The invention relates to measuring engineering and can be used for measurement of flow rate of liquid and gaseous substances by means of ultrasound. Ultrasound phase-pulse flow rate meter includes two emitting inclined piezo-transformers made in one body as a separate-combines piezo-transformer and connected to respective outputs of the source of sounding pulses, two receiving inclined piezo-transformers connected to the block for processing measuring information and blocks for control of operation of the source of sounding pulses, and a measuring block. The block for processing measuring information is additionally equipped with a unit for determination of angle of phase shift between the signals of receiving piezo-transformers by parameters of interference ellipse and the unit for correction of measuring information on non-identity of acoustic channels. Besides that, as a source of sounding pulses a generator of synchronizing pulses is used. The invention provides increase of accuracy of measurement of flow rate of liquids and gas through application of an additional unit for determination of angle of phase shift between the signals of the receiving piezo-transformers by parameters of interference ellipse and account of asymmetry of acoustic channels due to additional unit for correction of measuring information on non-identity of acoustic channels with simultaneous simplification of design of ultrasonic flow rate meter.