

GENERAL DISPLAY & CONTROLLER



GDC-01/02, Single Channel or Dual-channels Terminal



GDC-04/06/08, Multiple Channels Terminal



GDC-H, Handheld Terminal



GDC-Ex, Explosion Proof Terminal



GENERAL DISPLAY & CONTROLLER

THE ADVANTAGE

Universal Terminals: Use with Cross Smart Sensors for measurements of water analyzing, Gas analyzing and process control.

Advanced Display: -40°C tolerance brighter OLED screen for GDC-01/02, GDC-H and GDC-Ex. Colorful touch screen LCD for GDC-04/06/08

Single or Multiple Channels: for parameters and 4-20 mA analogue outputs up to 8 Channels.

4-20 mA output and Alarm Relays: Flexible configurations for all applications.

GDC-Ex Explosion Proof Terminal: Using a magnetic screwdriver through the display window to set up the GDC-Ex, eliminates the need to open the enclosure cover.

USB Port for easy data logging and software update.

GDC-04/06/08 terminals based on Linux system to run cross-platform software Delta-Phase View™

Optional Ethernet (TCP/IP) port and Wi-Fi for GDC-04/06/08, can be connected wirelessly by Pad, smart phones and computers for remote display and operations.

DESCRIPTION

GDC (General Displayer & Controller) series terminal are designed for continuous measurements with Cross Smart Sensors in a general purpose industrial or municipal environment. GDC terminals have the ability to extend network by intelligent sensors with RS485 output, Modbus RTU protocol. GDC terminals supply power to sensors in the meantime of getting signals. A plug and play function can be expected for those sensors in our recommended list, that means if you plug an intelligent sensor into a GDC and it will automatically configure to any of the listed measurements. GDC terminals can be expanded to work with any sensors with analogue or digital outputs for customized configuration.

Water analyzing:

- DO7 optical Dissolved Oxygen sensor.
- FA7 series Fluorescence Analyzing sensors are for Oil/HC-in-water, Chlorophyll a Cyanobacteria.
- SA-9 in-situ UV-VIS Spectrum Analyzing sensor are for parameters like CODEq, TOCe, DOCe, SAC254, BODEq, NO3-Neq, Dissolved Ozone, Dissolved Hydrogen Sulfide, Color and SS etc.
- TS7 Turbidity and SS sensor.
- MV7 series ISE sensors are for parameters of pH, ORP, Specific Ion, Dissolved Oxygen (ISE), Conductivity or Resistivity.
- DG7 series Disinfection Gauge Sensors for Free Chlorine, Total Chlorine, Chlorine Dioxide and Dissolved Ozone.

Gas analyzing:

- SDT series digital toxic and combustible gases detecting sensors.

Process measurements & control:

- DV7 digital Doppler Velocity sensor
- MI7 digital Magnetic Insertion-style flow sensor
- PG7 intelligent pressure sensor.
- RV7 digital Rada Velocity sensor
- UL7 intelligent ultrasonic level sensor.



SPECIAL CONFIGURATIONS AND APPLICATIONS

Delta-Phase developed some optional software and configurations of GDC terminals for some special application especially in water and waste water treatments as following...



Bar Screen and Travelling Screen level differential

GDC-02 connects two UL7 ultrasonic level sensors to measure levels of both up-stream and down-stream of Screen, GDC calculates the level differential and outputs signal to PLC or other control system for Bar Screen or Travelling Screen control.

Open Channel Flow

GDC terminals measure flow of standard Open Channel weir like Parshall Flume or other Flumes & weirs by using UL7 ultrasonic level sensor. GDC calculates the flow by level scale, displays the instant and accumulative flow readings, provide 4-20 mA output, pulse signal, RS485 MODBUS RTU and Alarm Relays.

Area/Velocity Flow Measurement

GDC terminal may connect to DV7 submersible Doppler velocity sensor or RV7 non-contact Radar velocity sensor; when combined with a level signal of a known flume cross section, it can provide corresponding Area/Velocity flow rate measurement for open channel and non-full pipe application without primary device. An operator can view flow rate, total, and alarms. The display is also used to work in conjunction with the Configuration Panel to access flow meter settings, such as 4 to 20mA and pulse output scaling, pipe or flume size, zero flow cut-off, flow filtering (damping), display options, and high or low alarm limits.

Atmospheric Pressure Compensation

GDC terminals allow the optional atmospheric pressure compensating function by a built-in Freescale chip to measure ambient air pressure. The benefits include more accurate DO readings especially for surface water, reliable and precise measurements when use robust PG7 Absolute Pressure sensor as submersible level probe by eliminating the capillary tube into cable.

Filter Water Level and Head Loss

GDC-02 combines two PG7 AP sensors with atmospheric pressure compensation to measure both Water Level and Head Loss in Sand Filter, Activated Carbon Filter or other filters.

SPECIFICATIONS

Measuring Parameters

Depended on Cross Smart Sensor

Accuracy

±0.1%F.S.

Repeatable

±0.1%

Linearity

±0.05%

Respond time

T90<1s

Compensation

Atmosphere compensation for Dissolved Oxygen and pressure measurements

Display

GDC-01/02/H/Ex: OLED Screen
GDC-04/06/08: LCD Touch Screen
Parameter, value, % and Unit

Operating Temperature

GDC-01/02/H/Ex: -40 to 158°F (-40 to 70°C)
GDC-04/06/08: -4 to 140°F (-20 to 60°C)

Conform to the following EU Directives & Standards:

	Low Voltage Directive 2014/35/EU
	Electromagnetic Compatibility Directive 2014/30/EU
	RoHS 2 Directive 2011/65/EU
	EN 61010-1:2010; EN 61326-1:2013

Input

Analog input 4~20mA

Output

Analog output: 4~20mA, up to 8 Channels depended on GDC model

Pulse: flow measurement only

Relay: up to 8 SPDT (According to Model selection)

5A@250VAC / 5A@30VDC

GDC-H 0.5A@30VDC

Digital Interface

RS485 Modbus RTU

USB2.0

Ethernet (TCP/IP) port and wifi (TCP/IP) for GDC-04/06/08 only

Power Supply

24VDC (18 to 36VDC), 100 to 240VAC, 50Hz/60Hz

Rechargeable Battery (GDC-H only)

Weight

GDC-01/02 1.76lb. (0.8kg)

GDC-04/06/08 3.31lb. (1.5kg)

Explosion Proof

GDC-Ex: Ex d IIC T6

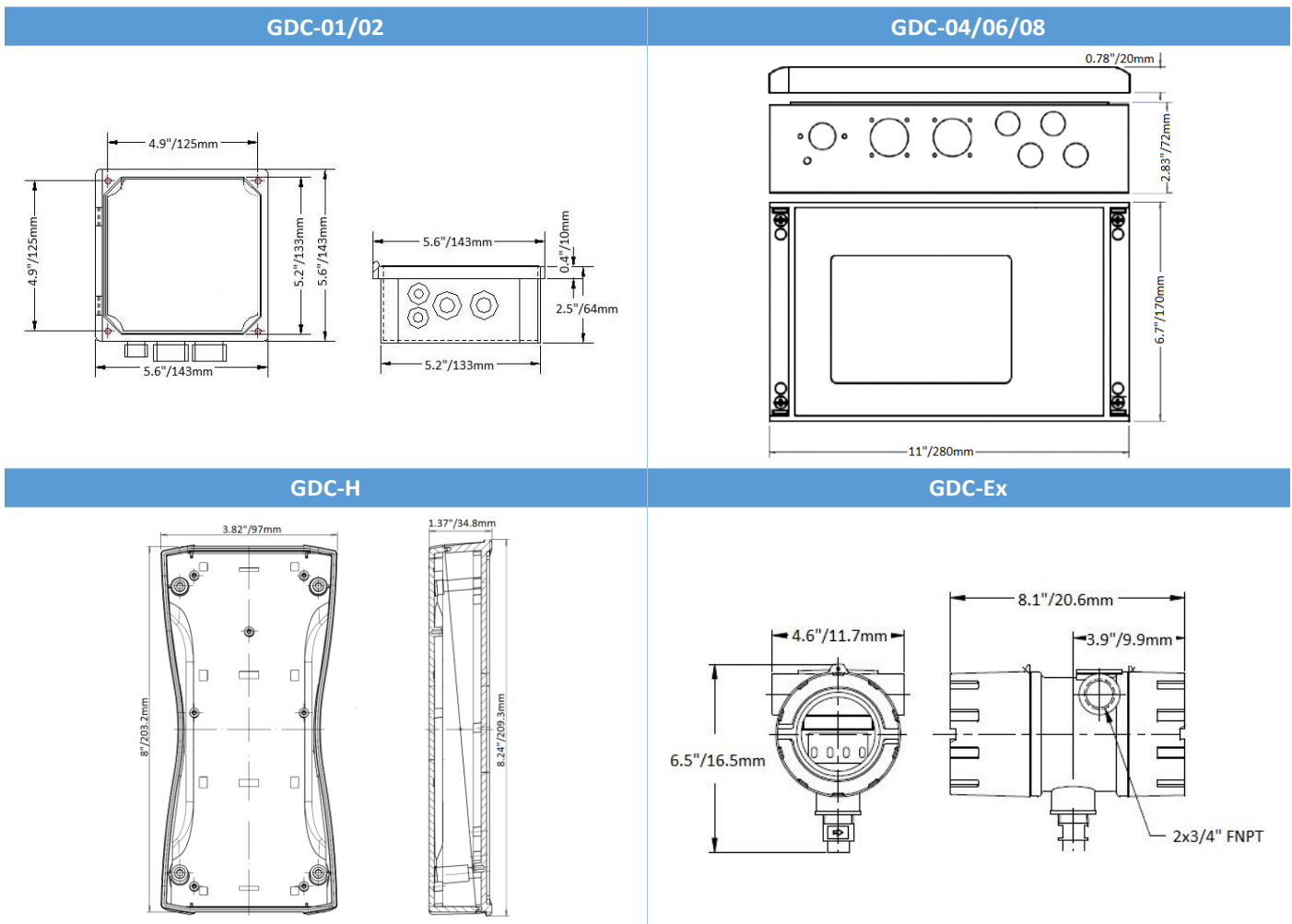
Protection Rate

IP65 for GDC-01/02, GDC-04/06/08

IP66 for GDC-Ex

IP54 for GDC-H

DIMENSION



General Display & Controller				
Model and Analogue Output Channel Number				
-01	Single Channel	-02	Dual Channels	
-04	Four Channels	-06	Six Channels	-08 Eight Channels
-H	Handheld	-Ex	Explosion-proof	
Relay				
- Two SPDT Relays (Standard for GDC-01/02)				
-R4 Four SPDT Relays (Standard for GDC-04/06/08 or Optional for GDC-01/02)				
-R6 Six SPDT Relays (for GDC-04/06/08 only) -R8 Eight SPDT (for GDC-04/06/08 only)				
Power Supply				
-AC 100 to 240VAC, 50Hz/60Hz				
-DC 24VDC (18 to 36VDC)				
Special Application				
- None				
-AL Acousto-optic Alarm				
-OCF Open Channel Flow Measurement				
-ATM Atmosphere compensation				
-WHL Water Head Lost				
-AVF Area/Velocity Flow Measurement				
GDC	-02	-	-AC	-AVF

Specifications subject to change without notice.



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