

FORCE 
TRAVEL 
PERFORMANCE 



The BRUNNER CLS-P Active Force Feedback Joystick meets the highest demands of professional flight simulation. As a top level element of our Control Loading System portfolio of leading drop-in devices, the CLS-P Joystick integrates perfectly into many new or existing FNPTs, FTDs and even FFS Level D Flight Simulation environments.

Beside Aircraft Solutions, the BRUNNER Joystick finds perfect application for military ground vehicles or any other application where a modern stick solution is used for system control.

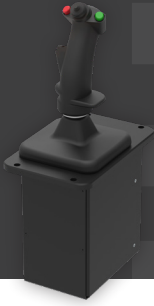
Supporting standard procedure training as well as abnormal and emergency procedure training, the BRUNNER CLS-P Joystick provides excellent quality, highest fidelity and unique durability at an unmatched price-performance level.

The integrated high resolution load cells and the high dynamic brushless DC technology reacts with realistic movements to even finest inputs and offers excellent artificial feeling for highest demands!

Our CLS-P Joystick is supporting single as well as dual pilot applications. A unique real-time synchronization logic enables unmatched and automatic pilot/co-pilot take-over functionality for MCC applications. Either the A320 Grip, the BRUNNER Jet Grip or an adaption of any customer-provided Grip is easily mountable. Enabled by our CLS2Sim software-environment, the CLS-P Joystick communicates easily with commercially available flight simulation software such as X-Plane, M-FSX, and Prepar3D®. Any third party simulation connects via a simple TCP/IP or UDP remote interface protocol.

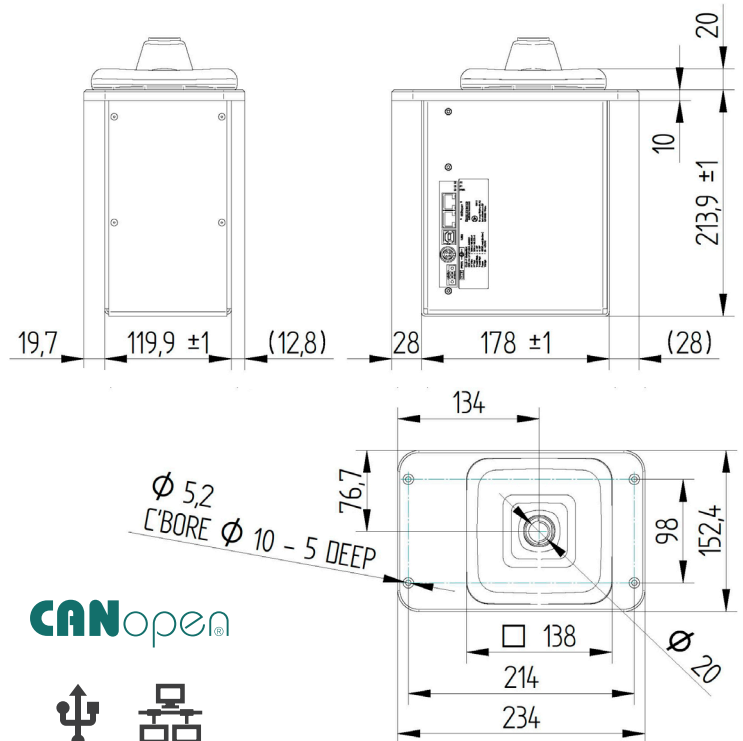
FACTSHEET CLS-P JOYSTICK.

www.brunner-innovation.swiss



- BRUNNER Drop-In: fully integrated, with built-in control unit and 36 VDC power inlet (ext. power supply included)
- Highest force density in the market through use of long life brushless DC technology
- 2 integrated high resolution Force-Cells for force measurement of roll and pitch axis
- Contactless high-resolution position feedback
- Simulated effects: engine, ground, turbulence, real trim, autopilot, stall etc.
- Pre-Configured profiles available (e.g. A320)
- Multi-Crew-Capability (MCC) through electrical link, self-synchronized over CAN in real-time
- Designed for standard, abnormal and emergency procedure training
- Plug & Play (CAN or USB), Ethernet via optional BRUNNER high-speed E2CAN gateway
- CANaerospace on request
- Reliable, smooth, backlash and maintenance free design
- No fan, very quiet, high efficient
- Direct support for X-Plane, FSX, FSX Steam edition, Prepare-3D with BRUNNER CLS2SIM SW, X-Plane plugin for Windows, Linux and Mac
- Fully external control for QTG testing, applied over a simple network protocol
- Safety integrated, Software limits (soft stop), mechanical limit stops
- Swiss Made
- 2 Years warranty

Peak Force	50Nm / 36.9 ft-lb
Travel Pitch	+/- 24°, A320 +/-18°
Travel Roll	+/- 24°, A320 +/-20°
Interface	USB (USB-2 Type B), CAN (RJ45), Ethernet via optional E2CAN gateway
Power	400W peak (no fan)
Operating Voltage	36VDC
Size	234 x 152.4 x 214 mm 9.2 x 6 x 8.4 in
Weight	7.5 kg / 16.5 lb



CANopen®

