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Data Sheet

August 15, 2026

BASLER ELECTRIC

Basler Electric BE1-25A Automatic Synchronizer

The Basler Electric BE1-25A Automatic Synchronizer is a sophisticated device designed to precisely synchronize generators or other rotating equipment to a power system. It automatically adjusts the speed and phase of the incoming generator to match the system, ensuring a smooth and bumpless connection. This synchronizer enhances system stability and reduces stress on equipment by preventing out-of-phase closure.



MODEL

**Basler Electric
BE1-25A**

CALIBRATION

**Available on
request**

CONDITION

Used

STATUS

In stock

RFQ / SKU

BE1-25A

LISTING

<https://aumictechlabs.com/products/be1-25a-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 • 811210 • 541380

This unit

The Basler Electric BE1-25A is a microprocessor-based automatic synchronizer engineered to achieve precise generator synchronization with minimal transients. This solid-state device automatically adjusts incoming generator speed, voltage, and phase angle to match the system, closing the breaker when phase angle approaches zero. An anticipatory close signal - calculated from preset breaker closing time and measured slip frequency - ensures smooth connection across a wide range of prime movers, from slow-responding hydroturbines to fast gas and diesel engines. Technical Specifications Synchronization Parameters Voltage magnitude: adjustable limits to match system voltage acceptance criteria Slip frequency: wide operating range for compatibility with various prime mover types Phase difference: breaker closure near zero phase angle between generator and bus Advance angle: calculated from breaker closing time and

measured slip frequency

Electrical Specifications

Power supply: 90–132 Vac (50/60 Hz single phase) or 70–150 Vdc; burden <20.0 VA

Voltage sensing inputs: 70–150 Vac (50/60 Hz); <6 VA

generator, <2 VA bus

Contact sensing inputs: minimum 0.05 A at 250 Vdc

Breaker closing output: 30 A at 250 Vdc for 1 second; 7 A continuous; break 0.3 A at 250 Vdc ($L/R = 0.04$)

Lockout output: 5 A at 250 Vac (80% PF), 5 A at 28 Vdc (resistive), 0.5 A at 120 Vdc (resistive)

Key Features

Microprocessor-based control with anticipatory close logic for transient-free synchronization

Non-volatile memory supports up to six independent generator/breaker configurations

Solid-state design for accuracy and repeatability

Simple HMI for field configuration without external computer

Front panel test module terminals for commissioning and diagnostics

Typical Applications

Generator synchronization to utility systems, parallel operation in microgrid environments, and multi-generator power systems requiring coordinated breaker closure and voltage acceptance verification.

Compatibility & Integration

The BE1-25A accepts optional voltage acceptance modules (A1, A2) that enforce generator voltage magnitude and bus voltage conditions prior to breaker closure. The A2 module allows independent configuration of high/low bus voltage and voltage difference parameters.

BE125A Characteristics / Specifications

PARAMETER	VALUE
Model	BE1-25A
Instrument Type	Automatic synchronizer
Sensing Range	70-150 Vac, 50/60 Hz, generator and bus
Generator Burden	less than 6.0 VA
Bus Burden	less than 2.0 VA
Power Ac	90-132 Vac, 50/60 Hz single phase
Power Dc	70-150 Vdc
Power Burden	less than 20.0 VA
Breaker Close Make	30 A at 250 Vdc for 1 second
Breaker Close Carry	7 A continuously
Breaker Close Break	0.3 A at 250 Vdc, L/R = 0.04
Correction Contact Rating	5 A at 250 Vac 80 percent PF; 5 A at 28 Vdc resistive; 0.5 A at 120 Vdc resistive
Advance Angle	breaker close command within 3.0 degrees of phase coincidence
Max Slip Range	0.01 to 0.500 in steps of 0.001
Breaker Time Range	characteristic breaker time 0.02 s class adjustable
Contact Sensing	user-supplied contact, minimum 0.05 A rating class
Surge Withstand	ANSI/IEEE C37.90.1-1989 oscillatory and fast transient; IEC 255-5 impulse and dielectric
Rfi	IEEE C37.90-1989 trial-use radiated EMI from transceivers
Modules	MCU sync, test module, and power supply; optional frequency and voltage matching
Dead Bus Volts	Dead Bus option D1 adjustable 10.0 to 40.0 Vac
Voltage Matching Pulse	0.1 to 5.0 seconds pulse width; 0.2 to 10.0 seconds interval (V1/V2/V3 class)
Manufacturer	Basler Electric

PARAMETER

VALUE

Literature

Basler Electric BE1-25A Auto Synchronizer instruction manual specifications

Form Factor

rack-mounted three-module basic set

Full OEM specifications

Complete technical content extracted from the manufacturer datasheet. Sparse OEM tables are reconstructed as tables below; other text is preserved as paragraphs.

specifications list generator and bus sensing 70-150 Vac 50/60 Hz with burden less than 6.0 VA (generator) and less than 2.0 VA (bus); power 90-132 Vac 50/60 Hz or 70-150 Vdc at less than 20.0 VA; breaker close contact make/carry 30 A at 250 Vdc for 1 s, 7 A continuous, break 0.3 A at 250 Vdc L/R=0.04; correction/lockout/fail contacts 5 A at 250 Vac 80 percent PF, 5 A at 28 Vdc resistive, 0.5 A at 120 Vdc resistive; close command within 3.0 degrees of phase coincidence; max slip 0.01 to 0.500 in 0.001 steps; breaker time 0.02 s class; surge ANSI/IEEE C37.90.1-1989.

Applications

Generator-to-bus automatic synchronizing, slip-frequency close, optional voltage and frequency matching.

Key Features

Microprocessor generator-to-bus synchronizer

70-150 Vac sensing, 50/60 Hz

Close command within 3.0 degrees

Max slip 0.01 to 0.500 Hz in 0.001 steps

ANSI/IEEE C37.90.1 surge withstand

Technical Specifications

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Form Factor	rack-mounted three-module basic set

Notes

From Basler Electric BE1-25A Auto Synchronizer instruction-manual specification tables. Generator undervoltage exact numeric window is on the settings table in that manual; do not invent the undervoltage volts.

Available from Aumictech

Used and refurbished unit evaluated in-house. Calibration: Available on request. Used · In stock.

Request a quote: sales@aumictech.com · +1 (484) 841-9341

Aumictech

788 S 500 E, Pleasant Grove, UT 84062
sales@aumictech.com · +1 (484) 841-9341
<https://aumictechlabs.com>

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Technical content from manufacturer specifications. Unit photo/stock from Aumictech listing when available. Specifications subject to OEM documentation and unit condition.