

Programmable Terminal NA-series

Practices Guide

Page Editing – Custom Keypads

NA5-15□101□

NA5-12□101□

NA5-9□001□

NA5-7□001□



Practices
Guide

■ Introduction

This guide provides reference information on editing pages of the NA. It does not provide safety information.

Be sure to obtain the NA-series Programmable Terminal User's Manuals, read and understand the safety points and other information required for use, and test sufficiently before actually using the equipment.

- (1) All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted, in any form, or by any means, mechanical, electronic, photocopying, recording, or otherwise, without the prior written permission of OMRON.
- (2) No patent liability is assumed with respect to the use of the information contained herein. Moreover, because OMRON is constantly striving to improve its high-quality products, the information contained in this manual is subject to change without notice. Every precaution has been taken in the preparation of this manual. Nevertheless, OMRON assumes no responsibility for errors or omissions. Neither is any liability assumed for damages resulting from the use of the information contained in this publication.
- (3) Trademarks
 - Sysmac and SYSMAC are trademarks or registered trademarks of OMRON Corporation in Japan and other countries for OMRON factory automation products.
 - Windows, Visual Basic, and Excel are either registered trademarks or trademarks of Microsoft Corporation in the United States, Japan, and other countries.
 - Other company names and product names in this document are the trademarks or registered trademarks of their respective companies.
 - Microsoft product screen shots reprinted with permission from Microsoft Corporation.
 - The product pictures and drawings contained in this document are the graphical images, which may be different from the actual articles.

Terms and Conditions Agreement

Warranty, Limitations of Liability

Warranties

Exclusive Warranty

Omron's exclusive warranty is that the Products will be free from defects in materials and workmanship for a period of twelve months from the date of sale by Omron (or such other period expressed in writing by Omron). Omron disclaims all other warranties, express or implied.

Limitations

OMRON MAKES NO WARRANTY OR REPRESENTATION, EXPRESS OR IMPLIED, ABOUT NON-INFRINGEMENT, MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OF THE PRODUCTS. BUYER ACKNOWLEDGES THAT IT ALONE HAS DETERMINED THAT THE PRODUCTS WILL SUITABLY MEET THE REQUIREMENTS OF THEIR INTENDED USE.

Omron further disclaims all warranties and responsibility of any type for claims or expenses based on infringement by the Products or otherwise of any intellectual property right.

Buyer Remedy

Omron's sole obligation hereunder shall be, at Omron's election, to (i) replace (in the form originally shipped with Buyer responsible for labor charges for removal or replacement thereof) the non-complying Product, (ii) repair the non-complying Product, or (iii) repay or credit Buyer an amount equal to the purchase price of the non-complying Product; provided that in no event shall Omron be responsible for warranty, repair, indemnity or any other claims or expenses regarding the Products unless Omron's analysis confirms that the Products were properly handled, stored, installed and maintained and not subject to contamination, abuse, misuse or inappropriate modification. Return of any Products by Buyer must be approved in writing by Omron before shipment. Omron Companies shall not be liable for the suitability or unsuitability or the results from the use of Products in combination with any electrical or electronic components, circuits, system assemblies or any other materials or substances or environments. Any advice, recommendations or information given orally or in writing, are not to be construed as an amendment or addition to the above warranty.

See <http://www.omron.com/global/> or contact your Omron representative for published information.

Limitation on Liability; Etc

OMRON COMPANIES SHALL NOT BE LIABLE FOR SPECIAL, INDIRECT, INCIDENTAL, OR CONSEQUENTIAL DAMAGES, LOSS OF PROFITS OR PRODUCTION OR COMMERCIAL LOSS IN ANY WAY CONNECTED WITH THE PRODUCTS, WHETHER SUCH CLAIM IS BASED IN CONTRACT, WARRANTY, NEGLIGENCE OR STRICT LIABILITY.

Further, in no event shall liability of Omron Companies exceed the individual price of the Product on which liability is asserted.

Application Considerations

Suitability of Use

Omron Companies shall not be responsible for conformity with any standards, codes or regulations which apply to the combination of the Product in the Buyer's application or use of the Product. At Buyer's request, Omron will provide applicable third party certification documents identifying ratings and limitations of use which apply to the Product. This information by itself is not sufficient for a complete determination of the suitability of the Product in combination with the end product, machine, system, or other application or use. Buyer shall be solely responsible for determining appropriateness of the particular Product with respect to Buyer's application, product or system. Buyer shall take application responsibility in all cases.

NEVER USE THE PRODUCT FOR AN APPLICATION INVOLVING SERIOUS RISK TO LIFE OR PROPERTY WITHOUT ENSURING THAT THE SYSTEM AS A WHOLE HAS BEEN DESIGNED TO ADDRESS THE RISKS, AND THAT THE OMRON PRODUCT(S) IS PROPERLY RATED AND INSTALLED FOR THE INTENDED USE WITHIN THE OVERALL EQUIPMENT OR SYSTEM.

Programmable Products

Omron Companies shall not be responsible for the user's programming of a programmable Product, or any consequence thereof.

Disclaimers

Performance Data

Data presented in Omron Company websites, catalogs and other materials is provided as a guide for the user in determining suitability and does not constitute a warranty. It may represent the result of Omron's test conditions, and the user must correlate it to actual application requirements. Actual performance is subject to the Omron's Warranty and Limitations of Liability.

Change in Specifications

Product specifications and accessories may be changed at any time based on improvements and other reasons. It is our practice to change part numbers when published ratings or features are changed, or when significant construction changes are made. However, some specifications of the Product may be changed without any notice. When in doubt, special part numbers may be assigned to fix or establish key specifications for your application. Please consult with your Omron's representative at any time to confirm actual specifications of purchased Product.

Errors and Omissions

Information presented by Omron Companies has been checked and is believed to be accurate; however, no responsibility is assumed for clerical, typographical or proofreading errors or omissions.

Contents

Terms and Conditions Agreement	3
Warranty, Limitations of Liability	3
Application Considerations	4
Disclaimers	4
Related Manuals	6
1 Custom Keypads	7
1-1 Custom Keypads Basic Settings	7
Revision History	14

Related Manuals

The following manuals are related to this manual.

Cat.No.	Model	Manual Name
W504	SYSMAC-SE2□□□	Sysmac Studio Version 1 Operation Manual
V117	NA5-15W□□□□ NA5-12W□□□□ NA5-9W□□□□ NA5-7W□□□□	NA-series Programmable Terminal Hardware User's Manual
V118	NA5-15W□□□□ NA5-12W□□□□ NA5-9W□□□□ NA5-7W□□□□	NA-series Programmable Terminal Software User's Manual
V119	NA5-15W□□□□ NA5-12W□□□□ NA5-9W□□□□ NA5-7W□□□□	NA-series Programmable Terminal Device Connection User's Manual
V120	NA5-15W□□□□ NA5-12W□□□□ NA5-9W□□□□ NA5-7W□□□□	NA-series Programmable Terminal Startup Guide

1 Custom Keypads

1-1 Custom Keypads Basic Settings

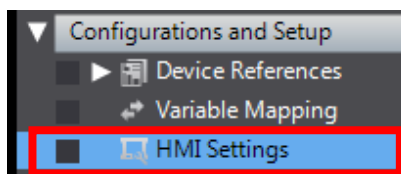
The following two features are now available for editing the keypads.

- Modification of the size of the standard keypads
- Creation of user-defined keypads facilitated by the use of the Custom Keypads function

1-1-1 Changing the Size of the Standard Keypads

You can change the size of the standard keypads that are displayed when you enter values in the Data Edit objects.

1. In the Multiview Explorer, double-click [Configurations and Setup]-[HMI Settings].



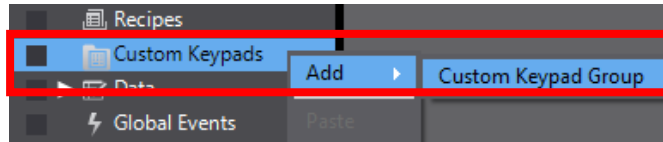
2. Specify the keypad size in [HMI Settings]-[Device Settings]-[Software Keypads/USB Keyboard]-[System Keypad size]. The settable range is between 75 and 125 %.



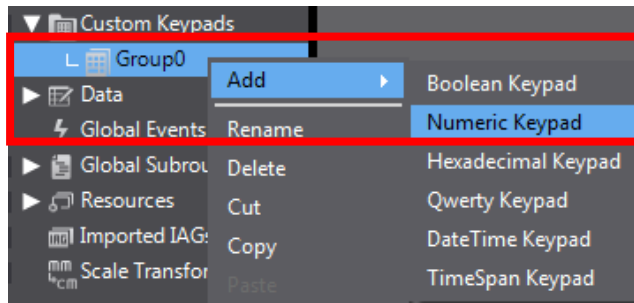
1-1-2 Creating Custom Keypads

Following is the procedure to create the user's original keypads. You can use one of the original keypads instead of the system keypad when entering numerical values.

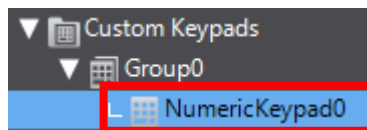
1. In the Multiview Explorer, right-click [HMI]-[Custom Keypads] and click [Add]-[Custom Keypad Group].



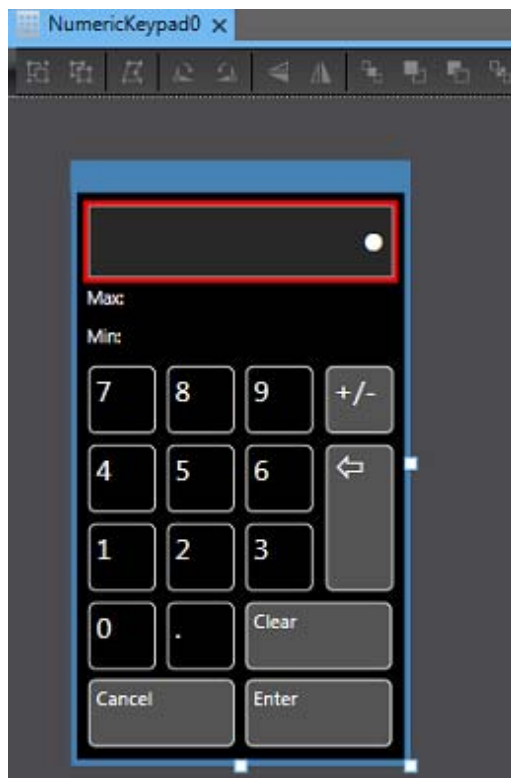
2. Right-click [Group0] added in Step 1, and click [Add]-[(the keypad to create)]. Here, select [Numeric Keypad].



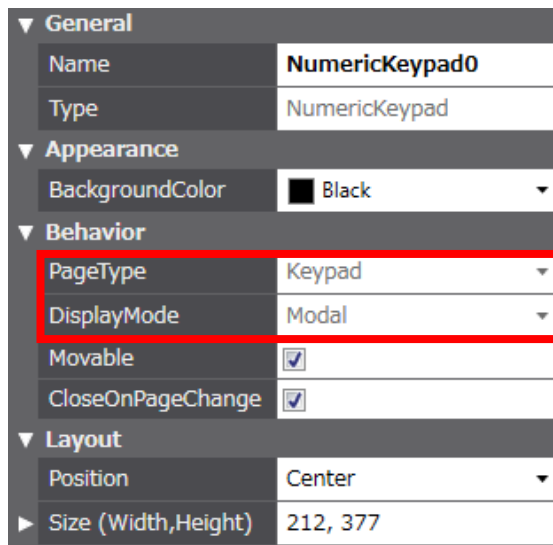
3. Double-click [NumericKeypad0] added in Step 2.



4. The screen based on a standard keypad appears. You can edit this keypad to create a custom keypad.

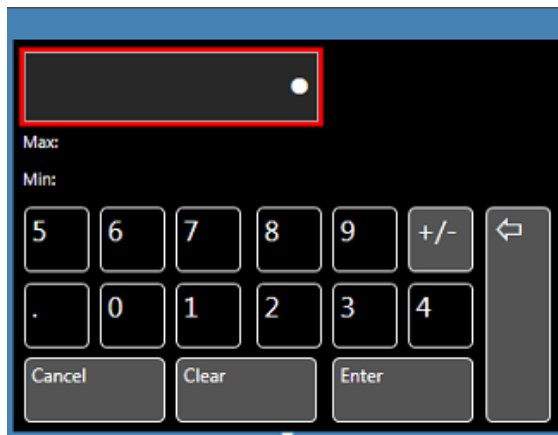


5. There are three differences in the Properties of the custom keypad screens from those of the normal popup screens as described below.
1. PageType: fixed to "Keypad". This is unique to custom keypads.
 2. DisplayMode: fixed to "Modal". While a custom keypad is displayed, you cannot operate other objects on the main screen.
 3. AutoNavigateKeyPads: this item does not exist. Thus, you cannot activate or use this function to continuously enter data within a custom keypad.

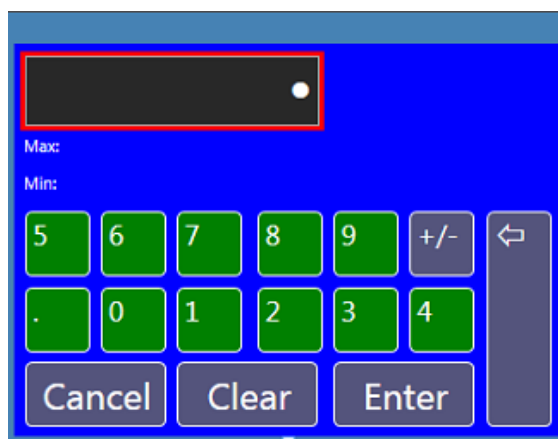


6. Edit [NumericKeypad0] created in Step 2 as below.
1. Change the layout (the positions of keys and other parts).
 2. Change the appearance (color and font).
 3. Add an action that writes a value to the specific variable upon entering a value.

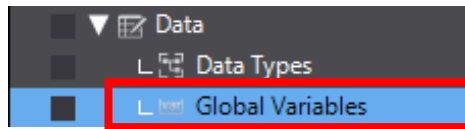
7. Change the layout as described below.
- Change the keypad size by editing [Layout]-[Size (Width,Height)] in the Properties. Change also the position and size of each part arbitrarily from the Properties tab.



8. Change the appearance of the parts. Modify the background color of the keypad from [BackgroundColor] under [Appearance] in the Properties. Modify also the background colors and font sizes of the keys and other parts from the Properties tab.



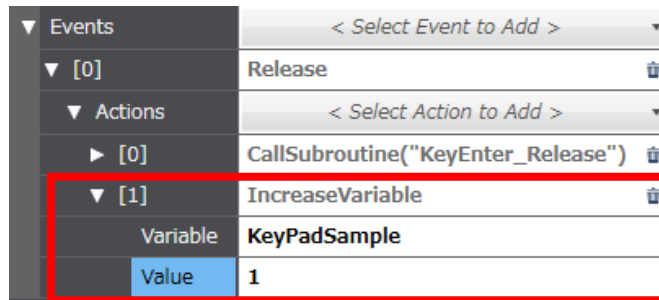
9. Add an action to write a value to the specific variable upon entering a value. In the Multiview Explorer, double-click [HMI]-[Data]-[Global Variables].



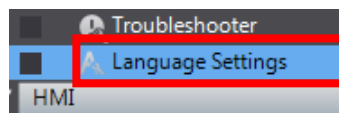
10. Create two arbitrary integer-type variables. Here, create the following two variables:
DataInputSample
KeyPadSample

Name	Data Type	Initial Value	AT	Retain	Constant	Update Rate	Scaling
DataInputSample	Integer			<input type="checkbox"/>	<input type="checkbox"/>	None	None
KeyPadSample	Integer			<input type="checkbox"/>	<input type="checkbox"/>	None	None

11. Execute the “Ctrl + Shift + 5” keyboard shortcut to display the [Events and Actions] tab page of the [Enter] key, and add the following settings to [Actions].
Actions: IncreaseVariable
Variable: KeyPadSample
Value: 1
With the above settings, an action is executed of adding “1” to the KeyPadSample variable upon releasing the [Enter] key.



12. After completing editing of the keypad, perform settings for using the keypad within the project. In the Multiview Explorer, double-click [Configurations and Setup]-[Language Settings].



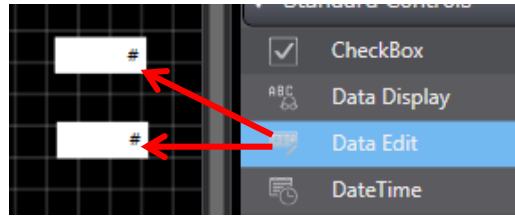
13. Change “Standard” to “Group0” in the [Software Keypads] cell under [Default language].
If the setting remains as “Standard”, a standard keypad will be used.

Project Languages	System Languages	Software Keypads
English (United States)	English (United States)	Standard
		Group0
Other languages		Standard

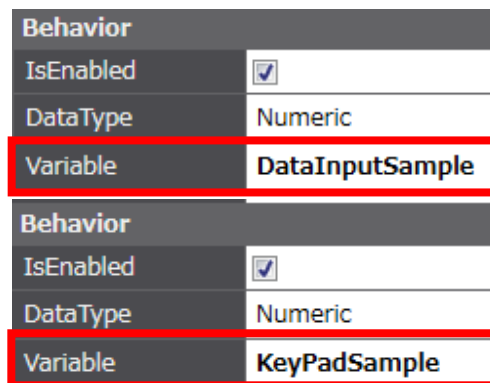
1-1-3 Checking Operations of the Custom Keypad

Check the operations of the custom keypad created in the previous subsection.

1. Create two Data Edit objects for checking the operations. From [Toolbox], select [Standard Controls]-[Data Edit] and drag and drop it to the page. Specify arbitrarily the font type and size of each object.



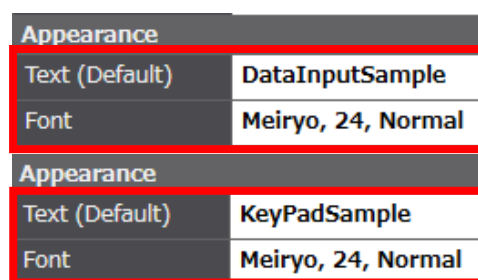
2. In [Variable] in the Properties tab of the two Data Edit objects created in Step 1, set respectively the variables registered in Step 10 of "1-1-2 Creating Custom Keypads".



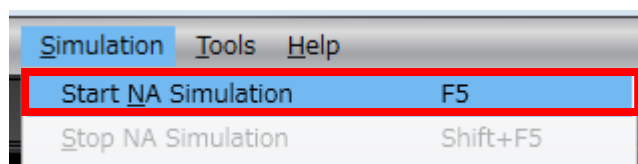
3. Create two Label objects that indicate which variables are assigned to the Data Edit objects created in Step 1. From [Toolbox], select [Standard Controls]-[Label] and drag and drop it to the page.



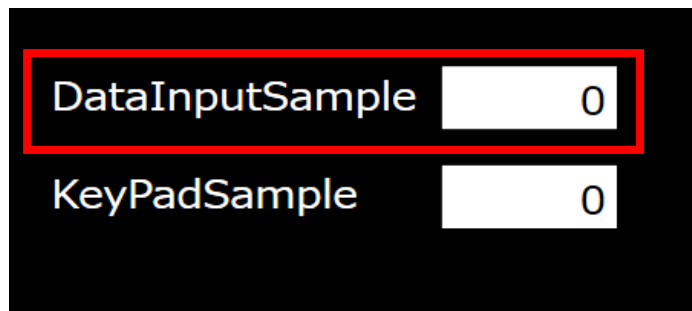
4. In [Text (Default)] in the Properties tab of the Label objects created in Step 3, enter respectively the names of the assigned variables registered in Step 10 of "1-1-2 Creating Custom Keypads". Arbitrarily specify the font.



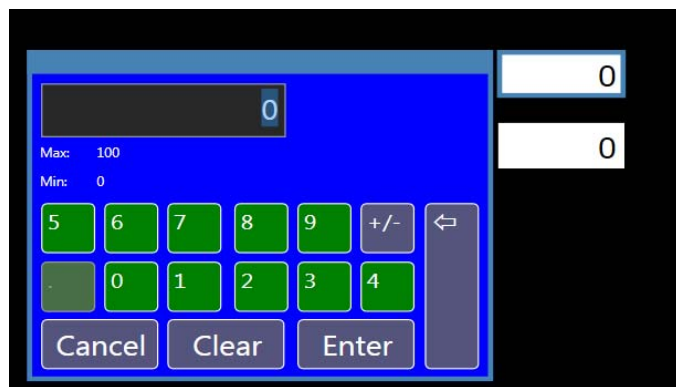
5. Use the simulation function to check the operations. From the menu bar, select [Simulation]-[Start NA Simulation].



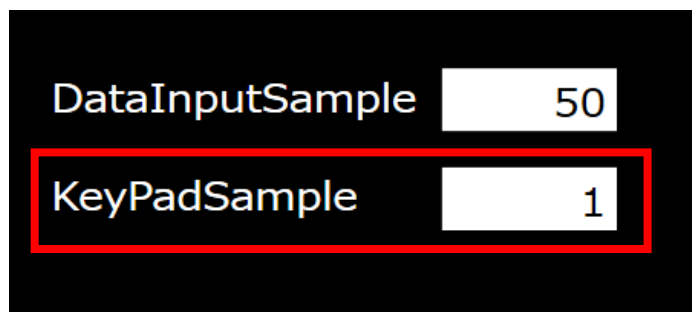
6. When the Simulator starts up, click the Data Edit object next to [DataInputSample].



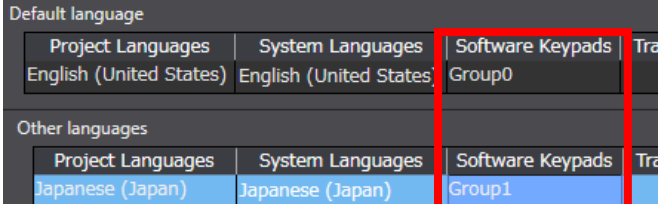
7. The created keypad appears. Enter an arbitrary value.



8. When the value is entered, "1" is now added to the value of [KeyPadSample] according to the action specified in Step 11 of "1-1-2 Creating Custom Keypads".



1-1-4 Questions and Answers Related to Custom Keypads

Questions	Answers																		
I would like to use different keypads (standard and custom) depending on the object. Is that possible?	As described in Step 13 of “1-1-2 Creating Custom Keypads”, you cannot use the standard and custom keypads at the same time within a single language setting.																		
Is it possible to register multiple custom keypads and to use them differently for each object?	It is possible to create multiple different custom keypads within a single group (e.g. a numeric keypad and a hexadecimal keypad). It is not possible, however, to create multiple keypads of the same type within a group.																		
When building the project after creating a custom keypad, the “The variable is not specified” warning appears.	This does not affect the operations. If you assign a variable to a Data Edit object on a custom keypad, an error occurs during build. Therefore, do not set variables in an attempt to delete the warning.																		
Whereas the custom keypad is displayed in the default language, the standard keypad is displayed after switching the language. Why is that?	<p>The Software Keypads setting of [Other languages] may be set to “Standard”. You must set the keypad to be used for each language.</p>  <table border="1" data-bbox="614 929 1276 1131"> <thead> <tr> <th colspan="3">Default language</th> </tr> <tr> <th>Project Languages</th> <th>System Languages</th> <th>Software Keypads</th> </tr> </thead> <tbody> <tr> <td>English (United States)</td> <td>English (United States)</td> <td>Group0</td> </tr> <tr> <th colspan="3">Other languages</th> </tr> <tr> <th>Project Languages</th> <th>System Languages</th> <th>Software Keypads</th> </tr> <tr> <td>Japanese (Japan)</td> <td>Japanese (Japan)</td> <td>Group1</td> </tr> </tbody> </table>	Default language			Project Languages	System Languages	Software Keypads	English (United States)	English (United States)	Group0	Other languages			Project Languages	System Languages	Software Keypads	Japanese (Japan)	Japanese (Japan)	Group1
Default language																			
Project Languages	System Languages	Software Keypads																	
English (United States)	English (United States)	Group0																	
Other languages																			
Project Languages	System Languages	Software Keypads																	
Japanese (Japan)	Japanese (Japan)	Group1																	

Revision History

Revision code	Date	Revised content
01	December 2015	Original production

Note: Do not use this document to operate the Unit.

OMRON Corporation Industrial Automation Company

Tokyo, JAPAN

Contact: www.ia.omron.com

Regional Headquarters

OMRON EUROPE B.V.

Wegalaan 67-69, 2132 JD Hoofddorp
The Netherlands
Tel: (31)2356-81-300/Fax: (31)2356-81-388

OMRON ELECTRONICS LLC

2895 Greenspoint Parkway, Suite 200
Hoffman Estates, IL 60169 U.S.A
Tel: (1) 847-843-7900/Fax: (1) 847-843-7787

OMRON ASIA PACIFIC PTE. LTD.

No. 438A Alexandra Road # 05-05/08 (Lobby 2),
Alexandra Technopark,
Singapore 119967
Tel: (65) 6835-3011/Fax: (65) 6835-2711

OMRON (CHINA) CO., LTD.

Room 2211, Bank of China Tower,
200 Yin Cheng Zhong Road,
PuDong New Area, Shanghai, 200120, China
Tel: (86) 21-5037-2222/Fax: (86) 21-5037-2200

Authorized Distributor:

© OMRON Corporation 2015 All Rights Reserved.
In the interest of product improvement,
specifications are subject to change without notice.

Cat. No. V427-E1-01

1215 (1215)