MAB50R, MAB100R - Intelligent addressable reflective beam detectors

Two versions of the intelligent addressable loop powered reflective beam detectors are available in this range, the MAB50R with a range of up to 50 metres and the MAB100R with a range of 50 to 100 meters.

Both the MAB50R and the MAB100R are compatible with Eaton's range of intelligent addressable fire systems.

These intelligent addressable loop powered reflective beam detectors are extremely simple to install, they require no separate power supply, operate on a reflective principle and have a simple set up mode to enable easy and quick alignment during installation.

These units are designed to replace individual point detectors in large open areas such as warehouses.

Fire and fault conditions are signalled to the control panel using standard loop wiring so no additional interconnection required.

Features and benefits

- Loop powered
- Soft addressed
- Integral short circuit Isolator
- Single address
- Reflective beam detection
- Two models available
    - 5m to 50m
    - 50m to 100m
- Quick and simple to setup
- Saves on both time and installation costs
- No power supply required
- Single device to install instead of numerous point detectors
- Single point of maintenance
- Wall mounted for ease of maintenance, especially in warehouses with racking

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Eaton product datasheet

Addressable fire products

Technical specification

Code	MAB50R	MAB100R
Description	Addressable beam detector	Addressable beam detector
Standards	EN54 Pt12 2002 & Pt17 2005	EN54 Pt12 2002 & Pt17 2005
Specification		
Operating voltage	18V dc to 30V dc	18V dc to 30V dc
Quiescent current	< 5mA (no LED's illuminated)	< 5mA (no LED's illuminated)
Alarm current	< 9mA	< 9mA
Alignment current	< 18mA	< 18mA
Power up time	10 seconds (approx)	10 seconds (approx)
Operating range	5 to 50 metres	50 to 100 metres
Operating width	15 meters	15 meters
Tolerance to beam misalignment at 35%	Detector ± 0.8°, Prism ± 5.0°	Detector ± 0.8°, Prism ± 5.0°
Fire alarm thresholds	2.50dB (25%) 3.74dB (35%) 6.02dB (50%)	2.50dB (25%) 3.74dB (35%) 6.02dB (50%)
Optical wavelength	880nm	880nm
Environmental		
Operating temperature	-10°C to +55°C	-10°C to +55°C
Humidity (non condensing)	0 to 93% RH	0 to 93% RH
Physical		
Construction	PC/ABS	PC/ABS
Colour	White & black	White & black
Dimensions (H x W x D)	210mm 130mm x 120mm	210mm 130mm x 120mm
Weight	0.8kg	0.8kg
Ingress protection	IP40	IP40
Compatibility		
Suitable for use with	Eaton intelligent addressable fire systems	Eaton intelligent addressable fire systems

Installation

1. Must be fixed to solid structure.
2. Recommended mounting height is 0.3 to 0.6 metres below the ceiling.
3. Cables can be terminated into separate termination box (not supplied) or use purpose designed mounting bracket (MRBFP) ordered separately.
4. Mounting bracket has facilities for glanding of incoming cables plus simple fixing of beam detector.
5. Test filter is supplied with detector to simulate required smoke obscuration level and confirm correct operation.
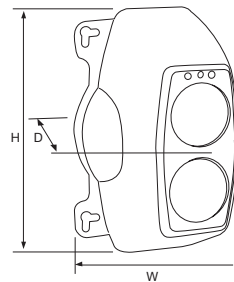
## User interface

Beam detectors status LEDs

- Red LED constantly illuminated indicates fire condition.
- Flashing amber LED indicates fault condition

System functionality

Beam detectors have 3 modes:

1. Prism targeting mode - designed to provide simple initial alignment of beam and reflector assembly
2. Alignment mode - enables accurate fine tuning of beam alignment without the need for additional calibration equipment or a second operator
3. Normal running mode

Dimensions

H (mm)	W (mm)	D (mm)
210	130	120

Standard connections

to beam detector socket

screen connected using suitable terminal in backbox
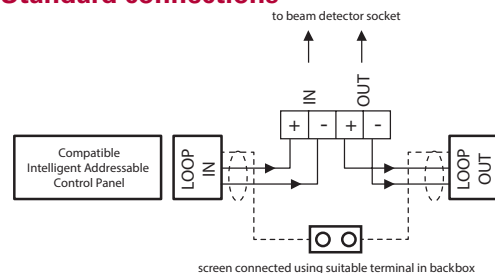
WARNING:
Do NOT use high voltage testers if ANY equipment is connected to the system.

Screen (Earth) must be continuous along entire length of loop.

Catalogue numbers

Description	Code
MAB50R Addressable beam detector (5m - 50m range)	MAB50R
MAB100R Addressable beam detector (50m - 100m range)	MAB100R
Mounting bracket	MRBFP