

APPLICATIONS

- > Actuators position control
- > Active control of vibrations

KEY FEATURES

- > Daughter board for CTEC solutions
- > Multi-channels capability (up to 3)
- > PID control with stabilizing filters
- > 16bits resolution
- > 10/15/30kSps sampling rate depending on number of channels
- > Controller tuning with GUI through USB port

RELATED PRODUCT

- > CTEC power amplifiers
- > CTEC sensor conditioners



SPECIFICATIONS

PARAMETER	TYPICAL VALUE	UNIT
> General		
Number of control channels	1 ... 3	
Number of analog inputs	2	
Number of analog outputs	1	
Digital communication	USB	
Graphical User Interface	CTEC HDP45	
> Digital control		
Control strategy	Tunable PID + Stabilizing filters	
Stabilizing filters	Tunable lowpass and notch	
List of stabilizing filters configurations	No filter 2nd order lowpass filter 2nd order notch filter 2 x 2nd order notch filters 4th order notch filter	
Sampling rate (1)	10 / 15 / 30	kSps
Digital resolution	16	bits
> Analog inputs		
Voltage range	-10 ... +10	V
Small signals bandwidth (-3dB)	34	kHz
> Analog outputs		
Voltage range	-10 ... +10	V
Small signals bandwidth (-3dB)	>100kHz	kHz

MISCELLANEOUS

PARAMETER	TYPICAL VALUE	UNIT
Mass	0,02	kg
Product compatibility	CA45, LA75, SA75 series	
Operating temperature range	0 ... +40	°C
Storage temperature range	-10 ... +50	°C
Warm up time	15	min
Computer interface	USB type B	

INCLUDED ACCESSORIES

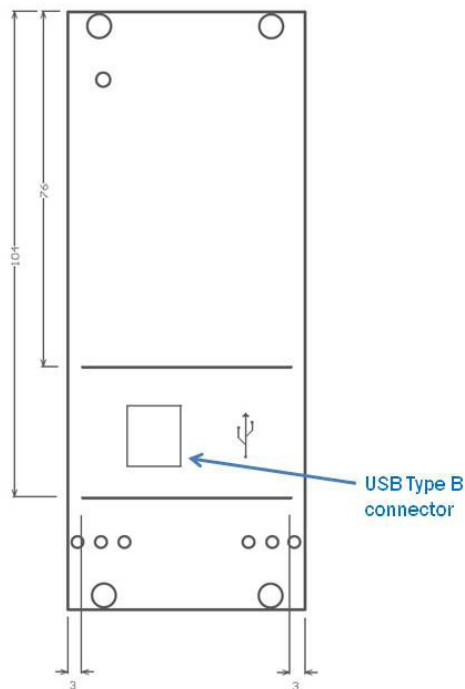
> **Front panel USB hub** With type B connector

Mass	0,09	kg
Front panel dimensions	10F wide, 3U high	
USB cable	Type B to Type A	
HDPM45 Graphical User Interface	Windows compatibility	

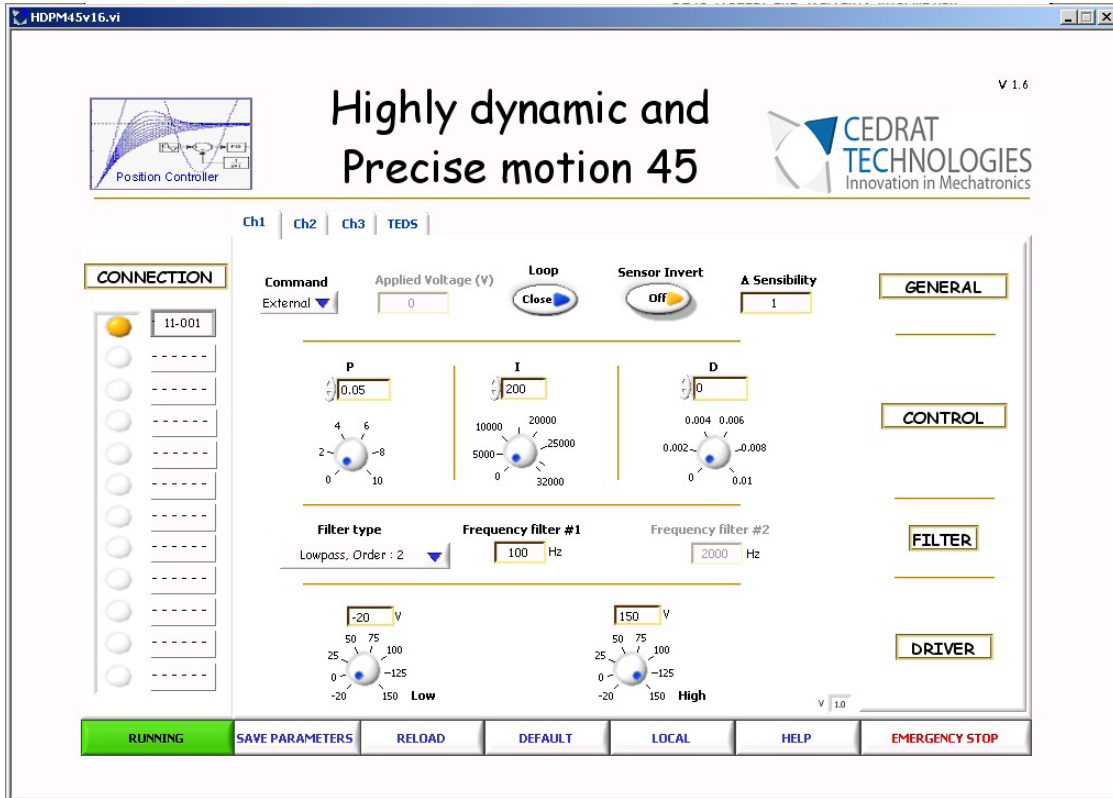
ANNOTATIONS

(1) 10kSps for 3 channels, 15kSps for 2 channels, and 30kSps for 1 channel

DRAWINGS



TYPICAL PERFORMANCE CHARACTERISTICS



The screenshot shows the control interface for the HDPM45v16.vi. The window title is "HDPM45v16.vi" and the version is "V 1.6". The main title is "Highly dynamic and Precise motion 45". The interface includes a "Position Controller" graph, a "CONNECTION" panel with a "11-001" indicator, and a "GENERAL" panel with "Command" (External), "Applied Voltage (V)" (0), "Loop" (Close), "Sensor Invert" (Off), and "A Sensibility" (1). The "CONTROL" panel features PID gains: P (0.05), I (200), and D (0). The "FILTER" panel shows "Filter type" (Lowpass, Order: 2), "Frequency filter #1" (100 Hz), and "Frequency filter #2" (2000 Hz). The "DRIVER" panel has "Low" and "High" voltage controls. A status bar at the bottom includes "RUNNING", "SAVE PARAMETERS", "RELOAD", "DEFAULT", "LOCAL", "HELP", and "EMERGENCY STOP".