

The advertisement features a central graphic of a circular controller with the text "Graphic Operation Controller" and "All-In-One Controller" above the large red "GOC" logo. Three callout boxes labeled "Visualise", "Control", and "Connect" are connected to the central graphic. Below this is a photograph of the physical GOC35 device, which has a screen displaying "PLC + HMI" and a keypad with function keys F1-F5 and K1-K8. The background is a dark blue grid with binary code.

Visualise

Control

Graphic Operation Controller
GOC
All-In-One Controller

Connect

Graphic Operation Controller
GOC35

PLC + HMI

F1 F2 F3 F4 F5
K1 K2 K3 K4 K5 K6 K7 K8

VERSATILITY
MEETS
VALUE

INTRODUCTION

Key Attributes

- I/O Capacity – 48
- Main Unit – 16 IO and 32 IO
- I/O Extension Unit – Analog, DI/DO
- Communication Options –
 - Serial RS232
 - Serial RS422/485
 - Ethernet
- Display – Graphical LCD, 128 x 64 pixels
- Configurable MODBUS RTU Master/Slave
- Data logging via SD Card (upto 32 GB)

“A single controller for all my automation needs”

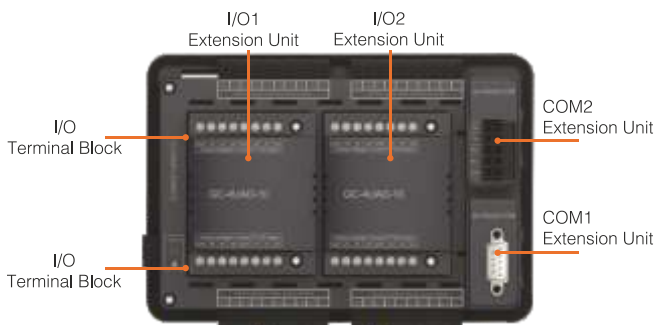
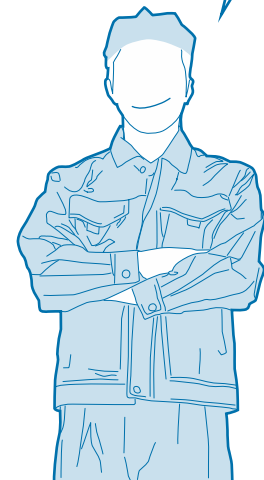


Main Unit Back Side View

Key Attributes

- 6 Models. 16 IO (Relay, Transistor (sink, source)) and 32 IO (Relay, Transistor (sink, source))
- Configurable Digital Inputs -
 - 2 HSC : 20 KHz
 - 2 Encoder : 10 KHz
 - 2 Hardware Interrupt
 - 2 Pulse Catch

“GOC is compact and it reduces Assembly Time by eliminating separate wiring of PLC and HMI”



• **Digital IO**
 8 Inputs
 6 Relay Outputs
 4 Inputs + 4 Outputs
 2 HSC + 2 PTO



• **Analog IO**
 4 Analog Inputs (V/I), 12-bit
 4 Analog Outputs (V/I), 12-bit
 4 Universal Inputs (PT100, V/I), 10-bit



• **Communication**
 Ethernet
 Serial
 Modbus



GOC HMI FUNCTION



Function Keys

Key legend on LCD

MANUAL CONTROL
STAGE 1 PUMP
START STOP REST

Fonts supported by Windows

WINDOWS FONTS
Arial
Century Calibri
Magneto

Real Time Clock

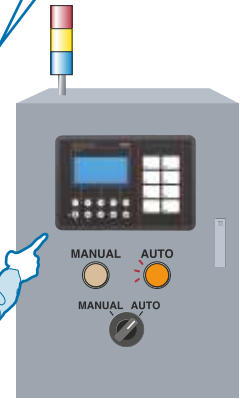
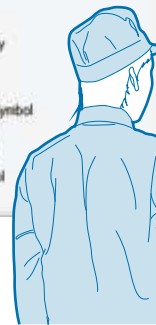
RTC
DD-MM-YYYY
HH:MM:SS

Graphical Symbols

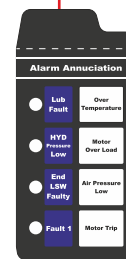
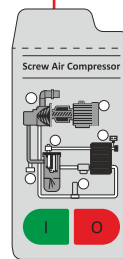
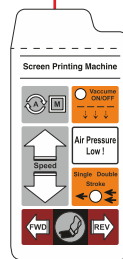
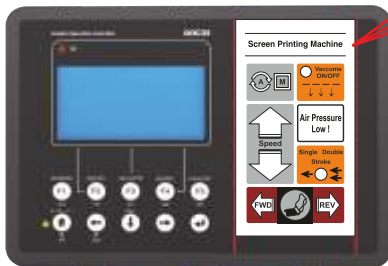
GRAPHIC SYMBOLS
Dynamic Symbols



"Now I can easily debug in a single operation and operate in my preferred language too!"



ILLUMINATED KEYS



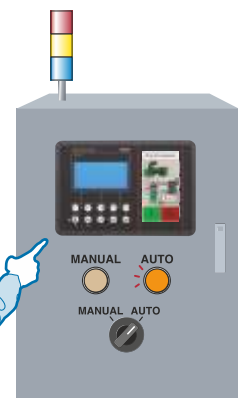
Key Attributes

- 8 Illuminated Keys (Keys with Dual colour bright LEDs)
- User configurable operation Inch/ Toggle/ GoTo Screen
- LED control Red/Green/Yellow ON/ OFF/ Blink Slow/ Blink Fast
- Multi-fold usage combined with slide-in label

Customization

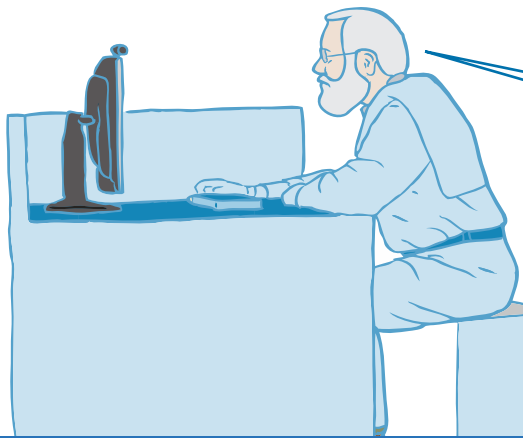
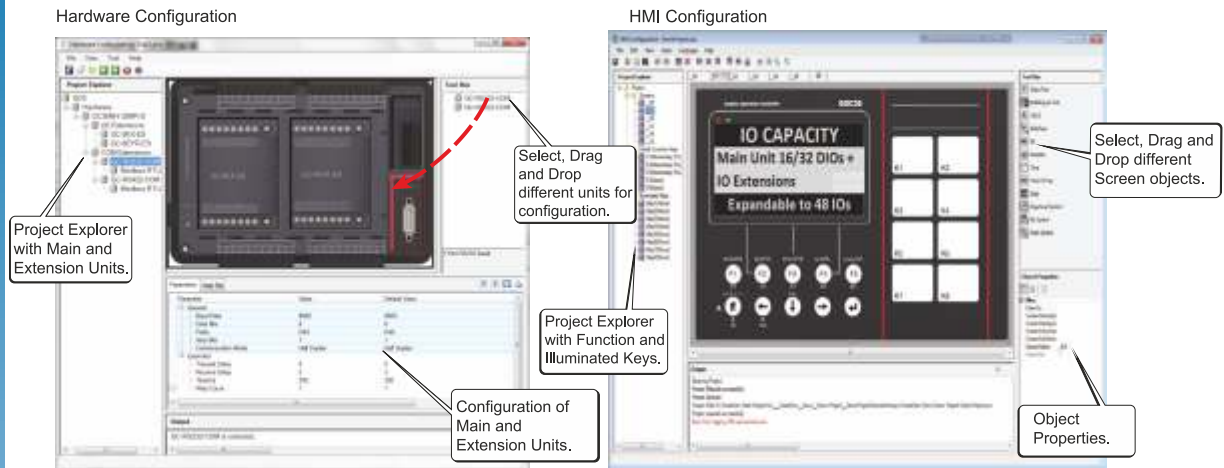
Easy customisation of front look

- Insert able side-in labels
- Process mimic
- Brand labelling
- Machine information



SOFTWARE FEATURES

SINGLE Integrated programming software for PLC and HMI - **FREE OF CHARGE!!**
Easy Hardware and HMI Configuration



“Now no need to invest time in learning two different softwares for PLC and HMI”

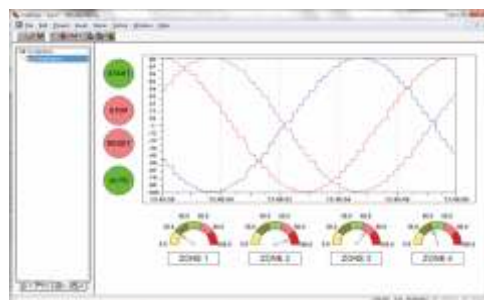
PLC Editor

- Number of languages to choose from.
- Built-in function blocks to save time.



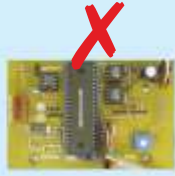
Vivid Visualisation

- Graphs and color images for variable inputs.



AUTOMATION MADE EASY

Entry Level Application



Still stuck to traditional Microcontroller based dedicated controller on Relay Logic?



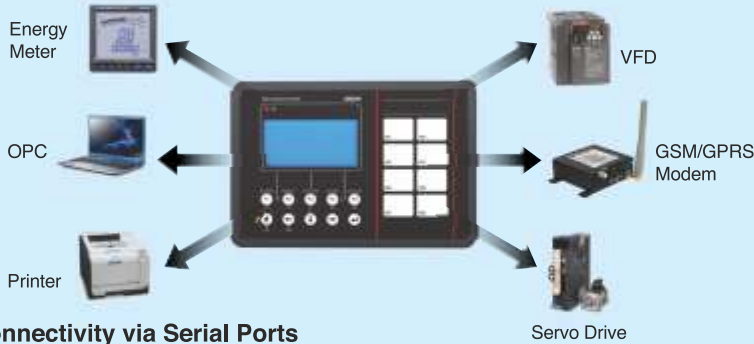
Time to move on



Design your own concept with GOC and save big on time and money

SIMPLE FUNCTION

Wide connectivity to Fulfil Your Basic Needs

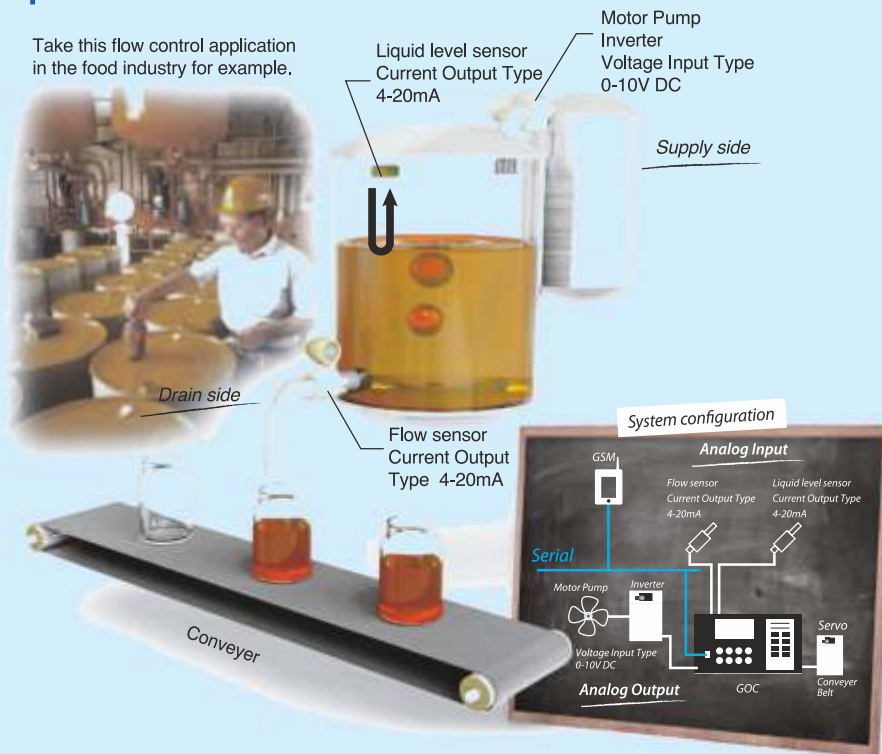


Connectivity via Serial Ports

MODERATE FUNCTION

Compact Yet Advanced Function

Take this flow control application in the food industry for example.



ADVANCED FUNCTION

SPECIFICATION

Main Unit

Model		GC35MH-16MT-DS GC35MH-16MR-D GC35MH-16MT-DSS	GC35MH-32MT-DS GC35MH-32MR-D GC35MH-32MT-DSS
IO Range (Input, Output)		16 (8,8)	32 (16,16)
Maximum IO Range		48	
CPU Performance	BOOL	0.3 µsec	
	MOVE (BYTE, WORD)	0.3 µsec	
	MOVE (DWORD, REAL)	0.1 µsec	
Memory Size	Program	192 KBytes (for PLC program and HMI program)	
	Source code and Comments	1.5 MBytes	
	Data Memory	24 KBytes	
	Retain Memory	1 KBytes	
Power		24 VDC , 400 mA, 9.6 Watt.	
Output Type		GC35MH-16MT-DS : Transistor (sink)	GC35MH-32MT-DS : Transistor (sink)
		GC35MH-16MR-D : Relay	GC35MH-32MR-D : Relay
		GC35MH-16MT-DSS: Transistor (source)	GC35MH-32MT-DSS: Transistor (source)
Integrated Functions	Single Phase Counter	20 KHz (2 Nos.)	
	Encoder Interface	10 KHz (2 Nos.)	
	Pulse Catch	Min 500 µsec (2 Nos.)	
	Real Time Clock	Retained up to 2 weeks with super capacitor backup	
	Communication	RS232, RS422/RS485, Ethernet* (Via com Extension Unit)	
	Serial Protocols	Modbus RTU Master, Master RTU Slave	
HMI	Display	Graphic LCD Display, 128 x 64 pixels White characters on blue background	
	Keys	10 keys for display navigation and data entry (User configurable functionality for 5 keys)	
	Illuminated Keys	8 (Keys with bicolor LEDs, Slide-in label)	
IO Expandability		2 IO Extension Slots	
Communication Expandability		2 COM Extension Slots	
Programming	Software	GOCToolkit (Includes CoDesys for programming and other configuration tools)	
	IEC 61131-3 Languages	Ladder, ST, SFC, FBD, IL	
	User Defined Function Blocks	Yes	
Environmentals	IP Level	IP65 from front. IP20 from rear	
	Temperature Range	Operating: 0 to 55 °C, Storage: -20 to 75 °C	
	Dimensions	Cut Out : 166.5 (W) x 107.5 (H), Front : 177.0 (W) x 123.0 (H) x 4 (D)	
Approvals	CE, ROHS	Yes	

IO Extension Units

	GC-8EX-ES	GC-6EYR-ES	GC-8ET-ESS	GC-4AD-12	GC-4DA-12	GC-4UAD-10	GC-4HSOXPTY
IO extension Type		Digital			Analog		High Speed Digital
Input Points	8	0	4	4	0	4	2 Ch HSC/Encoder, 100/50KHz max
Output Points	0	6	4	0	4	0	2 Ch PTO, 100 KHz max
Input Type	24VDC, Sink/Source	-	24VDC, Sink/Source	Voltage: 0 to 10V/ -10 to 10V Current: 0 to 20mA/ 4-20mA	-	Voltage: 0 to 10V Current: 0 to 20mA RTD PT100: -50°C to 150°C	24 VDC Sink/Source
Output Type	-	Relay (500 mA at 250 VAC and 30 VDC)	24VDC, Source Type 1.5A/output	-	Voltage: 0 to 10V/ -10 to 10V Current: 0 to 20mA/ 4-20mA	-	5 VDC Differential
Resolution	-	-	-	12 Bit	12 Bit	10 Bit	-
Isolation	Optical 1.5 KV between input & internal circuit	Galvanic between output and internal circuit	Optical 1.5KV between input/ output and internal circuit	No isolation	No isolation	No isolation	Optical 1.5 KV between input and internal circuit. No isolation between PTO and internal circuit
Protections	-	-	Short circuit protection for output	-	Short circuit protection for voltage output	-	No short circuit protection for PTO

COM Extension Units

	GC-RS232-COM	GC-RS422-COM	*GC-ENET-COM
Hardware Interface	RS232C	RS422/ 485	10/100 Base-TX
Number of COM Ports	1	1	1
Communication Speed (BPS)	9600, 19200, 38400, 57600, 115200		10/100 Mbps
Connector Type	9-pin D male	5-pin removable terminal block	RJ45 female, Shielded

*Ethernet is trademark of xerox Corporation