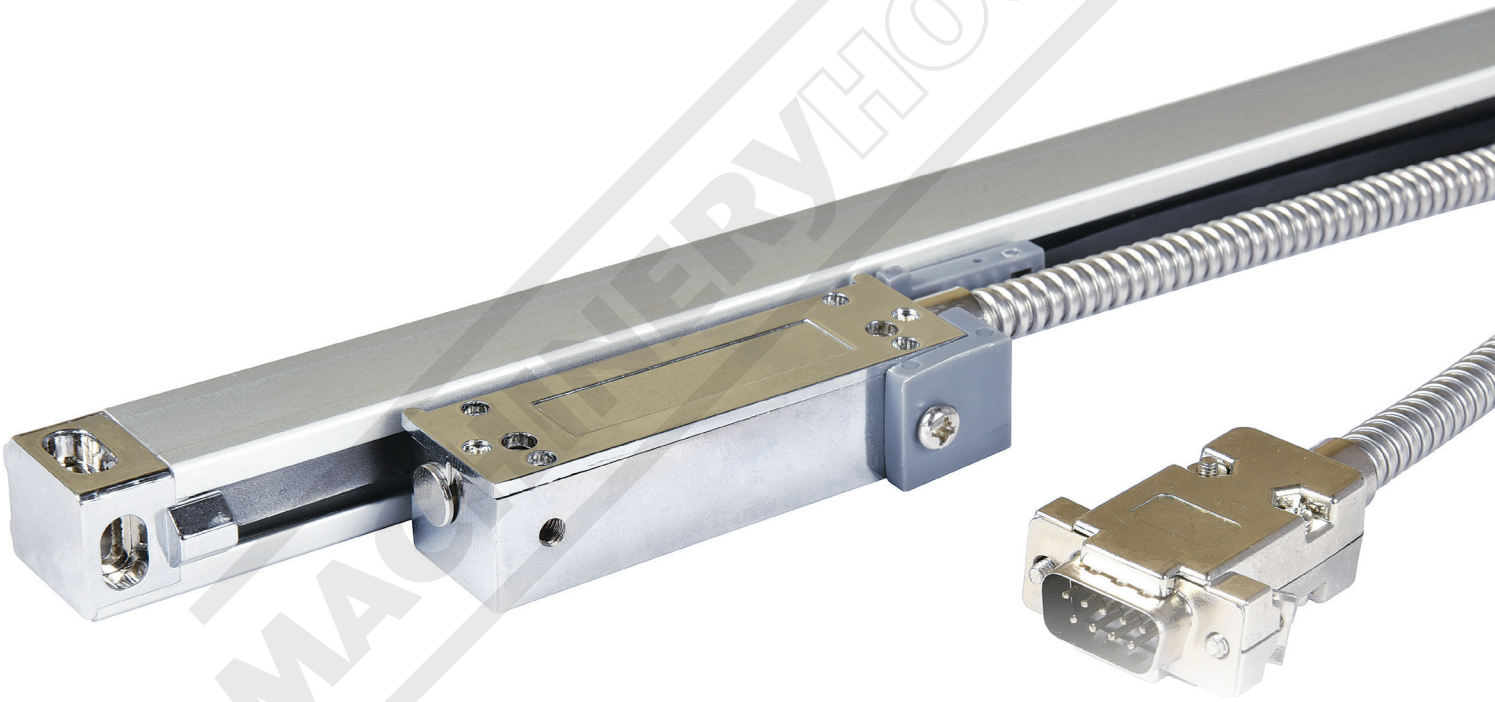
MeasumaX MX

Measuring tools for now and the future

LINEAR SCALES

MX-500 SERIES
MX-300 SERIES
MX-600 SERIES



MACHINERYHOUSE

Installation Instructions

Edition: 1.1

Item Code: Q8510-Q8558

MX www.measumax.com

FITTING THE “X” SCALE ON A MILLING MACHINE

One of the easiest ways to set up an “X” scale on a milling machine, if the side of the table is machined, is to clamp two parallels to the flat table surface that the table travels on and sit the scale on the parallels. Carefully drill and tap the holes to take the screws provided. (Fig. 15)

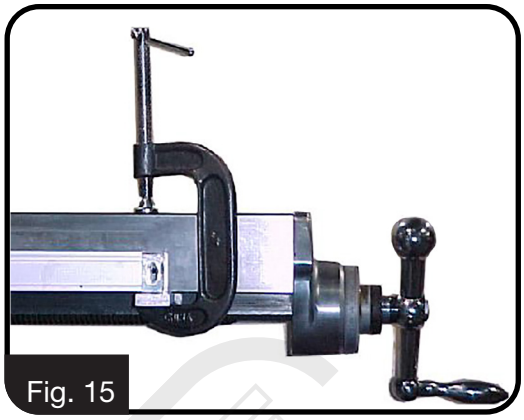


Fig. 15

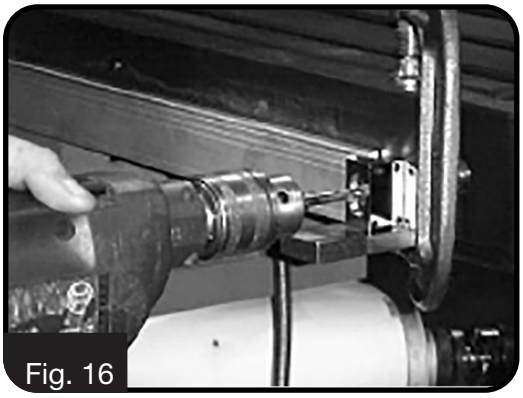


Fig. 16

When the scale is mounted then fix the reader head to the saddle, if necessary packing the head to ensure that it is parallel and in line with the scales. (Remove the grey packing between the reader head and scale which allows for the correct clearance and holds the reader head parallel to the scale.) (Fig. 16)

Mount the cover over the scale, and drill and tap the holes to secure it to the table making sure that there is 3mm clearance between the cover and the scale. (Fig.17)

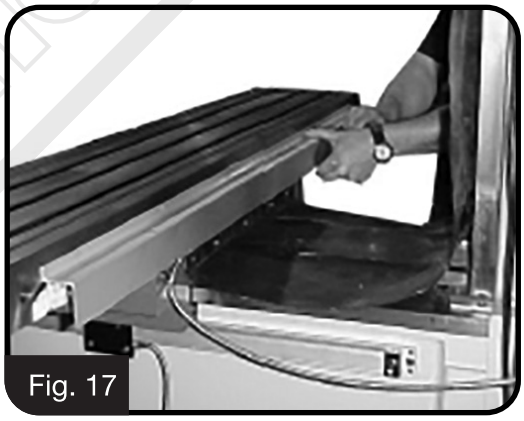


Fig. 17

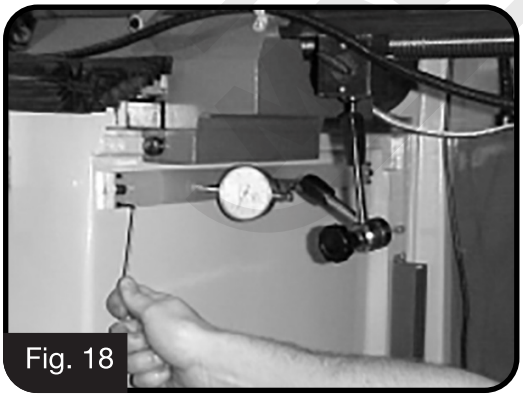


Fig. 18

FITTING THE “Y” AXIS SCALE.

If the surface is not machined, mount the backing plate and use the grub screws to adjust the backing plate, checking with a dial indicator until the scale is square and perpendicular to the machine slides. (Fig. 18)

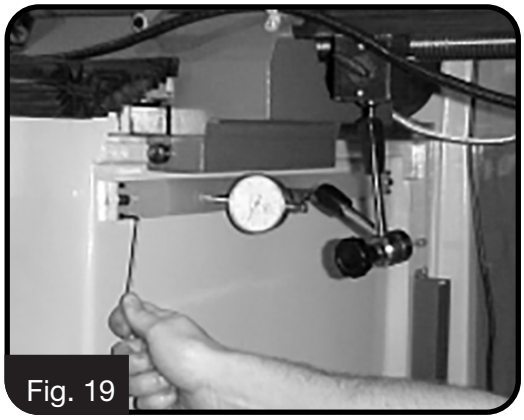


Fig. 19

Mount the scale on the backing plate using the pre-drilled holes, checking that the scale is parallel with the machine slide with a dial indicator. (Fig. 19)

Fig. 20

After the scale is aligned to the axis, then drill and tap the saddle to suit the bracket provided and mount the bracket ensuring that the reader head is sitting correctly so that when the reader head is attached it will be square and parallel to the scale. (Fig. 20)

Mount the bracket on the saddle to take the reader head making sure that the reader head is in line and parallel to the scale. Secure the cable making sure to leave enough free cable to allow for the travel of the slide. (Fig. 21)

Fig. 21

FITTING THE "Z" AXIS SCALE

Before mounting the scale ensure that it will read "+" as you wind the table down, increasing the distance from the table to the cutter

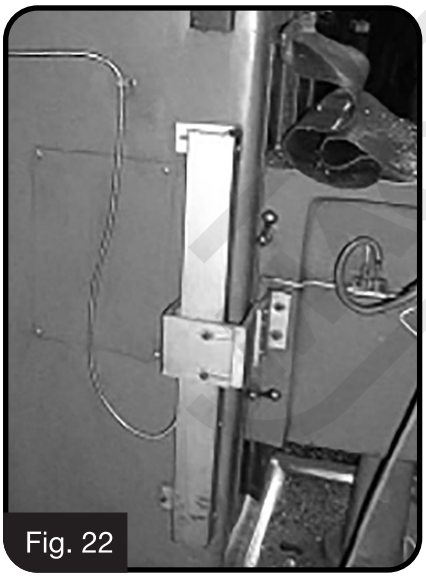


Fig. 22

Fig. 23

Fig. 24

The "Z" axis scale should be installed on the side of the column ensuring that the open side of the scale is away from direct swarf and coolant and that the travel is in the right direction "-" towards the spindle and "+" away from the spindle. The bracket (Fig. 22) is mounted off the knee, and around the scale (Fig 23) to allow for the cover (Fig.24) to protect the scale, where excessive coolant & swarf are present.

LATHE INSTALLATION

To install a readout on a lathe the following tips can be used. To mount the cross slide scale select a flat surface that is suitable and clear of the traveling parts of the lathe.

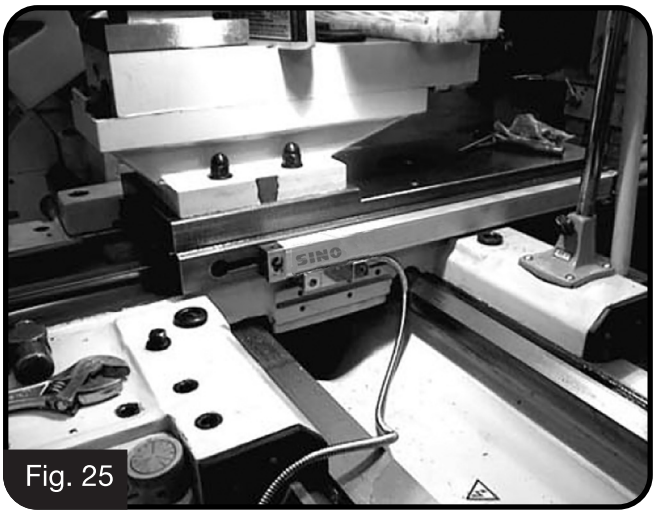


Fig. 25

The scale should be mounted ensuring that it is parallel and square to the slide. (Fig. 25)

Fig. 26

When mounting the reader head if necessary pack the reader head (Fig. 27) so that it travels in line and square to the scale to avoid any damage to the scale. Testing for parallel can be done by either a dial indicator or a precision level. (Fig. 26) The cover must be fitted (Fig. 28)

Fig. 27

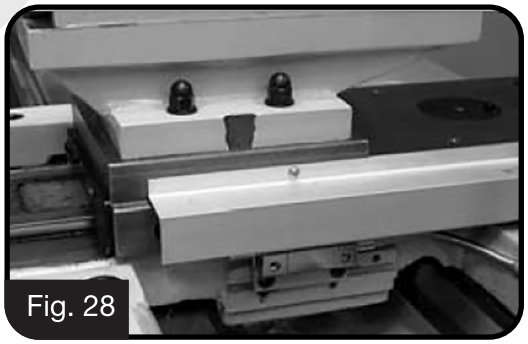


Fig. 28

The longitudinal scale should be mounted on the back of the Lathe (Fig. 29) with the open side of the scale facing down and must be parallel to the bed. The reader head is mounted to the saddle (Fig. 30) via the brackets provided. Some modification may be required for some lathes. Covers should be mounted over the slides. (Fig 30)

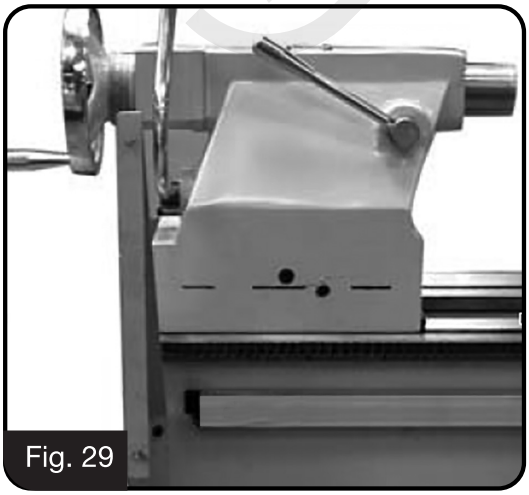


Fig. 29

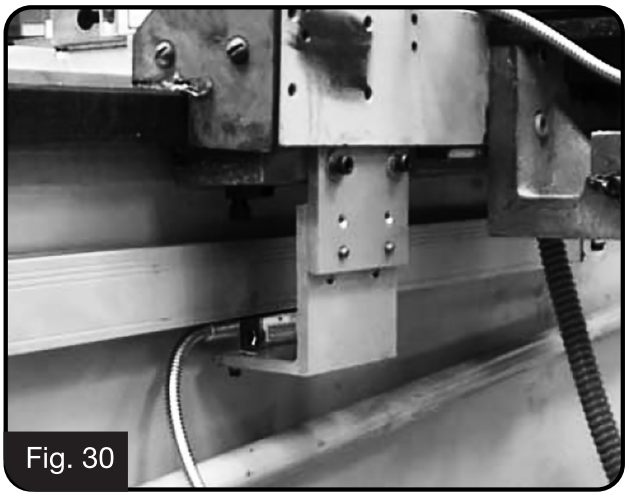
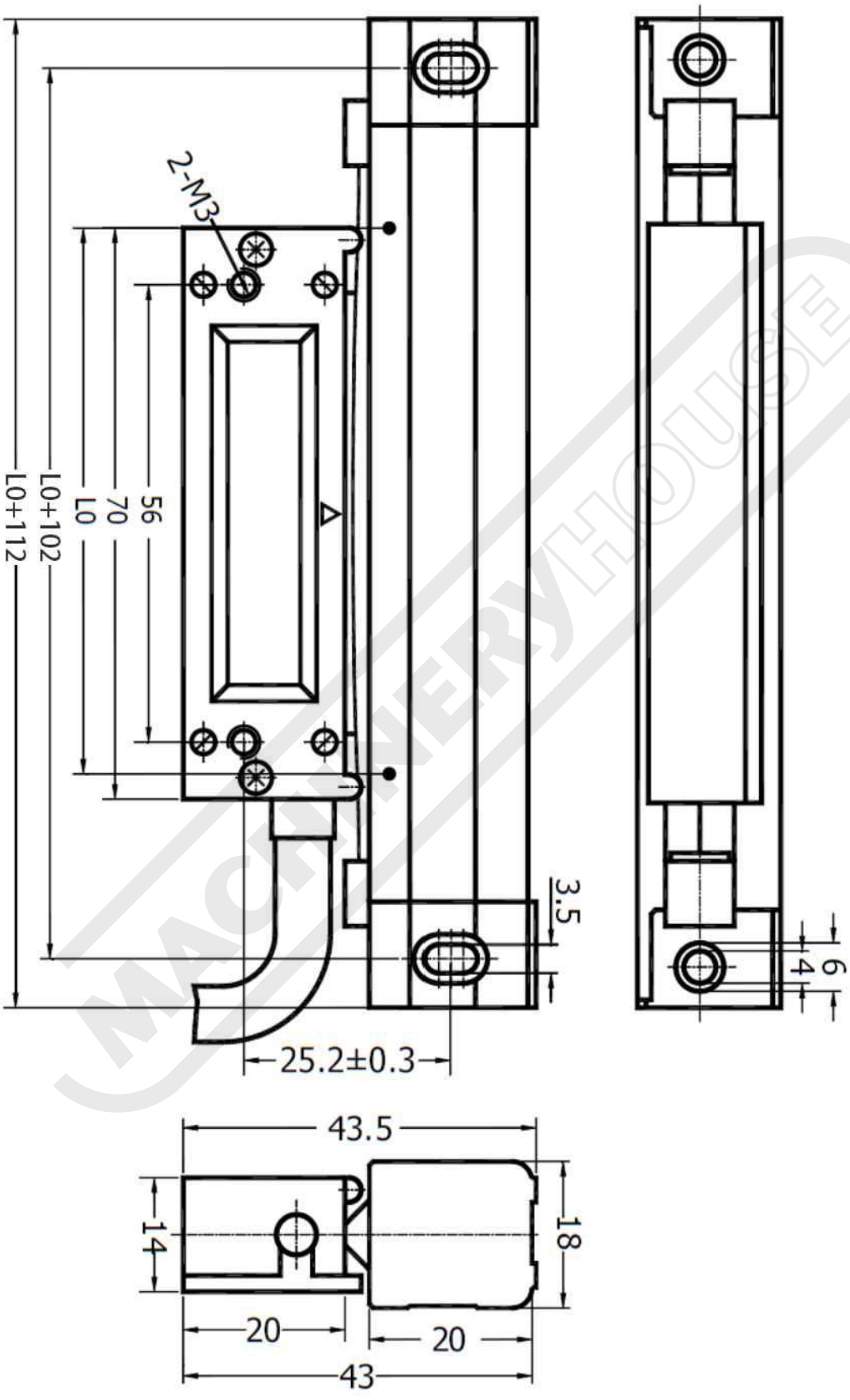


Fig. 30

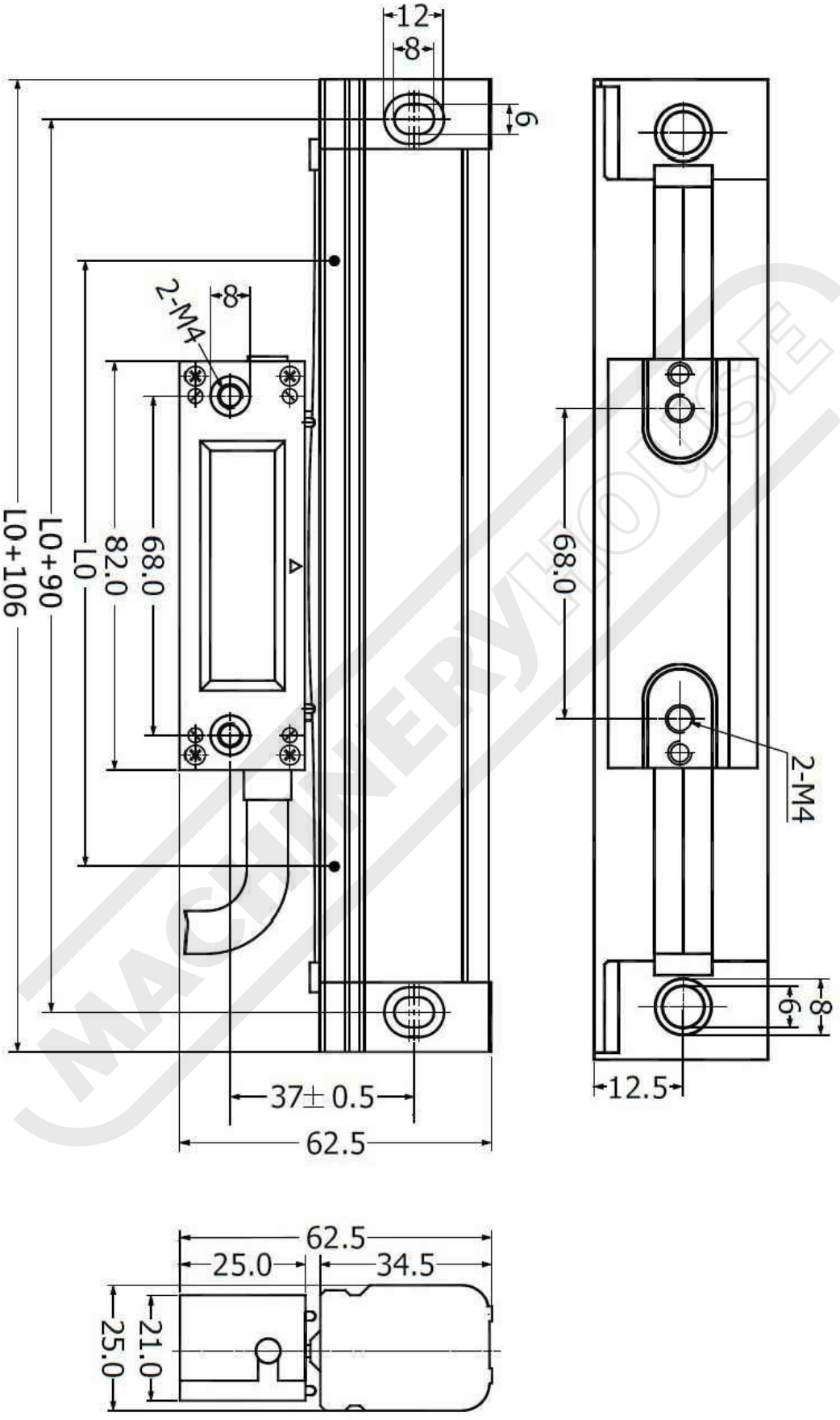
MeasumaX MX

MX-500 Series - COMPACT LINEAR SCALES



L0 = Effective measuring length of scale

MACHINERYHOUSE



L0 = Effective measuring length of scale

MeasumaX MX

MX-300 Series - LINEAR SCALES

MACHINERY HOUSE

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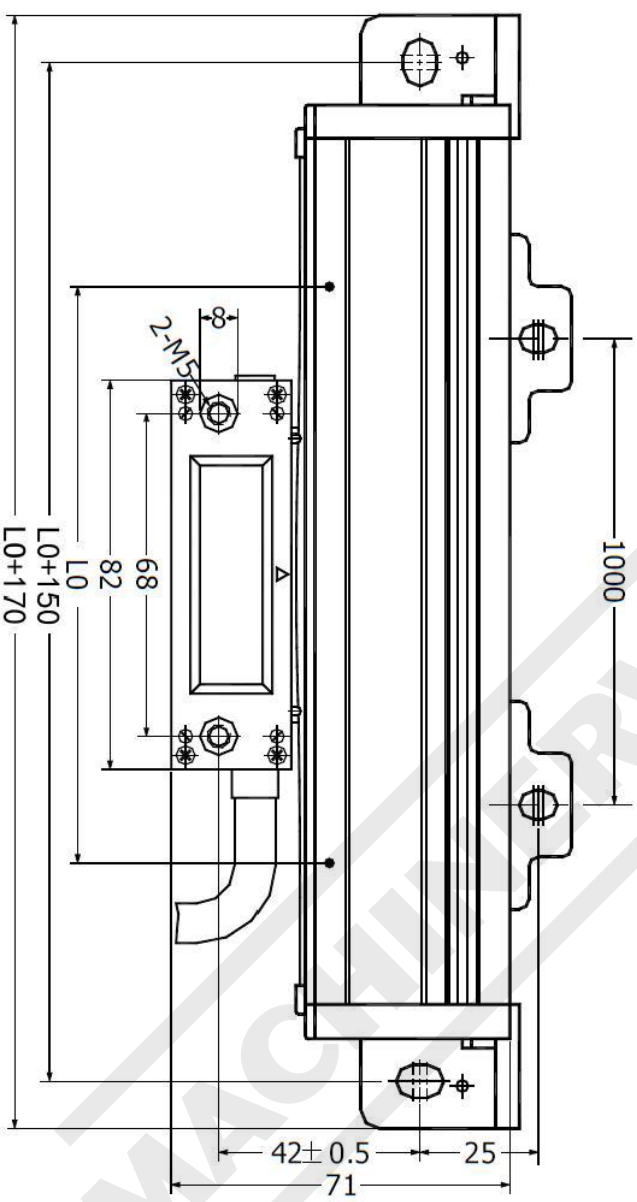
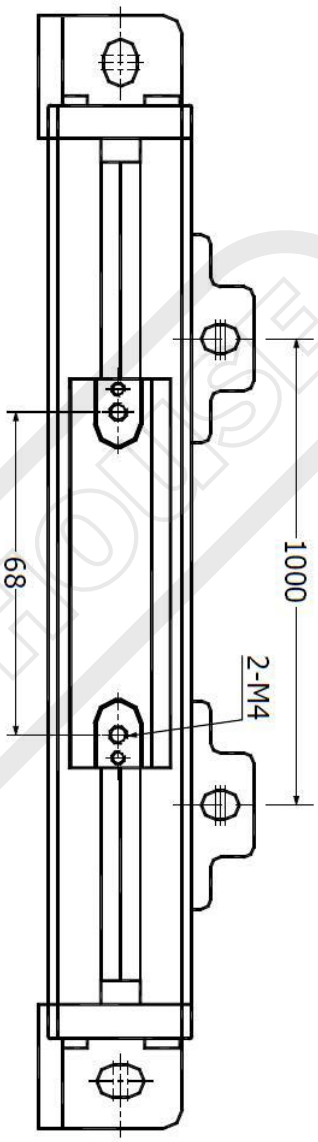
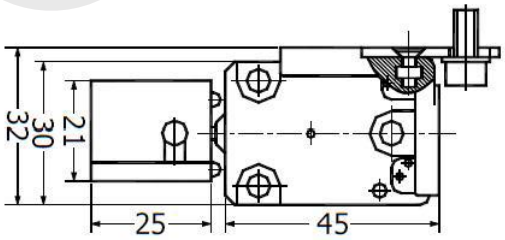
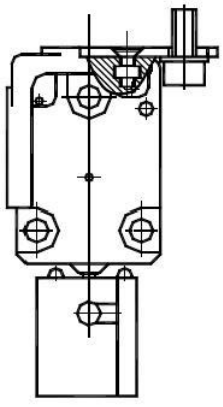
MX-600 Series - LINEAR SCALES



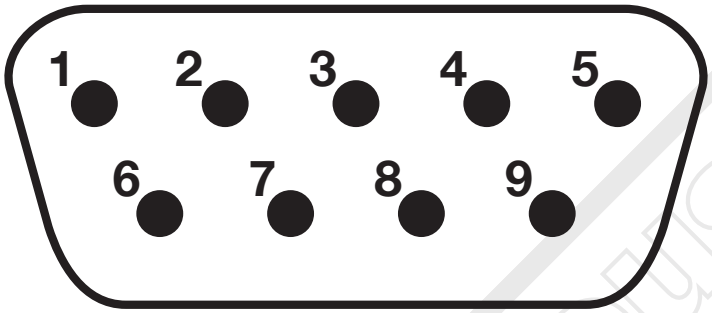






L0 = Effective measuring length of scale

Dsub 9-5V TTL



Pin	TTL	
	Signal	Cable
1	—	—
2	0V	Black
3	—	—
4	—	—
5	—	—
6	A	Yellow
7	5V	Red
8	B	Green
9	R	Brown

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NOTES:

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