

## Advanced Process Control Instrument Family

### DIN-Rail Mount Unit



### 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

### DESCRIPTION

The Nobel - BLH 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.

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.

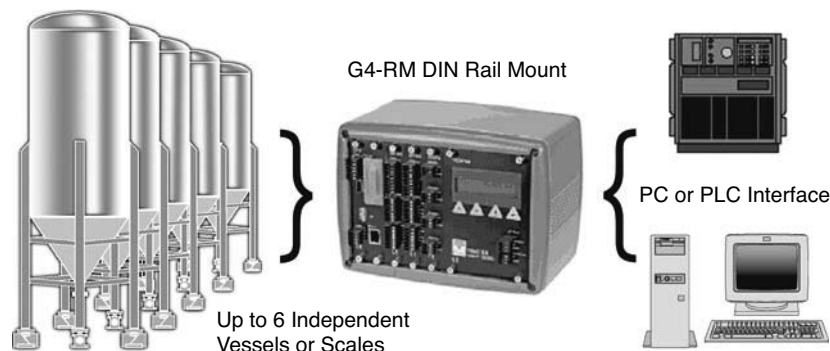
Custom software designed to customer requirements for special applications is available upon request.

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

### 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

### CONFIGURATION



**SPECIFICATIONS**

<b>Enclosure types</b>	<b>DIN Rail mount</b>
<b>Dimensions WxHxD</b>	229 x168 x145mm
<b>Enclosure design</b>	Aluminum housing
<b>Environmental</b>	
Temperature range	
Rated performance	-10 to +50°C
Storage	-25 to +85°C
Protection	IP20
EMC, Safety	CE (Industrial), UL, cUL, FM, cFM
<b>Display</b>	2 x16 character LCD with backlighting
<b>Keyboard</b>	4 membrane keys
<b>Power</b>	DC SUPPLY module
Voltage and Power	19-29VDC, 40W
<b>CPU module:</b>	
<b>Interfaces:</b>	All are isolated
RS232 and RS485, ports	For process data and control
Protocol	Modbus RTU
Baud rate	Up to 115 kbaud
USB, supported units	Version 1
Keyboard	USB keyboard for PC
Memory stick	USB type for PC For backup and restore of set-up parameters. For change to a new program version
Ethernet	For process data and control
Protocol	Modbus TCP and EtherNet/IP
Field bus or Industrial Ethernet, Optional	For process data and control
Available field busses	Profibus or DeviceNet. Other on demand (contact factory)
<b>WF IN1 (1 input) and WF IN2 (2 inputs) Weight/Force input modules:</b>	
Max. # of load cells	8 per channel
Excitation voltage:	5VDC
A/D conversion:	3.9kHz, 16 000000 units (24 bits)
Input range	±7mV/V
Update rate:	1 up to 300 readings per second
No. of weight channels:	Up to 6 channels
Sensitivity:	0.1µV
Zero drift:	<10nV/V/K
Span drift:	<2ppm/K
Digital I/O	4 inputs, 24V, isolated with common return 2 outputs, 24V, max 100mA, isolated with common return

**SPECIFICATIONS cont.**

<b>HS WF2 High speed Weight/Force Input module:</b>	
Max. # of load cells	4 per channel
Excitation voltage:	10VDC
A/D conversion	20kHz, 16 000000 units (24 bits)
Input range	±4.5mV/V
Update rate:	6 up to 800 readings per second
No. of weight channels:	2 or 4 channels
Sensitivity:	0.1µV
Zero drift:	<10nV/V/K
Span drift:	<2ppm/K
Digital I/O	4 inputs, 24V, isolated with common return 2 outputs, 24V, max 100mA, isolated with common return
<b>DIO8 module, Digital Input and Output module:</b>	
Separate I/O module	2 units can be used
Type	8 inputs, 24V, isolated with common return 8 outputs, 24V, max 100mA, isolated with common return
<b>AOUT1 / AOUT4 Analog output modules:</b>	
Number of channels	1 or 4, separately isolated channels
Resolution	65000 units, 16 bits
Voltage output	0 - 10V, -10 to 10V, >1kohm load
Current output	4 - 20mA, 0 - 20mA, -12 - 20mA or -20 - 20mA <500 ohm load
Update rate	Analog input update rate, adjustable smoothing filter

### Ordering Information

G4-RM-FB-S1-S2-S3-P

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

#### Example: 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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