Quanser Inverted Rotary Pendulum

The inverted rotary pendulum is one of the most classic experiments in control theory. It is an additional module mounted on Rotary Servo Base Unit, equipped with a pendulum mounted on a steering axle and an encoder. Students model this object mathematically, and then design algorithms necessary to control it: stabilization and swing-up. The kit includes all the elements needed to quickly start the station: amplifier, controller, Matlab or LabVIEW software module and educational materials for s...

Basic technical parameters:

- Base parameters:
  - High quality servo motor (6V,1A, 6000 RPM)
  - Potentiometer for measuring the position (± 5V)
  - Quadrature encoder (4096 pulses / revolution)
  - Gears with the possibility of changing the gear ratio
  - Complete teaching materials compatible with NI LabVIEW and Matlab / Simulink included
  - Open architecture allows to create own control algorithms

- Module parameters:
  - Arm length: 216 mm
  - Pendulum length: 337 mm
  - Encoder resolution: 4096 pulses / revolution