French major aerospace company looks for permanent-magnet synchronous brushless motor controllers

Summary

Profile type
Business request

Company's country
France

POD reference
BRFR20260115015

Profile status
PUBLISHED

Type of partnership
Supplier agreement

Targeted countries

- **Austria**
- **Portugal**
- **Finland**
- **Slovenia**
- **Belgium**
- **Estonia**
- **Denmark**
- **Greece**
- **Albania**
- **Hungary**
- **Netherlands**
- **Norway**
- **Ireland**
- **Spain**
- **Slovakia**
- **United Kingdom**
- **Iceland**
- **Sweden**
- **France**
- **Malta**
- **Italy**
- **Poland**
- **Czechia**
- **Germany**

• **Switzerland**

Contact Person	Term of validity	Last update
Enrico FRANZIN	**15 Jan 2026** **15 Jan 2027**	**15 Jan 2026**

General Information

Short summary

This tender focusses on the identification of electronics supplier that design and produce "Off the Shelf" tunable controlers to control the shaft position of brushless actuators.

Full description

Electrical actuators are thoroughly used for various space transport actuation chains like Thrust Vector Control of the launcher or cryo engines control. Most of them are used in a position control mode, the controlled angular position being measured with resolvers embedded in the actuator.

For various needs, COTS (Commercial Off-the-shelf) controllers can be considered:
- during early phases of the development, it is necessary to use easily tunable controllers to prototype or contribute to the qualification of the actuator while the avionics is not yet available
- during production phase, acceptance tests of subsystems do not require a flight worthy electronics and COTS controllers are relevant with common bench digital interfaces.

Nice to have/ to know:
- Some COTS controller are qualified for harsh environment and could offer the possibly of "Flight" use. This is not considered as a formal need for this tender Some typical environmental requirements are therefore provided herein. (refer to § Technical specification)
- The capability of the supplier to customize its products for specfic needs would be appreciated (to be mentioned in the answer)

Advantages and innovations

Technical specification or expertise sought

Functional requirements :

- Motor topology: 3-Phases
- Control:
  - Positon controller
  - Tunable vector control algorithm with HMI interface
  - Loop bandwidth : position>5Hz, speed >30Hz, current >4 kHz
- Communication: either CAN, CANopen, RS232, RS422, USB, Ethernet
- Inputs:
  - Minimal / Nominal/Maximal supply voltage (VDC) = (40, 140, 200)
  - Minimal / Nominal/Maximal logic voltage (VDC) = (10, 28, 70)
- Ouputs:
  - Minimum continuous power output (W) = 3000
  - Sinusoidal continuous RMS current limit (A) = 40
- Encoders:
  - type : résolvers

  Supply Current(mA) : [30; 80] (typical)

  Supply Voltage : 5 V – 8 kHz
- Casing dimensions:
  - Volume < 5L
  - Weight <5 kg

Environmental requirement (nice to have) :
See media below

Stage of development

Already on the market

Sustainable Development goals

• Goal 9: Industry, Innovation and Infrastructure

IPR Status

IPR Notes

IPR Notes

Partner Sought

Expected role of the partner

Designer & manufacturer of the controller

Type of partnership

Supplier agreement

Type and size of the partner

- **SME <=10**
- **SME 11-49**
- **Big company**
- **SME 50 - 249**

Dissemination

Technology keywords

Market keywords

- **08003007 - Other industrial equipment and machinery**

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- **Germany**
- **Switzerland**

Sector groups involved

- **Aerospace and Defence**

Media

Images

Feature	Operation Conditions	Range
Ambient Temperature Range	Non-operating conditions	-50 °C to +100 °C (-58 °F to 212 °F)
	Operating conditions	-40 °C to +70 °C (-40 °F to 160 °F)
Temperature Shock	Non-operating conditions	-40 °C to +70 °C (-40 °F to 160 °F) within 3 min
Altitude	Non-operating conditions	Unlimited
	Operating conditions	-400 m to 12,000 m (-1312 to 39370 feet)
Maximum Humidity	Non-operating conditions	Up to 95% relative humidity non-condensing at 35 °C (95 °F)
	Operating conditions	Up to 95% relative humidity non-condensing at 25 °C (77 °F), up to 90% relative humidity non-condensing at 42 °C (108 °F)
Vibration	Operating conditions	20 Hz to 2,000 Hz, 14.6g
Mechanical Shock	Non-operating conditions	±40g; Half sine, 11 msec, 3 per direction (overall 18)
	Operating conditions	±20g; Half sine, 11 msec, 3 per direction (overall 18)

environmental requirements (nice to have).png