

A7 Electronic Automatic Transfer Switch Controller

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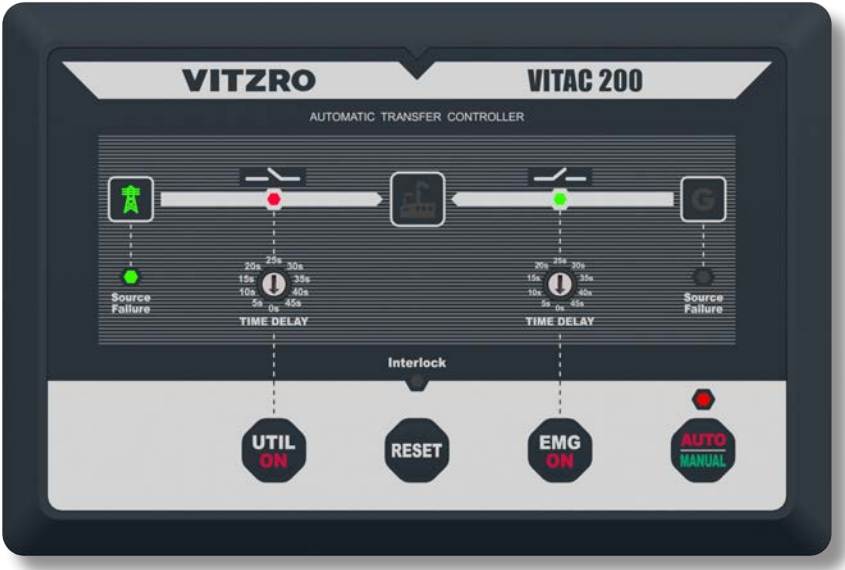
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Electronic Automatic Transfer Switch Controller

VITAC 200

VITAC 200 is equipment connected to the Automatic Transfer Switch (hereafter ATS), which monitors two power supplies and controls the ATS.



Features

VITAC 200 is an electronic controller that controls the Automatic Transfer Switch (ATS); it has the following characteristics.

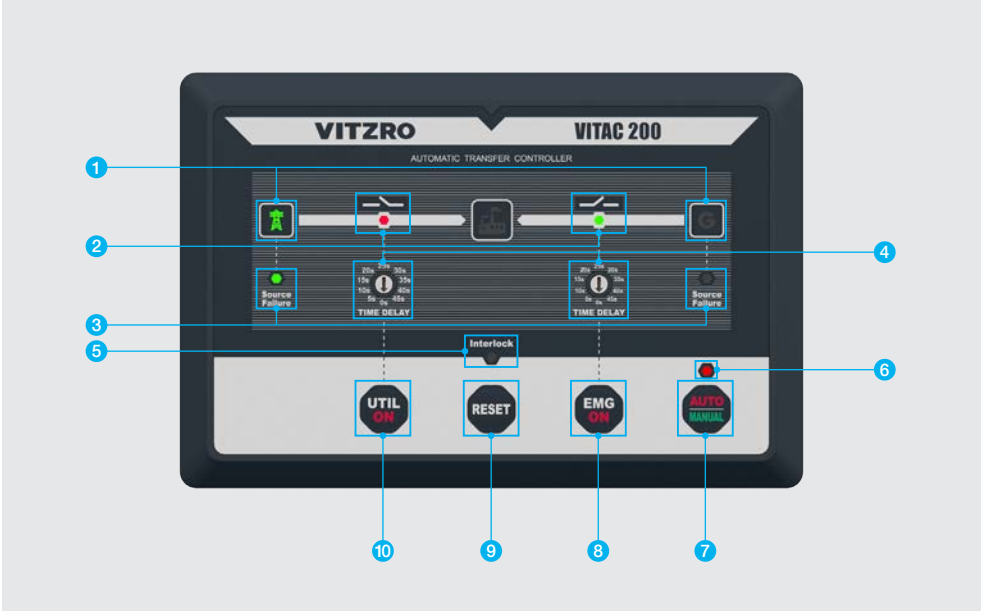
- Resumes power supply to load by controlling the ATS when power fails, by always monitoring the commercial and emergency power.
- Reflects the power characteristics of the product installation site by setting the level of commercial and emergency power monitoring.
- Supports automatic switchover to the commercial power when the commercial power returns to normal level during emergency power operation.
- Prevents the closing/trip coil damage of the ATS by setting the output time of the ATS control signal.
- Guarantees product reliability using EMC test items and self-diagnosis function.
- Checks the state of the product and modifies major setting values using the VITZRO's VICOM Manager program (Modbus-RTU, RS-232)
- Easy installation on panels with various thickness by applying the screw fastening method

Rating & Front Configuration

Rating

Item		Specification
Control Power		Rating: AC 220[V] (input range: AC 130[V] ~ 270[V]) Type: Self-power using the power transformer
Power Consumption		Ordinary: Under 4[W] In switchover: Under 5[W]
Frequency		60 / 50 [Hz]
Voltage	Rating	AC 220[V]
	Number of Channels (2 EA)	- A-phase voltage of the commercial power - A-phase voltage of the emergency power
	Measurement Scope	130[V] ~ 270[V] (measurement error: ±3%)
Input contact	Type	Dry Contact
	Number of Contacts (3 EA)	- Switch on state of the commercial power side - Switch on state of the emergency power side - Switchover interlock input state
Output Contact	Type	For control: Wet contact (AC 220 [V]), NO (Normal Open) For alarms: Dry contact, NO (Normal Open)
	Contact Point Capacity	For control: AC 250V, 16A For alarms: AC 250V, 5A
	Number of Channels	For control: Switch on of the commercial power side, switch on of the emergency power side For alarms: Fault alarm
Communication		RS 232 serial communication (Modbus-RTU)

Front Configuration and Name of Each Unit



No.	Item	Detailed Description
1	 Commercial, Emergency Power Status Display LED	- Green lamp on: Power on (normal power supply) - Green lamp blinking: Abnormal power (OVR, UVR, OFR, UFR) - Lamp off: Power off, LED damage, product damage
2	 Commercial, Emergency Switch Status Display LED	- Green lamp on: Open - Red lamp on: On - Blinking: In switching over (LED of the switched side blinks) - Lamp off: Power off, LED damage, product damage
3	 Commercial, Emergency Switchover Failure Display LED	- Red lamp on: Switchover failure ¹⁾ - Lamp off: Normal
4	 Rotary Switch to Set the Commercial and Emergency Switchover Delay	Switchover delay time setting switch for automatic switchover Setting range: 0 ~ 45 seconds (can be set in 5-second interval)
5	 Switchover Interlock ²⁾ Input Status LED	- Red lamp on: Input on - Lamp off: Input off
6	 Auto/Manual Status Display LED	- Red lamp on: Auto - Green lamp on: Manual - Lamp off: Power off, LED damage, product damage
7		Auto/Manual Selection Button - Operation in an Auto state: Changes to Manual - Operation in a Manual state: Changes to Auto
8	 Button to Turn on the Commercial Power Side Switch	Turns on the commercial power side switch
9	 Reset Button	S/W Reset
10	 Button to Turn on the Emergency Power Side Switch	Turns on the emergency power side switch

1) Determined to be switchover failure only when switchover fails after making an attempt three times.
2) Switchover operation will not be performed even though the automatic switchover occurs, when inputting the switchover interlock.
* Precautions when manipulating buttons: Buttons will be activated only when pressed and held for more than 1.5 seconds.

Rear Configuration & Performance

Rear Configuration and Name of Each Unit



No.	Terminal name	Name	Description
1	a1	Alarm Output	Fault alarm contact output terminal (Outputs when switchover fails or the controller is abnormal.)
	a2		
2	UP	Utility Voltage	Commercial power input terminal
	UN		
3	A1	Operating Signal	Switch on contact output terminal at the commercial power side
	A2		
4	UTIL ON	Status Signal	Switch status input terminal at the commercial power side
	EMG ON		Switch status input terminal at the emergency power side
	Inter-Lock		Interlock status input terminal
	COM		Input common terminal
5	B1	Operating Signal	Switch on contact output terminal at the emergency power side
	B2		
6	EP	Emergency Voltage	Emergency power input terminal
	EN		

Measurement

Measurement Range and Precision

Item	Display Range	Precision
Commercial Power Voltage	130 ~ 270V	±3%
Emergency Power Voltage	130 ~ 270V	±3%
Commercial Power Frequency	40 ~ 70Hz	±0.2Hz
Emergency Power Frequency	40 ~ 70Hz	±0.2Hz

※ The single-phase voltage of the commercial and emergency power can be measured.

ATS Control

Manual Switchover

Item	Method
Commercial Power → Emergency Power	Press the emergency on button more than 1.5 seconds (activated only when emergency power is normal)
Emergency Power → Commercial Power	Press the commercial on button more than 1.5 seconds (activated only when commercial power is normal)

※ Manual switchover can be performed using the button only when in manual mode.

Automatic Switchover (Power switchover when the power is abnormal)

Item	Power Supply	Operation
Commercial Power → Emergency Power	Commercial Power	In case that the emergency power is normal but the commercial power is abnormal Automatic switchover to the emergency power after waiting for the switchover delay time
Emergency Power → Commercial Power	Emergency Power	In case that the commercial power is normal but the emergency power is abnormal Automatic switchover to the commercial power after waiting for the switchover delay time

※ Automatic switchover will be performed normally only in automatic mode.

Automatic Switchover (power switchover according to power priority)

Item	Power Supply	Power Priority	Operation
Commercial Power → Emergency Power	Commercial power	Emergency power	In case that the emergency power with high priority becomes normal Automatic switchover to the emergency power after waiting for the switchover delay time
Emergency Power → Commercial Power	Emergency power	Commercial power	In case that the commercial power with high priority becomes normal Automatic switchover to the commercial power after waiting for the switchover delay time

Judgment Criteria for the Normal / Abnormal Power

Item	Abnormal	Normal
Overvoltage	Over 242V	Under 235V
Low voltage	Under 176V	Over 181V
Overfrequency	Over 61Hz	Under 60.5Hz
Low frequency	Under 59Hz	Over 59.5Hz

Communication Functions / Dimension / Installation

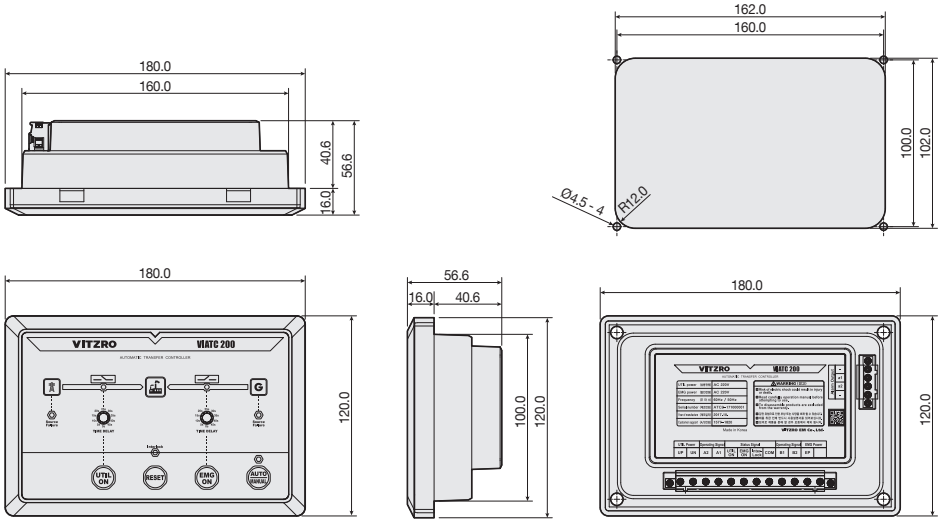
Communication Functions

- Measurement: Checks the voltage and frequency of the commercial and emergency power.
- Status monitoring tab: Checks the status of the commercial/emergency power and switch on/off.
- Settings tab: Checks and changes the current value of major parameters.

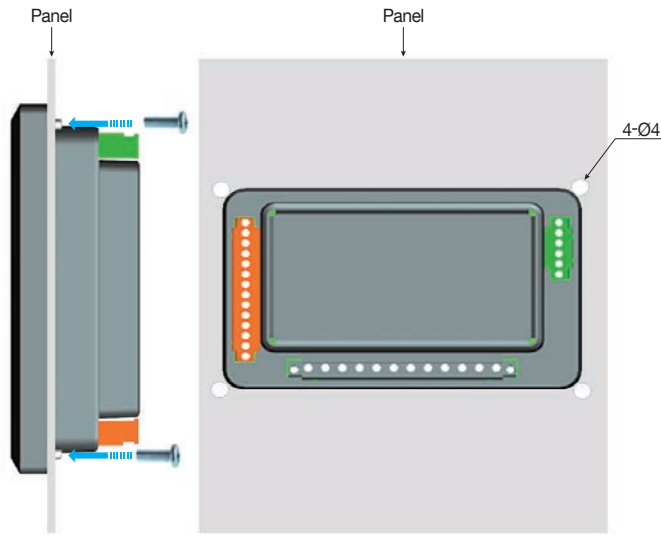


Dimensions

180(W)×120(H)×56.6(D)



Installation

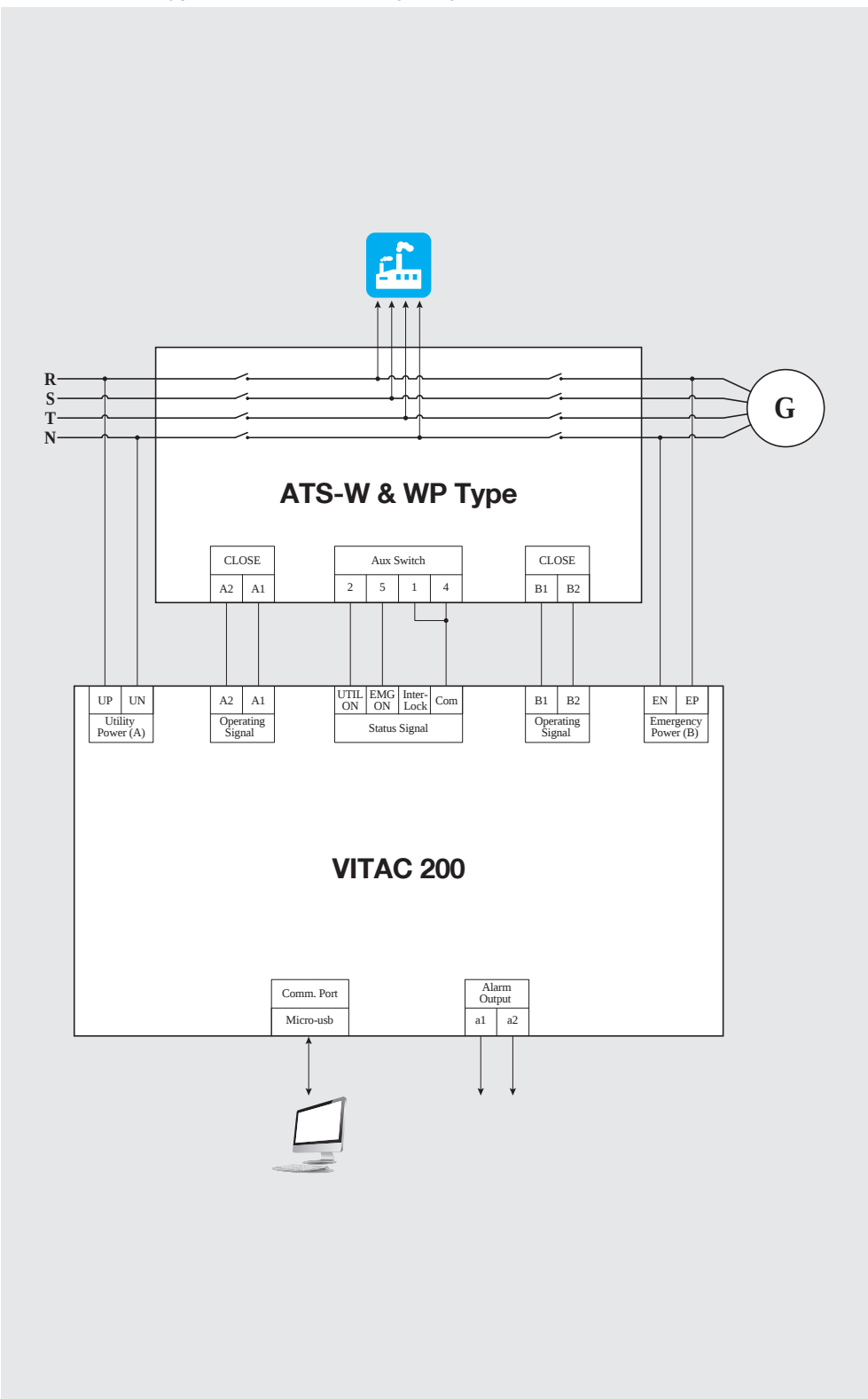


※ VITAC 200 penetrates into the panel when installed. M4×L12 bolts are used (based on 3t panel thickness).

Connection Wiring Method

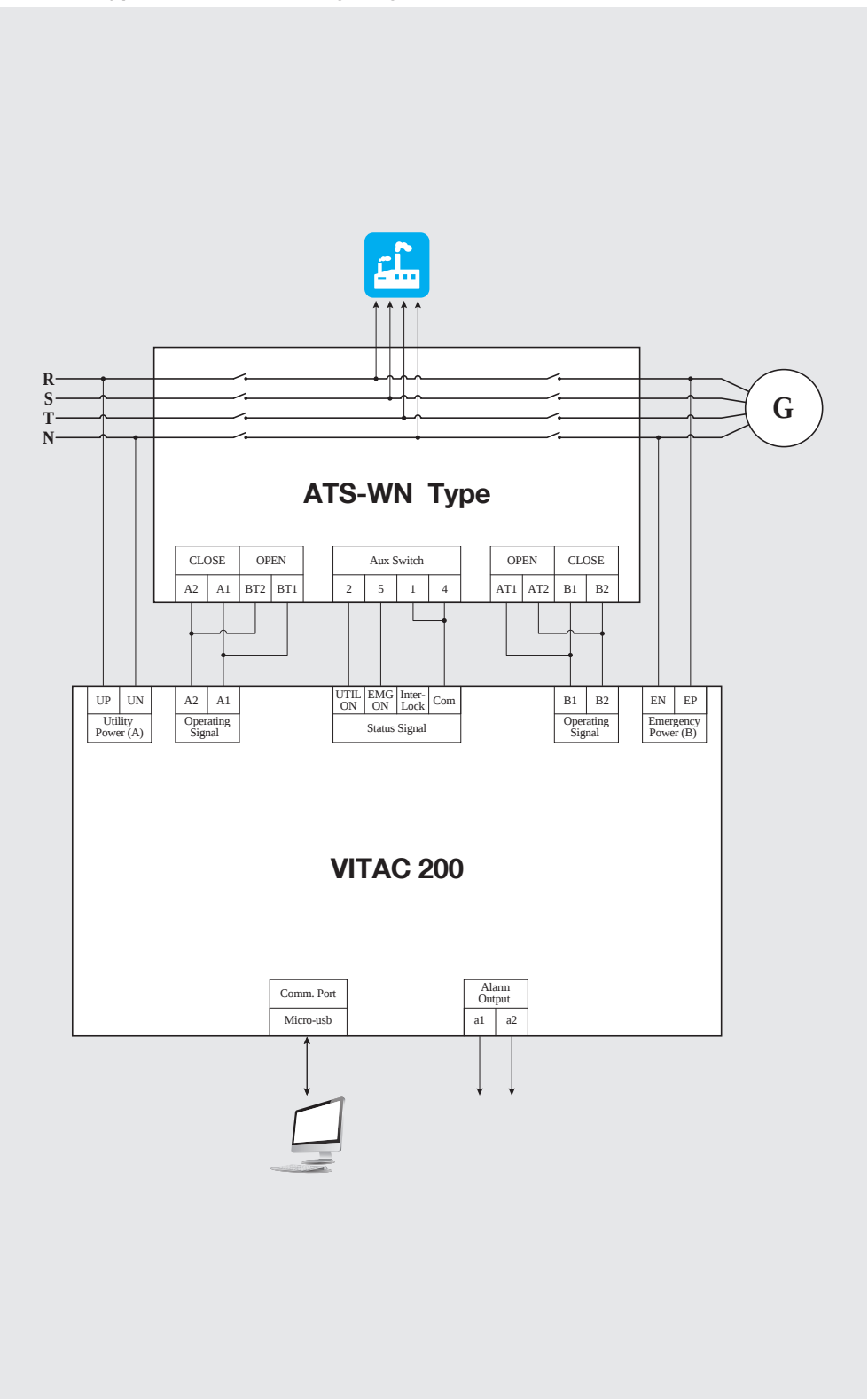
Connection Wiring Method

ATS - W & WP Type Connection Wiring Diagram



Connection Wiring Method

ATS-WN Type Connection Wiring Diagram



Test Result Report



2. 제조자 정보

- 회사명 : 비츠로이엘
- 주 소 : 경기도 안산시 단원구 별망로 327

3. 시험 요약

3.1 적용 기준

- KS C IEC 60947-1: 2014

3.2 시험항목 및 결과

시험 항목	기본 규격	시험 결과
정전기 방전 내성시험	IEC 61000-4-2:2010	■ 적합 □ 부적합
전기자기 방사 내성시험	IEC 61000-4-3:2013	■ 적합 □ 부적합
전기적 빠른 과도현상 내성시험	IEC 61000-4-4:2013	■ 적합 □ 부적합
서지 내성시험	IEC 61000-4-5:2008	■ 적합 □ 부적합
전자기장 전도 내성시험	IEC 61000-4-6:2010	■ 적합 □ 부적합
전원 주파수 자계 내성 시험	IEC 61000-4-8:2010	■ 적합 □ 부적합
전압강하 및 순간정전 내성시험	IEC 61000-4-11: 2008	■ 적합 □ 부적합

- 상기 시험 항목은 신청인의 요청에 따른 시험 항목임.

3.3 수검기기의 보완내용

* 해당없음.

VITZRO EM