

## 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*



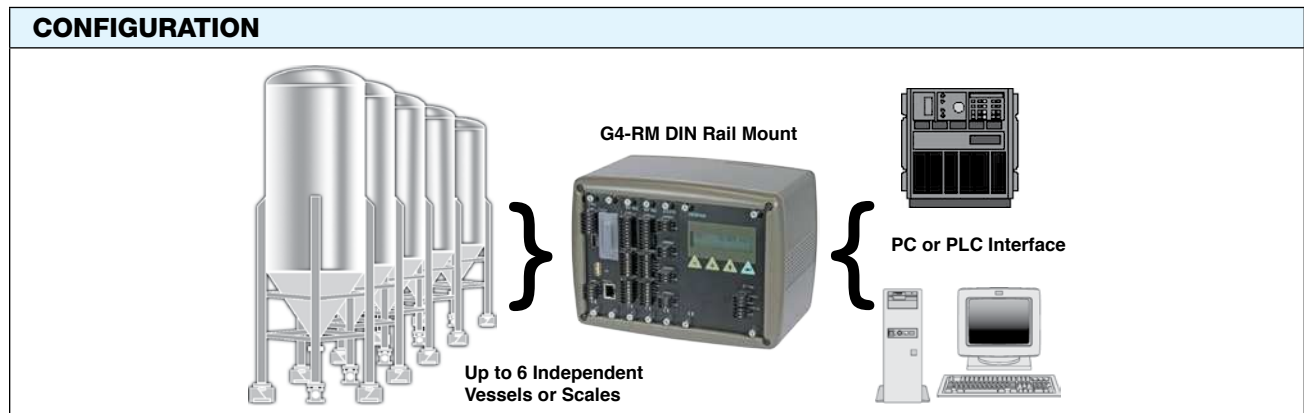
A wide variety of industrial communication interfaces (Ethernet, RS232, RS485), Protocols (Modbus RTU, Modbus TCP, EtherNet/IP) and Fieldbuses (Profibus or Devicenet) are available.

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	PARAMETER	VALUE
Enclosure types	DIN	<b>WF IN1 (1 INPUT) AND WF IN2 (2 INPUTS) WEIGHT/FORCE INPUT MODULES</b>	
Dimensions W x H x D	229x168x145 mm	Max. no. of load cells	8 per channel
Enclosure design	Aluminum housing	Excitation voltage	5 VDC
<b>ENVIRONMENTAL</b>		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), UL, cUL, FM, cFM	Sensitivity	0.1 µV
Display	2 x 16 character LCD with backlighting	Zero drift	<10 nV/V/K
Keyboard	4 membrane keys	Span drift	<2 ppm/K
<b>POWER</b>		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	<b>HS WF2 HIGH SPEED WEIGHT/FORCE INPUT MODULE</b>	
<b>CPU MODULE</b>		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	<b>DIO8 MODULE, DIGITAL INPUT AND OUTPUT MODULE</b>	
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
		<b>AOUT1 / AOUT4 ANALOG OUTPUT MODULES</b>	
		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
<b>G4</b>	Instrument type	G4	—
<b>RM</b>	Enclosure type	RM	Rail mount
<b>FB</b>	Fieldbus interface	0 P D	None Profibus DeviceNet
<b>Si</b>	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
<b>V</b>	User interface and power	V	Viewpan, 24 VDC
<b>S</b>	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 = WF1 (4)

Slot 2 = DIO8 (8)

Slot 3 = Blank (0)

Power = Viewpan (V)

F = Force software version

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