MG

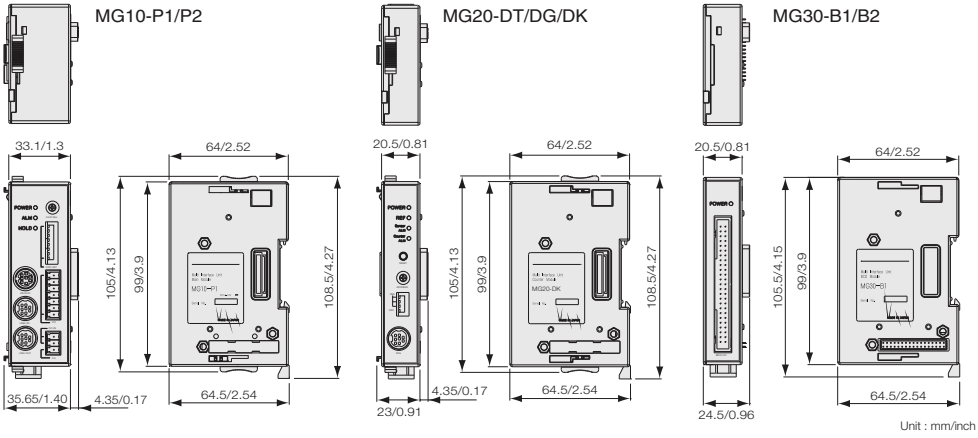
MG10/20/30 SERIES

Flexible digital gauge system for multi-point measuring .

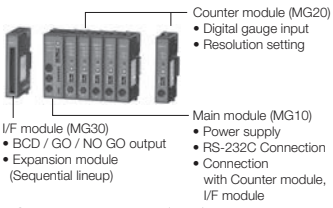
- Up to 64 connectable gauges
- Input resolutions : 0.1μm, 0.5μm, 1μm, 5μm, and 10μm.
- Compatible with RS-232C, BCD
- Operating voltage : 12-24VDC
- DIN rail mounting (35mm)

Interface unit

System structure



"MG"Multi Interface unit operates with a variety of modules.

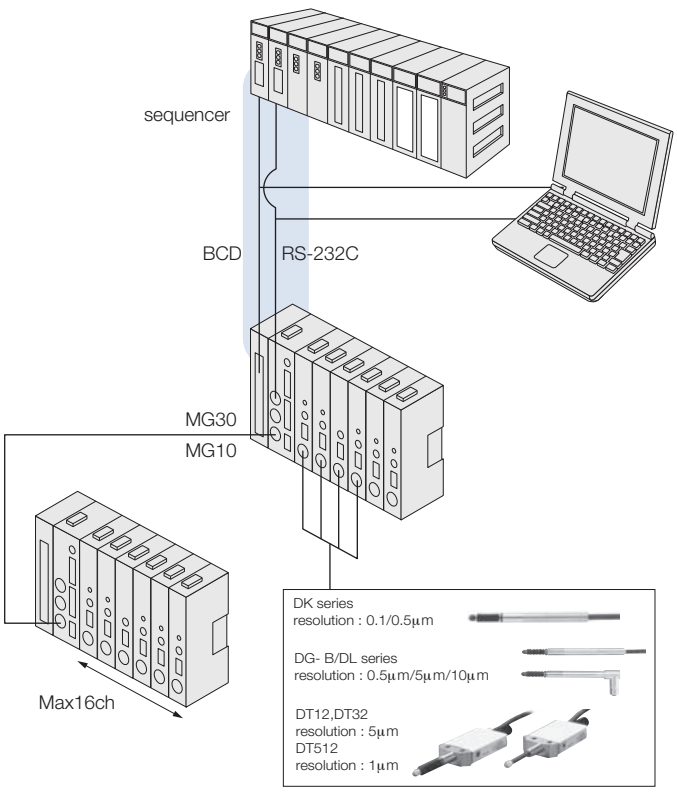


MG10-P1 : sink type output (–com)
MG10-P2 : source type output (+com)

MG20-DK : DK series gauges
MG20-DG : DG**B and DL**B/BR series gauges
MG20-DT : DT series gauges

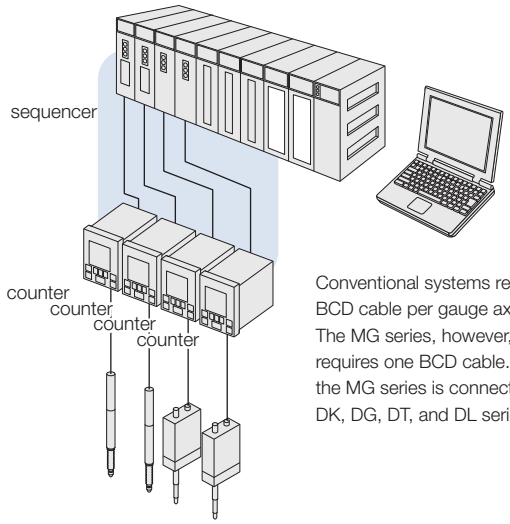
MG30-B1 : BCD sink type output (–com)
MG30-B2 : BCD source type output (+com)

MG series System structures



The "MG" series is a modular gauging system that allows flexible, multi-point measuring, with built-in software for today's most popular output protocols.
The "MG" system can be easily mounted to a standard DIN rail (35mm), requires minimal wiring, and can be easily expanded for future upgrades.

Conventional system structure



Conventional systems require one BCD cable per gauge axis.
The MG series, however, only requires one BCD cable. In addition, the MG series is connectable to our DK, DG, DT, and DL series gauges.

Main module

Model name		MG10-P1	MG10-P2
Power source	Supply voltage	DC12-24V(11-26.4V)Min. startup time: 100ms or less	
	Power consumption	2.0W + total power consumption for connected modules*1	
	Inrush current (10ms)	10A or less (when maximum number of modules are connected)	
	Power supply protection	Fuse (5A fuse is built in.)	
Communication	Communication I/F	RS-232C (EIA-232C or equivalent)	
	Baud rate setting	2400 / 9600 / 19200 / 38400 bps (set with DIP switch)	
	Data length	7 / 8 bit (set with DIP switch)	
	Stop bit	1 / 2 bit (set with DIP switch)	
	Parity	none / ODD / EVEN (set with DIP switch)	
	Delimiter	CR / CR+LF (set with DIP switch)	
Linkage function	Maximum number of linkages	16 (total of counter modules: 64)	
	Maximum length of linking cable	10m	
I / O	Input format	source input (+COM)	sink input (–COM)
		Photo coupler insulation, external power: DC5 – 24V	
	Output format	sink type (–COM)	source type (+COM)
		Photo coupler insulation, external power: DC5 – 24V	
	Input signal	reset, pause, start, latching, and data out trigger to whole channels	
	Output signal	integrated alarm	
Connectable modules	Counter modules	MG20-DK, MG20-DG and MG-20DT (available for mixed use, up to 16 modules) *1	
	Interface modules	MG30-B1,MG30-B2	

*1: Total power of modules connected to MG10 should not be over 54W (12VDC Input) or 108 W (24VDC Input).

Counter module

Model name		MG20-DK	MG20-DG	MG20-DT
Power consumption		1W + power consumption for connected gauge	1.4W (connected to DG-B) / 0.5W (connected to DL-B)	0.8W
Measuring unit input	Corresponding gauge	DK series (A/B quadrature input)	DG**B series, DL**B/DL**BR series	DT series
	Allowable resolution setting *2	10 / 5 / 1 / 0.5 / 0.1μm	10 / 5 / 0.5μm	5μm (DT12/32) 1μm (DT512)
		set with DIP switch		
	Maximum response speed	Subject to the specification of the connected gauge		100m / min
	Reference point *3	REF-LED (reference point loaded) shows on the display after the reference point is detected. Set "0" or preset value on the counter when the reference point is detected.		–
Others	Alarm	S-ALM LED activates by excess speed/acceleration of measuring unit. C-ALM LED activates by excess speed of the internal circuit of counter.		
		Alarm display is cancelled by reset command from MG10 or with the reset button of main unit.		

*2: Set the resolution value of the connected gauge. *3: MG20-DG work only connect to DL**BR series

Interface module

Model name		MG30-B1	MG30-B2
Power consumption		1w	
I/O	Input format	source input (+com)	sink input (–com)
		Photo coupler insulation, external power: DC5 – 24V	
	Output format	sink type (–com)	source type (+com)
		Photo coupler insulation, external power: DC5 – 24V	
	Input signal	DRQ / channel address / measuring mode shifting / comparator shifting / reset / start / posing / reference point loaded	
	Output signal	BCD data (6 digits) / READY / code / GO/NO GO output / alarm / reference point loaded	
Output setting		timer (1~128ms) / OUT / OR / polarity (set with internal DIP switch)	
All models	Operating temperature	0~+50℃ (No condensation)	
	Storage temperature	–10~+60℃ (20~90%RH)	