

Accuracy is one of the most important specifications for a measurement and calibration instrument.

Traditionally accuracy is represented either as a fixed value in a standard measurement unit or as a percentage of the range of the measuring instrument. The most common terms used are “percentage of full scale value” (% of FS) and “percentage of reading” (% of rdg) accuracies.

% of FS accuracies are constant through the range of the instrument. This means that accuracy is constant across the measuring range.

% of rdg accuracies are linear through the range of the instrument. This means that that the uncertainty in measurement increases as we go up in the range.

Intelliscale (IS) Accuracy

Intelliscale or Intelligent - scaling of the range provides the users a combination of % of FS and % of rdg accuracy within one measuring range.

This allows for a linear % of rdg accuracy in the top part of the range and a constant % of full scale accuracy in the lower part of the range.

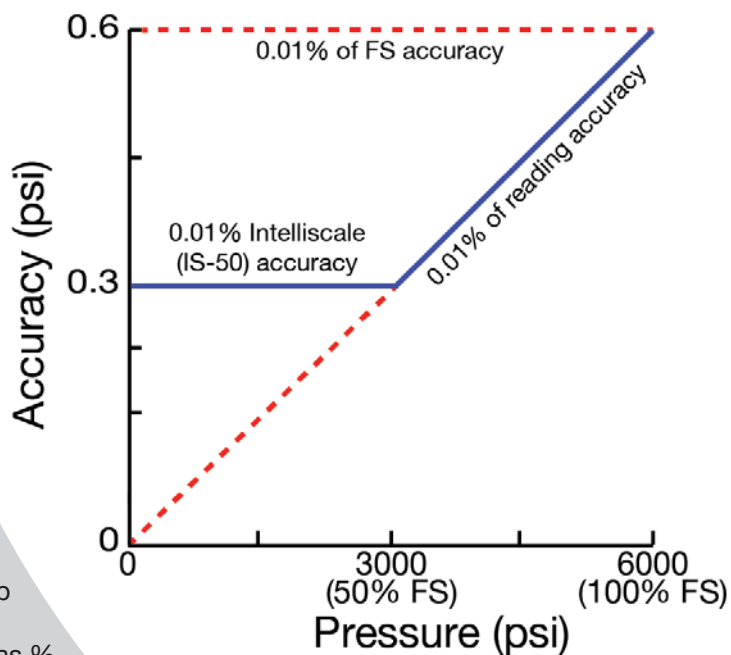
Essentially an Intelliscale accuracy is always better than a % of FS accuracy and is equivalent to a % of rdg accuracy in the top part of the range.

The Intelliscale accuracy is represented as % IS - ‘X’ accuracy. Where ‘X’ denotes the percentage at which the ranges switches from a % of full scale value to a % of rdg accuracy.



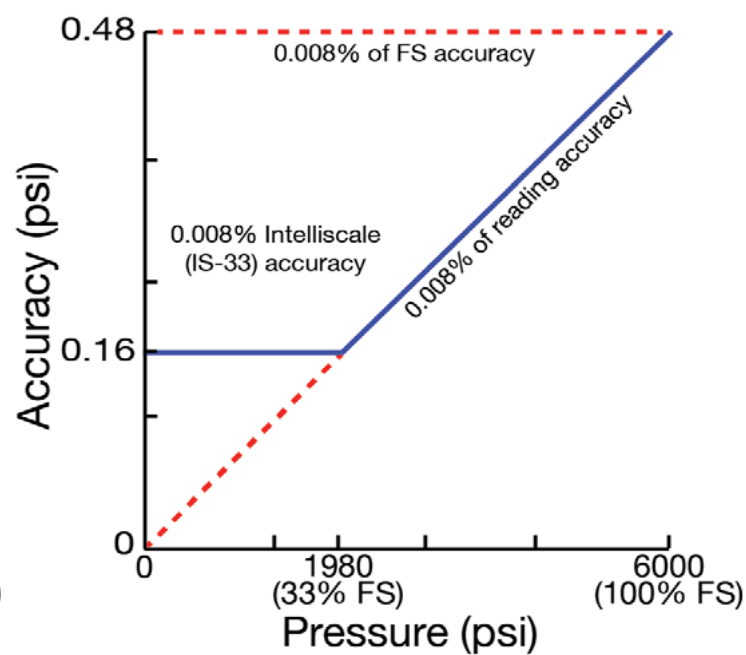
0.01% IS-50¹

% of rdg: 100 - 50% of range
% of half of FS: 0 - 50% of range



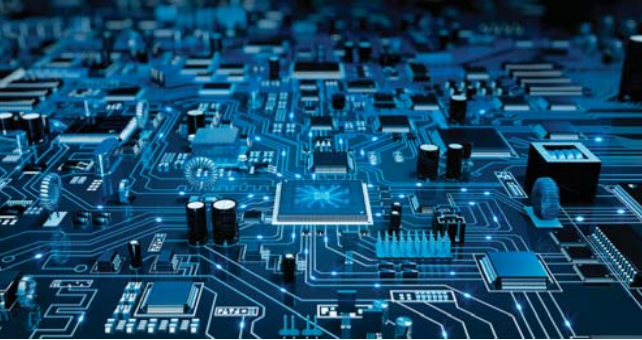
0.008% IS-33²

% of rdg: 100 - 33% of range
% of a third of FS: 0 - 33% of range

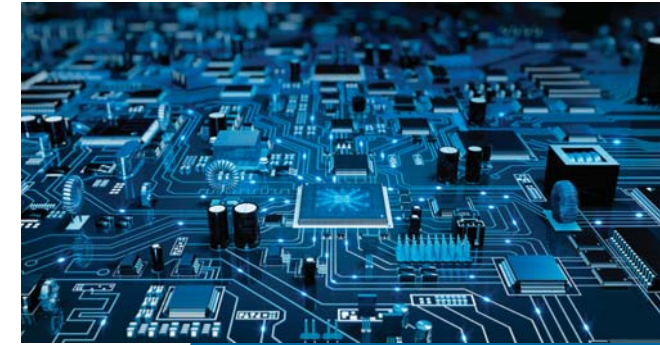


¹ IS-50 accuracy is available on CPT6180, CPG2500, CPC4000, CPC6050 & CPC8000

² IS-33 accuracy is available on CPG2500 and CPC8000



Understanding Intelliscale Accuracy



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