

SURETECH Synchro-Scope

The SURETECH Synchro-Scope measures various electrical parameters of two electrical sources (A and B). The Synchro-Scope measures:

- frequency of source A
- frequency of source B
- phase angle difference (PA – PB)
- phase angle rate (differential frequency dPA - dPB)
- voltage of source A
- voltage of source B
- differential voltage (VA – VB)

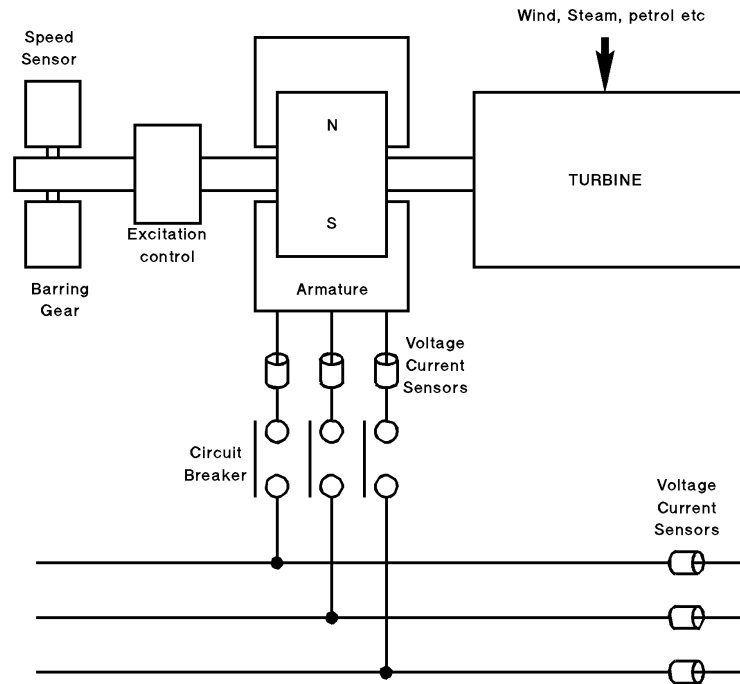


Before coupling two electrical systems, bus-bars or cables it is necessary to ensure that phase angle, phase rate and differential voltages are all compatible. This ensures that the two sources have reached sufficiently small deviations of voltage, frequency and phase angle so that they may then be connected together with a circuit breaker.

Optional Features:

- ✓ Available as a portable, battery powered instrument, or panel mounting
- ✓ Voltage sensors are available to take inputs from 110Vac VTs, or directly from Medium Voltage bushing-shields
- ✓ LCD 2xline or 4xline by 20 character displays are standard
- ✓ Bar-graph lines on LCD display indicate instantaneous values
- ✓ RS-232 output feeds directly into a PC (Personal Computer)

- ✓ External analog instruments also available
- ✓ LEDs are available to show voltage, phase and frequency windows of synchronisation opportunity
- ✓ RS232 output for data logging
- ✓ Options include an extension lead for measuring across the length of a sub-station control room, or switch-gear chamber
- ✓ A six sensor system is also available for 3 phase systems
- ✓ Instrument extension is available for auto synchronising, i.e. the SURETECH SS-Auto. Please enquire
- ✓ Various methods of mounting are available, please enquire
- ✓ Backup to provide support for design, application, installation, and maintenance information



SAFETY and synchronisation time windows:

DESCRIPTION	RATING	UNIT	ACCURACY
• frequency of source A	45-65	Hz	0.01%
• frequency of source B	45-65	Hz	0.01%
• phase angle difference (PA – PB)	0-360	Degr	0.01%
• phase angle rate (differential frequency dPA - dPB)	360	Degr/sec	0.01%
• voltage of source A	300	Volts	1%
• voltage of source B	300	Volts	1%
• differential voltage (VA – VB)	600	Volts	1%
• Standard enclosure size	220x160x120	mm	
• Auxiliary Power Supply	90-260	Vac rms	

SAFETY and synchronisation time windows:

When two large electrical systems are being connected / synchronised, then the user needs to take great care with fault level capacities of associated switchgear. The switchgear needs to be rated to be able to trip without failure or damage, on the highest fault level of the electrical system. If for example, a generator is being synchronised to a power grid, then depending on the fault level rating of the generator OR the power grid, one will be higher than the other.

SURETECH instrumentation:

We make more instruments for the power electrical industry. See our website, or better still, contact us directly for your special needs. We have a range of sensors to measure and process electrical signals.



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