

# SONY

## Magnescale®

Feedback scale System for Rolling mills

| Head     | Scale    | Interpolator |
|----------|----------|--------------|
| HA-705LK | MSS-976R | MD50-2N/4N   |

上海迈信诺



- Major Rolling mill manufacturers around the world adopt this system.
- Proven and reliable digital measuring system for use in metal processing environments.
- Feedback control system can be incorporated into custom built equipment racks.
- 2 and 4 axis measuring system
- Magnescale® Technology

# Head Scale HA-705LK MSS-976R

-Excellent vibration resistance and waterproof head, guaranteed high reliability.

## Head : HA-705LK

■ Waterproof performance equivalent to IP67.

■ Structure of excellent vibration resistance and shock resistance.

-Resist bad environment of rolling mill by water proof head developed only for it and excellent against harsh environment Magnescale.

-At tests done by our company, it has shock resistance which is 30 to 50G at acceleration and 110G or more at drop test (under our test condition).

■ Capable of extend with the cable only for it.

-Compliable with cable length up to max.150m

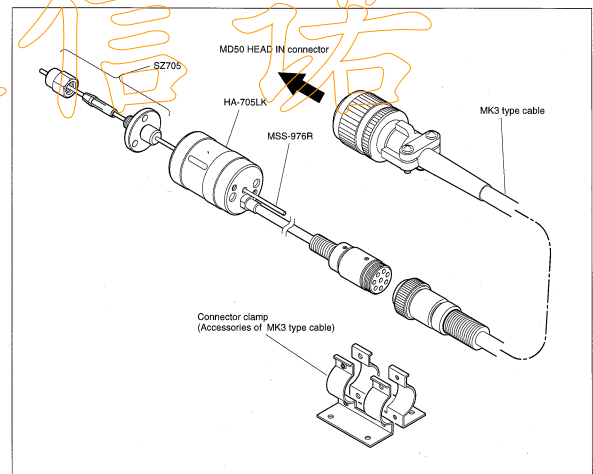
-Use material excellent for waterproof and oilproof

## Scale rod : MSS-976R

■ Accuracy :  $\pm 3\mu\text{m}$

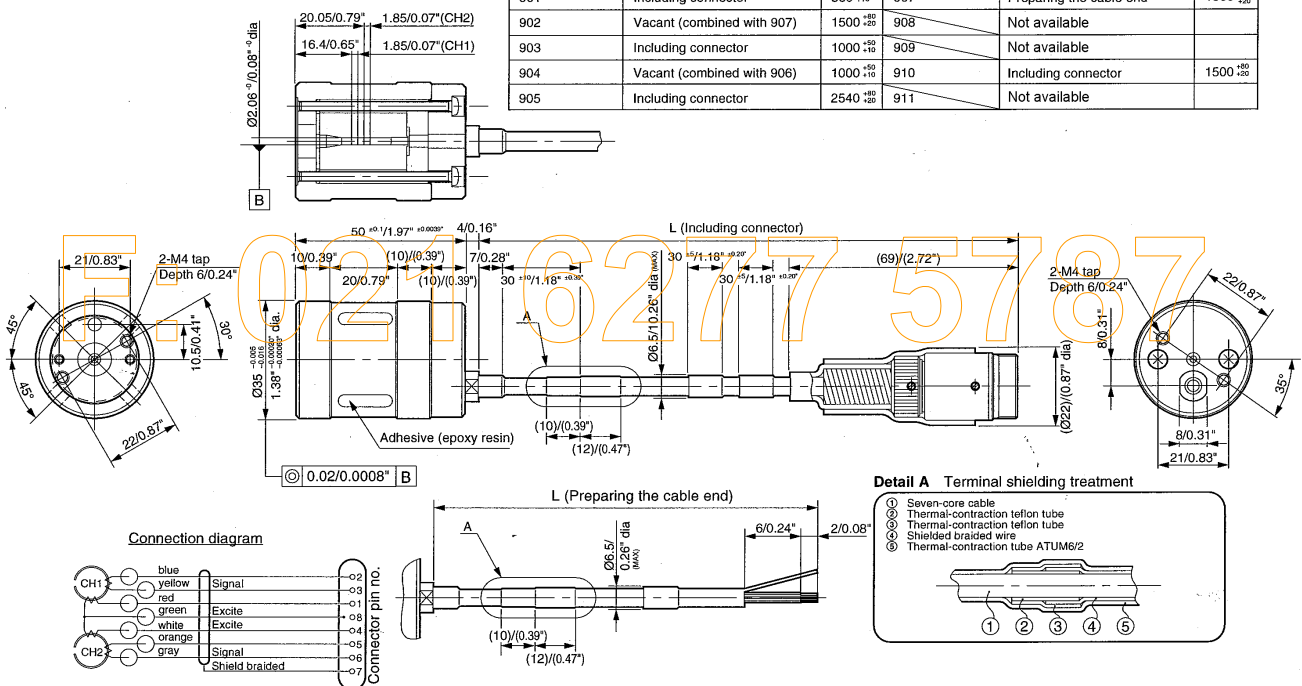
■ Measuring length : 200mm up to 600mm

(Overall length : 30+ML+30 mm)



T: 021 3227 0811

| Special connection model | Cable terminal processing, description | L measurement       | Special connection model | Cable terminal processing, description | L measurement       |
|--------------------------|--|---------------------|--------------------------|--|---------------------|
| Standard                 | Preparing the cable end                | 500 $^{+50}_{-10}$  | 906                      | Preparing the cable end                | 1000 $^{+50}_{-10}$ |
| 901                      | Including connector                    | 560 $^{+50}_{-10}$  | 907                      | Preparing the cable end                | 1500 $^{+50}_{-20}$ |
| 902                      | Vacant (combined with 907)             | 1500 $^{+50}_{-10}$ | 908                      | Not available                          |                     |
| 903                      | Including connector                    | 1000 $^{+50}_{-10}$ | 909                      | Not available                          |                     |
| 904                      | Vacant (combined with 906)             | 1000 $^{+50}_{-10}$ | 910                      | Including connector                    | 1500 $^{+50}_{-30}$ |
| 905                      | Including connector                    | 2540 $^{+50}_{-10}$ | 911                      | Not available                          |                     |



### Insulation resistance and insulation yield strength

There should be DC 250 V over at least 50 m and a one-minute leakage current of 5 mA or less at AC250 V between the coils, coil and head unit, head unit and housing, and shield and head unit.

### Note

The connection section of the thermal-contraction tube ATUM6/2 for the cable does not have a designated location. (This is because the length varies depending on the contraction state.)

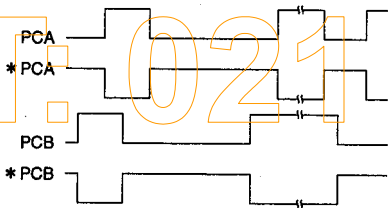
# Interpolator MD50-2N/4N

-High reliability and many functions, it can comply with a variety of equipments.

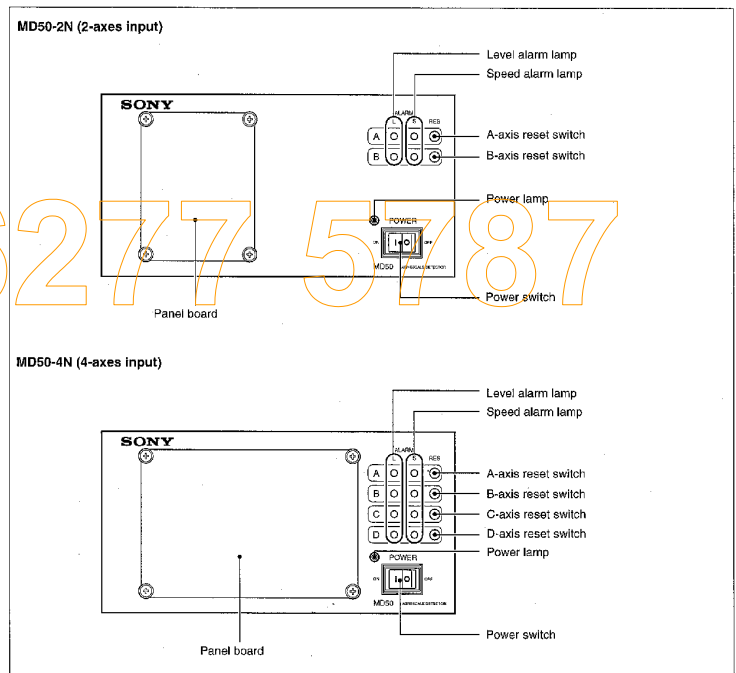
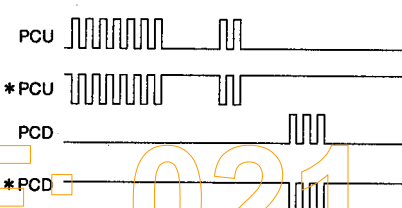


- With max. response speed 100m/min, comply with shocks of rolled material.
- Comply with world-wide power source : AC100 to 240V
- Selectable from 5 kinds of output pulse resolution and 9 kinds of output pulse width  
-Select resolution from 0.5 to 10 $\mu$ m, output pulse width from 0.1 to 4.0 $\mu$ s.
- Can be selected A/B signal or Up/Down signal.
- Selectable of setting 2 kinds and 6ways of alarm output adjusting to user's usages  
-Alarm output can be detected with signal output to controller and with lump of main unit lighting. This makes it monitor deteriorating with age, and it becomes effective means of maintenance.
- Standard equipping A/B signal for monitor or Up/Down signal output.  
-Possible to make A/B signal output as a monitor for maintenance, except signal output to control device.
- Body configuration of capable of inputting up to max.4 axes.  
-Capable of easy maintenance because of adopting card type detector. And, even if only 1 axis is out of order, it can do with the change of only the board, because each axis is independent.

AB Signal



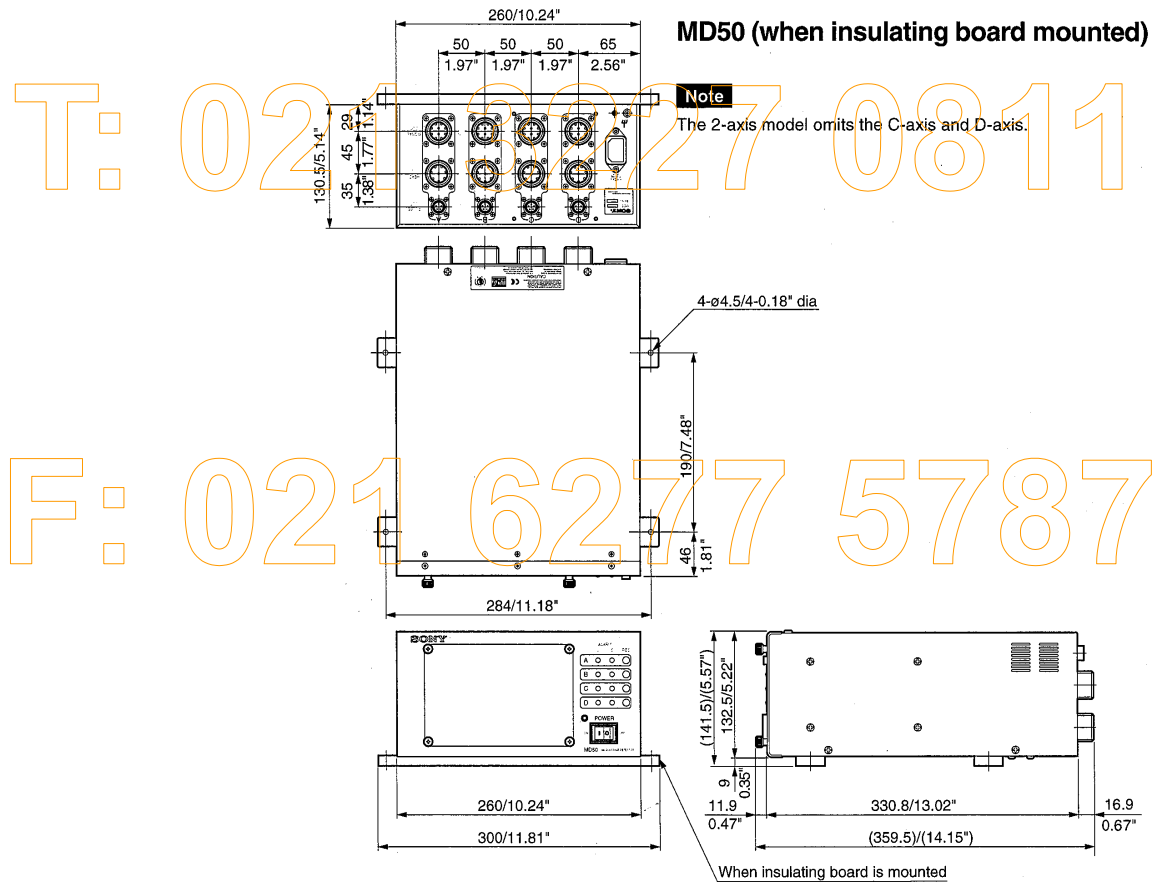
Up / Down Signal



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## ■ Main specifications of MD50

| Model name             | MD50-2N   | MD50-4N       |
|------------------------|---|---------------|
| Input axes             | 2 axes  | 4 axes        |
| Scales to be connected | HA-705LK  |               |
| Resolutions            | 0.5, 1, 2, 5, 10 $\mu$ m (Selectable)   |               |
| Output pulse width     | 0.1, 0.2, 0.4, 0.8, 1.0, 1.6, 2.0, 3.2, 4.0 $\mu$ s (Selectable)  |               |
| Max. response speed    | 100m/min (Depending on the resolution and output pulse width)   |               |
| Main output signal     | A/B signal or Up/Down signal (Selectable), Line driver output (Equivalent to SN75183)   |               |
| Sub output signal      | A/B signal or Up/Down signal (Selectable), Line driver output (Equivalent to SN75183)   |               |
| Synchronous signal     | Output for the stable reception of A/B or Up/Down signals.  |               |
| Alarm functions        | Level alarm : Hi-level signal is output when the scale signal drops be 1.4Vp-p (or 0.6Vp-p) or less.<br>Speed alarm : Hi-level signal is output when the maximum response speed of scale is exceeded. |               |
| Alarm reset functions  | Manual reset operation : Push the RESET switch on the front panel,<br>Reset operation by external signal : Apply a DC voltage between 2 input terminal.   |               |
| Cable length           | Max. 150m (Option : Extension cable : MK3 -30, -50, -100, -120, -135, -150)   |               |
| Operating temperature  | 0 to 40°C   |               |
| Storage temperature    | -20 to 60°C   |               |
| Power consumption      | Max. 70 VA  |               |
| Input power voltage    | 100 to 230V $\pm$ 10% 50/60Hz   |               |
| Dimensions             | 260(W) x 359.5(D) x 141.5(H) mm   |               |
| Mass                   | Approx. 5.8Kg   | Approx. 7.0Kg |
| Applicable standards   | UL3101-1 , FCC Part 15, Subpart B, Class A<br>EMC Directive EN55011 Group 1, Class A<br>EN50082-2 , Low Voltage Directive EN61010-1   |               |



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