



**G6**

**NEXT-GENERATION  
MULTI-CHANNEL  
PROCESS INSTRUMENT**

# G6

UNMATCHED FLEXIBILITY.  
HIGH PERFORMANCE.  
PROVEN RELIABILITY.

**Get a highly reliable, high-performance instrument tailored to your unique application requirements.**

G6 is a best-in-class, next-generation multi-channel process instrument from the worldwide leaders in industrial weighing and force measurement. Building on the success of the G4 instrument, proven across more than 20 years in highly demanding applications, G6 implements today's most advanced technologies for enhanced performance and versatility. In addition to delivering outstanding accuracy, functionality, and flexibility, G6 offers simplified setup, easy use, and long-lasting reliability in challenging industrial environments.

With its modular design supporting up to 8 high-speed input channels, and highly customizable, multi-functional embedded software, the G6 supports the widest array of applications, from basic weighing to complex, multi-force measurement, motion supervision, and diagnostics. It can easily be modified during development of your customized solution and reconfigured at any time as your application needs change, even post-installation.





# G6

ROCK-SOLID  
ADVANTAGES

Unmatched  
flexibility

High  
performance

Long-lasting  
reliability

## UNMATCHED FLEXIBILITY

**Modular HW design** – Supports up to 6 modules; can be easily changed or upgraded in the field

**Wide variety of software packages** – All customizable to suit unique application needs

**Multiple user interfaces** – Easy integration and setup according to your needs

**Supports multiple high-speed modules**

**Panel-mount and rail-mount versions**

## HIGH PERFORMANCE

**Extreme accuracy** – Captures force signals with high precision

**Advanced technologies** – An advanced system-on-chip solution, a wide range of fieldbus communication protocols, and more

**Comprehensive measurement and control functionality** – Embedded as standard

**Extensive advanced features and interfaces** – Support complex installations and requirements

**Intuitive use** – Simple operation, requiring zero to little training

## LONG-LASTING RELIABILITY

**Proven** – The next generation of the G4 instrument, used in demanding industrial environments for 20+ years

**Durable accuracy even in challenging conditions** – Robust aluminum casing and shock-absorbing design

**Assured quality** – Testing performed on each individual module

**Developed and manufactured in-house at BLH Nobel** – Part of VPG, the global leader in precision measurement, with worldwide operations

# G6

## INSTRUMENT UNITS

The G6 multi-channel process instrument comes with a rich array of standard features and components, and extensive optional capabilities and features.



### G6 Panel Mount

Robust aluminum housing, a large (5.7-inch) color backlit touchscreen, and press-buttons. Supports up to 6 modules and is available with a DC or AC power supply.



### G6 Rail Mount

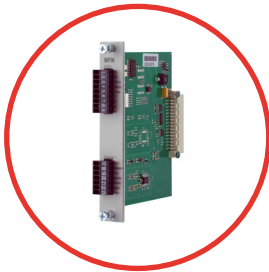
DIN 46 277/3 and DIN EN 50022 Rail Mount version with aluminum housing. Compact view-pan display with press-buttons. Supports up to 3 modules and is available with a DC power supply.

## KEY STANDARD FEATURES AND CAPABILITIES

- High reading rate – Enables accurate control of dynamic processes
- Synchronized sampling of all channels – Provides true measurement that is not affected by severe vibration or shock
- Advanced digital filtering
- Extensive communication support – Including multiple interfaces (high-speed Ethernet, RS485), protocols (Modbus RTU, Modbus TCP, Ethernet/IP), fieldbuses (PROFINET, PROFIBUS, DeviceNet), and analog output
- Comprehensive measurement and control capabilities – Net and gross weight, force, level supervision, setpoint, min./max. values, and more
- Remote live-view – Enables browser-based monitoring from anywhere
- Sealed enclosure optimized for industrial environments – IP20 DIN Rail Mount; IP65 Panel Mount

# G6 MODULES

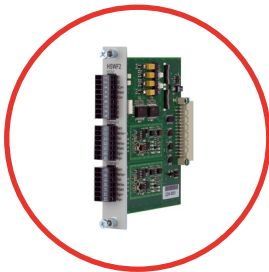
The G6 product line includes varied modules and fully customizable software, providing advanced, high-performance instruments easily configured according to your specific application needs.



## WF1N1/2

High-performance weight/force input module with 1 or 2 input channels.

- Single-channel or dual-channel weighing module
- Sample rate: up to 3840 samples per second
- Update rate: up to 300 updates per second
- Resolution: 16,000,000 counts
- Excitation: 5 VDC, up to 16 load cells per channel, no barriers
- Accuracy static: 0.002%
- Input range:  $\pm 7.5$  mV/V
- Offset drift:  $< 10$  nV/V/K
- Gain drift:  $< 2$  ppm/K
- Digital I/O: 4 inputs and 2 outputs, 24 V, 50 mA



## HSWF2

High-performance and high-speed weight/force input module with 1 or 2 input channels.

- Single-channel or dual-channel weighing module
- Sample rate: 20,000 samples per second
- Update rate: up to 800 updates per second
- Resolution: 16,000,000 counts
- Excitation: 10 VDC, up to 4 load cells per channel, barriers OK
- Accuracy: 0.002%
- Input range:  $\pm 7.5$  mV/V
- Offset drift: 10 nV/V
- Gain drift: 2 ppm/K
- Digital I/O: 4 inputs and 2 outputs, each 24 V, 50 mA

## G6 MODULES



### Analog Output

Versatile analog output module, with 1 or 4-channels that can be configured to output current and/or voltage.

- Single-output module or quad-output (4) module
- Voltage or current outputs:
  - 4-mA to 20-mA isolated analog output at  $R_{Load} < 500$  ohms, or
  - 20-mA to +20-mA analog output at  $R_{Load} < 500$  ohms, or
  - 10-V to +10-V analog output at  $R_{Load} > 1$  kilohm
- Resolution: 16-bit
- Update rate: 300/800 updates per second, same as measurement rate



### AC supply for Panel Mount

Power supply module for AC operation.

- Power in: 115/230 VAC
- Power regulation and filtering
- Power indication LED
- Mains AC power connector

More modules on the next page >>

# G6 MODULES



## DIO8

Digital input/output module.

- 8 isolated digital inputs, 24 V, 7 mA
- 8 isolated outputs, 24 V, 100 mA



## DC Supply for Panel Mount

Power supply module for 24 V operation.

- Power in: 24 VDC
- Power regulation and filtering
- Power indication LED



## Viewpan Module

User Interface panel for DIN Rail Unit.

- 2 x 16-character LCD display with backlight
- Keypad with 4 function keys
- 24 VDC power supply

# MEASUREMENT AND CONTROL FOR CHALLENGING APPLICATIONS

The G6 instrument is an essential part of BLH Nobel's market-leading, high-quality solutions for precision process weighing and force measurement in demanding industrial applications. It comes integrated with versatile BLH Nobel software for specific industries, customized to your particular application and needs.



## Standard weighing

View real-time accurate weighing information for your tank, silo, or bucket.



## Multi-channel batching

Control several batching processes, using up to eight weighing channels and expanded I/O options. Simultaneous measuring and high-speed capabilities enable higher accuracy in the batching process.



## Multi-channel force vector calculation

Simultaneous and synchronous measurement of all eight channels, more difficult to achieve with high-speed communication capabilities, allows you to measure multiple forces and make complex calculations.



## High dynamic force measurement

Simultaneous and synchronous measurement of up to eight high-sample-rate channels, combined with high-speed communication, enable accurate measurement of forces in systems with high-speed events, such as machine automation, press machine real-time control, and quality assurance monitoring.

# DEDICATED SOFTWARE PACKAGES FOR DEMANDING INDUSTRIES



Metal processing



Mining operations



Pulp & paper production



Offshore operations



Food & beverage production



Chemical processing and manufacturing



Pharmaceuticals manufacturing



Crane weighing and other custom applications

# ABOUT BLH NOBEL

BLH Nobel, part of Vishay Precision Group (VPG), is the pioneer and market leader in process weighing and force measurement solutions for demanding industrial applications. We design, manufacture and support high-quality, extremely accurate and robust weighing and control systems. Our wide range of standard products and custom solutions are all meticulously engineered to optimize our customers' processes. BLH Nobel systems are installed in more than 100 countries, reliably providing precise stress, force, weight, pressure, and current measurements in the toughest environments.

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