

DCU-400 / DCU-800

Detector Control Unit

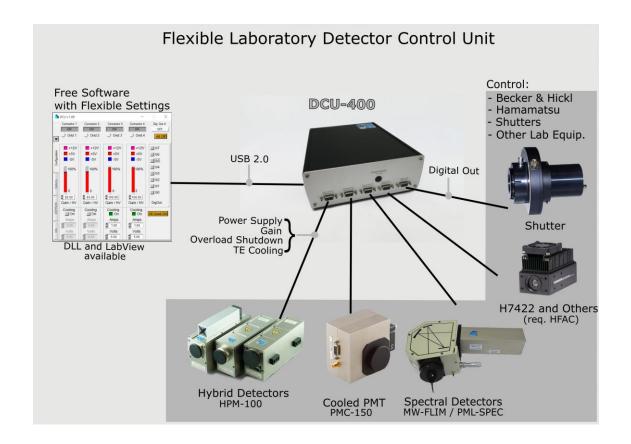
Controls up to 4 / 8 detectors or lasers Power supply, gain control and overload shutdown for up to 4 / 8 detectors USB interface

Additional high current digital output for shutter and filter control

Overload protection of detectors in conjunction with bh HFAC-26 Preamps

Full operation of Hamamatsu H7422 modules Software for Windows Vista/7/8/10 Simple +19 V power supply Compatible with all bh TCSPC devices





Designed and manufactured by



Becker & Hickl GmbH Nunsdorfer Ring 7-9 12277 Berlin, Berlin Tel. +49 / 30 / 212 80 02-0 Fax. +49 / 30 / 212 80 02-13 email: info@becker-hickl.com www.becker-hickl.com



DCU-400 / DCU-800

DCU-400 controls up to 4 detectors with an additional digital output for shutter and filter control. DCU-800 controls up to 8 detectors with two additional digital outputs for shutter and filter control.

Power Supply Outputs (All Connectors)

Max. Current at +12 V 100 mA Short Circuit Current +12 V 50 mA 1) $10 \text{ ms}^{2)}$ Time from /OVLD to disable +12V Output current in disabled state, +12 V < 0.5 mA200 mA Max. Current at +5 V Short Circuit Current +5 V 60 mA 1) Output current in disabled state, +5 V < 0.5 mAMax. Current at -5 V 200 mA Short Circuit Current -5 V 60 mA 1) Output current in disabled state, -5 V < 0.5 mA

Max. Current at -12 V Sum 120 mA, single output 60 mA

Short Circuit Current -12 V No short protection. Don't short longer than 1s

Detector Gain Control (Connectors 1-4 / 1-8)

Resolution	12 bit
Voltage Range Pin 12	0 to +10 V
Load at Pin 12	min. 1 kΩ
Output Resistance at Pin 12	100Ω
Voltage Range Pin 13	0 to +0.9 V
Load at Pin 13	min. 1 kΩ
Output Resistance at Pin 13	100Ω
Output Time Constant	100 ms

Overload Shutdown

Overload inputs at connector 1 - 4 / 1 - 8TTL, active Low, Pull-up resistor $10 \text{ k}\Omega$ Overload Reset By Software and at Power-ON

High Current Switches (Additional Digitial Out / Digital Output A + B)

Typical 'On' Resistance, 25°C		$70~\mathrm{m}\Omega$
Max. Switch Current, Single Switch		2 A
Max. Switch Current, Sum of all Switches		$5 A^{3)}$
Max. turn-off Voltage at Switch		20 V
Turn-on and turn-off transition time, Load 10 Ω		100 ns
Disable Transition Time		< 1 us
Time from /OVLD to Disable		< 2 us
3) Both GND pins used		

Supply for Thermoelectric Coolers (Connector 1-4 / 1-8)

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Output Voltage	0 to 5 V
Output Current	0 to 2 A
Resolution of Output Voltage and Current	12 bit
Output Resistance	$0.4~\Omega^{4)}$
Output Capacitance	300 uF
Output Ripple	< 5 mV
⁴⁾ All pins parallel	

General

Dimensions 264 mm x 205 mm x 75 mm USB 2.0 / 2x USB 2.0 Interface / Connector + 19 V DC Power Supply

International Sales Representatives







UK: Photonic Solutions PLC sales@psplc.com www.psplc.com



Japan: Tokyo Instruments Inc. sales@tokyoinst.co. jp www.tokyoinst.co.jp



China: DynaSense Photonics Co. Ltd. info@dvna-sense.com www.dvna-sense.com

 $^{^{\}rm 1)}$ Foldback Characteristics, don't short several outputs simultaneously for more than 20 s

²⁾ Connectors 1 - 4 / 1 - 8 only. 250 Ω load, time from +12 V to +6 V output voltage.