

**IPX6:  
For Use under  
the Harshest  
Conditions**

The instrument is waterproof:  
protection class **IPX6**.  
A gas-filled objective lens  
compartment prevents moisture  
condensation on the lenses.

**Automatic Compensator**

This newly-developed automatic  
compensator is wire suspended  
and magnetically damped.

The Pentax  
Automatic Level AL  
is impressively  
equipped and  
applicable in many  
areas of surveying



# Automatic Level

*AL Series AL-240 / AL-240R / AL-270 / AL-270R /  
AL-320 / AL-320R / AL-320S*

## High Performance



## Pentax AL Series Levels are Robust Precision instruments for Surveying and Construction

### High Performance for a Wide Range of Applications

The AL-series automatic levels are accurate and easy to use. They feature improved performance and are compact and light.

### Short focus distance

The AL-240 and AL-270 provide an extremely short focus distance of 12 inch (30 cm), allowing usage in confined space.

### Quality 'Designed by Pentax'

- ❑ Superior optics in terms of sharpness, contrast and range.
- ❑ High Resolution Telescope: bright images and high resolving power enable clear targeting.
- ❑ Compact, Watertight IPX6 and Robust (only high-grade materials are used).

### Useful accessories

The AL-series Levels offer a wide variety of optional accessories to match different job conditions.

- ❑ **Parallel Micrometer (SM4)**  
Parallel plate micrometer SM4 attached to the front of the telescope provides reading down to 0.1mm.
- ❑ **Diagonal eyepieces (SBL2)**  
The diagonal eyepiece SBL2 can be used when space is limited or when the instrument is low.
- ❑ **Illumination device (EP2)**  
The illumination device EP2, attached to the front of the telescope, provides light to the telescope reticle, allowing operation at night or when working in dark places like a tunnel.

## Technical specifications

| AL-Series                            | AL-240        | AL-240R | AL-270   | AL-270R       | AL-320   | AL-320R | AL-320S |
|--------------------------------------|---------------|---------|----------|---------------|----------|---------|---------|
| <b>Telescope</b>                     |               |         |          |               |          |         |         |
| <b>Image</b>                         | Erect         |         |          |               |          |         |         |
| <b>Magnification</b>                 | 24 x          |         | 27 x     |               | 32 x     |         |         |
| <b>Objective aperture</b>            | 36 mm         |         | 40 mm    |               | 45 mm    |         |         |
| <b>Resolving power</b>               | 3.5"          |         | 3"       |               | 2.5"     |         |         |
| <b>Field of view</b>                 | 2.5 % (1°26') |         |          | 2.3 % (1°20') |          |         |         |
| <b>Minimum focus distance</b>        | 0.3 m/12'     |         |          | 0.5 m/20'     |          |         |         |
| <b>Stadia ratio</b>                  | 1:100         |         |          |               |          |         |         |
| <b>Stadia constant</b>               | 0             |         |          |               |          |         |         |
| <b>Automatic compensator</b>         |               |         |          |               |          |         |         |
| <b>Compensation range</b>            | ± 12'         |         |          |               |          |         |         |
| <b>Setting accuracy</b>              | ± 0.5"        |         |          | ± 0.3"        |          |         |         |
| <b>Standard deviation*</b>           | ± 2.0 mm      |         | ± 1.5 mm |               | ± 0.8 mm |         |         |
| <b>(1 km double run levelling)**</b> | -             |         | -        |               | ± 0.4 mm |         |         |

| AL-Series                     | AL-240                | AL-240R   | AL-270   | AL-270R   | AL-320   | AL-320R   | AL-320S  |
|-------------------------------|-----------------------|-----------|----------|-----------|----------|-----------|----------|
| <b>Sensitivity of vial</b>    |                       |           |          |           |          |           |          |
| <b>Circular vial</b>          | 8' / 2 mm             |           |          |           |          |           |          |
| <b>Horizontal circle</b>      | Metal                 |           |          |           |          |           | Glass    |
| <b>Diameter</b>               | 96 mm                 |           |          |           |          |           | 88 mm    |
| <b>Graduation</b>             | 1°/1G(360° or 400G)   |           |          |           |          |           | 10°/10c  |
| <b>Estimation</b>             | 0.1° / 0.1G           |           |          |           |          |           | 1°/1c    |
| <b>Levelling base</b>         | 3 screws              | Spherical | 3 screws | Spherical | 3 screws | Spherical | 3 screws |
| <b>Dimensions and weights</b> |                       |           |          |           |          |           |          |
| <b>Length</b>                 | 219 mm                |           |          | 247 mm    |          |           |          |
| <b>Width</b>                  | 147 mm                |           |          |           |          |           |          |
| <b>Height</b>                 | 133 mm                | 137 mm    | 133 mm   | 137 mm    | 137 mm   | 141 mm    | 137 mm   |
| <b>Weight (kg/lbs)</b>        | 1.6/3.5               | 1.8/3.9   | 1.6/3.5  | 1.8/3.9   | 1.8/3.9  | 2.0/4.4   | 2.0/4.4  |
| <b>Carrying case (mm)</b>     | L364 x W200 x H180 mm |           |          |           |          |           |          |



### Standard configuration

- ❑ Instrument
- ❑ Objective cap
- ❑ Plumb bob
- ❑ Hexagonal wrench
- ❑ Lens brush
- ❑ Rain cover
- ❑ Silicon cloth
- ❑ Instruction manual
- ❑ Carrying case

