

### 7.7. Setting of reference

This function allows user to set a machine zero point. With this machine zero point users can restore the work coordinates even if the machine is moved when the DRO is in OFF condition. Generally each encoder has reference marks present at every specified interval. These reference marks are used to recall the same datum point every time.

This function works only in ABS mode. If tried to use in INC mode, the DRO is automatically forced to ABS mode and then the function executes.


There are two Positions which can be set as datum point (Home function)

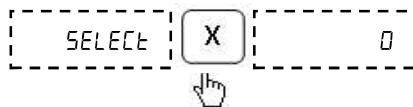
- Reference point of measuring system.
- Machine reference mark.

### 7.7.1. Reference Point

In this function, the Datum is set at the reference mark on the encoder.

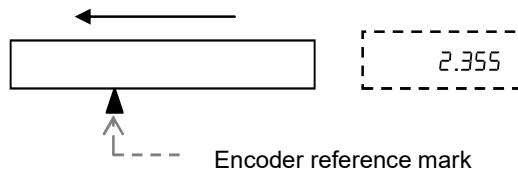


Press  key and select 'Home' mode by pressing Enter key.




Select the corresponding axis for referencing.

Blinking zero next to selected axis will indicate that DRO is now waiting for the encoder reference mark. Move the machine to select the reference mark.



After crossing reference mark DRO will start counting. Your reference is now set.

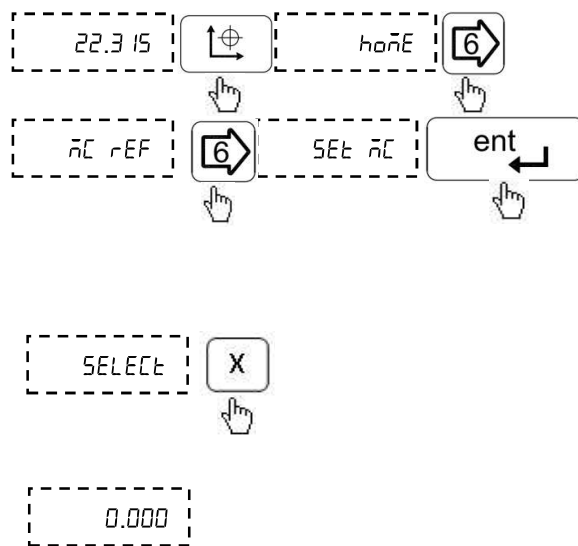
 **Note:** It is highly recommended to mark an indicator on the encoder so as to use the same reference mark while finding the datum point.

### 7.7.2. Machine Reference function

Machine referencing is used when datum is not at the reference mark on encoder but at a fixed distance from reference mark.

#### 7.7.2.1. Setting of Machine Reference


Before setting the machine reference, make sure to perform reference point function as discussed in [Section 7.7.1](#)



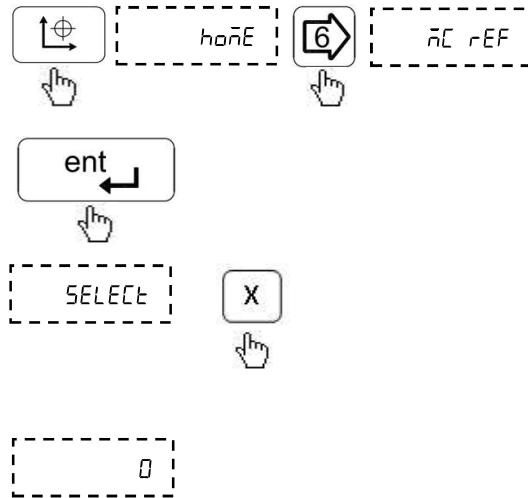
Move the machine to the required machine reference position. Then navigate with left/right arrow key to Set Machine Reference menu and press Enter to confirm the position.

Select the axis for which machine reference is to be set.

Now display will show zero on selected axis. This indicates that selected point is set as machine reference for that axis.

 **Note:** In machine reference function, the absolute datum is at a fixed distance from the reference mark of an encoder. It is marked permanently on the machine

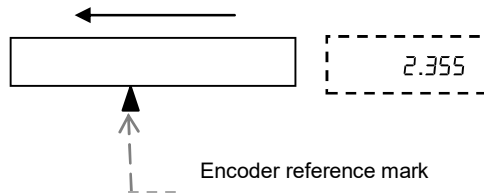
### 7.7.2.2. Recall Machine Reference



Select reference mode and navigate using left / right arrow keys to machine reference menu. Confirm with enter key.

Select axis for which machine reference is to be recalled.

Blinking zero next to selected axis will indicate that DRO is now ready to set reference. Move slide towards reference mark indicator.



After crossing reference mark on encoder DRO will start counting.

This indicates that machine reference is now recalled.