

Advanced Process Control Instruments Family

FEATURES

- DIN Rail mount
- Modular system with flexible configuration
- Up to 6 weighing/force measurement channels per unit
- Synchronized sampling of all channels
- Fast update rate – up to 800 updates per second
- Easy access to service and control panel
- Integrated flexible digital I/O
- Communication: Ethernet, Profibus, DeviceNet, Modbus, USB, RS485, RS232, Modbus/TCP, EtherNet/IP
- Easy parameter backup and restoration via USB port or internal memory

APPLICATIONS

- Process weighing and control
- Force measurement
- Web tension measurement and control
- Automation
- Force vector calculations
- High dynamic force measurement
- High speed batching/blending systems

DESCRIPTION

The BLH Nobel G4-RM family of process control instruments offers high speed, high performance control for industrial weighing and force measurement applications plant wide. G4-RM units set new standards geared for today's application demands and tomorrow's expanding requirements.

G4-RM instruments accommodate up to three different, easily installed, modules for advanced performance, more functional channels, custom applications, or repair. This provides customers with a highly flexible, upgradeable, single instrument system capable of weighing up to six independent vessels or scales. For web tension applications, up to six zones (rolls) can be monitored simultaneously. Inputs and outputs can be configured according to customer requirements.



DIN-Rail Mount Unit



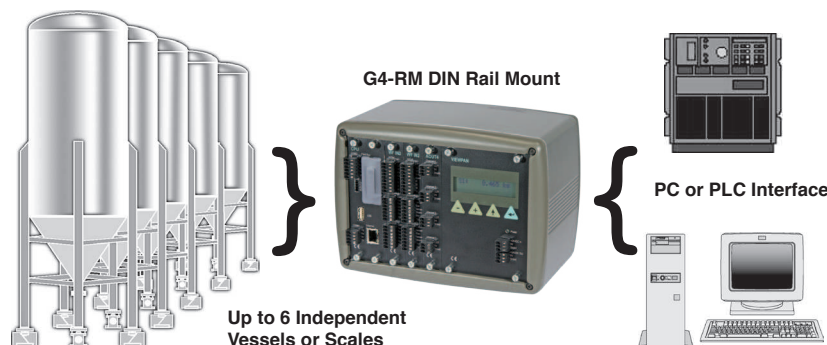
A wide variety of industrial communication interfaces (Ethernet, RS232, RS485), Protocols (Modbus RTU, Modbus TCP, EtherNet/IP) and Fieldbuses (Profibus or DeviceNet) are available.

Software upgrades can be downloaded to the instrument from our website, or be transferred to the G4-RM unit via a standard USB port connection.

Custom software designed to customer requirements for special applications is available upon request.

DIN Rail mount units are rated IP20. Power supply is 24 VDC.

CONFIGURATION



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| SPECIFICATIONS | | | |
|--|--|--|--|
| PARAMETER | VALUE | PARAMETER | VALUE |
| Enclosure types | DIN | WF IN1 (1 INPUT) AND WF IN2 (2 INPUTS) WEIGHT/FORCE INPUT MODULES | |
| Dimensions W × H × D | 229 × 168 × 145 mm | Max. no. of load cells | 8 per channel |
| Enclosure design | Aluminum housing | Excitation voltage | 5 VDC |
| ENVIRONMENTAL | | A/D conversion | 3.9 kHz, 16,000,000 units (24 bits) |
| Temperature range – Rated performance | –10 to +50°C | Input range | ±7 mV/V |
| Temperature range – Storage | –25 to +85°C | Update rate | 1 up to 300 readings per second |
| Protection | IP20 | No. of weight channels | Up to 6 channels |
| EMC, Safety | CE (Industrial), FM, cFM | Sensitivity | 0.1 µV |
| Display | 2 × 16 character LCD with backlighting | Zero drift | <10 nV/V/K |
| Keyboard | 4 membrane keys | Span drift | <2 ppm/K |
| POWER | | Digital I/O | 4 inputs, 24 V, isolated with common return 2 outputs, 24 V, max. 100 mA, isolated with common return |
| DC SUPPLY module | 19–29 VDC, 40 W | HS WF2 HIGH SPEED WEIGHT/FORCE INPUT MODULE | |
| CPU MODULE | | Max. no. of load cells | 4 per channel |
| Interfaces | Isolated | Excitation voltage | 10 VDC |
| RS232 and RS485, ports | For process data and control | A/D conversion | 20 kHz, 16,000,000 units (24 bits) |
| Protocol | Modbus RTU | Input range | ±4.5 mV/V |
| Baud rate | Up to 115 kbaud | Update rate | 6 up to 800 readings per second |
| USB, supported units | Version 1 | No. of weight channels | 2 or 4 channels |
| Keyboard | USB keyboard for PC | Sensitivity | 0.1 µV |
| Memory stick | USB type for PC For backup and restore of set-up parameters. For change to a new program version | Zero drift | <10 nV/V/K |
| Ethernet | For process data and control | Span drift | <2 ppm/K |
| Protocol | Modbus TCP and EtherNet/IP | Digital I/O | 4 inputs, 24 V, isolated with common return 2 outputs, 24 V, max. 100 mA, isolated with common return |
| Field bus or Industrial Ethernet, Optional | For process data and control | DIO8 MODULE, DIGITAL INPUT AND OUTPUT MODULE | |
| Available field busses | Profibus or DeviceNet. Other on demand (contact factory) | Separate I/O module | 2 units can be used |
| | | Type | 8 inputs, 24 V, isolated with common return 8 outputs, 24 V, max. 100 mA, isolated with common return |
| | | AOUT1 / AOUT4 ANALOG OUTPUT MODULES | |
| | | Number of channels | 1 or 4, separately isolated channels |
| | | Resolution | 65,000 units, 16 bits |
| | | Voltage output | 0 to 10 V, –10 to 10 V, >1 kΩ load |
| | | Current output | 4 to 20 mA, 0 to 20 mA, –12 to 20 mA or –20 to 20 mA <500 Ω load |
| | | Update rate | Analog input update rate, adjustable smoothing filter |

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ORDERING INFORMATION
Part Number Nomenclature: G4-RM-FB-S1-S2-S3-P

| Code | Type | Part Number Reference | Description |
|-----------|--------------------------|---|--|
| G4 | Instrument type | G4 | — |
| RM | Enclosure type | RM | Rail mount |
| FB | Fieldbus interface | 0 P D | None Profibus DeviceNet |
| Si | Slot 1 to 3 type | 0 1 2 3 4 5 6 7 8 | Blank HSWF1—High speed weight/force, single input module HSWF2—High speed weight/force, dual input module WFIN1—Weight/force, single input module WFIN2—Weight / force, dual input module TBD AOUT1—Analog output, single channel AOUT4—Analog output, 4 channels DIO8—Digital input and output module |
| V | User interface and power | V | Viewpan, 24 VDC |
| S | Software version | W F S | Weighing Force Special version (contact factory for option code) |

Example of actual part number: G4-RM-0-4-8-0-V-F

Where:

G4 instrument (G4)

DIN Rail mount (RM)

No field bus or special protocol (0)

Slot 1 = WFIN1 (4)

Slot 2 = DIO8 (8)

Slot 3 = Blank (0)

Power = Viewpan (V)

F = Force software version

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