An Electromagnetic Actuated Pin Puller has been designed by Cedrat Technologies for the CNES (French space agency). Its specifications make it able to cover a wide range of spatial applications where moving parts must be locked during launch and unlocked after launch.

This ECSS standards compliant latch called BRUCE is triggered when supplied with an 8A signal and the unlocking time is under 5ms. It has been designed to operate from -150°C up to 150°C and under high axial and radial loads.

This architecture allows pull-off strengths up to 150N and small dimensions.

The pin puller mechanical interface features three M2.0 holes and positioning surfaces. The mechanism can be armed easily by pulling the pin to its maximum stroke using a M1.6 threaded hole and an dedicated tool. It can be armed as well by pushing the pin via a hole in the backside of the system.

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TABLE OF STANDARD PROPERTIES OF USE AND MEASUREMENT

The properties defined in the table below, are set up according to the technical conditions of use and measurement. These properties are warranted within their variation range and in compliance with the standard technical conditions of use.

Properties	Standard technical conditions	Unit	Nominal values
Notes		-	*Preliminary data*
Length		*mm*	56,6
Body diameter		*mm*	24,6
Diameter (including fastening holes)		*mm*	31,7
Stroke		*mm*	6,6
Weight		*g*	120
Pull-off strength		*N*	From 110 N to 80 N, linear vs stroke
Max axial load		*N*	210
Max radial load		*N*	450
In service temperature		*°C*	-150 / +150
Storage temperature		*°C*	-200 / +150
Actuator resistance at 20°C		Ω	1,1
Operational current		A	8
Life			More than 100 cycles

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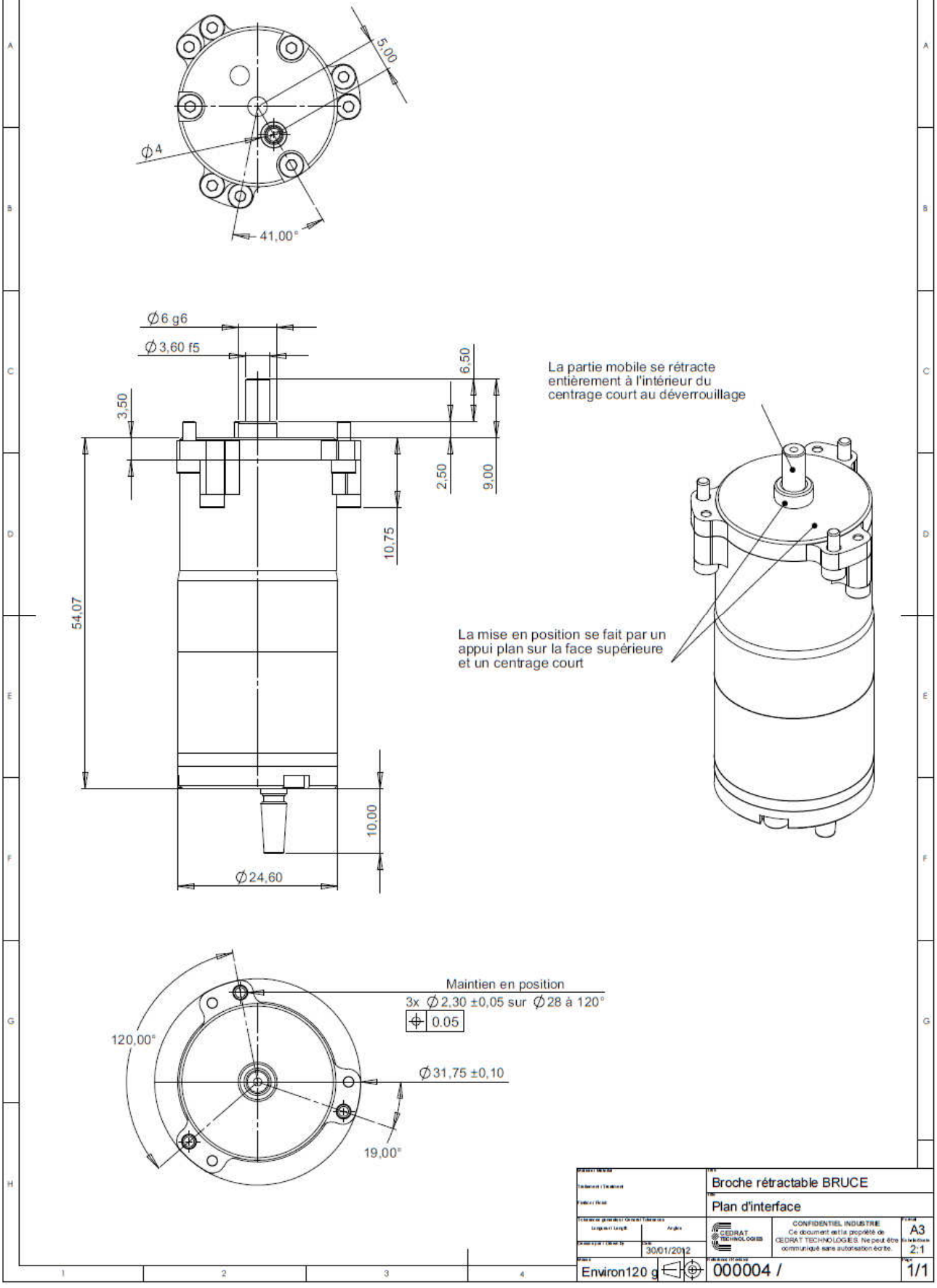

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