GYS GYSFLASH 12.12

GYSFLASH 12.12 Smart Battery Charger User Manual

Model: GYSFLASH 12.12 | Brand: GYS

1. Introduction

The GYSFLASH 12.12 is an advanced 12V 12A smart battery charger designed for optimal charging and maintenance of various 12V lead-acid batteries, including those found in cars, utility vehicles, motor homes, buses, commercial vehicles, and agricultural equipment. This manual provides essential information for safe and effective operation of your GYSFLASH 12.12 charger.

It features an 8-step intelligent charging curve to ensure maximum battery performance and longevity, along with specialized modes for different battery types and conditions.

2. Safety Instructions

Read all safety warnings and instructions carefully before using the charger. Failure to follow these instructions may result in electric shock, fire, or serious injury.

- Always ensure proper ventilation during charging to prevent gas accumulation.
- Do not charge frozen batteries. Allow them to warm up before charging.
- Avoid sparks or flames near the battery during charging, as batteries can emit explosive gases.
- Wear eye protection and protective clothing when working with batteries.
- Disconnect the AC power supply before making or breaking connections to the battery.
- This charger is designed for 12V lead-acid batteries only (WET, MF, Ca/Ca, AGM, GEL, EFB). Do not use it for other battery types.
- The charger is protected against short circuits, polarity reversal, and overcharging. It also features anti-spark technology.
- The GYSFLASH 12.12 has an IP65 rating, indicating resistance to dust and water ingress. However, avoid submerging the unit.

Figure 2.1: The GYSFLASH 12.12 charger is designed with multiple safety features, including IP65 protection against dust and water, an integrated temperature probe to prevent overheating, and safeguards against electrical hazards such as polarity reversal, sparks, and overcharging.

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3. Product Overview

The GYSFLASH 12.12 is a compact and robust battery charger. Key components include:

- **Main Unit:** Houses the charging electronics, control panel, and indicators.
- **Control Panel:** Features LED indicators for charging status, selected mode, and potential errors.
- **Mode Selection Button:** Used to cycle through available charging modes.
- **Battery Clamps/Terminals:** Red for positive (+), Black for negative (-).
- **AC Power Cable:** Connects the charger to a standard wall outlet.
- **External Temperature Sensor:** Automatically adjusts the charging curve based on ambient temperature for optimal performance.

Figure 3.1: The GYSFLASH 12.12 smart battery charger, shown with its main unit and the two types of battery connection cables: standard clamps and ring terminals.

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4. Setup and Connection

Follow these steps to safely connect the GYSFLASH 12.12 charger to your battery:

1. **Prepare the Battery:** Ensure the battery terminals are clean and free of corrosion. If charging an in-vehicle battery, ensure the vehicle's ignition is off and all accessories are disconnected.
2. **Connect to Battery:**
    - Connect the **red (+)** charger clamp/terminal to the **positive (+)** battery terminal.
    - Connect the **black (-)** charger clamp/terminal to the **negative (-)** battery terminal.
    - For in-vehicle batteries, if the battery is not grounded to the chassis, connect the black (-) clamp to the negative (-) battery terminal. If the battery is grounded to the chassis, connect the black (-) clamp to the vehicle chassis away from the battery and fuel line.
3. **Connect to Power:** Plug the charger's AC power cable into a standard electrical outlet. The charger will power on.

4. **Select Mode:** Press the mode selection button to choose the appropriate charging mode (see Section 5).

To disconnect, first unplug the charger from the AC outlet, then disconnect the black (-) clamp, followed by the red (+) clamp.

Figure 4.1: The GYSFLASH 12.12 charger properly connected to a vehicle battery, demonstrating a typical setup for charging.

5. Operating Modes

The GYSFLASH 12.12 offers several operating modes to optimize charging for different battery types and conditions. Use the mode selection button to cycle through these options.

- **Normal Charge Mode:** Standard charging for most 12V lead-acid batteries (WET, MF, Ca/Ca, GEL).
- **AGM Mode:** Specifically designed for cold weather charging (below 5°C) and for Start & Stop batteries (EFB & AGM types). This mode adjusts charging parameters for these specific conditions.
- **Refresh Mode:** Used to recover deeply discharged batteries. This mode attempts to recondition batteries that have been left discharged for extended periods.
- **Supply Mode:** Transforms the charger into a stabilized power supply. This mode is useful for:

- Maintaining battery health during vehicle demonstrations in showrooms.
- Preserving vehicle memory settings (e.g., radio codes, ECU data) during battery replacement.

The charger also features an **Optimized Maintenance Charge**, allowing it to remain plugged in indefinitely during winter months to maintain battery health without overcharging.

Figure 5.1: The GYSFLASH 12.12 is suitable for charging and maintaining 12V batteries across a range of vehicles, including cars, vans, agricultural vehicles, and boats, supporting all lead-acid battery types.

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6. 8-Step Intelligent Charging Curve

The GYSFLASH 12.12 utilizes an advanced 8-step charging curve to ensure efficient, safe, and complete charging, maximizing battery lifespan and performance. The external temperature sensor automatically adjusts this curve based on ambient conditions.

1. **Analysis:** Assesses battery condition and initial charge level.
2. **Recovery:** Initiates a gentle charge for deeply discharged batteries (SOS Recovery for batteries >2V).
3. **Test:** Checks battery's ability to accept charge.

4. **Desulfation:** Applies a pulsed charge to break down lead sulfate crystals, restoring battery capacity.
5. **Charge:** Bulk charging phase, delivering maximum current until the battery reaches approximately 80% capacity.
6. **Absorption:** Gradually reduces current while maintaining voltage to bring the battery to 100% charge.
7. **Refresh:** (If selected or needed) Further reconditions the battery.
8. **Floating Charge:** Maintains the battery at full charge with a low, constant voltage, preventing self-discharge.

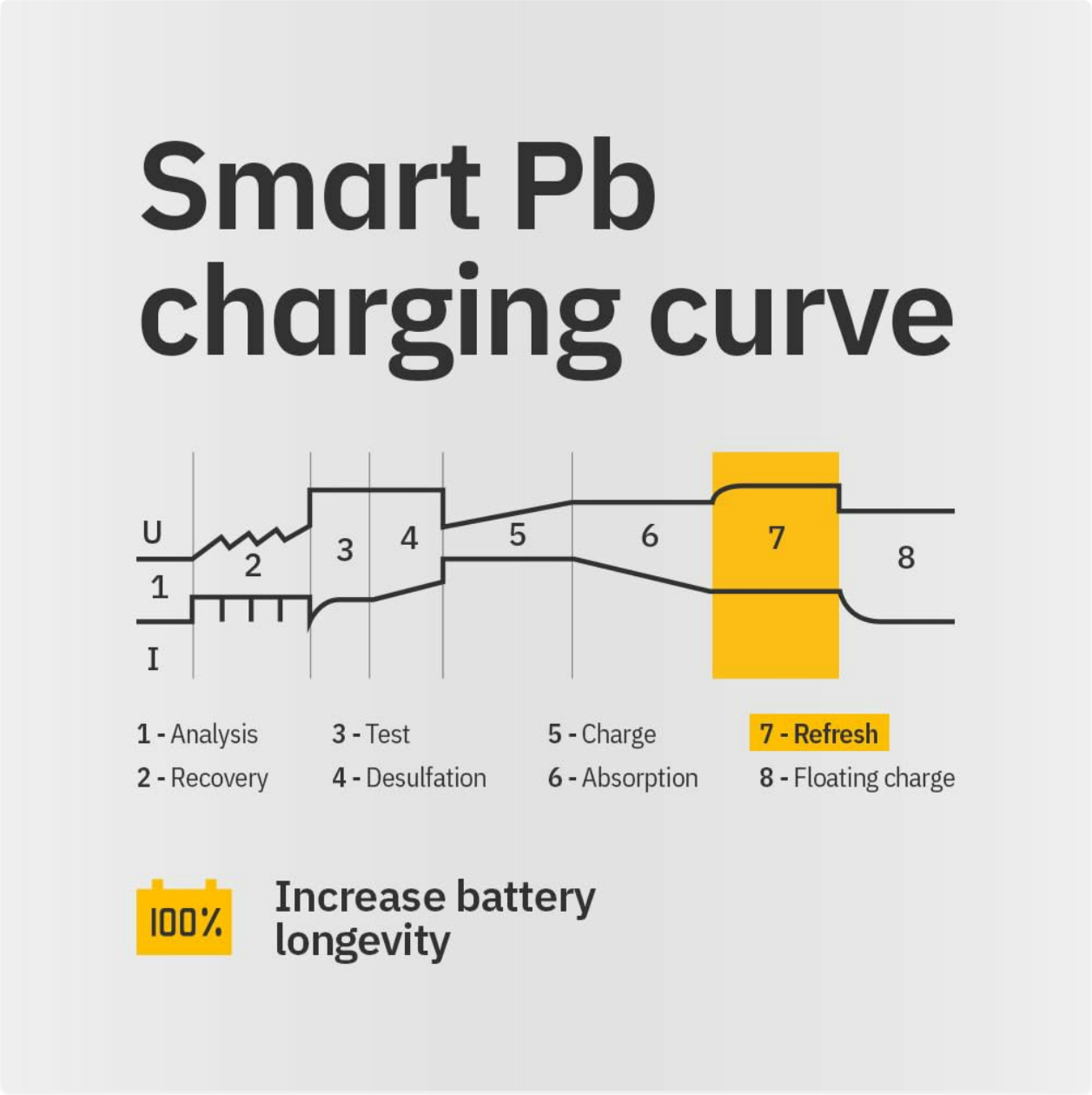

Figure 6.1: Visual representation of the 8-step intelligent charging curve, detailing each phase from analysis to floating charge, designed to increase battery longevity.

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7. Maintenance

Proper maintenance ensures the longevity of your GYSFLASH 12.12 charger and the batteries it charges.

- **Charger Care:**
  - Keep the charger clean and dry. Wipe with a soft, damp cloth. Do not use solvents.
  - Store the charger in a cool, dry place when not in use.

- Inspect cables and clamps regularly for damage. Replace if necessary.

- **Battery Care:**
  - Ensure battery terminals are clean and free of corrosion.
  - For conventional lead-acid batteries, check electrolyte levels periodically and top up with distilled water if needed (do not overfill).
  - For optimal battery health, use the maintenance charge feature during long periods of inactivity.

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8. Troubleshooting

If you encounter issues with your GYSFLASH 12.12, refer to the following common problems and solutions:

Problem	Possible Cause	Solution
Charger does not turn on.	No AC power; faulty power cable.	Check AC outlet and power cable connection. Try a different outlet.
Charging indicator not active.	Incorrect battery connection; battery voltage too low; incorrect mode selected.	Verify positive/negative connections. Ensure battery voltage is above 2V for recovery. Select appropriate mode.
Error LED illuminated.	Polarity reversal; short circuit; internal fault.	Disconnect charger, check connections for correct polarity. Inspect cables for damage. If error persists, contact support.
Battery not fully charged after extended time.	Battery deeply discharged or sulfated; battery capacity too large for charger; faulty battery.	Try "Refresh" mode for deeply discharged batteries. Ensure battery capacity is within charger's range (1.2-250 Ah). Test battery condition.
Charger automatically stops.	Battery disconnected; power cut; battery fully charged.	Check battery connections. The "Auto Restart" feature should resume charging after a power cut. If battery is full, this is normal operation.

If the problem persists after attempting these solutions, please contact GYS customer support.

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9. Specifications

Feature	Detail
Brand	GYS
Model	GYSFLASH 12.12 (GYS - 029392)
Nominal Voltage	12 V
Amperage	12 Amps
Battery Capacity (Charging)	1.2 Ah to 250 Ah

Feature	Detail
Battery Capacity (Maintenance)	Up to 330 Ah
Compatible Battery Types	Lead-acid (WET, MF, Ca/Ca, AGM, GEL, EFB, Start & Stop)
Charging Curve	8-step intelligent charging curve
Protection Rating	IP65 (Dust and water ingress resistant)
Safety Features	Short circuit, polarity reversal, overcharging protection, anti-spark, integrated temperature probe.
Dimensions (LxWxH)	28 x 11 x 5.5 cm
Weight	950 g
Country of Origin	France

Figure 9.1: Physical dimensions of the GYSFLASH 12.12 charger, as depicted in the image, showing approximate measurements of 25 cm length, 9 cm width, and 5 cm height.

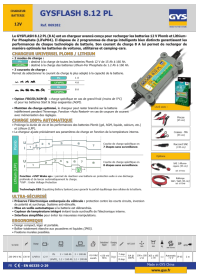
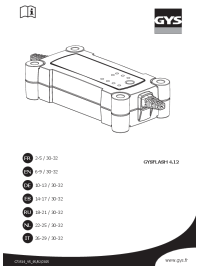
10. Warranty and Support

The GYSFLASH 12.12 charger comes with a**2-year warranty**, covering manufacturing defects from the date of purchase. Please retain your proof of purchase for warranty claims.

For technical assistance, troubleshooting beyond this manual, or warranty service, please contact GYS customer support through their official website or your local distributor. Provide your product model number (GYSFLASH 12.12 or GYS - 029392) and a detailed description of the issue.

Official GYS Website: www.gys.fr

Related Documents - GYSFLASH 12.12

	GYSFLASH 8.12 PL 12V Battery Charger - Lead Acid & Lithium The GYSFLASH 8.12 PL is an advanced 12V battery charger for Lead-acid and LiFePO4 batteries. Features 8A charging current, multiple modes, automatic charging, and advanced safety features for cars, utility vehicles, and campers.
	GYSFLASH 4.12: Smart Battery Charger - User Manual & Guide Comprehensive guide to the GYSFLASH 4.12 battery charger, covering safety instructions, operating modes, charging steps, troubleshooting, and technical specifications for optimal battery maintenance.
	GYS DIAG-BATIUM 100,12 FV 12V Battery Charger and Support Unit The GYS DIAG-BATIUM 100,12 FV is a professional 12V battery charger and support unit for automotive workshops. It offers optimal charge maintenance, diagnostics, and power supply with advanced features for lead-acid and lithium batteries, ensuring battery health and efficient vehicle service.
	GYS GYSFLASH PRO Battery Support Units: Advanced Charging Solutions for Professionals Discover the GYS GYSFLASH PRO range of smart battery support units and chargers. Designed for automotive and industrial professionals, these advanced units offer reliable power, connectivity, and comprehensive battery maintenance features. Explore models, specifications, and accessories.

	[GYS PBT 924: Professional Battery Tester with Integrated Printer] Discover the GYS PBT 924, a professional battery tester offering precise measurements and an integrated printer. This device supports various battery types and technologies, providing detailed analysis for 6V, 12V, and 24V systems. Learn about its advanced features, compatibility, and practical applications for automotive diagnostics.
	[GYSFLASH 103.12 CNT FV 12V 100A Smart Battery Charger | GYS] Comprehensive overview of the GYSFLASH 103.12 CNT FV, a 12V 100A smart battery charger with inverter technology. Features multiple operating modes, USB connectivity for customization, and advanced safety for lead-acid and lithium batteries.