OM–SGD–43–A–DK–PLUS
Development Kit for OM–SGD–43–A
Smart Graphics Display
OM-SGD-43-A-DK-PLUS
Development Kit for OM-SGD-43-A Smart Graphics Display

OM-SGD-43-A-DK-PLUS is a development kit for the OM-SGD-43-A display. The development board itself provides switches, dials, LEDs and screw terminal connections to quickly connect to and test all of the input/output functionality of the OM-SGD-43-A.

The OM-SGD-43-A-DK-PLUS is a PanelPilotACE development kit. The kit includes a 4.3” OM-SGD-43-A display, a USB cable and a development board which provides connections to all of the input/output functionality of the display. This includes LED’s and switches for digital I/O’s, four potentiometers to generate analogue inputs, variable brightness LED’s for PWM outputs and a prototyping area for testing circuitry. Connections are also available for the display’s RS232, SPI and I²C functionality which will be made available for use in a future software update.

Please consult the OM-OM-SGD-43-A technical data sheet for further information.

Specifications

<table>
<thead>
<tr>
<th>Feature</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Analogue Inputs</td>
<td>4 x analog inputs each with ±5Vd.c. analogue dial and screw terminals for external inputs</td>
</tr>
<tr>
<td>Digital Input/Outputs</td>
<td>8 x digital I/O’s each with input switch, status LED and pin headers to connect external circuitry</td>
</tr>
<tr>
<td>PWM Outputs</td>
<td>4 x PWM outputs each with LED indication and pin headers to connect external circuitry</td>
</tr>
<tr>
<td>Alarm Outputs</td>
<td>2 x alarm outputs with status LED and pin headers to connect external circuitry</td>
</tr>
<tr>
<td>Serial Bus Connections</td>
<td>RS232 serial connector and pin headers for SPI and I²C serial bus.*</td>
</tr>
<tr>
<td>Supply</td>
<td>5 to 30V d.c. (300mA typical at 5V d.c.)</td>
</tr>
<tr>
<td>Outside Dimensions</td>
<td>181 x 147x 64 mm (dimension of development board with OM-SGD-43-A connected)</td>
</tr>
</tbody>
</table>

* Hardware capability, but not available in software at launch

www.omega.com
OM-SGD-43-A-DK-PLUS
Development Kit for OM-SGD-43-A Smart Graphics Display

PanelPilotACE Design Studio

Making Industrial User Interface Design Simple

The design software provides a number of building blocks which allow users to drag-and-drop elements onto the screen to quickly create advanced user interfaces. From background images to text elements, analogue style meters, touchscreen navigation elements and even complex logic statements, users can build up multi-screen interfaces without needing to write a line of code.

There is a library of predefined elements such as meters, buttons and switches, and users can create their own content by combining elements or importing graphics in a number of formats (including jpg, png, tif, bmp and gif). The software includes support for transparency and multiple-layers.

Hardware interfacing is similarly intuitive, with hardware elements being dragged into a function builder where associations with graphical elements (such as a needle on a meter) can be defined. Here users can determine scaling for analogue inputs, define alarm triggers, behaviours for digital inputs and outputs and configure PWM outputs.

Previewing and Uploading Projects

The software includes a ‘Preview in Emulator’ function which emulates the hardware inputs/outputs allowing users to test their projects prior to upload. Projects are uploaded to the OM-SGD-43-A via USB.

PanelPilotACE Design Studio is compatible with Windows XP, Vista, 7 and 8 and can be downloaded free from www.omega.com.
The main connection is that of the OM-SGD-43-A supplied as part of the OM-SGD-43-A-DK-PLUS development kit. The board can be powered directly by connecting a USB cable to the rear of the display. Whilst connected the USB will provide power to both the display and the development board.

When providing power externally using either the screw terminals or 2.1mm DC power plug do not connect more than one external supply as this could damage one or both of these.

The pin-outs for PL4, PL5 and PL11 can be found on the OM-SGD-43-A data sheet together with further application information relevant when connecting external circuitry via the development board.
OMEGA ENGINEERING, INC. warrants this unit to be free of defects in materials and workmanship for a period of 13 months from date of purchase. OMEGA’s WARRANTY adds an additional one (1) month grace period to the normal one (1) year product warranty to cover handling and shipping time. This ensures that OMEGA’s customers receive maximum coverage on each product.

If the unit malfunctions, it must be returned to the factory for evaluation. OMEGA’s Customer Service Department will issue an Authorized Return (AR) number immediately upon phone or written request. Upon examination by OMEGA, if the unit is found to be defective, it will be repaired or replaced at no charge. OMEGA’s WARRANTY does not apply to defects resulting from any action of the purchaser, including but not limited to mishandling, improper interfacing, operation outside of design limits, improper repair, or unauthorized modification. This WARRANTY is VOID if the unit shows evidence of having been tampered with or shows evidence of having been damaged as a result of excessive corrosion; or current, heat, moisture or vibration; improper specification; misapplication; misuse or other operating conditions outside of OMEGA’s control. Components in which wear is not warranted, include but are not limited to contact points, fuses, and triacs.

OMEGA is pleased to offer suggestions on the use of its various products. However, OMEGA neither assumes responsibility for any omissions or errors nor assumes liability for any damages that result from the use of its products in accordance with information provided by OMEGA, either verbal or written. OMEGA warrants only that the parts manufactured by the company will be as specified and free of defects. OMEGA MAKES NO OTHER WARRANTIES OR REPRESENTATIONS OF ANY KIND WHATSOEVER, EXPRESSED OR IMPLIED, EXCEPT THAT OF TITLE, AND ALL IMPLIED WARRANTIES INCLUDING ANY WARRANTY OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE HEREBY DISCLAIMED. LIMITATION OF LIABILITY: The remedies of purchaser set forth herein are exclusive, and the total liability of OMEGA with respect to this order, whether based on contract, warranty, negligence, indemnification, strict liability or otherwise, shall not exceed the purchase price of the component upon which liability is based. In no event shall OMEGA be liable for consequential, incidental or special damages.

CONDITIONS: Equipment sold by OMEGA is not intended to be used, nor shall it be used: (1) as a “Basic Component” under 10 CFR 21 (NRC), used in or with any nuclear installation or activity; or (2) in medical applications or used on humans. Should any Product(s) be used in or with any nuclear installation or activity, medical application, used on humans, or misused in any way, OMEGA assumes no responsibility as set forth in our basic WARRANTY/DISCLAIMER language, and, additionally, purchaser will indemnify OMEGA and hold OMEGA harmless from any liability or damage whatsoever arising out of the use of the Product(s) in such a manner.

RETURN REQUESTS/INQUIRIES

Direct all warranty and repair requests/inquiries to the OMEGA Customer Service Department. BEFORE RETURNING ANY PRODUCT(S) TO OMEGA, PURCHASER MUST OBTAIN AN AUTHORIZED RETURN (AR) NUMBER FROM OMEGA’S CUSTOMER SERVICE DEPARTMENT (IN ORDER TO AVOID PROCESSING DELAYS). The assigned AR number should then be marked on the outside of the return package and on any correspondence.

The purchaser is responsible for shipping charges, freight, insurance and proper packaging to prevent breakage in transit.

FOR WARRANTY RETURNS, please have the following information available BEFORE contacting OMEGA:
1. Purchase Order number under which the product was PURCHASED,
2. Model and serial number of the product under warranty, and
3. Repair instructions and/or specific problems relative to the product.

FOR NON-WARRANTY REPAIRS, consult OMEGA for current repair charges. Have the following information available BEFORE contacting OMEGA:
1. Purchase Order number to cover the COST of the repair,
2. Model and serial number of the product, and
3. Repair instructions and/or specific problems relative to the product.

OMEGA’s policy is to make running changes, not model changes, whenever an improvement is possible. This affords our customers the latest in technology and engineering.

OMEGA is a registered trademark of OMEGA ENGINEERING, INC.

© Copyright 2014 OMEGA ENGINEERING, INC. All rights reserved. This document may not be copied, photocopied, reproduced, translated, or reduced to any electronic medium or machine-readable form, in whole or in part, without the prior written consent of OMEGA ENGINEERING, INC.
Where Do I Find Everything I Need for Process Measurement and Control?
OMEGA...Of Course!
Shop online at omega.com™

TEMPERATURE
- Thermocouple, RTD & Thermistor Probes, Connectors, Panels & Assemblies
- Wire: Thermocouple, RTD & Thermistor
- Calibrators & Ice Point References
- Recorders, Controllers & Process Monitors
- Infrared Pyrometers

PRESSURE, STRAIN AND FORCE
- Transducers & Strain Gages
- Load Cells & Pressure Gages
- Displacement Transducers
- Instrumentation & Accessories

FLOW/LEVEL
- Rotameters, Gas Mass Flowmeters & Flow Computers
- Air Velocity Indicators
- Turbine/Paddlewheel Systems
- Totalizers & Batch Controllers

pH/CONDUCTIVITY
- pH Electrodes, Testers & Accessories
- Benchtop/Laboratory Meters
- Controllers, Calibrators, Simulators & Pumps
- Industrial pH & Conductivity Equipment

DATA ACQUISITION
- Data Acquisition & Engineering Software
- Communications-Based Acquisition Systems
- Plug-in Cards for Apple, IBM & Compatibles
- Data Logging Systems
- Recorders, Printers & Plotters

HEATERS
- Heating Cable
- Cartridge & Strip Heaters
- Immersion & Band Heaters
- Flexible Heaters
- Laboratory Heaters

ENVIRONMENTAL MONITORING AND CONTROL
- Metering & Control Instrumentation
- Refractometers
- Pumps & Tubing
- Air, Soil & Water Monitors
- Industrial Water & Wastewater Treatment
- pH, Conductivity & Dissolved Oxygen Instruments