

Active Filters **Low - High - Band** miniModule **LHB 4-8**

Customizable Active Filters miniModule **LHB 4-8**

The modules are individually assembled according to customer specifications in the filter criteria:

- Filter type – Low Pass, High Pass, Band Pass
- Filter characteristic – Bessel, Butterworth or Chebyshev
- Cut-off frequency – in the range of 0.1 Hz (HP) to 50 kHz (LP)

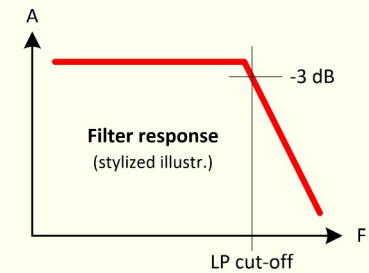
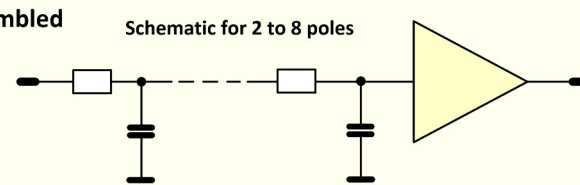
Assembly variants

- Assembled as low pass or high pass, 2nd, 4th, 6th or 8th order
- Assembled as high pass 2nd to 6th + low pass 2nd to 6th order
- Also possible variant: high pass 2nd and low pass 6th order
- First segment 2nd or 4th order and second segment 2nd or 4th order separable for looping in additional function groups
- Assembled with COG capacitors for highest precision in the cut-off frequency, temperature stability and flatness of the pass band
- Assembled with X7R capacitors for lowest possible cut-off frequency, especially as a high pass filter when the application does not require the highest precision and temperature stability
- Also possible variant: Assembled with X7R capacitors in the high pass segment and COG capacitors in the low pass segment

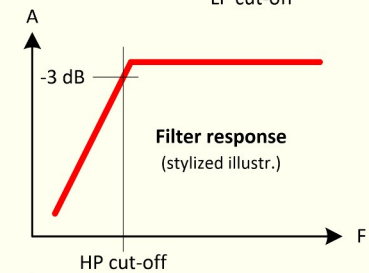
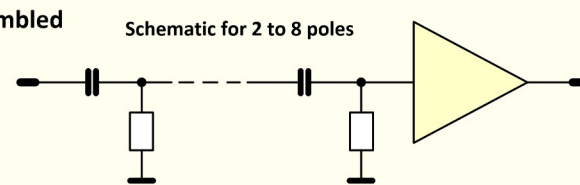
Power supply: ± 12 to ± 15 VDC, current consumption $< \pm 5$ mA
 Connector: Pin row pitch 2.0 mm, row spacing 16.51 mm (65/100 inch)
 Module dimensions: 18 x 17 [mm], height (incl. socket strip) 9 mm

Application example: Signal conditioner for IEPE sensors.

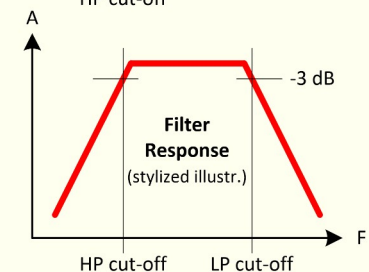
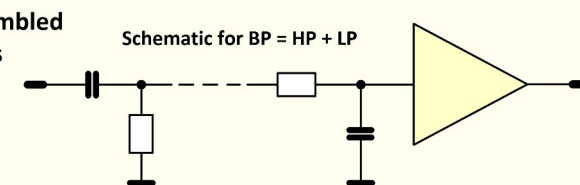
Module assembled for Low Pass



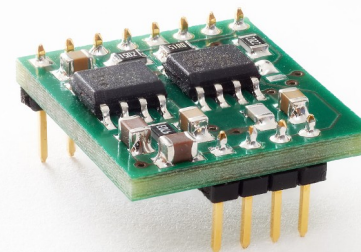
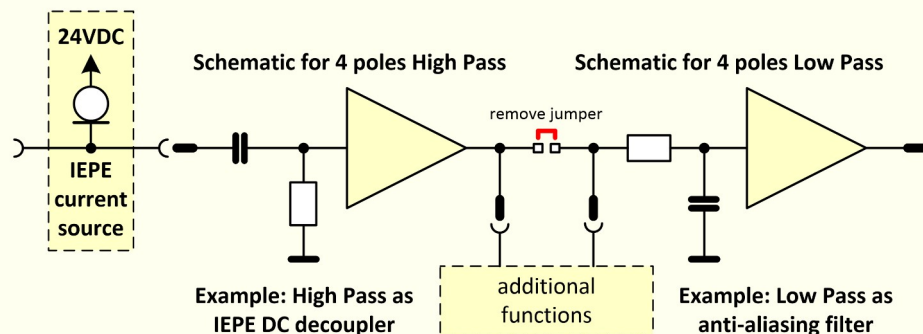
Module assembled for High Pass



Module assembled for Band Pass



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Pict. HP BE-2 + LP BU-6

ASSEMBLY VARIANTS – Order vs Frequency vs C-Type *

Typ	Order	C-Type "COG"	C-Type "X7R"
low pass	4th	$F \geq 60$ Hz	$F \geq 0.5$ Hz
	8th	$F \geq 100$ Hz	$F \geq 1$ Hz
high pass	4th	$F \geq 20$ Hz	$F \geq 0.1$ Hz
	8th	$F \geq 40$ Hz	$F \geq 0.2$ Hz
band pass	2th + 2th	HP 15 $\geq F \geq$ LP 60	HP 0.05 $\geq F \geq$ LP 0.1
	4th + 4th	HP 20 $\geq F \geq$ LP 60	HP 0.1 $\geq F \geq$ LP 0.5

* COG: highest Temperature stability, X7R: best size to capacity ratio