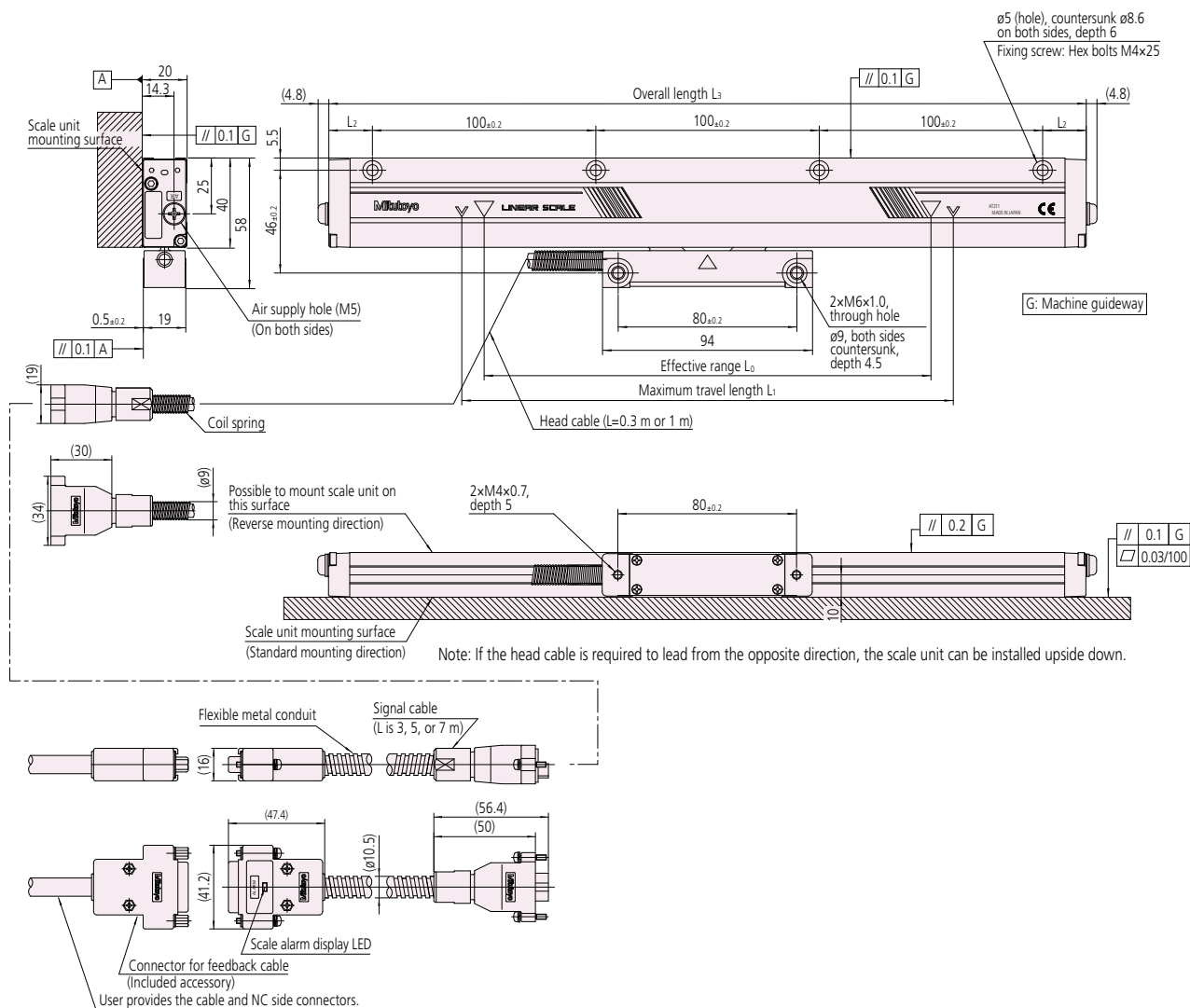


## Mounting dimensions for multi-point fixing type

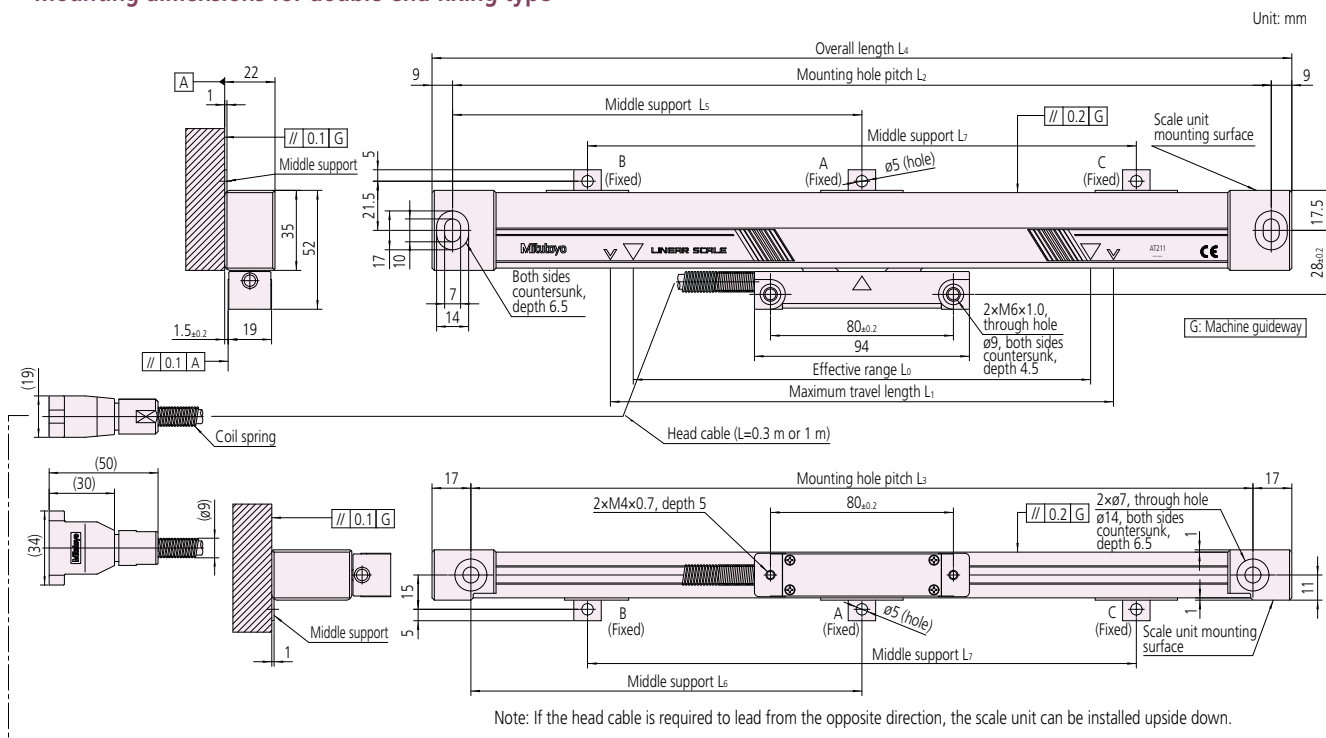
Unit: mm



## Mounting dimensions for multi-point fixing type

| Scale unit  | Effective range $L_0$ (mm) | Maximum travel length $L_1$ (mm) | End surface dimensions $L_2$ (mm) | Overall length $L_3$ (mm) | No. of mounting holes on scale unit (pcs.) |
|-------------|----------------------------|----------------------------------|-----------------------------------|---------------------------|--------------------------------------------|
| AT211- 100A | 100                        | 120                              | 19.5                              | 239                       | 3                                          |
| AT211- 150A | 150                        | 170                              | 44.5                              | 289                       | 3                                          |
| AT211- 200A | 200                        | 220                              | 19.5                              | 339                       | 4                                          |
| AT211- 250A | 250                        | 270                              | 44.5                              | 389                       | 4                                          |
| AT211- 300A | 300                        | 330                              | 24.5                              | 449                       | 5                                          |
| AT211- 350A | 350                        | 380                              | 49.5                              | 499                       | 5                                          |
| AT211- 400A | 400                        | 430                              | 24.5                              | 549                       | 6                                          |
| AT211- 450A | 450                        | 480                              | 49.5                              | 599                       | 6                                          |
| AT211- 500A | 500                        | 540                              | 29.5                              | 659                       | 7                                          |
| AT211- 600A | 600                        | 640                              | 29.5                              | 759                       | 8                                          |
| AT211- 700A | 700                        | 740                              | 29.5                              | 859                       | 9                                          |
| AT211- 750A | 750                        | 780                              | 49.5                              | 899                       | 9                                          |
| AT211- 800A | 800                        | 840                              | 29.5                              | 959                       | 10                                         |
| AT211- 900A | 900                        | 940                              | 29.5                              | 1059                      | 11                                         |
| AT211-1000A | 1000                       | 1040                             | 29.5                              | 1159                      | 12                                         |
| AT211-1100A | 1100                       | 1140                             | 29.5                              | 1259                      | 13                                         |
| AT211-1200A | 1200                       | 1240                             | 29.5                              | 1359                      | 14                                         |
| AT211-1300A | 1300                       | 1340                             | 29.5                              | 1459                      | 15                                         |
| AT211-1400A | 1400                       | 1440                             | 29.5                              | 1559                      | 16                                         |
| AT211-1500A | 1500                       | 1540                             | 29.5                              | 1659                      | 17                                         |

## Mounting dimensions for double-end fixing type



## Mounting dimensions for double-end fixing type

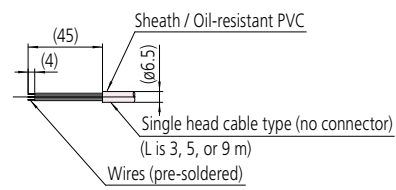
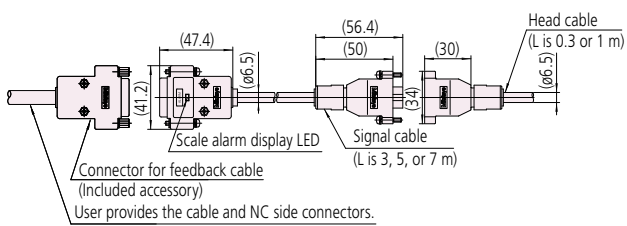
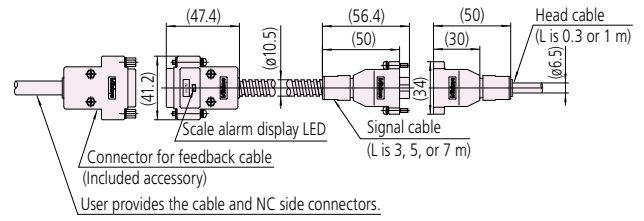
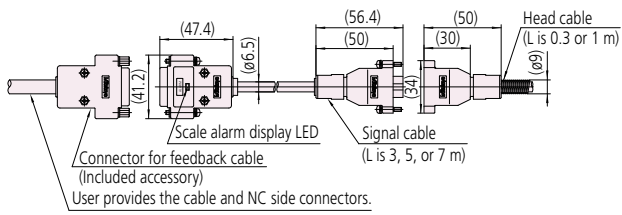
| Scale unit  | Effective range $L_0$ (mm) | Maximum travel length $L_1$ (mm) | Mounting hole pitch (mm) |       | Overall length $L_4$ (mm) | Middle support (mm) |       |       |
|-------------|----------------------------|----------------------------------|--------------------------|-------|---------------------------|---------------------|-------|-------|
|             |                            |                                  | $L_2$                    | $L_3$ |                           | $L_5$               | $L_6$ | $L_7$ |
| AT211- 100B | 100                        | 120                              | 258                      | 242   | 276                       | —                   | —     | —     |
| AT211- 150B | 150                        | 170                              | 308                      | 292   | 326                       |                     |       |       |
| AT211- 200B | 200                        | 220                              | 358                      | 342   | 376                       |                     |       |       |
| AT211- 250B | 250                        | 270                              | 408                      | 392   | 426                       |                     |       |       |
| AT211- 300B | 300                        | 330                              | 468                      | 452   | 486                       |                     |       |       |
| AT211- 350B | 350                        | 380                              | 518                      | 502   | 536                       |                     |       |       |
| AT211- 400B | 400                        | 430                              | 568                      | 552   | 586                       |                     |       |       |
| AT211- 450B | 450                        | 480                              | 618                      | 602   | 636                       |                     |       |       |
| AT211- 500B | 500                        | 540                              | 678                      | 662   | 696                       | 339                 | 331   |       |
| AT211- 600B | 600                        | 640                              | 778                      | 762   | 796                       | 389                 | 381   |       |
| AT211- 700B | 700                        | 740                              | 878                      | 862   | 896                       | 439                 | 431   | —     |
| AT211- 750B | 750                        | 780                              | 918                      | 902   | 936                       | 459                 | 451   |       |
| AT211- 800B | 800                        | 840                              | 978                      | 962   | 996                       | 489                 | 481   |       |
| AT211- 900B | 900                        | 940                              | 1078                     | 1062  | 1096                      | 539                 | 531   |       |
| AT211-1000B | 1000                       | 1040                             | 1178                     | 1162  | 1196                      | 589                 | 581   |       |
| AT211-1100B | 1100                       | 1140                             | 1278                     | 1262  | 1296                      | —                   | —     | 430   |
| AT211-1200B | 1200                       | 1240                             | 1378                     | 1362  | 1396                      |                     |       | 460   |
| AT211-1300B | 1300                       | 1340                             | 1478                     | 1462  | 1496                      |                     |       | 490   |
| AT211-1400B | 1400                       | 1440                             | 1578                     | 1562  | 1596                      |                     |       | 530   |
| AT211-1500B | 1500                       | 1540                             | 1678                     | 1662  | 1696                      |                     |       | 560   |

• The number of middle supports attached depends on the effective range.

| Effective range (mm) | Middle support  |
|----------------------|-----------------|
| 500 - 1000           | A (1 place)     |
| 1100 - 1500          | B, C (2 places) |

## Cable pattern

Unit: mm



# Specification Selection Method

- There is an extensive selection of specifications for the **AT211**.
  - Choose the appropriate numbers and letters below according to specification required.
- If you don't have a specification in mind, choose the option with the ●.
- Note: For special applications not shown in the specifications, please contact us.  
Additionally, we are also able to meet the 1 Vpp Sinusoidal signal output specification. Special specification code is Z. (Except effective range)

## Meaning of Model No.

AT211 -          -    -   

### Effective range list

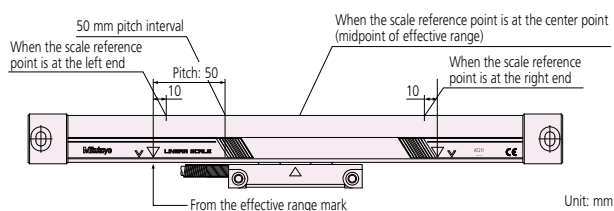
| Code | Effective range (mm) | Code | Effective range (mm) | Code | Effective range (mm) |
|------|----------------------|------|----------------------|------|----------------------|
| 0100 | 100                  | 0450 | 450                  | 1000 | 1000                 |
| 0150 | 150                  | 0500 | 500                  | 1100 | 1100                 |
| 0200 | 200                  | 0600 | 600                  | 1200 | 1200                 |
| 0250 | 250                  | 0700 | 700                  | 1300 | 1300                 |
| 0300 | 300                  | 0750 | 750                  | 1400 | 1400                 |
| 0350 | 350                  | 0800 | 800                  | 1500 | 1500                 |
| 0400 | 400                  | 0900 | 900                  |      |                      |

### Mounting method

| Code |                    |
|------|--------------------|
| A    | Multi-point fixing |
| B    | Double-end fixing  |

### Scale reference point

| Code |              |
|------|--------------|
| ● 1  | 50 mm pitch  |
| 2    | Center point |
| 3    | Left end     |
| 4    | Right end    |



### Accuracy (20 °C)

| Code |                               |
|------|-------------------------------|
| ● 5  | $(3 + 3L_0/1000) \mu\text{m}$ |
| H    | $(2 + 2L_0/1000) \mu\text{m}$ |

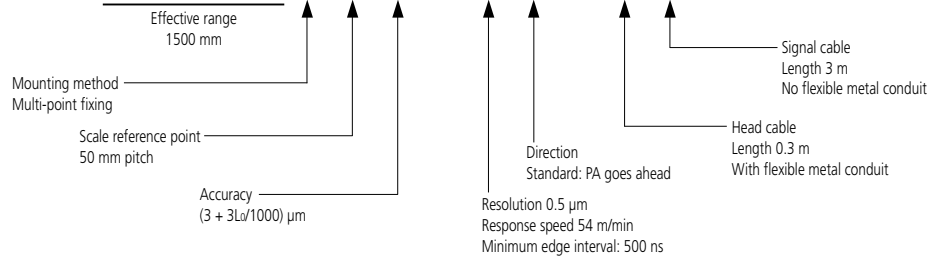
Note 1:  $L_0$  is the effective range (mm).  
Note 2: Type H is used for effective ranges of 500 mm or less.

### Specification combination table (resolution, response speed, and minimum edge interval)

| Resolution ( $\mu\text{m}$ ) \ Minimum edge interval (ns)* | 125     | 250       | 333     | 500     | 1000    |
|------------------------------------------------------------|---------|-----------|---------|---------|---------|
| 0.1                                                        | A: 710  | B: 360    | C: 260  | D: 180  | E: 90   |
| 0.2                                                        | F: 1400 | G: 710    | H: 530  | J: 360  | K: 180  |
| 0.5                                                        | L: 2000 | M: 1800   | N: 1300 | P: 900  | Q: 450  |
| 1.0                                                        | —       | ● R: 2000 | S: 2000 | T: 1800 | U: 900  |
| 2.5                                                        | —       | —         | —       | W: 2000 | X: 2000 |
| 5.0                                                        | —       | —         | —       | —       | Y: 2000 |

\* Codes A to Y show the maximum response speed in m/min, values in ( ) are mm/s.  
Note: The minimum edge interval varies 0 to -10% based on the operating environmental conditions.

# (Example) AT211 - 1 5 0 0 A 1 S - P 1 - A B

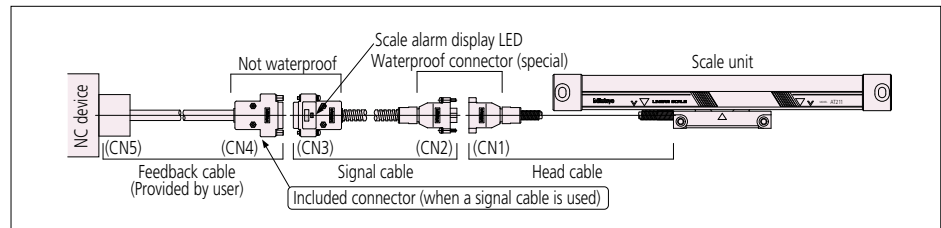


## Signal cable

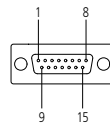
| Code        | Length (L)      | Flexible metal conduit*1 |
|-------------|-----------------|--------------------------|
| <b>A</b>    | 3 m             | Yes                      |
| <b>B</b>    | 3 m             | No                       |
| <b>C</b>    | 5 m             | Yes                      |
| <b>D</b>    | 5 m             | No                       |
| <b>E</b>    | 7 m             | Yes                      |
| <b>F</b>    | 7 m             | No                       |
| <b>G</b> *2 | 3 m             | No                       |
| <b>H</b> *2 | 5 m             | No                       |
| <b>J</b> *2 | 7 m             | No                       |
| <b>X</b>    | No signal cable |                          |

\*1 The cable is enclosed in a flexible metal conduit or else is PVC sheathed.

\*2 The connector (CN3) for signal cables G, H, and J are half-pitch connectors.



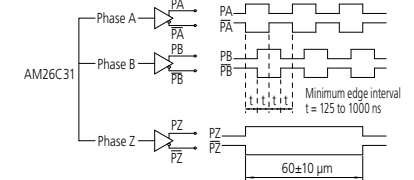
## Connector for signal cable (CN3) (pin type)



| Pin No.  | Signal | Pin No. | Signal   |
|----------|--------|---------|----------|
| 1, 2, 13 | 0 V    | 8       | PB       |
| 3, 4, 11 | +5 V   | 9       | PZ       |
| 5        | PA     | 10      | PZ       |
| 6        | PA     | 12, 14  | Not used |
| 7        | PB     | 15      | F.G      |

Applicable connector (CN4):  
HDAB-15S (Hirose Electric or equivalent product (D-sub series) may be used)

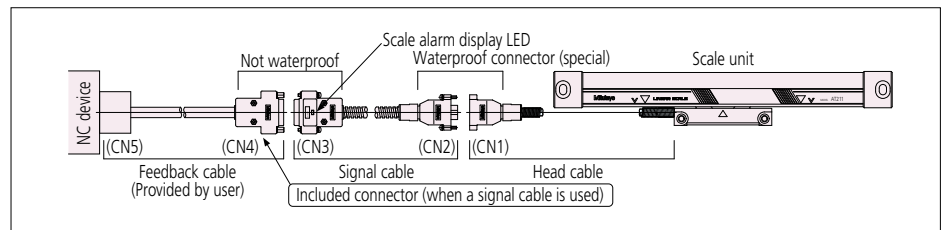
## Output circuit specification



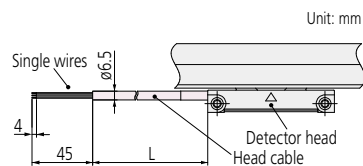
## Head cable

| Code     | Length (L) | Flexible metal conduit | Connector (CN1)    |
|----------|------------|------------------------|--------------------|
| <b>A</b> | 0.3 m      | Yes                    | Special waterproof |
| <b>B</b> | 0.3 m      | No                     | Special waterproof |
| <b>C</b> | 1 m        | No                     | Special waterproof |
| <b>D</b> | 3 m        | No                     | No                 |
| <b>E</b> | 4 m        |                        |                    |
| <b>F</b> | 5 m        |                        |                    |
| <b>H</b> | 7 m        |                        |                    |
| <b>J</b> | 8 m        |                        |                    |
| <b>K</b> | 9 m        |                        |                    |

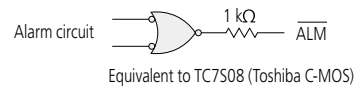
Note: The cable is enclosed in a flexible metal conduit or else is PVC sheathed.



## Single head cable type (no connector)



## ALM signal for single head cable type (no connector)



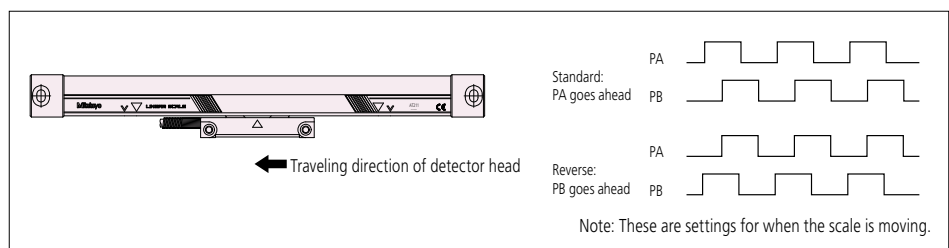
Equivalent to TC7S08 (Toshiba C-MOS)

High  
Low (when alarm occurs)

| Wire color   | Signal | Wire color | Signal |
|--------------|--------|------------|--------|
| White, black | 0 V    | Blue       | PB     |
| Brown, red   | +5 V   | Purple     | PZ     |
| Orange       | PA     | Gray       | PZ     |
| Yellow       | PA     | Pink       | ALM    |
| Green        | PB     |            |        |

## Direction

| Code     |                         |
|----------|-------------------------|
| <b>1</b> | Standard: PA goes ahead |
| <b>2</b> | Reverse: PB goes ahead  |



Note: These are settings for when the scale is moving.