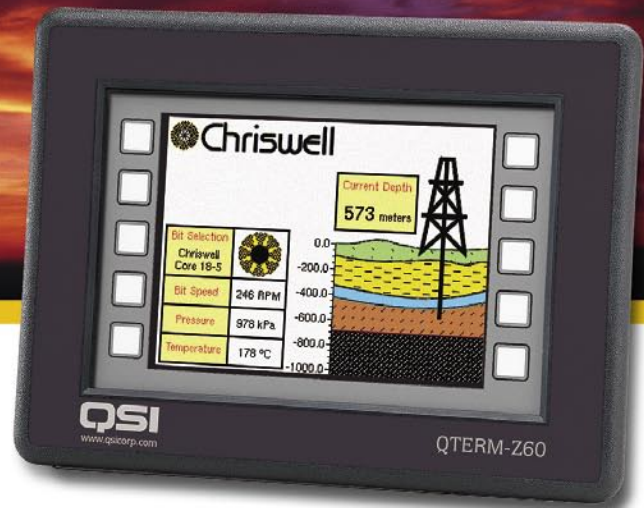# QTERM-Z60

Economical Graphic Terminal
with Object-Based Programming

QSI CORPORATION

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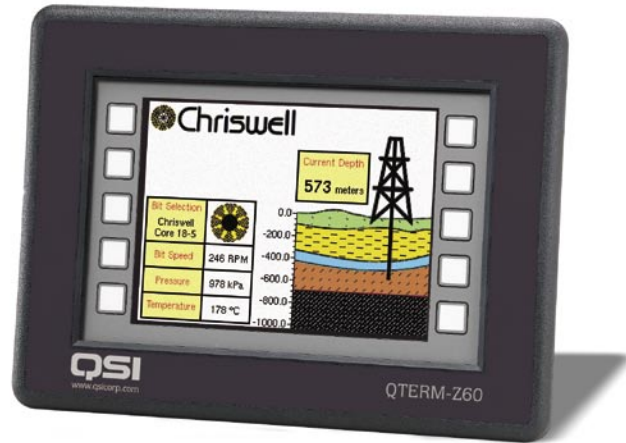4 Commerce Way
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Rev. 3.0

QTERM-Z60

C E Certified

FEATURES

• 320x240 pixel, 143 mm (5.6") diagonal, STN color graphic display

• Resistve touch screen with soft keys around viewable area.

• EIA-232, -422 or -485 serial port, user selectable

• Full NEMA-4 sealing for harsh environments.

• 0 to 50 °C operating temperature.

• CE Certified, UL 94V-0 housing.

• Programmable speaker.

• Powerful *Qlarity* object-based programming for easy application development.

• Windows® programming, simulation and debugging environment.

QSI Corporation's QTERM-Z60 is an economical NEMA-4 graphics terminal ideal for use in industrial and commercial control environments.

HARDWARE

DISPLAY: The QTERM-Z60 features an STN color QVGA display, 143 mm (5.6") diagonal size. This 256-color display has excellent readability under most lighting conditions.

TOUCH SCREEN: User input occurs through the resistive touch screen. This touch screen has very high resolution. The touch screen extends beyond the edge of the viewable area, allowing for "soft keys" to the sides of the display to be used.

HOUSING: The QTERM-Z60 uses a rugged, glass-filled polyester (UL 94V-O) panel-mount housing that meets all NEMA-4 specifications for hose-down, icing and salt spray when properly mounted in a NEMA-4 enclosure.

The terminal is designed to be mounted in a hole cut in your panel (Figure 2). No screw holes are required; a gasket and mounting hardware are included with the unit.

CONNECTORS: A twelve-pin Molex Mini-Fit™ connector on the back panel provides access to the serial port and power lines for the terminal.

SPEAKER: A speaker with software-controlled pitch and duration is included on the rear of the unit. Pitch is set by specifying musical tones to simplify creation of distinctive audio sequences.

FLASH MEMORY: The QTERM-Z60 includes 2 Mbytes of flash memory and 16 Mbytes of RAM. The flash memory contains the firmware, user application, objects and file space.

Firmware and application upgrades can be downloaded through the serial interface and into memory without opening the terminal housing.

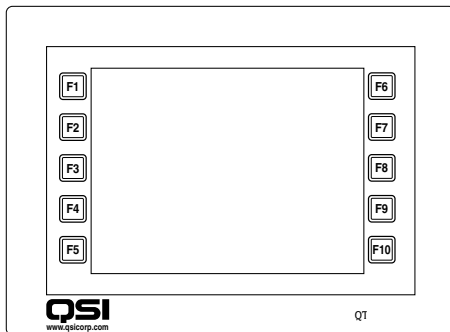**POWER SUPPLY:** The QTERM-Z60 requires an unregulated DC supply from 8 to 32 VDC for operation.
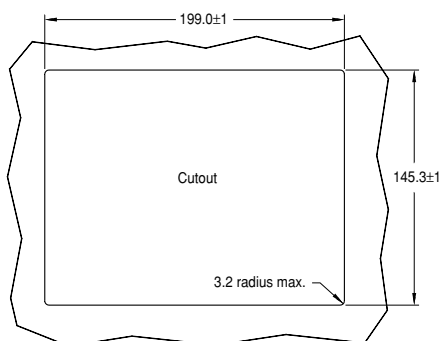

Figure 1▲ *QTERM-Z60 with standard legend*

Figure 2▼ *QTERM-Z60 cutout dimensions*

The intelligent capabilities of the QTERM-Z60 allows it to monitor and adjust the operation of an industrial sheering machine.

Figure 3 ▲ *QTERM-Z60 panel-mount dimensions (mm).*

SERIAL PORT: The QTERM-Z60 ships with a single serial port, which operates in most data formats and up to 115,200 kbaud. The port can be factory configured as an EIA-232, -422 or -485 port.

CUSTOMIZING: For purchases of 100 units or more, the QTERM-Z60 can be produced with your company name and logo on the perimeter label, and soft key designs of your choice on the inner label. (NRE and setup charges apply.)

SOFTWARE AND SETUP

OBJECT-BASED PROGRAMMING LANGUAGE: Software for the QTERM-Z60 is based on QSI's scripted graphic terminal programming language called *Qlarity*™ (pronounced "Clarity"). *Qlarity* uses objects to display information on the screen, accept user input and communicate with other devices.

PROGRAMMING TOOLS: *Qlarity Foundry*™ is a PC-based software tool that aids in screen design, application development, compilation and loading programs into the QTERM-Z60. *Qlarity Foundry* is powerful enough for the elementary user, yet flexible enough for the technical user. Intelligent applications can be created by modifying object properties and without writing a single line of code.

For more information about *Qlarity*™ and *Qlarity Foundry* refer to the appropriate section of this catalog or visit us on the web at *www.qlarity.com.*

INTERFACES

EIA-232: With proper cables and grounding, the QTERM-Z60 can communicate up to 15 meters at its top speed of 115,200.

EIA-422: Using the EIA-422 interface, the QTERM-Z60 can operate at distances up to 1000 meters.

EIA-485: Multiple terminals can be connected to each other in a multidrop chain to reduce cabling costs.
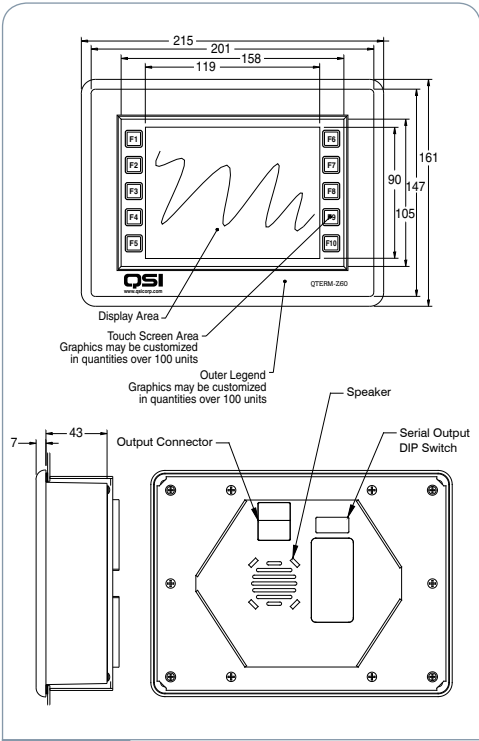
DISPLAY

STN color QVGA, 256 colors
Pixels: 320x240
114x86 mm "live area"
Dot Pitch: 0.36 mm
Contrast: Software-controllable
Temperature-compensated
Lighting: Cold-cathode fluorescent lamp
Brightness is software-controllable

TOUCH SCREEN

Analog-resistive operation
Transparent touch area over viewable display
Labeled touch area underlay on each side of the display

INTERFACE

One serial port, user-selectable for EIA-232, EIA-422 or EIA-485
Baud rates: 1200, 2400, 4800, 9600, 14,400, 19,200, 38,400, 57,600 and 115,200
Data formats: 8n1, 8e1, 8o1, 8n2, 7e1, 7o1, 7n2, 7e2 and 7o2
Connector: 12-pin Molex Mini-Fit™

MEMORY

2 Mbytes flash and 16 Mbytes RAM memory

SPEAKER

Software programmable pitch and duration

PHYSICAL

Panel-mount configuration
Housing: Glass-filled polyester, UL 94V-0 flame rating.
Accommodates panels from 0 to 7 mm thick with standard screws
Size: 215x161x50 mm
Mass: 1.16 kg (est.)
Processor: ARM 77 Mhz

ENVIRONMENTAL

Sealing: NEMA-4 front panel
Temperature: Operating 0 to 50 °C
Storage -10 to 60 °C
Humidity: 0 to 95%, non-condensing
Vibration: 5 to 5000 Hz, 4 g RMS
Shock: 20 g, 3 ms, any axis

POWER

8 to 32 VDC – 220 mA @ 12 VDC (est.)

SOFTWARE

Qlarity™ – Object-based programming language
Qlarity Foundry™ – Windows® design environment

CUSTOMIZING

Inner and outer legends can be customized with your logo/name or graphics in quantities greater than 100 units.

CERTIFICATION

FCC Part 15, Class A
CE Certified: EN60950:1992, EN55022:1994 FCC Part 15, Subpart B, ICES-003, EN55024:1998

ORDER WORKSHEET 1

Company _____   City / State / Zip _____ / _____ / _____

Address _____   Telephone _____   Fax _____

_____   Email _____

Who do we call with questions (name & phone)? _____

Check ONE box in each of the following groups, then fill in the customizing information you are requesting. A unique part number will be assigned when your worksheet is received.

MAIN CONFIGURATION

❑   320x240 Color STN

PRIMARY SERIAL PORT

❑   EIA-232
❑   EIA-422
❑   EIA-485

CUSTOMIZING

Inner Legend

❑   Standard Legend
❑* Custom Legend

Outer Legend

❑   QSI Logo Legend
❑   Standard Legend
❑* Custom Legend

Legend customization is described in detail in the "Legend Customization" section at the front of this catalog. Refer to "Custom Art Submissions" in the "How to Order" section for custom logo art and special font submission requirements.

STANDARD   Standard legend. No customization.

CUSTOM   Fill out all of the keys you want customized. Specify custom typefaces, colors (Pantone PMS) and logo text or submit your own custom logo. Default text is Black Helvetica Bold typeface.

❑ Custom Art   ❑ Custom Fonts _____   ❑ Custom Colors _____

*   Extra cost option only available on orders greater than 100 units

ORDER WORKSHEET 2

!!FILL IN APPROPRIATE AREAS FOR CUSTOMIZING!!
NOTE: Legend is not to scale.

320x240 Display