

# NC Feedback Detector

# MD21

## High accuracy detector unit for position control

- Generates A/B phase output signal with a resolution of 0.1  $\mu\text{m}$  for feedback to an NC unit and up/down output signal for a display unit.
- Selectable resolution and output pulse width
- Compact design of 32 x 171 x 144 mm / 1.3" x 6.7" x 5.7" (W x H x D) permits the detector to be located in tight spaces as in a switchboard.
- Operable from 5V power supply.  
With the optional PU20 power supply unit, power for up to 3 axes can be supplied.
- A/B phase signal, up/down signal, zero point signal and alarm signal output by differential line driver.

### Specifications

Model	MD21
Resolution	0.1, 0.2 $\mu\text{m}$ selectable*
Output pulse width	0.25, 0.5, 1, 2, 2.5, 5, 10 or 20 $\mu\text{s}$ selectable
Max. response speed	See table below
Output signal	A/B phase and up/down output by differential line driver (equivalent to SN75113); both simultaneous
Zero point signal	In synch with scale signal
Alarm	Max. response speed exceeded, cable broken or disconnected, other circuit errors
Reset	Use reset key operation or external input
Power supply	+ 5 V DC + 5% -2%
Power consumption	Max. 3 W
Operating temperature	0 °C to 50 °C / 32 °F to 122 °F
Storage temperature	-10 °C to 70 °C / 14 °F to 158 °F
Dimensions	32 x 171 x 144 mm/ 1.3" x 6.7" x 5.7" (W x H x D)
Mass	0.8 kg/ 1.76 lbs

### Maximum response speed

Resolution ( $\mu\text{m}$ )	Output pulse width ( $\mu\text{s}$ )							
	0.25	0.5	1	2	2.5	5	10	20
0.1	18	9	4.5	2.2	1.8	0.8	0.4	0.2
0.2	30	18	9	4.5	3.6	1.8	0.8	0.4

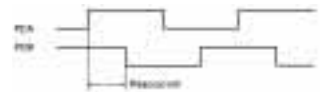
(Unit : m/min)

### Zero point response speed

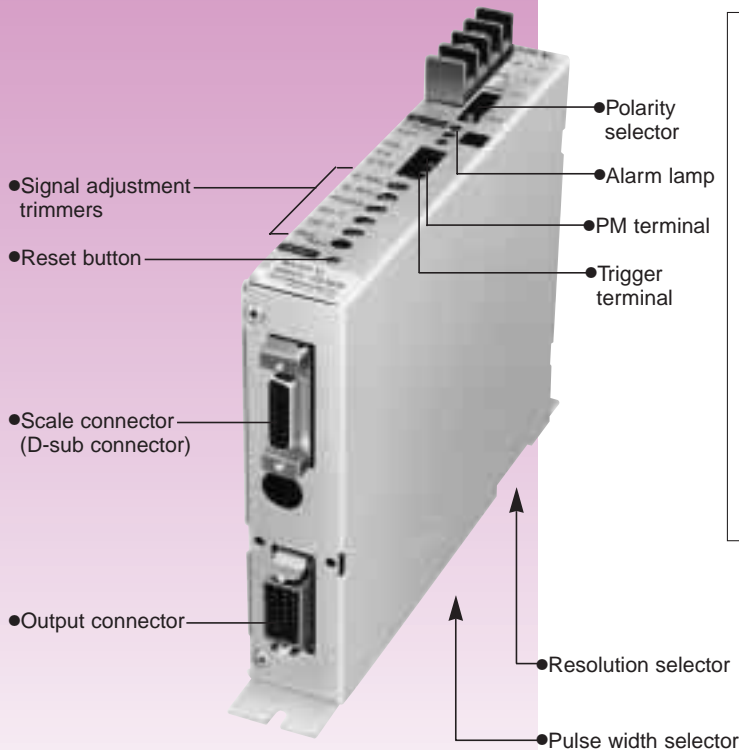
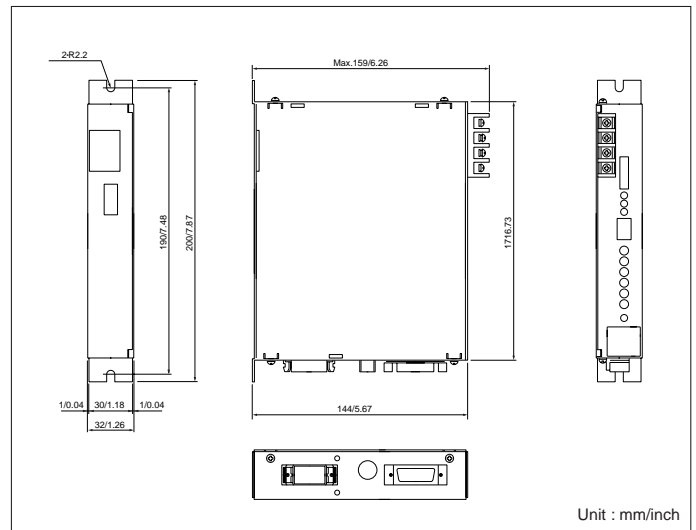
Resolution ( $\mu\text{m}$ )	Response speed (m/min)
0.1	0.15
0.2	0.3

(Unit : m/min)

\* The resolution of the A/B phase output is the min. phase difference.



### Dimensions



Detectors & Interpolators