

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
Enclosure types	DIN		
Dimensions W x H x D	229x168x145 mm		
Enclosure design	Aluminum housing		
ENVIRONMENTAL			
Temperature range – Rated performance	-10 to +50°C		
Temperature range – Storage	-25 to +85°C		
Protection	IP20		
EMC, Safety	CE (Industrial), UL, cUL, FM, cFM		
Display	2 x 16 character LCD with backlighting		
Keyboard	4 membrane keys		
POWER			
DC SUPPLY module	19–29 VDC, 40 W		
CPU MODULE			
Interfaces	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)		
		PARAMETER	VALUE
		WF IN1 (1 INPUT) AND WF IN2 (2 INPUTS) WEIGHT/FORCE INPUT MODULES	
		Max. no. of load cells	8 per channel
		Excitation voltage	5 VDC
		A/D conversion	3.9 kHz, 16,000,000 units (24 bits)
		Input range	±7 mV/V
		Update rate	1 up to 300 readings per second
		No. of weight channels	Up to 6 channels
		Sensitivity	0.1 µV
		Zero drift	<10 nV/V/K
		Span drift	<2 ppm/K
		Digital I/O	4 inputs, 24 V, isolated with common return 2 outputs, 24 V, max. 100 mA, isolated with common return
		HS WF2 HIGH SPEED WEIGHT/FORCE INPUT MODULE	
		Max. no. of load cells	4 per channel
		Excitation voltage	10 VDC
		A/D conversion	20 kHz, 16,000,000 units (24 bits)
		Input range	±4.5 mV/V
		Update rate	6 up to 800 readings per second
		No. of weight channels	2 or 4 channels
		Sensitivity	0.1 µV
		Zero drift	<10 nV/V/K
		Span drift	<2 ppm/K
		Digital I/O	4 inputs, 24 V, isolated with common return 2 outputs, 24 V, max. 100 mA, isolated with common return
		DIO8 MODULE, DIGITAL INPUT AND OUTPUT MODULE	
		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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