



suparule

Suparule Cable height meters:

Accuracy & Resolution



Accuracy.

The accuracy specification contains two elements, a percentage specification (0.5%) and a Number of digits specification (+2d).

Taking each separately:

The percentage specification specifies the tolerance on the measurement. If the actual distance being measured is 5m, then with a tolerance of $\pm 0.5\%$, the CHM will give a reading in between $5\text{m} - 0.5\%$ and $5\text{m} + 0.5\%$. Therefore, the reading will be between 4.975m and 5.025m.

The Number of Digits specification is an extra tolerance on the display reading. The specification of +2d (+2 digits) means that the reading tolerance is further increased by two increments of the least significant digit, which is the small digit on the right hand side of the display reading. For readings below 10m, this digit increment in steps of 5, i.e. it displays either 0 or 5. Because it is the third digit after the decimal point, each increment represents 5 mm. The +2d specification therefore means that a further $\pm 10\text{mm}$ can be added to the display reading.

Therefore, going back to the original example of measuring a distance of 5m, the CHM reading would be between 4.965m and 5.035m

Resolution.

The Resolution specification specifies the minimum increment on the CHM display. Below 10m, the minimum increment is 5mm (the right most digit will display either 0 or 5). So values of 4.170, 4.175, 4.180 are possible.

Above 10 meters, the minimum increment is 10mm. Therefore, in this range, readings such as the following are possible 11.170, 11.180, 11.190.