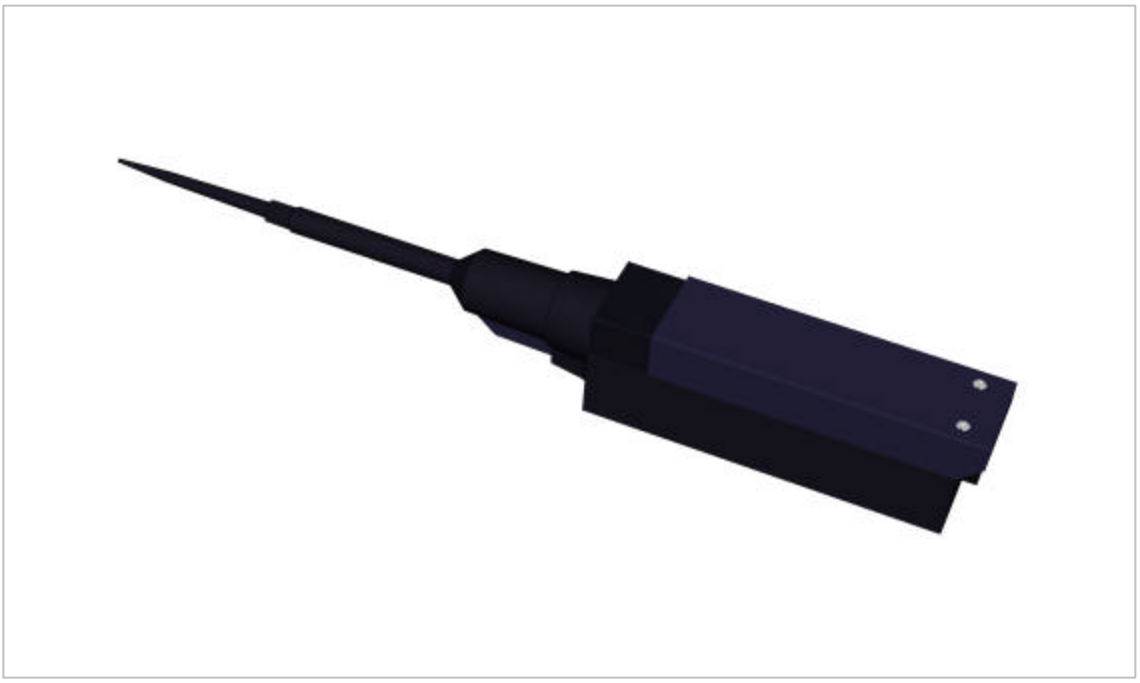
REMOTE CONTROL PIPETTOR
BRC 2501



INTEGRATED EXCELLENCE
The RC Remote Control Dispenser is an compact electronic 250 µl dispensing module with liquid level sensing, electronic tip ejection, and a versatile communication interface. The precision of the molded cylinder with a Biohit patented displacement mechanism guarantees high performance front-end for liquid handling robotic applications.

VERSATILE SERIAL INTERFACE
The RC Dispenser modules are equipped with two serial interfaces. An asynchronous RS-232 interface is for a host unit with RS-232 communication port, such as a PC. In addition to this, the module is equipped with a differential 2-wire RS-485 interface for networking and long distance communication. This versatile interface enables to build up a network of several modules even with a host having single RS232 communication port.
Effective, yet reliable protocols with simple ASCII-commands are used to control the operation of the modules. Communication speed is supported up to 57.6 kbps.

LIQUID LEVEL SENSING
Integrated liquid level sensing provides detection of a fluid surface when used with Biohit conductive polypropylene/carbon tips. A 10 ms response time is achieved by data polling. However, a dedicated digital output signal option provides even faster response time.

ELECTRONIC TIP EJECTOR
The unit is equipped with an integrated tip eject mechanism. A single command, when executed, will run the tip eject collar outwards removing the affixed tip.

IN-BUILD INTELLIGENCE
Multitasking software enables data and status information polling when running the piston. On board self-diagnostics provides continuous monitoring of the module's performance.

MECHANICAL

Dimensions	220 x 29 x 35 mm (L x W x H)
Weight	170 g
Material	Body: Aluminium, black anodized Cylinder/Piston: NBR Cone: Stainless steel

ELECTRICAL

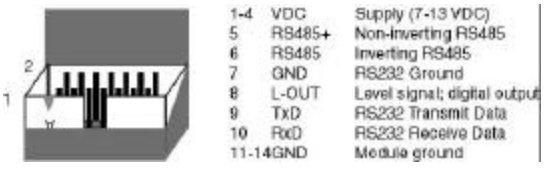
Supply Voltage	9 VDC (1.5 A)
Current consumption	Idle: 50 mA Drive: 0.4 A (typical), 1.5 A (max. at stall)
Serial I/O	RS-232 and RS-485 (2-wire), 9600 (default), 8, n, 1
Digital Output	Level Signal

DISPENSER

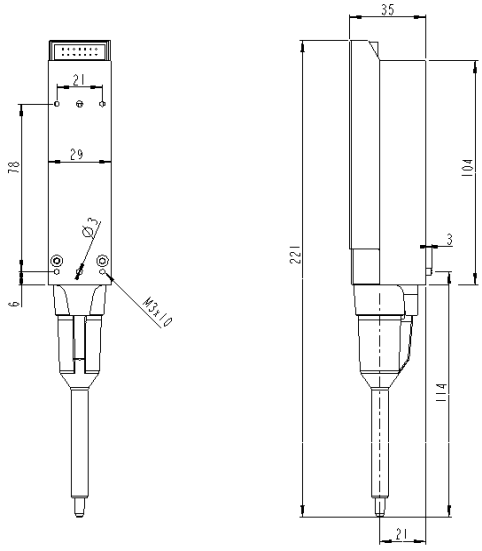
Type	Air displacement
Resolution	0.83 µl (250 µl / 300)
Nominal Volume	250 µl (300 steps)
Inaccuracy	≤ 3 % at 25µl, 0.5% at 250 µl H_2O
Imprecision	≤ 1 % at 25µl, 0.2% at 250 µl H_2O
Smallest Volume	1.7 µl (2 steps)
Conversion	1 step = 0.1 mm or 0.83 µl
Tip Eject	at 4.0 mm (= 40 steps)
Zero Point	at 4.5 mm (= 45 steps)
Displacement Space	-45 .. 400 steps (~ 44.0 mm)

LIQUID SENSING

Type	Capacitive
Output Range	50 – 320 (operational)
Measurement Time	4 ms



Signals on the 14 pin dual line connector



Dimensions of the module.