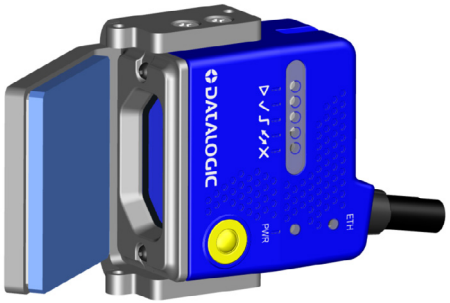
MATRIX 120™ ACCESSORY

MOUNTING INSTRUCTIONS



DATALOGIC

90° Deflection Mirror

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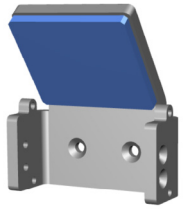
Deflection Mirror



Description	Order number
M120 DEFLECTION MIRROR	93ACC0389

This is an accessory 90° deflection mirror for the Matrix 120 image reader.

MOUNTING THE DEFLECTION MIRROR TO MATRIX 120

The package contains the following materials to mount the Deflection Mirror:

- 1 Deflection Mirror
- 4 screws

To install the mirror on the reader, follow this procedure:

1. Mount the mirror bracket onto the Matrix 120 aligning the bracket and reader mounting holes highlighted in Fig. 1.

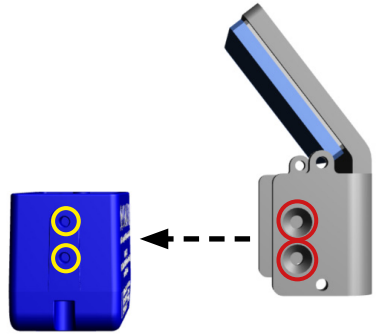


Fig. 1 - Aligning the holes

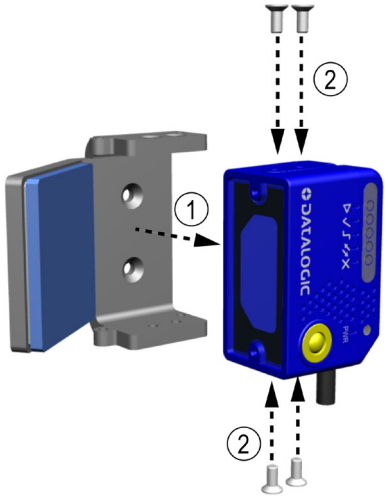


Fig. 2 - Mounting the deflection mirror

2. Insert the four screws and tighten them to fix the mirror bracket on the reader.
3. You can now focus the reader as described in the Product Reference Guide.

4. You can use the two holes highlighted in Fig. 3 to mount the reader and mirror assembly to a flat surface with two M3x8 UNI-7688 screws.

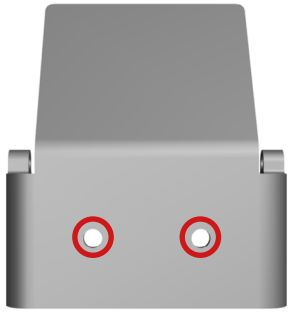


Fig. 3 - Mounting the deflection mirror

NOTE: the spacing between the threaded holes highlighted in Fig. 4 has been designed to mount the mirror to the bracket of a Matrix 210N 21X-0XX (90° reading window model).

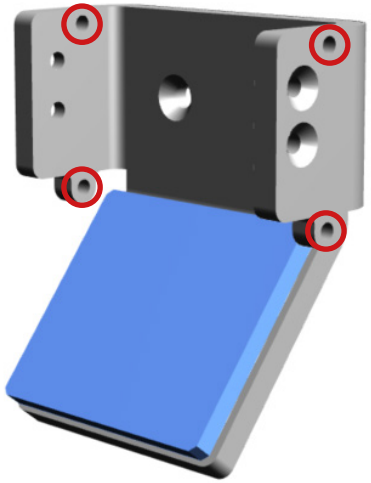
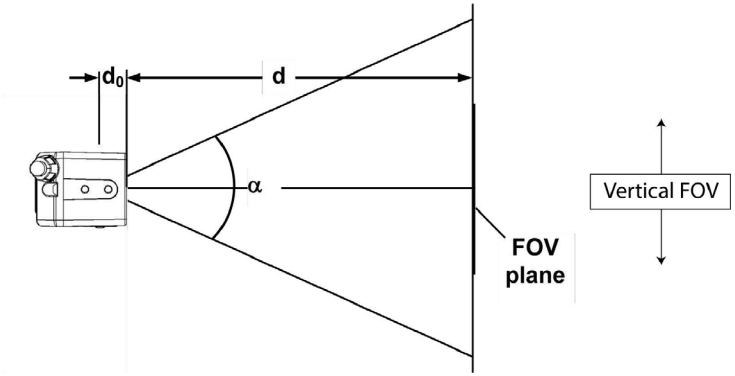


Fig. 4 - Mounting holes

CALCULATING THE READING DISTANCE

Without the deflection mirror, the reading distance *d* is the distance between the exit window and the barcode plane.



The deflection mirror deflects the optical path so that the angle between the optical axis and the regular 90° axis to the barcode plane is β=15°.

The reading distance *d* is calculated as
$d = 1.035*d_1$
where d_1 is the distance between the back plane of the bracket and the barcode plane.

In addition, the offset of the optical axis intercept on the barcode plane to the exit window is d_2 and is calculated as:
$d_2 = 0.27*d_1 + 11.6$

All distances are in mm.

Example (please note that the value in ***bold*** is a variable value):
If d_1 is measured as ***150mm***, then
$d = 1.035*$***150mm*** $\approx$ 158mm
$d_2 = 0.27*$***150mm*** + 11.6mm $\approx$ 52mm