

Specifications for PXIE MEBT BPMs

MEBT BPMs in operation - 9 (one BPM inside each quadrupole block)
Each BPM station measures position in 3 dimensions

Internal diameter - 35 mm
Available length - 50 mm

Transverse resolution - 0.1 mm (for a single 1 μ s macro-pulse)
0.01 mm (CW, 0.1 sec update)

Accuracy of absolute
positioning-

1 mm

Phase resolution - 0.1 deg (162.5 MHz)

Nominal intensity- 2E08 H- per 162.5 MHz bunch (range 0.2 - 4 \cdot E08 ppb)

Typical rms beam half-size - 3mm

Typical rms longitudinal half-size - 10 degree (162.5 MHz)

Bakeable to 150C

The BPMs are welded in and cables are connected before the quads are mounted. Details of the available space between quads can be found in Quad specs.