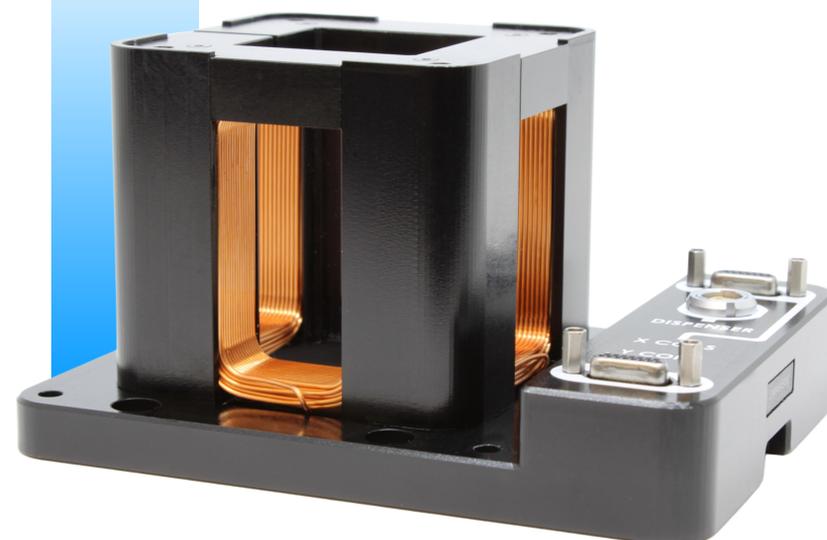


Magnetic Coil Sub-Assembly

Coil PICAS Assembly Component

Compact MOT coil assembly
Intended for use with Cold Atom Source Cell (CASC)
Sub-assembly of Coil PICAS
Integrated connector interface



CAMAPA

Description

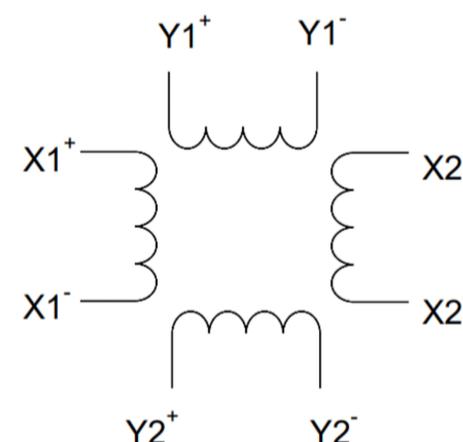
The Magnetic Coil Sub-Assembly sub-assembly is a compact coil assembly that generates an adjustable 2D MOT magnetic field, where each of the four coils can be individually controlled. The Magnetic Coil Sub-Assembly also includes a dispenser connection.

Specifications

Coil Connector	Two 15-pin Micro-D sub miniature connectors
Dispenser Connector	4-pin LEMO socket: ECG.0B.304
Mounting	PICAS Coil Mount Assembly mounting compatibility
Dimensions	90 x 119.60 x 65.50 mm
Weight	0.6kg

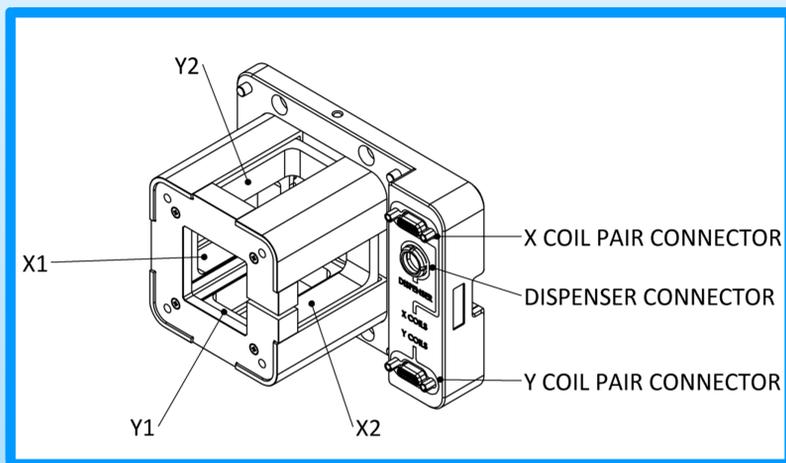
Coil Connections

Coil Parameters	5 x 15 turns of 0.8mm wire
Max Recommended Current	2.8A per coil
Current Required for Approx, 14G/cm	1.5A per coil
Dimensions	0.3 Ω (1.8m length cable)
Weight	0.4 Ω
Weight	0.7 Ω



Magnetic Coil Sub-Assembly

Coil PICAS Assembly Component



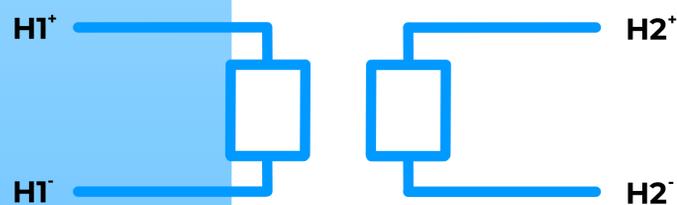
X		Y	
Connection	Pin	Connection	Pin
X1 ⁺	1, 9, 2, 10	Y1 ⁺	1, 9, 2, 10
X1 ⁻	3, 11, 4, 12	Y1 ⁻	3, 11, 4, 12
X2 ⁺	5, 13, 6, 14	Y2 ⁺	5, 13, 6, 14
X2 ⁻	7, 15, 8	Y2 ⁻	7, 15, 8

Temperature

Maximum operating temperature:
60°C

The equilibrium temperature when
operating the coils at nominal
current (1.5A) is 28°C.

Dispenser Connectors



Resistances: <math>< 1\Omega</math> per dispenser

Nominal Current: 3A

Max: 3.7A

Connection	Pin
H1 ⁺	1
H1 ⁻	2
H2 ⁺	3
H2 ⁻	4

Dimensions

All dimensions shown in millimeters - mm. Not to scale

