

Reimagining the User Experience

Touch Encoder



Stores hundreds of screens (32MB memory)

Field upgradable application and firmware

• USB 2.0 or CAN J1939 communications with

• Incorporates pictures: PNG, JPEG, etc.

• Robust: sealed to IP67, high impact

strength, chemical resistant











- Replaces many traditional user input devices (such as switches, keypads, pushbuttons, displays, etc.) with a simple, easy to use device
- Optimal front panel footprint
- Supported gestures: Tap + Swipe + Turn
- High resolution display: 330 PPI (320 X 300)
- Quick user interface development
 - $\,{}_{^{\circ}}$ Intuitive tablet based development platform
 - Library of configurable standard widgets

TOUCHSCREEN/DISPLAY

• 1,000,000 encoder cycles

host device

- Optically bonded display and touchscreen for excellent sunlight readability
- Touchscreen construction: high resolution PCAP ITO

MATERIALS

- Cover lens: polyester
- Knob: 304 stainless steel with optional black chrome finish or silicone grip
- Rear housing: nylon
- Mounting nut: nylon
- RoHS 2018/863 compliant

www.grayhill.com

Bulletin 1297 Rev1218

General

Device Diameter (O.D.): 2.200 in (55.88 mm) Nominal

Display Diameter (V.A.): 1.320in (33.50 mm) Nominal

Touchscreen: Projected Capacitive

Display - Type: Round Color TFT LCD, 320 X 300

Display - Brightness: 200 Cd/m2

Positions/Revolution: 32

Connector Style: M12 5-Pin Connector or PC Board Connector

Environmental

Operating Temp. Range: -20 to 65 °C

Storage Temperature: -30 to 70 °C

Humidity: 95% @ 65 °C

Mechanical Shock: ANSI EP455 5.14.1

Seal (Electronics): IP67

Radiated Immunity: IEC 61000-4-3 80 - 2700 MHz 10 V/M

Conducted Immunity: IEC 61000-4-6 LEVEL 2 - 130 dBμV, 150 KHz to 80 MHz

ESD: IEC 61000-4-2: 8 kV Contact; 15 kV Air

Vibration (Random): 50 - 2000 Hz, 2hr Each Axis ANSI EP455 5.15.2

Chemical Resistance: Designed to survive repeated exposure to most chemicals found in Medical, Off-Highway, and Industrial applications

Solar Radiation: ISO 4892.2 Method B

Power Frequency Magnetic Field: Meets IEC 61000-4-8, 100 A/m

Electrical Fast Transient/Burst: IEC 61000-4-4 ±1kV Coupling Clamp

For more information, contact us at TE@grayhill.com

Conducted Emissions: EN 55011, EN55032 Class B

Radiated Emissions: EN 55011, EN55032 FCC Part 15 Class B

Mechanical

Pushout Force (Max): 45 lbs (200 N)

Pullout Force (Max): 45 lbs (200 N)

Side Load Force: 45 lbs (200 N)

Lens Hardness: 2H

Lens Impact: IK5

Mounting Torque (Nominal): 4 - 10 in-lbs

Mounting Torque (Max): 14 in-lbs

M12 Connector Torque (Max): 14 in-lbs

M12 Connector Pull-Out: 15 lbs (66.7 N)

Mounting Alignment (Maximum): < 1Deg

Weight (Production Unit): 4.25 oz (120.6 g)

Electrical Function

Operating Voltage: SDK: 4.75 to 5.25 Vdc; Component: 4.75 to 18 Vdc;

Max Operating Power: 1.5 W @ Max Brightness

Memory: 32MB

Standby Power Mode: < 100 mW

Sleep Mode Wakeup Time: 500 mSec

Boot Time: 5 Seconds to O.S.

USB Interface: 2.0 Full Speed Composite Device

CANbus Interface: J1939 Compliant

Encoder Function

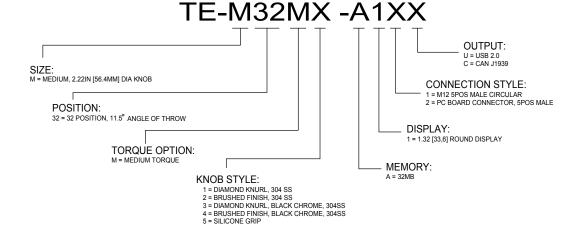
Initial Rotational Torque: 3.50 ± 2.00 in-oz (Medium Torque Option)

Rotational Life: 1,000,000 Cycles

Detent Type: Ball Spring

Encoder Sensing Technology: Hall Effect

Part Numbers



Software Development Kit P/N: TE-M321-SDK (without iPad) & TE-M321-SDKT (with iPad) * iPad is a registered trade mark of Apple Corporation

Inside the Kit:

Touch Encoder Development Module

CANbus Interface Cable

Red Programming Cable

Power to USB Cable

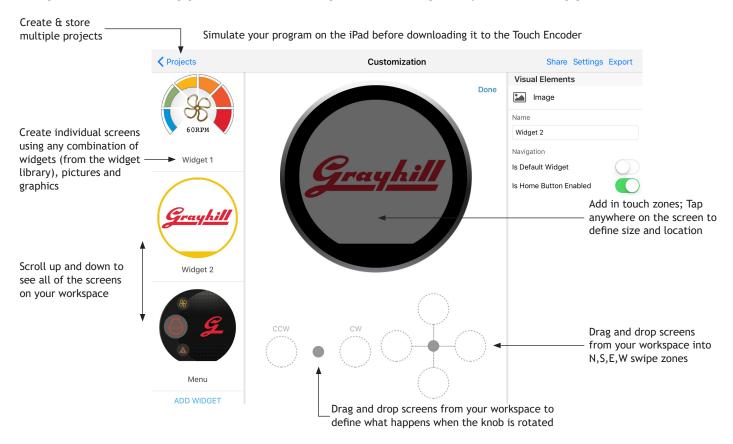
Power Supply Wall Mount

Thumb drive

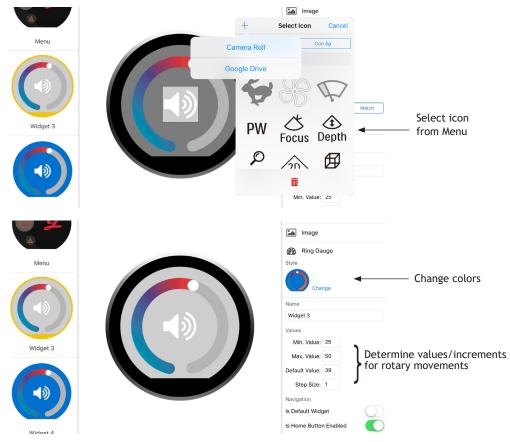
White USB Micro B to USB Type A Adapter Cable



Simple, Intuitive Application Development using Grayhill GIIB App



Fully Customizable Standard Widgets



www.grayhill.com

Bulletin 1297 Rev1218