | COIL 3 | |

## GENERAL SPECIFICATIONS

| | |
|---|---|
| Winding type | Star |
| Hall effect angle | 120 degree electrical angle |
| Shaft run out | 0.05 mm |
| Radial play | 0.02 mm @ 450 g |
| End play | 0.08 mm @ 450 g |
| Max. radial force | 220 N @ 20 mm from the flange |
| Max. axial force | 60 N |
| Insulation class | Class F |
| Dielectric strength | 500 VAC for one minute |
| Insulation resistance | 100 MΩ Min. , 500 VDC |
| Mass | 3.15 Kg |
| Length | 96 mm |
| Model | FL86BLS98-24V-11270A2 |




ECHELLE 2/5

| | | | |
|---|---|---|---|
| F | Add the SWITCHING TIMING<br>svt NM : C.MO.DEF.00643.FR | Modified by | F_SEGAUD 12/06/2012 |
| | | Verified by | T_HUA 12/06/2012 |
| | | Authorized by | NON APPLIC. |

Toler. gene. lin ± 0.25 mm
Toler. gene. Ang ± 0.5 degres

General Raw surface Ra



Scale 1/2

Crouzet
2, rue du Dr ABEL
BP 59, 26902,
Valence CEDEX 9
France

Customer: Customer Ref.:

Designation/FR: MOTEUR BLDC CARRE86 271W LG98 80120302
Designation/GB: BLDC MOTOR SQUARE86 271W LG98 80120302

PFT001:0<C>;0<M>
Dispatching D50

Department: MO
NATO code: FA0X2

Design by D_JULIA 06/05/2009
Verif. by T_HUA 06/05/2009
Authorized by NON APPLIC.

**DATA SHEET**

# FT80120302FR

| Index | Format | Folio |
|---|---|---|
| F | A3 | 1/1 |