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Artudatech E301-A114-20A

Artudatech Micro3 Fuse Automotive ATL 20A 3-Prong Instruction Manual

Model: E301-A114-20A

1. Introduction

This instruction manual provides essential information for the proper use, installation, and maintenance of the Artudatech Micro3 ATL 20A 3-Prong Automotive Fuse. Please read this manual thoroughly before installation and retain it for future reference. This fuse is designed for specific automotive electrical circuits requiring a 20 Amp rating and a Micro3 form factor.

2. Product Overview

The Artudatech Micro3 ATL 20A fuse is a compact, 3-prong blade-type fuse designed for modern automotive applications, particularly in vehicles like the Ford Focus. It features a yellow housing, indicating its 20 Amp rating, and is constructed from silver-plated zinc alloy and PA66 material for durability and reliable performance.



Image 2.1: A pack of five Artudatech Micro3 20A fuses, showing their yellow color and 3-prong design. The 20A rating is clearly visible.

Key features include:

- **Micro3 Form Factor:** Compact design suitable for modern vehicle fuse boxes.
- **20 Amp Rating:** Specifically designed for circuits requiring 20 Amperes of protection.
- **3-Prong Design:** Ensures correct orientation and secure connection in compatible fuse holders.
- **Durable Construction:** Made with silver-plated zinc alloy terminals and a PA66 housing for reliability.



Image 2.2: A single Artudatech Micro3 20A fuse, showing the yellow plastic body and three metal prongs from a top-down perspective.



Image 2.3: An angled view of the Artudatech Micro3 20A fuse, highlighting its compact structure and the three distinct terminals.

3. Specifications

The following table details the technical specifications of the Artudatech Micro3 ATL 20A fuse:

Specification	Detail
Brand	Artudatech
Model Number	E301-A114-20A
AC Adapter Current	20 Amps
Voltage Rating	32 Volts
Material	Silver-plated Zinc Alloy, PA66

Specification	Detail
Mounting Type	Through-Hole Mount
Package Dimensions	3.54 x 2.32 x 1.02 inches
Item Weight	0.32 ounces (for 5 pieces)

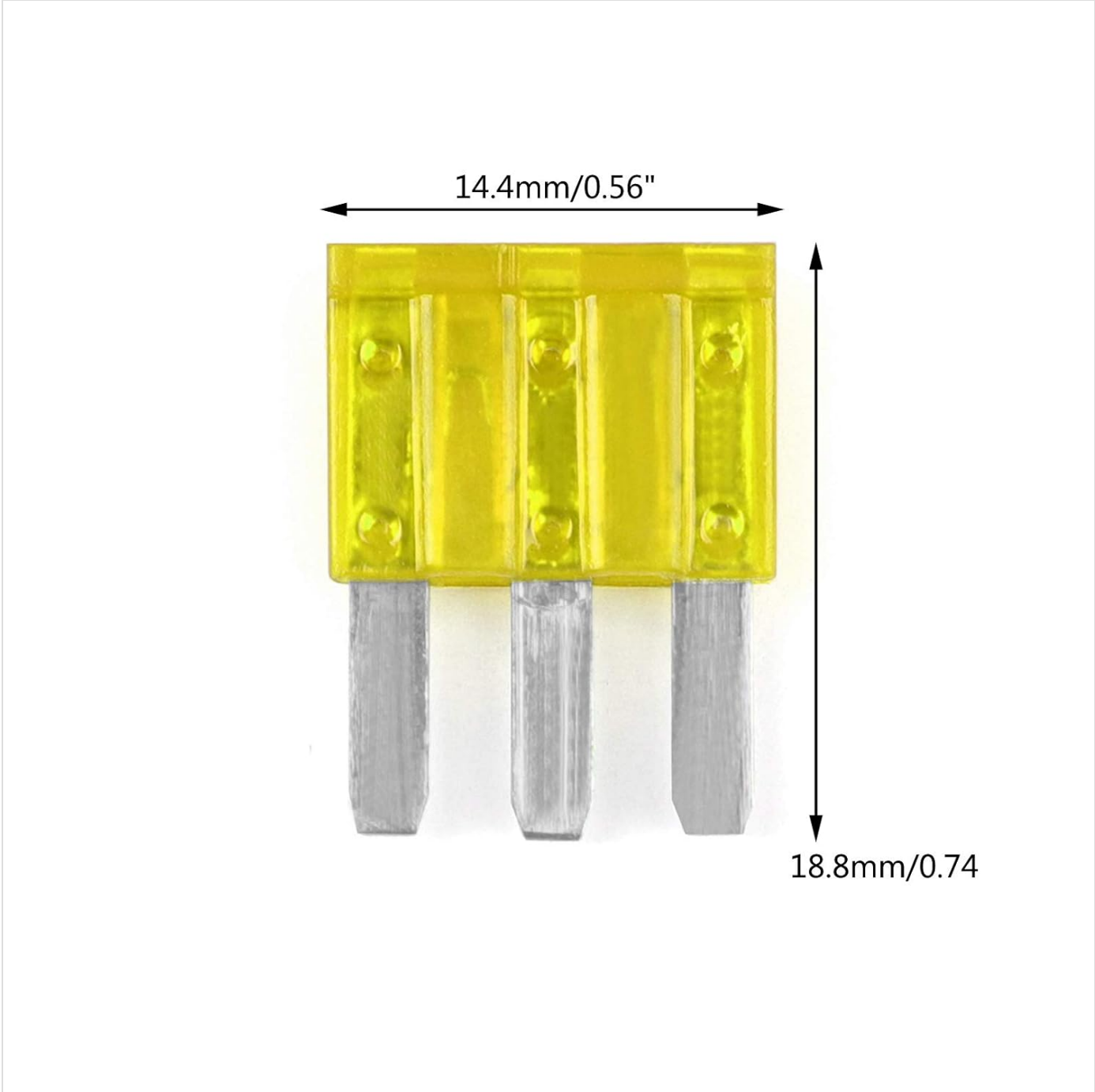


Image 3.1: Diagram illustrating the dimensions of the Micro3 fuse, showing a width of 14.4mm (0.56 inches) and a height of 18.8mm (0.74 inches).



MICRO3™ Blade Fuses Rated 32V

The MICRO3™ Fuse has 3 terminals and 2 fuse elements with a common center terminal. Its sub-miniature design meets the need for more circuits to be protected while utilizing less space and its ability to cope with high temperatures in adverse environments makes the MICRO3™ Fuse of recommended choice for protection.

Specifications

Voltage Rating:	32 VDC
Interrupting Ratings:	1000A @ 32 VDC
*Component Level Temperature Range:	-40°C to +125°C
**System Level Temperature Range:	-40°C to +105°C

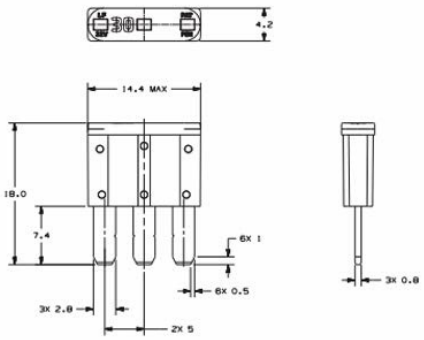
105°C is a typical system level temperature requirement.

Terminals:	Ag plated zinc alloy
Housing Material:	PA66
Conforms to:	SAE 2741 and ISO 8820-3 in reference to electrical, mechanical and environmental performance requirements

RoHS

Dimensions

Dimensions in mm



Ordering Information

Part Number	Package Size
0337xxx.PX2S	2000
0337xxx.LXS	50

Time-Current Characteristics

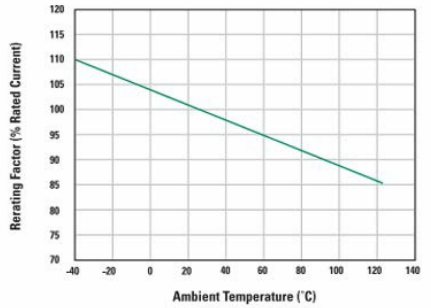
% of Rating	Opening Time (Min / Max)
110	100 h / –
135	0.75 sec / 120 sec
160	0.30 sec / 50 sec
200	0.15 sec / 5 sec
350	0.04 sec / 0.50 sec
600	0.02 sec / 0.100 sec

Ratings

Part Number	Current Rating (A)	Housing Material Color	Typ. Voltage Drop (mV)	Cold Resistance (mΩ)	I^2t (A^2s)
0337005._	5		116	17.4	17
033707.5_	7.5		106	10.8	47
0337010._	10		102	7.8	89
0337015._	15		94	4.9	189

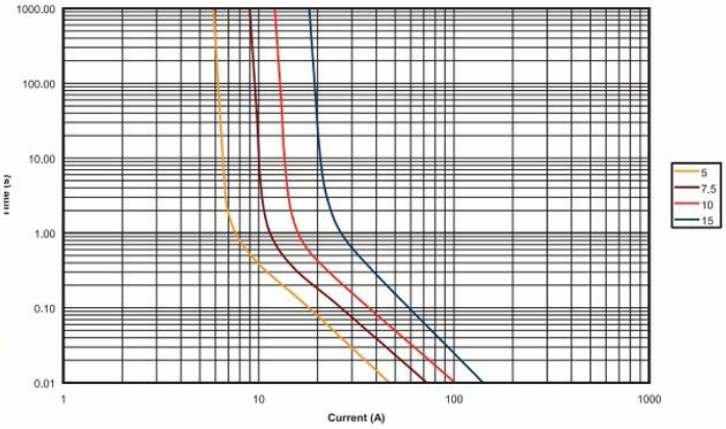
Image 3.2: Technical diagram detailing specifications for Micro3 Blade Fuses, including voltage rating, interrupting ratings, temperature ranges, housing material, and time-current characteristics.

Temperature Rerating Curve



***Component Level Temperature** = the maximum ambient temperature that a single fuse will survive. This does not factor-in the heat from a populated fuse box, but does include the heat from the current load with the proper rerating.*
***System Level Temperature** represents the ambient temperature of the fuse box at a location within the vehicle. The temperature within a populated fuse box (in a given location) will be higher. The limiting factor is the plating. Sn-plating's temperature limit is ≈130°C, and Ag-plating allows up to 150°C at the terminal interface.*

Time-Current Characteristic Curves



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Image 3.3: Graphs showing the Temperature Rerating Curve and Time-Current Characteristic Curves, which are crucial for understanding fuse performance under various conditions.

4. Installation and Setup

Fuses are critical safety components in automotive electrical systems. Proper installation is essential to prevent damage to electrical components and ensure vehicle safety.

4.1 Safety Precautions

- Always disconnect the vehicle's battery before working on electrical systems to prevent electrical shock or short circuits.
- Ensure the replacement fuse matches the original fuse's amperage rating (e.g., 20A for a 20A circuit). Using a fuse with a higher rating can lead to wiring damage or fire.
- Consult your vehicle's owner's manual for the exact location of the fuse box and the correct fuse for the circuit you are servicing.

4.2 Installation Steps

1. **Locate the Fuse Box:** Refer to your vehicle's owner's manual to find the fuse box. It may be located under the hood, inside the passenger compartment (e.g., under the dashboard), or in the trunk.
2. **Identify the Blown Fuse:** Once the fuse box is open, locate the fuse corresponding to the faulty circuit. Blown fuses typically have a broken wire or discolored plastic. Use a fuse puller (if available) to carefully remove the blown fuse.
3. **Verify Amperage:** Confirm that the new Artudatech Micro3 20A fuse has the identical amperage rating as the fuse being replaced. The amperage is usually stamped on the fuse body and indicated by its color (yellow for 20A).
4. **Insert New Fuse:** Align the three prongs of the new fuse with the corresponding slots in the fuse holder. Gently push the fuse firmly into place until it is seated securely. Do not force it.
5. **Reconnect Battery:** Once the fuse is installed, reconnect the vehicle's battery.
6. **Test Circuit:** Turn on the ignition and test the electrical component or system that was previously malfunctioning to ensure it is working correctly.

Note: If the new fuse blows immediately, there may be a more serious electrical issue (e.g., a short circuit) that requires professional diagnosis and repair.

5. Operation

The Artudatech Micro3 ATL 20A fuse operates as a sacrificial device designed to protect electrical circuits from overcurrent conditions. When the current flowing through the circuit exceeds the fuse's 20 Amp rating, the metallic element within the fuse melts, breaking the circuit and preventing damage to more expensive components or wiring. This is a passive, automatic operation that occurs when an overload or short circuit is detected.

6. Maintenance

Fuses generally require no routine maintenance. However, periodic inspection of the fuse box and individual fuses can help identify potential issues before they cause problems.

- **Visual Inspection:** Occasionally check fuses for signs of damage, such as cracks in the plastic housing or discoloration, which might indicate overheating or a weak fuse.
- **Cleanliness:** Ensure the fuse box is free from dirt, moisture, and debris, which can interfere with electrical connections.
- **Proper Fit:** Confirm that all fuses are securely seated in their respective slots. Loose fuses can lead to intermittent electrical issues.

7. Troubleshooting

If an electrical component in your vehicle stops working, a blown fuse is a common cause. Follow these steps to troubleshoot:

- **Identify the Affected Circuit:** Determine which electrical component or system is not functioning (e.g., radio, power windows, headlights).
- **Locate the Corresponding Fuse:** Consult your vehicle's owner's manual to find the fuse associated with the malfunctioning circuit.
- **Inspect the Fuse:** Remove the suspected fuse and visually inspect it. A blown fuse will typically have a visible break in the metal wire inside the fuse body. You can also use a fuse tester for a more definitive check.
- **Replace the Fuse:** If the fuse is blown, replace it with a new Artudatech Micro3 fuse of the exact same amperage rating (20A in this case). Refer to Section 4 for detailed installation steps.
- **Persistent Blowing:** If the new fuse blows immediately or repeatedly, it indicates an underlying electrical problem, such as a short circuit or an overloaded component. In such cases, it is recommended to seek assistance from a qualified automotive technician.

8. Safety Information

Adhere to the following safety guidelines when handling and installing fuses:

- **Correct Amperage:** Always use a fuse with the specified amperage rating for the circuit. Never use a fuse with a higher rating, as this can lead to overheating, wiring damage, and fire.
- **Power Disconnection:** Disconnect the vehicle's battery before replacing fuses to avoid electrical hazards.
- **Proper Tools:** Use a plastic fuse puller for safe removal and insertion of fuses. Avoid using metal tools that could short circuit terminals.
- **Avoid Overloading:** Do not connect additional electrical accessories to a circuit if it risks exceeding the circuit's design capacity, even with a properly rated fuse.
- **Professional Assistance:** If you are unsure about any aspect of fuse replacement or suspect a complex electrical issue, consult a professional mechanic.

9. Warranty and Support

Artudatech products are manufactured to high-quality standards. For specific warranty information or technical support regarding your Artudatech Micro3 ATL 20A fuses, please refer to the official Artudatech website or contact their customer service department. Please note that fuses are consumable items designed to fail under fault conditions, and their blowing is typically an indication of proper function in protecting your vehicle's electrical system.
For further assistance, you may visit the Artudatech Store on Amazon.

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