

Meister

PRECISION GLASS SCALE
Model MS Series



Rev A, Jan 2005

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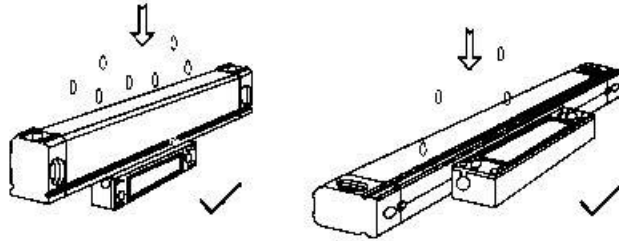
MS linear scale are high accuracy displacement transducers that connect to digital display units to form digital measuring equipments.

1.0 Specifications

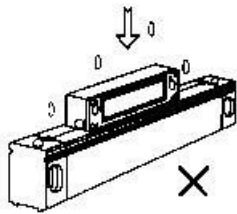
- a) Scale: Precision etched grating glass scales
- b) Grating pitch: 0.02mm (50LP / mm)
- c) Resolution: 5 μ m
- d) Accuracy: ± 0.005 mm or 0.0002 inches (at 20° C and within 1000mm).
ABS reference marks – there are marks at interval of 50mm for 50LP/mm, and the output signal is positive pulse
- e) Measuring Range: 100mm ~ 6000mm
- f) Operating Temperature: 0° C ~ 40° C
- g) Storage Temperature: -20° C ~ 70° C
- h) Response Rate: 60m/min
- i) Input Voltage: 5 Vdc / 12Vdc
- j) Output signals: TTL signal output
 - Two orthogonal square wave signals with the amplitude of 4 – 5 V
 - Two orthogonal square wave signals with the amplitude of 10 – 12V
- k) Cable: 3 meters stainless steel flexible armour sleeving
- l) Type of Connector: MSR 7 Pins or DB-9

2.0 Installation

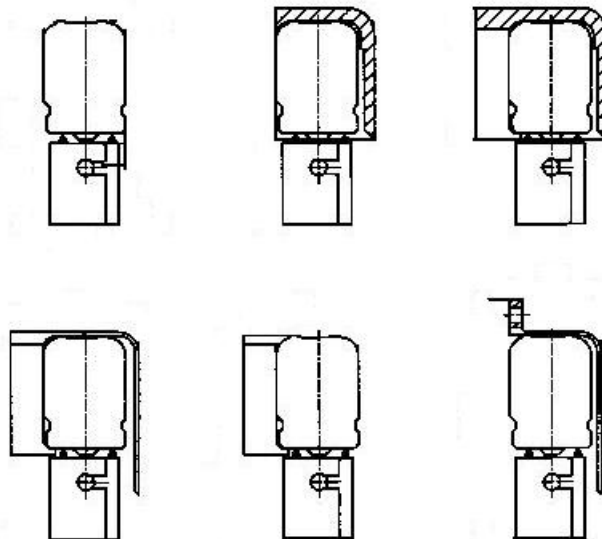
2.1 The following picture shows the correct method of mounting the scales.



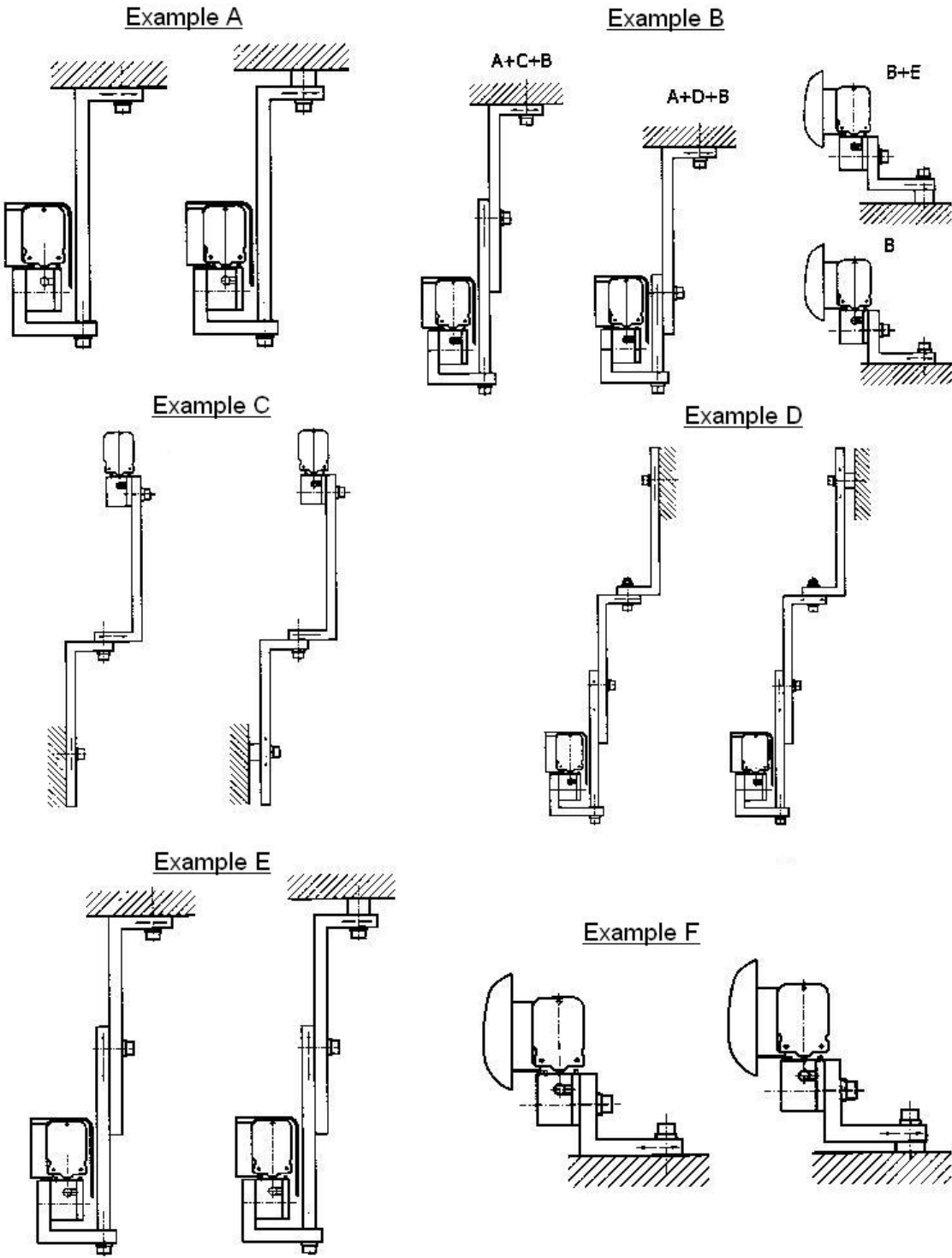
2.2 Do not mount the scale as shown below:



2.3 Provide coolant / chip cover for the scales



Use cover to protect the scale from chip/coolant



Sketches above show methods for mounting the Y-Axis linear glass scale.

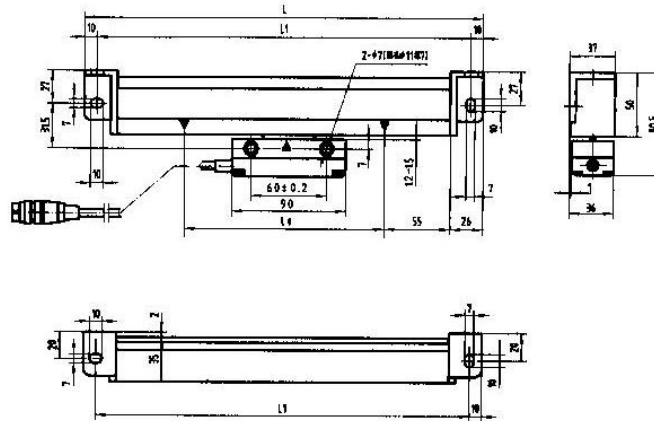
3.0 Maintenance

- 3.1 Always switch off the power when connecting or disconnecting the linear scale plug to the Digital Display box.
- 3.2 Ensure that the scale cable is able to move freely during machining.
- 3.3 Prevent the linear scale from being damaged by coolant or chip by installing a cover over the scale.
- 3.4 Clean the aluminum body of the linear scale daily.

4.0 Scale Dimension

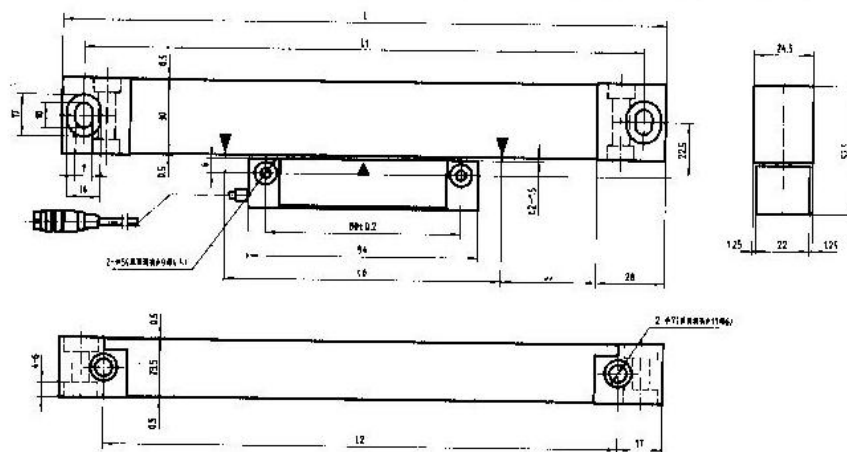
a) Model MS-2

| | |
|------------|-------------------------------------|
| L_0 (mm) | 100 ~ 3000mm |
| L_1 (mm) | $L_1 = L_0 + 2 (55+16) = L_0 + 142$ |
| L (mm) | $L = L_0 + 2 (55+26) = L_0 + 162$ |



b) Model MS-4

| | |
|------------|-------------------------------------|
| L_0 (mm) | 100 ~ 1000mm |
| L_1 (mm) | $L_1 = L_0 + 2 (55+19) = L_0 + 148$ |
| | $L_2 = L_0 + 2 (55+11) = L_0 + 132$ |
| L (mm) | $L = L_0 + 2 (55+28) = L_0 + 166$ |



e) Model MS-7 Linear Scale

| | |
|------------|--------------------------------------|
| L_0 (mm) | 3000~6000mm |
| L_1 (mm) | $L_1 = L_0 + 2 (100+17) = L_0 + 234$ |
| L (mm) | $L = L_0 + 2 (100+25) = L_0 + 250$ |

