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> Measuring Instrument Digital Readout DRO GCS906-2 User Manual

## HHXXOVA GCS906-2

# User Manual

## DIGITAL READOUT (DRO) SYSTEM

Model: GCS906-2

Brand: HHXXOVA

### 1. INTRODUCTION

This manual provides essential information for the proper installation, operation, and maintenance of the HHXXOVA GCS906-2 Digital Readout (DRO) system. The GCS906-2 is a high-precision measuring instrument designed for use with various machine tools, including lathes, milling machines, and grinders, to enhance measurement accuracy and operational efficiency.

Please read this manual thoroughly before using the product to ensure safe and effective operation. Keep this manual for future reference.

### 2. PRODUCT OVERVIEW AND FEATURES

The GCS906-2 Digital Readout system is engineered for precision and reliability in industrial environments. It features an LCD display and a robust design to withstand demanding workshop conditions.

#### Key Features:

- **High Precision:** Offers customizable resolution options including 0.5 $\mu$ m, 1 $\mu$ m, 2 $\mu$ m, 5 $\mu$ m, and 10 $\mu$ m.
- **LCD Display:** Clear and easy-to-read LCD screen for displaying measurement values.
- **Robust Construction:** Aluminum alloy spray plastic appearance provides dustproof, wear-resistant, and good shielding properties.
- **Anti-interference:** Signal lines are protected by multi-layer isolating wire and metal softshell, ensuring stable performance.
- **Multi-functional:** Equipped with various intelligent functions for diverse machining operations.
- **Wide Application:** Suitable for lathes, cylindrical grinders, milling machines, surface grinders, boring mills, and other machine tools.



# UNIVERSAL DIGITAL DISPLAY METER

Built-in chip

High precision

Long service life

Industrial quality

High precision and long service life.



Image: The GCS906-2 Universal Digital Display Meter, highlighting its built-in chip, high precision, and long service life for industrial quality applications.

### 3. PACKAGE CONTENTS

Upon unpacking, please verify that all components listed below are present and undamaged. If any items are missing or damaged, contact your supplier immediately.

## CONFIGURATION LIST

LIST SHOW



DIGITAL DISPLAY



1. SCREW

2. POWER CORD

3. CONNECTION  
PLATE

4. INSTRUCTIONS



Image: A visual representation of the GCS906-2 Digital Readout system and its included accessories, labeled for easy identification.

### **Included Components:**

1. GCS906-2 Digital Readout Unit
2. Power Cord
3. Connection Plate
4. Instruction Manual (this document)
5. Mounting Bracket
6. Screws and other accessories (for grating machines, if applicable)

## **4. SPECIFICATIONS**

The following table details the technical specifications of the GCS906-2 Digital Readout system:

UNIT: MM



PRODUCT NAME	GCS906-2
VOLTAGE	AC80-240V/50-60HZ
POWER DISSIPATION	15W
WORKING TEMPERATURE	-10°C TO 60°C
STORAGE TEMPERATURE	-20°C TO 70°C
COORDINATES	2 AXIS, 3 AXIS
INPUT FREQUENCY	≤32MHZ

Image: A diagram illustrating the dimensions of the GCS906-2 unit (27.8cm x 17.5cm x 4.3cm) and a table of its key technical specifications.

Parameter	Value
Product Name	GCS906-2

Parameter	Value
Voltage Range	AC 80V ~ 260V / 50HZ ~ 60HZ
Power Dissipation	25VA (Max 15W)
Working Temperature	-10°C to 60°C
Storage Temperature	-20°C to 70°C
Coordinates	2 axis (expandable to 3 axis)
Linear Scale Resolution	0.5μm, 1μm, 2μm, 5μm, 10μm (customizable to 0.1μm)
Accuracy	±0.5, 1, 5, or 10μm / 0.0002" (at 20°C)
Input Frequency	≤32MHz
Pulse Signal Period	20μm
Traveling Speed	100m/min
Dimensions (L×W×H)	278mm × 175mm × 43mm

## 5. SETUP AND INSTALLATION

Proper installation is crucial for the accurate and reliable operation of your GCS906-2 DRO system. Follow these general guidelines for setup.

### 5.1 Mounting the DRO Unit

Use the provided mounting bracket and screws to securely attach the GCS906-2 unit to a stable surface near your machine tool. Ensure the display is at an ergonomic viewing angle for the operator.

### 5.2 Connecting Linear Scales

The GCS906-2 is designed to work with HXX grating rulers. If you are using other types of grating rulers, please ensure compatibility or contact support for guidance on configuration.

- Connect the linear scales (not included in all packages) to the corresponding axis input ports on the rear of the DRO unit.
- Ensure connections are firm and secure to prevent signal loss.



Image: The rear panel of the GCS906-2 unit, showing the three D-sub connector ports for linear scales, the power switch, and the AC power inlet.

### 5.3 Power Connection

- Connect the provided power cord to the AC power inlet on the rear of the DRO unit.
- Plug the other end of the power cord into a suitable AC power outlet (80V-260V, 50/60Hz).
- Ensure the power switch on the rear of the unit is in the OFF position before connecting to power.



Image: A complete kit showing the GCS906-2 DRO unit, two linear scales, various connection cables, and mounting hardware, illustrating a typical setup.

## 6. OPERATING INSTRUCTIONS

The GCS906-2 features an intuitive control panel and a clear LCD display for easy operation. This section outlines the basic functions.

# GCS906-2

## FUNCTIONS AND PARAMETERS

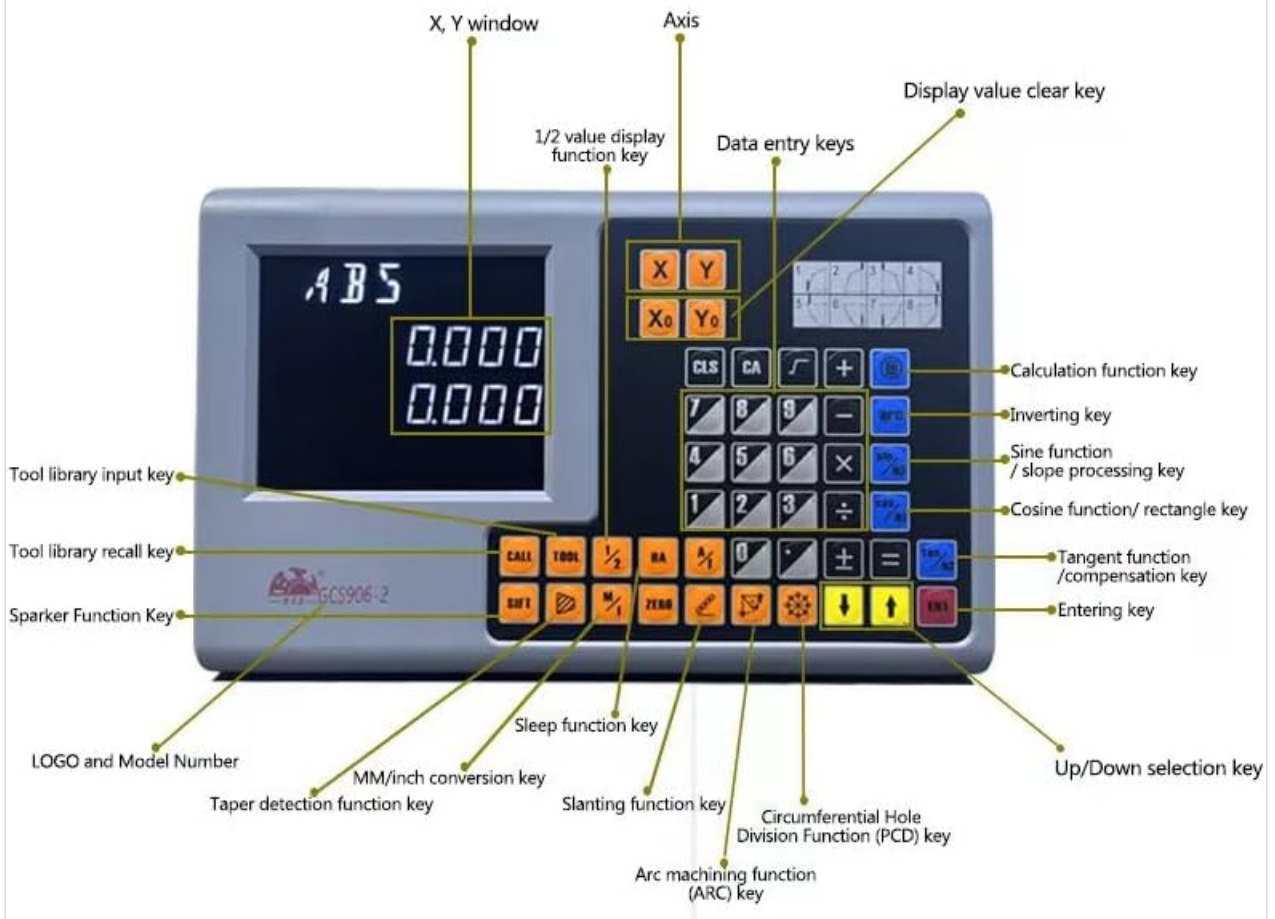


Image: A detailed view of the GCS906-2 control panel, with labels pointing to various keys and their corresponding functions, such as X, Y axis selection, data entry, calculation, and special functions.

## 6.1 Powering On/Off

- To power on, flip the power switch on the rear of the unit to the ON position.
- To power off, flip the power switch to the OFF position.

## 6.2 Basic Measurement Functions

- **X, Y Axis Display:** The main LCD screen displays the current position values for the X and Y axes.
- **Zeroing:** Press the **ZERO** key to set the current axis position to zero.
- **Absolute/Incremental (ABS/INC):** The display can switch between absolute and incremental measurement modes.
- **MM/Inch Conversion:** Use the **MM/inch** key to toggle between metric and imperial units.

## 6.3 Advanced Functions

The GCS906-2 includes several advanced functions accessible via the keypad:

- **Data Entry Keys:** Numeric keys (0-9) and arithmetic operators (+, -, ×, ÷) for calculations.
- **Calculation Function Key:** For performing mathematical operations.
- **Tool Library Input/Recall:** Keys for managing tool offsets.
- **1/2 Value Display:** For displaying half of the current measurement.
- **Circumferential Hole Division (PCD) / Arc Machining (ARC):** Dedicated keys for specific machining patterns.
- **Sine/Cosine/Tangent Functions:** For trigonometric calculations.

## MULTI-LANGUAGE LCD DISPLAY

GCS906 is a digital display meter with Multi-language and big liquid crystal display.

At the same time, it is a metal case with strong anti-interference.

Professional manufacturer that uses 16-bit and 32-bit computer technology  
to apply digital display meter,

and can process straight line, oblique line, circular arc, continuous processing, etc.



CHIP



RESISTORS



Image: A composite image showing the GCS906-2's multi-language LCD display, internal chip, resistors, control panels, and the clear digital readout in incremental mode.

## 7. MAINTENANCE

Regular maintenance ensures the longevity and accuracy of your GCS906-2 DRO system.

- **Cleaning:** Keep the display screen and keypad clean using a soft, dry cloth. Avoid abrasive cleaners or solvents that could damage the surfaces.
- **Environmental Protection:** While the unit is designed to be dustproof, avoid exposing it to excessive dust, moisture, or corrosive substances.
- **Cable Inspection:** Periodically check all cables for signs of wear or damage. Replace any damaged cables immediately to prevent electrical hazards or signal issues.
- **Power Supply:** Ensure the unit is connected to a stable power supply within the specified voltage range.

## 8. TROUBLESHOOTING

This section provides solutions to common issues you might encounter with your GCS906-2 DRO system.

### 8.1 No Display / Power Issue

- **Check Power Connection:** Ensure the power cord is securely plugged into both the DRO unit and the wall outlet.
- **Verify Power Switch:** Confirm the power switch on the rear of the unit is in the ON position.
- **Check Outlet:** Test the power outlet with another device to ensure it is functional.

### 8.2 Incorrect Readings / No Movement on Display

- **Check Scale Connections:** Ensure the linear scales are properly connected to the DRO unit and that the connectors are secure.

- **Verify Scale Functionality:** Inspect the linear scales for any physical damage or obstructions.
- **Resolution Setting:** Confirm that the DRO's resolution setting matches that of your linear scales. Incorrect settings can lead to inaccurate readings.

### 8.3 Keypad Unresponsive

- **Restart Unit:** Power off the unit, wait a few seconds, and then power it back on.
- **Clean Keypad:** Ensure there is no debris or liquid on the keypad that might be interfering with key presses.

If you encounter issues not covered here or require further assistance, please contact customer support.

## 9. WARRANTY AND SUPPORT

### 9.1 Warranty Information

The HHXXOVA GCS906-2 Digital Readout system comes with a **1-Year warranty** from the date of purchase. This warranty covers manufacturing defects and ensures the product is free from defects in material and workmanship under normal use.

The warranty does not cover damage caused by improper installation, misuse, unauthorized modifications, accidents, or natural disasters. Please retain your proof of purchase for warranty claims.

### 9.2 Customer Support

For technical support, warranty claims, or any inquiries regarding your GCS906-2 DRO system, please contact HHXXOVA customer service:

- **Phone/WeChat:** +86 13430820858
- **WhatsApp:** +1 (226) 448-3615

When contacting support, please have your product model (GCS906-2) and a detailed description of the issue ready.