

OPTICON

CCD Linear Scan Engine with Built-in Decoder

MDC-100 / MDC-200



MDC-100



MDC-200

This manual provides software interface specifications for the MDC-100 / MDC-200 CCD linear scan engine with built-in decoder.

Software Interface Specifications Manual

All information subject to change without notice.

Document History

Model Number:	MDC-100 / MDC-200	Specification Number:	SI14052
Edition:	2	Original Spec Number:	SI14017
Date:	2014-10-24		

Copyright 2014 Opticon. All rights reserved.

This manual may not, in whole or in part, be copied, photocopied, reproduced, translated or converted to any electronic or machine readable form without prior written consent of Opticon.

Limited Warranty and Disclaimers

PLEASE READ THIS MANUAL CAREFULLY BEFORE INSTALLING OR USING THE PRODUCT.

Serial Number

A serial number appears on all Opticon products. This official registration number is directly related to the device purchased. Do not remove the serial number from your Opticon device. Removing the serial number voids the warranty.

Warranty

Unless otherwise agreed in a written contract, all Opticon products are warranted against defects in materials and workmanship for two years after purchase. Opticon will repair or, at its option, replace products that are defective in materials or workmanship with proper use during the warranty period. Opticon is not liable for damages caused by modifications made by a customer. In such cases, standard repair charges will apply. If a product is returned under warranty and no defect is found, standard repair charges will apply. Opticon assumes no liability for any direct, indirect, consequential or incidental damages arising out of use or inability to use both the hardware and software, even if Opticon has been informed about the possibility of such damages.

Packaging

The packing materials are recyclable. We recommend that you save all packing material to use should you need to transport your scanner or send it for service. Damage caused by improper packaging during shipment is not covered by the warranty.

Trademarks

Trademarks used are the property of their respective owners.

Opticon Inc. and Opticon Sensors Europe B.V. are wholly owned subsidiaries of OPTOELECTRONICS Co., Ltd., 12-17, Tsukagoshi 4-chome, Warabi-shi, Saitama, Japan 335-0002. TEL +81-(0) 48-446-1183; FAX +81-(0) 48-446-1184

SUPPORT

USA

Phone: 800-636-0090

Email: support@opticonusa.com

Web: www.opticonusa.com

Europe

Email: support@opticon.com

Web: www.opticon.com

Revision History

Specification No. : SI14052
Product name : MDC-100 / MDC-200

Edition	Date	Page	Section	Description of Changes
1st	2014/09/04	-	-	Initial release
2nd	2014/10/24	3	3.4	Added the statement of low power mode
	2014/10/24	44		Added low power mode control menus and commands

Contents

1. Abstract.....	1
2. Overview	1
3. Interface	2
3.1. Interface Signal.....	2
3.2. Connection Method.....	2
3.3. Communication Options.....	3
3.4. Power Mode Transition	3
4. Configuration Method	4
4.1. Universal Menu Label	4
4.2. Universal Command	5
4.3. OptiConfigure	6
5. String Option	7
5.1. String Structure.....	7
5.2. String Configuration	7
6. Illumination LED Configuration	8
Appendix: Universal Menu Labels and Command List.....	9

1. Abstract

This document provides interface specifications of the MDC-100 / MDC-200 CCD linear scan engine with built-in decoder (This product shall be hereinafter called as “this scan engine”). Apart from the specifications, it also provides information on how to connect and control this scan engine.

2. Overview

This scan engine is a compact CCD linear scan engine with a built-in decoder, which can be installed in various handheld products such as handy terminals. This scan engine is connected to a host system via a serial interface and can be controlled via serial commands.

3. Interface

3.1. Interface Signal

Connector type: IRISO Electronics Co.,LTD."IMSA-9681S-12 ", 12-pin, 0.5 mm pitch, FFC connector, bottom contact type.

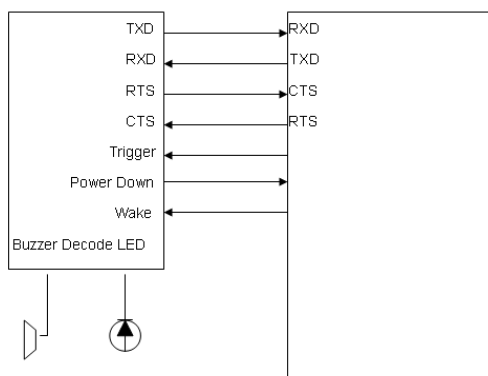
Signals used to connect this scan engine and host system are as follows:

Signal	Pin No.	I/O	Functions
Trigger*	1	I	Trigger input, L = TRIGGER IN
Wake	2	I	Recover from Low Power Mode, L =WAKE
Decode LED	3	O	External LED indicator, L = LED ON
Buzzer	4	O	Buzzer control pulse output, L = BUZZER ON
Power Down	5	O	Power down output, H = LOW POWER STATE
RTS	6	O	Request to send, L = RECEIVE DATA
CTS/USB+	7	I/O	(function 1) Clear to send, L = SEND DATA (function 2) USB+ data signal
Txd	8	O	Serial data output
Rxd/USB-	9	I/O	(function 1) Serial data input (function 2) USB- data signal
GND	10	-	Ground
VDD	11	I	Power supply: DC 3.0V ~ 3.6V
Boot	12	I	START signal input, H = Normal Operation

* If in Low Power Mode, L=TRIGGER IN will also wake this scan engine.

3.2. Connection Method

The connection between this scan engine and the host system will be carried out as follows:



3.3. Communication Options

This scan engine supports three different communication interfaces. Note that RS232 and USB interface require different circuitry in the host system.

(I) RS232

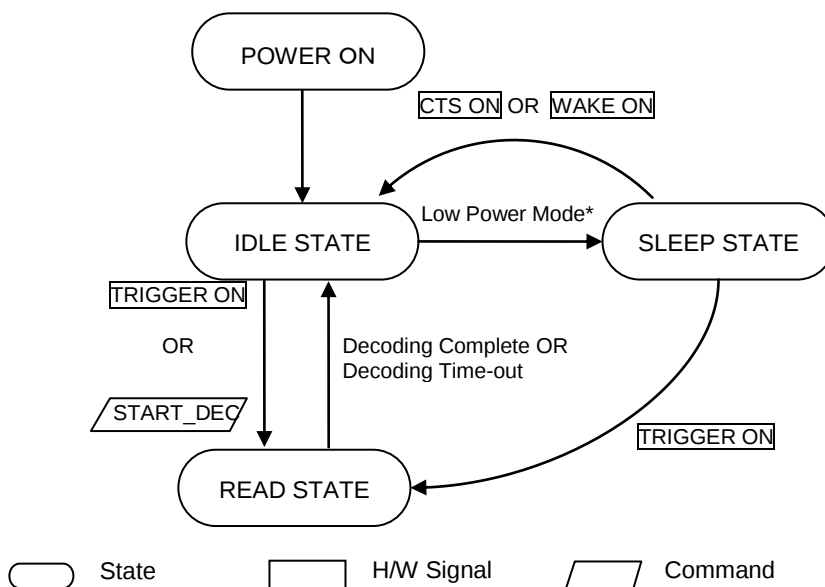
The specifications are as follows:

- Asynchronous
- Data Length: 7 bit or 8 bit (default setting: 8 bit)
- Parity: Odd / Even / None (default setting: none)
- Stop bits: 1 or 2 (default setting: 1 bit)
- Baud Rate: 3,00bps to 115,200bps (default setting: 9,600bps)

(II) USB-HID

(III) USB-COM

3.4. Power Mode Transition



*** Low Power mode is ONLY available when using RS-232C interface.**

- When "Low Power" mode is enabled, this scan engine automatically enters "SLEEP" state from "Power-ON".
- When moving to "IDLE" state by "CTS ON" or "WAKE ON" from "SLEEP" state this scan engine goes back to "SLEEP" state in 2 second if no event occurs to move to another state.

Universal ID	Description	Default
Z5	Disable Low Power mode	Y
Z6	Enable Low Power mode	

4. Configuration Method

There are three methods to configure this scan engine.

- (I) Universal menu labels (printed as Universal menu book)
- (II) Universal commands
- (III) OptiConfigure software.

4.1. Universal Menu Label

Universal menu labels are intended for setting up your bar code reader to optimize its performance for your particular application. When the required options have been configured, they remain in the reader, even after power down. The reader can be returned to factory default by reading the default label. The menu labels can be referenced from the Universal menu book or from the appendix in this document.

To configure the required options proceed as follows:

Scan the SET label

- scan the required option(s)
- scan the END label

After scanning the END label, the new settings are stored in non volatile memory.

Besides Universal menu labels as described above, some options can also be set via Code128 menu labels. Those labels are scanned directly without reading the "SET" and "END" labels and the options they represent are configured immediately and stored in non volatile memory.

4.2. Universal Command

This scan engine can also be configured through the RS232 interface or the USB interface (provided it is configured as USB-COM). Unlike Universal menu labels, Universal commands are executed immediately but are not stored in non volatile memory. Only when a special command (The <Z2> command) is sent, all options configured are stored in non volatile memory.

To configure via the RS232 port proceed as follows:

- transmit <ESC><Command string 1><CR>
- transmit <ESC><Command string 2><CR>
- ...
- transmit <ESC><Command string n><CR>
- transmit <ESC>Z2<CR>

Universal ID	Description
<ESC>	ASCII escape character (Hex 1B)
<Command string>	ASCII command with accompanying parameters. ASCII command strings are the same as command strings from Universal menu labels. i.e. <ESC>M41B<CR> configures the ASCII control code <STX> as the prefix for Code 39. Example: 1B 4D 34 31 4B 0D Each 3-character command should be preceded by the '[' character (Hex 5B) i.e. <Esc>[BCC<CR> is used to enable Data Matrix. Each 4-character command should be preceded by the ']' character (Hex 5D) i.e. <Esc>]DIAU<CR> is used to disable auto connect.
<CR>	ASCII CR character (Hex 0D)
<Z2>	The Z2 command, when sent via RS232, stores the settings in non volatile memory. Some options, like baud rate settings, are only activated after the reception of this Z2 command.

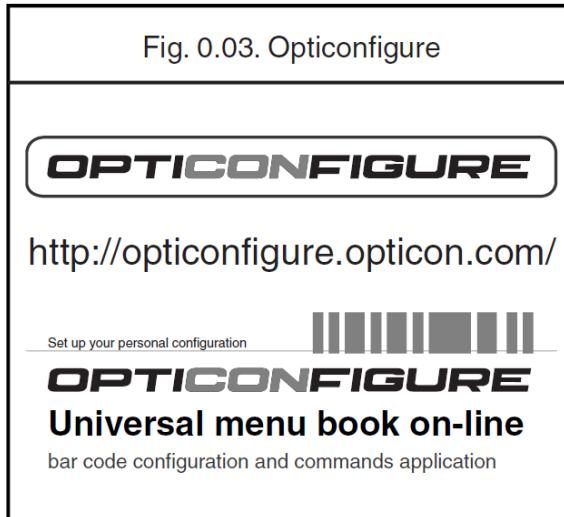
The following are commonly used command strings:

- “B” sound a good read beep
- “E” sound an error beep
- “L” switch on good read LED
- “Y” de-trigger the reader
- “Z” trigger the reader

The characters transmitted must be separated by an intercharacter delay to allow this scan engine to process each character received and to execute the command string.

4.3. OptiConfigure

OptiConfigure is the on line version of the Universal Menu Book. With OptiConfigure it is possible to create customized configuration sheets. OptiConfigure supports Opticon bar code readers which are compatible with the Universal Menu Book. In addition to the Universal Menu Book labels, OptiConfigure offers product specific and less often used menu labels that are specific to the product and software version selected. OptiConfigure can be accessed via the Opticon home page (www.opticon.com). From there select the OptiConfigure button.



5. String Option

5.1. String Structure

A bar code is transmitted as a string of data with an optional prefix and suffix. The string structure is transmitted as shown in the figure below.

	String Options				
	Preamble	Prefix (Include code ID, code length)	Bar code data	Suffix (Include code ID, code length)	Postamble
Digits	0~8	0~4		0~4	0~4
Default	N.A. (0 digit)	N.A. (0 digit)		<CR> (Hex 0D)	N.A. (0 digit)

Example 1 (Default)

Preamble : N.A.
Code 39 prefix : N.A.
Bar code data : 12345"
Code 39 suffix : <CR> (Hex 0D)
Postamble : N.A.

Output data: 12345<CR>

Example 2

Preamble : A
Code 39 prefix : bc
Bar code data : "12345"
Code 39 suffix : Def
Postamble : HIJK

Output data: Abc12345defHIJK

5.2. String Configuration

String options can be configured either by Universal menu labels or by Universal commands.

Example 1: Set the prefix of Code39 bar codes to "C39".

Order	Universal ID	Configuration	Remark
1	ZZ	Start configuration	Ignorable if by command
2	M4	Set Code39 prefix	Scan menu label or input command
3	0C	Set character "C"	Scan menu label or input command
4	Q3	Set character "3"	
5	Q9	Set character "9"	
6	ZZ	End configuration	Ignorable if by command

Example 2: Clear the suffix of Code128 bar codes.

Order	Universal ID	Configuration	Remark
1	ZZ	Start configuration	Ignorable if by command
2	M9	Set Code128 prefix	Scan menu label or input command
3	ZZ	End configuration	Ignorable if by command

Example 3: Set the suffix to <CR> for all the readable bar codes.

Order	Universal ID	Configuration	Remark
1	ZZ	Start configuration	Ignorable if by command
2	RZ	Set suffix for all the codes	RY ID for prefix of all the codes
3	1M	Set character "^M(CR)"	Scan menu label or input command
4	ZZ	End configuration	Ignorable if by command

6. Illumination LED Configuration

One can configure the illumination LED to optimize the read performance according to applications.

Mode	Universal ID	Description
ON (Default)	D39	The default option is ON for both illumination and aiming purposes. When illumination is OFF, weak illumination is visible for aiming purpose.
OFF	D3A	The OFF option is recommended for applications where the bar code will be read only from LCD displays.
Interval	D3B	Automatically switch between ON and OFF status at 0.5 second interval. This configuration is useful for applications which frequently read both printed and LCD displayed bar codes.
Specular reflection reduction	D3Q	If the scan engine detects specular reflection it will automatically turn OFF the LED. This configuration is recommended for applications where the bar code is displayed on an LCD display (for example, cell phone screens), or reading a bar code printed on a glossy surface which is exposed to strong environmental illumination.

Appendix: Universal Menu Labels and Command List

Universal ID	Universal Menu label	Class	Group	Title	Settings	Default
ZZ	 Z Z	Menu	Menu	Menu	Start (SET) / End (END)	
U2	 U 2	Default	Default	Default	RS232C	Y
K0	 K 0	Interface	RS232C option	Baud rate settings	150 bps	
K1	 K 1	Interface	RS232C option	Baud rate settings	300 bps	
K2	 K 2	Interface	RS232C option	Baud rate settings	600 bps	
K3	 K 3	Interface	RS232C option	Baud rate settings	1200 bps	
K4	 K 4	Interface	RS232C option	Baud rate settings	2400 bps	
K5	 K 5	Interface	RS232C option	Baud rate settings	4800 bps	
K6	 K 6	Interface	RS232C option	Baud rate settings	9600 bps	Y
K7	 K 7	Interface	RS232C option	Baud rate settings	19200 bps	
K8	 K 8	Interface	RS232C option	Baud rate settings	38400 bps	
K9	 K 9	Interface	RS232C option	Baud rate settings	57600 bps	
SZ	 S Z	Interface	RS232C option	Baud rate settings	115200 bps	
L0	 L 0	Interface	RS232C option	Data, Parity, Stop-bit	7 bits	

Universal ID	Universal Menu label	Class	Group	Title	Settings	Default
ZZ	 Z Z	Menu	Menu	Menu	Start (SET) / End (END)	
L1	 L 1	Interface	RS232C option	Data, Parity, Stop-bit	8 bits	Y
L2	 L 2	Interface	RS232C option	Data, Parity, Stop-bit	No parity	Y
L3	 L 3	Interface	RS232C option	Data, Parity, Stop-bit	Even parity	
L4	 L 4	Interface	RS232C option	Data, Parity, Stop-bit	Odd parity	
L5	 L 5	Interface	RS232C option	Data, Parity, Stop-bit	1 stop-bit	Y
L6	 L 6	Interface	RS232C option	Data, Parity, Stop-bit	2 stop-bit	
P0	 P 0	Interface	RS232C option	Handshake	No handshake	Y
P1	 P 1	Interface	RS232C option	Handshake	Busy/ready	
P2	 P 2	Interface	RS232C option	Handshake	Modem	
ZG	 Z 6	Interface	RS232C option	Handshake	XON/XOFF	
P3	 P 3	Interface	RS232C option	Handshake	ACK/NAK	
P4	 P 4	Interface	RS232C option	Handshake	ACK/NAK NO RESPONSE	
I0	 I 0	Interface	RS232C option	Handshake	Infinite flow control timeout	Y
I1	 I 1	Interface	RS232C option	Handshake	Flow control timeout 100 ms	

Universal ID	Universal Menu label	Class	Group	Title	Settings	Default
ZZ		Menu	Menu	Menu	Start (SET) / End (END)	
I2		Interface	RS232C option	Handshake	Flow control timeout 200 ms	
I3		Interface	RS232C option	Handshake	Flow control timeout 400 ms	
KA		Interface	RS232C option	Character delay (RS232)	No delay	Y
KB		Interface	RS232C option	Character delay (RS232)	Delay 20 ms	
KC		Interface	RS232C option	Character delay (RS232)	Delay 50 ms	
KD		Interface	RS232C option	Character delay (RS232)	Delay 100 ms	
A0		Code option	Code	Enabling a single read. code	All codes excl. add-on code	
J0		Code option	Code	Enabling a single read. code	UPC/EAN only	
J1		Code option	Code	Enabling a single read. code	UPC only	
J2		Code option	Code	Enabling a single read. code	UPC + 2 only	
J3		Code option	Code	Enabling a single read. code	UPC + 5 only	
J4		Code option	Code	Enabling a single read. code	EAN only	
J5		Code option	Code	Enabling a single read. code	EAN + 2 only	
J6		Code option	Code	Enabling a single read. code	EAN + 5 only	

Universal ID	Universal Menu label	Class	Group	Title	Settings	Default
ZZ		Menu	Menu	Menu	Start (SET) / End (END)	
A2		Code option	Code	Enabling a single read. code	Code 39 only	
JD		Code option	Code	Enabling a single read. code	Tri-Optic only	
A3		Code option	Code	Enabling a single read. code	Codabar only	
J7		Code option	Code	Enabling a single read. code	Industrial 2 of 5 only	
J8		Code option	Code	Enabling a single read. code	Interleaved 2 of 5 only	
RA		Code option	Code	Enabling a single read. code	S-Code only	
AB		Code option	Code	Enabling a single read. code	Matrix 2 of 5 only	
JE		Code option	Code	Enabling a single read. code	Chinese Post Matrix 2 of 5 only	
A4		Code option	Code	Enabling a single read. code	IATA only	
A7		Code option	Code	Enabling a single read. code	MSI/Plessey only	
A9		Code option	Code	Enabling a single read. code	Telepen only	
A1		Code option	Code	Enabling a single read. code	UK/Plessey only	
A6		Code option	Code	Enabling a single read. code	Code 128 only	
A5		Code option	Code	Enabling a single read. code	Code 93 only	

Universal ID	Universal Menu label	Class	Group	Title	Settings	Default
ZZ	 Z Z	Menu	Menu	Menu	Start (SET) / End (END)	
JL	 J L	Code option	Code	Enabling a single read. code	Korean Postal Authority only	
J9	 J 9	Code option	Code	Enabling a single read. code	GS1 DataBar Omnidirectional, GS1 DataBar Truncated, GS1 DataBar Stacked, GS1 DataBar Stacked Omnidirectional only ^{(*)1}	
JJ	 J J	Code option	Code	Enabling a single read. code	GS1 DataBar Limited Only ^{(*)2}	
JK	 J K	Code option	Code	Enabling a single read. code	GS1 DataBar Expanded, GS1 DataBar Expanded Stacked only ^{(*)3}	
BLB	 B L B	Code option	Code	Enabling a single read. code	Code 11 only	
BCA	 B C A	Code option	Code	Enabling a single read. code	Enable all 1D codes only	
B0	 B 0	Code option	Code	Enabling of readable codes	Disable all	
R1	 R 1	Code option	Code	Enabling of readable codes	Enable UPC	Y
R2	 R 2	Code option	Code	Enabling of readable codes	Enable UPC + 2	
R3	 R 3	Code option	Code	Enabling of readable codes	Enable UPC + 5	
R4	 R 4	Code option	Code	Enabling of readable codes	Enable EAN	Y
R5	 R 5	Code option	Code	Enabling of readable codes	Enable EAN + 2	
R6	 R 6	Code option	Code	Enabling of readable codes	Enable EAN + 5	
B2	 B 2	Code option	Code	Enabling of readable codes	Enable Code 39	Y

Universal ID	Universal Menu label	Class	Group	Title	Settings	Default
ZZ	 Z Z	Menu	Menu	Menu	Start (SET) / End (END)	
B3	 B 3	Code option	Code	Enabling of readable codes	Enable Codabar	Y
R7	 R 7	Code option	Code	Enabling of readable codes	Enable Industrial 2 of 5	Y
R8	 R 8	Code option	Code	Enabling of readable codes	Enable Interleaved 2 of 5	Y
R9	 R 9	Code option	Code	Enabling of readable codes	Enable S-Code	Y
BB	 B B	Code option	Code	Enabling of readable codes	Enable Matrix 2 of 5	
B4	 B 4	Code option	Code	Enabling of readable codes	Enable IATA	Y
B5	 B 5	Code option	Code	Enabling of readable codes	Enable Code 93	Y
B6	 B 6	Code option	Code	Enabling of readable codes	Enable Code 128	Y
B7	 B 7	Code option	Code	Enabling of readable codes	Enable MSI/Plessey	Y
B9	 B 9	Code option	Code	Enabling of readable codes	Enable Telepen	Y
JZ	 J Z	Code option	Code	Enabling of readable codes	Enable Tri-Optic	Y
JS	 J S	Code option	Code	Enabling of readable codes	Enable Chinese Post Matrix 2 of 5	
WH	 W H	Code option	Code	Enabling of readable codes	Enable Korean Postal Authority	
B1	 B 1	Code option	Code	Enabling of readable codes	Enable UK/Plessey	Y

Universal ID	Universal Menu label	Class	Group	Title	Settings	Default
ZZ	 Z Z	Menu	Menu	Menu	Start (SET) / End (END)	
BCM	 B C M	Code option	Code	Enabling of readable codes	Enable all 1D codes	
JX	 J X	Code option	Code	Enabling of readable codes	Enable GS1 DataBar Omnidirectional,, GS1 DataBar Truncated, GS1 DataBar Stacked, GS1 DataBar Stacked Omnidirectional ^{(*)1}	
JY	 J Y	Code option	Code	Enabling of readable codes	Enable GS1 DataBar Limited ^{(*)2}	
DR	 D R	Code option	Code	Enabling of readable codes	Enable GS1 DataBar Expanded, GS1 DataBar Expanded Stacked ^{(*)3}	
BLC	 B L C	Code option	Code	Enabling of readable codes	Enable Code 11	
H0	 H 0	Code option	Digits	Setting of number of characters	Fixed length for all codes OFF	Y
H1	 H 1	Code option	Digits	Setting of number of characters	Fixed length for all codes ON	
HK	 H K	Code option	Digits	Setting of number of characters	Fixed length for selected code ON	
HL	 H L	Code option	Digits	Setting of number of characters	Minimum length for selected code	
HM	 H M	Code option	Digits	Setting of number of characters	Maximum length for selected code	
E3	 E 3	Code option	Code option	UPC-A	UPC-A, No leading 0, transmit CD	Y
E5	 E 5	Code option	Code option	UPC-A	UPC-A , No leading 0, not transmit CD	
E2	 E 2	Code option	Code option	UPC-A	UPC-A, Leading 0, transmit CD	

Universal ID	Universal Menu label	Class	Group	Title	Settings	Default
ZZ	 Z Z	Menu	Menu	Menu	Start (SET) / End (END)	
E4	 E 4	Code option	Code option	UPC-A	UPC-A, Leading 0, not transmit CD	
E7	 E 7	Code option	Code option	UPC-E	UPC-E, No leading 0, transmit CD	Y
E9	 E 9	Code option	Code option	UPC-E	UPC-E No leading 0, not transmit CD	
E6	 E 6	Code option	Code option	UPC-E	UPC-E, Leading 0, transmit CD	
E8	 E 8	Code option	Code option	UPC-E	UPC-E, Leading 0, not transmit CD	
6Q	 6 Q	Code option	Code option	UPC-E	Transmit UPC-E as is	Y
6P	 6 P	Code option	Code option	UPC-E	Transmit UPC-E as UPC-A	
KP	 K P	Code option	Code option	UPC-E	Disable UPC-E1	Y
KQ	 K Q	Code option	Code option	UPC-E	Enable UPC-E1	
6J	 6 J	Code option	Code option	EAN-13 EAN-8	EAN-13 not transmit CD	
6K	 6 K	Code option	Code option	EAN-13 EAN-8	EAN-13 transmit CD	Y
6H	 6 H	Code option	Code option	EAN-13 EAN-8	EAN-8 not transmit CD	
6I	 6 I	Code option	Code option	EAN-13 EAN-8	EAN-8 transmit CD	Y
IB	 I B	Code option	Code option	EAN-13 EAN-8	Disable ISBN conversion	Y

Universal ID	Universal Menu label	Class	Group	Title	Settings	Default
ZZ	 Z Z	Menu	Menu	Menu	Start (SET) / End (END)	
IA	 I A	Code option	Code option	EAN-13 EAN-8	Enable ISBN conversion	
IK	 I K	Code option	Code option	EAN-13 EAN-8	Enable ISBN conversion if possible	
HN	 H N	Code option	Code option	EAN-13 EAN-8	Disable ISSN conversion	Y
HO	 H 0	Code option	Code option	EAN-13 EAN-8	Enable ISSN conversion	
4V	 4 V	Code option	Code option	EAN-13 EAN-8	Enable ISSN conversion if possible	
IO	 I 0	Code option	Code option	EAN-13 EAN-8	Disable ISMN conversion	Y
IP	 I P	Code option	Code option	EAN-13 EAN-8	Enable ISMN conversion	
IQ	 I Q	Code option	Code option	EAN-13 EAN-8	Enable ISMN conversion if possible	
D5	 D 5	Code option	Code option	Code 39 It.Pharm.	Normal Code 39	Y
D4	 D 4	Code option	Code option	Code 39 It.Pharm.	Full ASCII Code 39	
+K	 + K	Code option	Code option	Code 39 It.Pharm.	Convert to Full ASCII Code 39 if possible	
D6	 D 6	Code option	Code option	Code 39 It.Pharm.	It. Pharmaceutical only	
D7	 D 7	Code option	Code option	Code 39 It.Pharm.	It. Pharmaceutical	
C1	 C 1	Code option	Code option	Code 39 It.Pharm.	Not check CD	Y

Universal ID	Universal Menu label	Class	Group	Title	Settings	Default
ZZ	 Z Z	Menu	Menu	Menu	Start (SET) / End (END)	
C0	 C 0	Code option	Code option	Code 39 It.Pharm.	Check CD	
D8	 D 8	Code option	Code option	Code 39 It.Pharm.	Not transmit CD	
D9	 D 9	Code option	Code option	Code 39 It.Pharm.	Transmit CD	Y
D1	 D 1	Code option	Code option	Code 39 It.Pharm.	Not transmit ST/SP	Y
D0	 D 0	Code option	Code option	Code 39 It.Pharm.	Transmit ST/SP	
DA	 D A	Code option	Code option	Code 39 It.Pharm.	Not transmit leading A for It. Pharm.Code	Y
DB	 D B	Code option	Code option	Code 39 It.Pharm.	Transmit leading A for It. Pharm.Code	
8D	 8 D	Code option	Code option	Code 39 It.Pharm.	Minimum 3 digits	
8E	 8 E	Code option	Code option	Code 39 It.Pharm.	Minimum 1 digit	Y
+M	 + M	Code option	Code option	Code 39 It.Pharm.	Disable concatenation	Y
+L	 + L	Code option	Code option	Code 39 It.Pharm.	Enable concatenation (if space is included in code head)	
HA	 H A	Code option	Code option	Codabar	Enable only Codabar Normal mode	Y
H4	 H 4	Code option	Code option	Codabar	Enable only ABC code	
H5	 H 5	Code option	Code option	Codabar	Enable only CX code	

Universal ID	Universal Menu label	Class	Group	Title	Settings	Default
ZZ	 Z Z	Menu	Menu	Menu	Start (SET) / End (END)	
H3	 H 3	Code option	Code option	Codabar	Enable Codabar, ABC and CX	
H7	 H 7	Code option	Code option	Codabar	Not check CD	Y
H6	 H 6	Code option	Code option	Codabar	Check CD	
H9	 H 9	Code option	Code option	Codabar	Not transmit CD	
H8	 H 8	Code option	Code option	Codabar	Transmit CD	Y
HE	 H E	Code option	Code option	Codabar	Disable space insertion	Y
HD	 H D	Code option	Code option	Codabar	Enable space insertion	
F0	 F 0	Code option	Code option	Codabar	Not transmit ST/SP	Y
F3	 F 3	Code option	Code option	Codabar	ST/SP: ABCD/ABCD	
F4	 F 4	Code option	Code option	Codabar	ST/SP: abcd/abcd	
F1	 F 1	Code option	Code option	Codabar	ST/SP: ABCD/TN*E	
F2	 F 2	Code option	Code option	Codabar	ST/SP: abcd/tn*e	
HJ	 H J	Code option	Code option	Codabar	ST/SP:<DC1><DC2><DC3><DC4>/<DC1><DC2><DC3><DC4>	
HC	 H C	Code option	Code option	Codabar	Minimum data 1 character	

Universal ID	Universal Menu label	Class	Group	Title	Settings	Default
ZZ	 Z Z	Menu	Menu	Menu	Start (SET) / End (END)	
HB	 H B	Code option	Code option	Codabar	Minimum data 3 characters	
HF	 H F	Code option	Code option	Codabar	Minimum data 5 characters	Y
HI	 H I	Code option	Code option	Codabar	Disable intercharacter gap check	
HH	 H H	Code option	Code option	Codabar	Enable intercharacter gap check	Y
E1	 E 1	Code option	Code option	2 of 5, S-code	Not transmit CD	
E0	 E 0	Code option	Code option	2 of 5, S-code	Transmit CD	Y
G0	 G 0	Code option	Code option	2 of 5, S-code	Not check CD	Y
G1	 G 1	Code option	Code option	2 of 5, S-code	Check CD	
GE	 G E	Code option	Code option	2 of 5, S-code	Minimum data 1 character	
GF	 G F	Code option	Code option	2 of 5, S-code	Minimum data 3 characters	
GI	 G I	Code option	Code option	2 of 5, S-code	Minimum data 5 characters	Y
GK	 G K	Code option	Code option	2 of 5, S-code	Disable space check for Industrial 2 of 5	
GJ	 G J	Code option	Code option	2 of 5, S-code	Enable space check for Industrial 2 of 5	Y
GH	 G H	Code option	Code option	2 of 5, S-code	Not transmit S-Code as Interleaved 2 of 5	Y

Universal ID	Universal Menu label	Class	Group	Title	Settings	Default
ZZ	 Z Z	Menu	Menu	Menu	Start (SET) / End (END)	
GG	 G G	Code option	Code option	2 of 5, S-code	Transmit S-Code as Interleaved 2 of 5	
4H	 4 H	Code option	Code option	IATA	Not check CD	Y
4I	 4 I	Code option	Code option	IATA	Check CD FC / SN only	
4J	 4 J	Code option	Code option	IATA	Check CD CPN / FC / SN	
4K	 4 K	Code option	Code option	IATA	Check CD CPN / AC / FC / SN	
4M	 4 M	Code option	Code option	IATA	Not transmit CD	
4L	 4 L	Code option	Code option	IATA	Transmit CD	Y
4A	 4 A	Code option	Code option	MSI / Plessey	Not check CD	
4B	 4 B	Code option	Code option	MSI / Plessey	Check 1 CD = MOD 10	Y
4C	 4 C	Code option	Code option	MSI / Plessey	Check 2 CD's = MOD 10/MOD 10	
4D	 4 D	Code option	Code option	MSI / Plessey	Check 2 CD's = MOD 10/MOD 11	
4R	 4 R	Code option	Code option	MSI / Plessey	Check 2 CD's = MOD 11/MOD 10	
4G	 4 G	Code option	Code option	MSI / Plessey	Not transmit CD	
4E	 4 E	Code option	Code option	MSI / Plessey	Transmit CD 1	Y

Universal ID	Universal Menu label	Class	Group	Title	Settings	Default
ZZ	 Z Z	Menu	Menu	Menu	Start (SET) / End (END)	
4F	 4 F	Code option	Code option	MSI / Plessey	Transmit CD 1and CD 2	
D2	 D 2	Code option	Code option	Telepen	Numeric mode	Y
D3	 D 3	Code option	Code option	Telepen	ASCII mode	
4O	 4 O	Code option	Code option	UK / Plessey	Not transmit CD's	
4N	 4 N	Code option	Code option	UK / Plessey	Transmit CD's	Y
DO	 D O	Code option	Code option	UK / Plessey	Disable space insertion	Y
DN	 D N	Code option	Code option	UK / Plessey	Enable space insertion	
DP	 D P	Code option	Code option	UK / Plessey	Disable A to X conversion	Y
DQ	 D Q	Code option	Code option	UK / Plessey	Enable A to X conversion	
OF	 O F	Code option	Code option	Code 128 GS1-128	Disable GS1-128 ^(*)	Y
JF	 J F	Code option	Code option	Code 128 GS1-128	Enable GS1-128 only ^(*)	
OG	 O G	Code option	Code option	Code 128 GS1-128	Enable GS1-128 ^(*) If possible	
MP	 M P	Code option	Code option	Code 128 GS1-128	Disable concatenation	Y
MO	 M O	Code option	Code option	Code 128 GS1-128	Enable concatenation (if FNC2 character is included in code head)	

Universal ID	Universal Menu label	Class	Group	Title	Settings	Default
ZZ	 Z Z	Menu	Menu	Menu	Start (SET) / End (END)	
DM	 D M	Code option	Code option	GS1 DataBar	GS1 DataBar ^{(*)5} Not transmit CD	
DL	 D L	Code option	Code option	GS1 DataBar	GS1 DataBar ^{(*)5} Not transmit CD	Y
DT	 D T	Code option	Code option	GS1 DataBar	GS1 DataBar ^{(*)5} Not transmit application identifier	
DS	 D S	Code option	Code option	GS1 DataBar	GS1 DataBar ^{(*)5} Transmit application identifier	Y
RQ	 R Q	Code option	Code option	Composit	Not ignore link flag of GS1 DataBar ^{(*)5} GS1-128 ^{(*)4}	Y
RP	 R P	Code option	Code option	Composit	Ignore link flag of GS1 DataBar ^{(*)5} GS1-128 ^{(*)4}	
9Q	 9 Q	Code option	Code option	Code 93	Not check CD	
AC	 A C	Code option	Code option	Code 93	Check CD	Y
+W	 + W	Code option	Code option	Code 93	Disable concatenation	Y
+V	 + V	Code option	Code option	Code 93	Enable concatenation (if space is included in code head)	
BLF	 B L F	Code option	Code option	Code 11	Not check CD	
BLG	 B L G	Code option	Code option	Code 11	Check 1 CD	
BLH	 B L H	Code option	Code option	Code 11	Check 2 CDs	
BLI	 B L I	Code option	Code option	Code 11	Automatically check 1 or 2 CDs	Y

Universal ID	Universal Menu label	Class	Group	Title	Settings	Default
ZZ	 Z Z	Menu	Menu	Menu	Start (SET) / End (END)	
BLJ	 B L J	Code option	Code option	Code 11	Not transmit CD(s)	Y
BLK	 B L K	Code option	Code option	Code 11	Transmit CD(s)	
*+	 * +	Code option	Code option	Korean Postal Authority code	Transmit CD	
*-	 * -	Code option	Code option	Korean Postal Authority code	Not transmit CD	Y
*.	 * .	Code option	Code option	Korean Postal Authority code	Transmit dash sign	Y
*/	 * /	Code option	Code option	Korean Postal Authority code	Not transmit dash sign	
YZ	 Y Z	String option	Case conversion	Case conversion	No case conversion	Y
YW	 Y W	String option	Case conversion	Case conversion	Convert to upper case	
YX	 Y X	String option	Case conversion	Case conversion	Convert to lower case	
YY	 Y Y	String option	Case conversion	Case conversion	Exchange case	
MG	 M G	String option	Prefix	Prefix	Clear all prefixes	
RY	 R Y	String option	Prefix	All codes	All codes	
N1	 N 1	String option	Prefix	UPC-A	UPC-A	
M0	 M 0	String option	Prefix	UPC-A add-on	UPC-A add-on	

Universal ID	Universal Menu label	Class	Group	Title	Settings	Default
ZZ		Menu	Menu	Menu	Start (SET) / End (END)	
N2		String option	Prefix	UPC-E	UPC-E	
M1		String option	Prefix	UPC-E add-on	UPC-E add-on	
N3		String option	Prefix	EAN-13	EAN-13	
M2		String option	Prefix	EAN-13 add-on	EAN-13 add-on	
N4		String option	Prefix	EAN-8	EAN-8	
M3		String option	Prefix	EAN-8 add-on	EAN-8 add-on	
M4		String option	Prefix	Code 39	Code 39	
M5		String option	Prefix	Codabar	Codabar	
M6		String option	Prefix	Industrial 2 of 5	Industrial 2 of 5	
M7		String option	Prefix	Interleaved 2 of 5	Interleaved 2 of 5	
MB		String option	Prefix	Scode	S-Code	
GL		String option	Prefix	Matrix 2 of 5	Matrix 2 of 5	
I8		String option	Prefix	IATA	IATA	
M8		String option	Prefix	Code 93	Code 93	

Universal ID	Universal Menu label	Class	Group	Title	Settings	Default
ZZ	 Z Z	Menu	Menu	Menu	Start (SET) / End (END)	
M9	 M 9	String option	Prefix	Code 128	Code 128	
N0	 N 0	String option	Prefix	MSI/Plessey	MSI/Plessey	
L8	 L 8	String option	Prefix	Telepen	Telepen	
MA	 M A	String option	Prefix	UK/Plessey	UK/Plessey	
OE	 O E	String option	Prefix	GS1 DataBar	GS1 DataBar ^{(*)5}	
MZ	 M Z	String option	Prefix	Preamble	Preamble	No preamble
BLD	 B L D	String option	Prefix	Code 11	Code 11	
*\$	 * \$	String option	Prefix	Prefix	Korean Postal Authority code	
PR	 P R	String option	Suffix	Suffix	Clear all suffixes	
RZ	 R Z	String option	Suffix	Suffix	All codes	<CR> (0x0D)
N6	 N 6	String option	Suffix	UPC-A	UPC-A	
O0	 0 0	String option	Suffix	UPC-A add-on	UPC-A add-on	
N7	 N 7	String option	Suffix	UPC-E	UPC-E	
O1	 0 1	String option	Suffix	UPC-E add-on	UPC-E add-on	

Universal ID	Universal Menu label	Class	Group	Title	Settings	Default
ZZ	 Z Z	Menu	Menu	Menu	Start (SET) / End (END)	
N8	 N 8	String option	Suffix	EAN-13	EAN-13	
O2	 0 2	String option	Suffix	EAN-13 add-on	EAN-13 add-on	
N9	 N 9	String option	Suffix	EAN-8	EAN-8	
O3	 0 3	String option	Suffix	EAN-8 add-on	EAN-8 add-on	
O4	 0 4	String option	Suffix	Code 39	Code 39	
O5	 0 5	String option	Suffix	Codabar	Codabar	
O6	 0 6	String option	Suffix	Industrial 2 of 5	Industrial 2 of 5	
O7	 0 7	String option	Suffix	Interleaved 2 of 5	Interleaved 2 of 5	
OB	 0 B	String option	Suffix	Scode	S-Code	
GM	 G M	String option	Suffix	Matrix 2 of 5	Matrix 2 of 5	
I9	 I 9	String option	Suffix	IATA	IATA	
O8	 0 8	String option	Suffix	Code 93	Code 93	
O9	 0 9	String option	Suffix	Code 128	Code 128	
N5	 N 5	String option	Suffix	MSI / Plessey	MSI/Plessey	

Universal ID	Universal Menu label	Class	Group	Title	Settings	Default
ZZ	 Z Z	Menu	Menu	Menu	Start (SET) / End (END)	
L9	 L 9	String option	Suffix	Telepen	Telepen	
OA	 O A	String option	Suffix	UK / Plessey	UK/Plessey	
PQ	 P Q	String option	Suffix	GS1 DataBar	GS1 DataBar ⁽⁺⁵⁾	
PS	 P S	String option	Suffix	Postamble	Postamble	No postamble
BLE	 B L E	String option	Suffix	Code 11	Code 11	
*%	 * %	String option	Suffix	Suffix	Korean Postal Authority code	
5A	 5 A	String option	Direct input	Direct input code	<SPACE>	
5B	 5 B	String option	Direct input	Direct input code	!	
5C	 5 C	String option	Direct input	Direct input code	"	
5D	 5 D	String option	Direct input	Direct input code	#	
5E	 5 E	String option	Direct input	Direct input code	\$	
5F	 5 F	String option	Direct input	Direct input code	%	
5G	 5 G	String option	Direct input	Direct input code	&	
5H	 5 H	String option	Direct input	Direct input code	,	

Universal ID	Universal Menu label	Class	Group	Title	Settings	Default
ZZ	 Z Z	Menu	Menu	Menu	Start (SET) / End (END)	
5I	 5 I	String option	Direct input	Direct input code	(	
5J	 5 J	String option	Direct input	Direct input code	)	
5K	 5 K	String option	Direct input	Direct input code	*	
5L	 5 L	String option	Direct input	Direct input code	+	
5M	 5 M	String option	Direct input	Direct input code	,	
5N	 5 N	String option	Direct input	Direct input code	-	
5O	 5 O	String option	Direct input	Direct input code	.	
5P	 5 P	String option	Direct input	Direct input code	/	
6A	 6 A	String option	Direct input	Direct input code	:	
6B	 6 B	String option	Direct input	Direct input code	;	
6C	 6 C	String option	Direct input	Direct input code	<	
6D	 6 D	String option	Direct input	Direct input code	=	
6E	 6 E	String option	Direct input	Direct input code	>	
6F	 6 F	String option	Direct input	Direct input code	?	

Universal ID	Universal Menu label	Class	Group	Title	Settings	Default
ZZ	 Z Z	Menu	Menu	Menu	Start (SET) / End (END)	
6G	 6 G	String option	Direct input	Direct input code	@	
7A	 7 A	String option	Direct input	Direct input code	[	
7B	 7 B	String option	Direct input	Direct input code	\	
7C	 7 C	String option	Direct input	Direct input code	]	
7D	 7 D	String option	Direct input	Direct input code	^	
7E	 7 E	String option	Direct input	Direct input code	—	
7F	 7 F	String option	Direct input	Direct input code	`	
9T	 9 T	String option	Direct input	Direct input code	{	
9U	 9 U	String option	Direct input	Direct input code		
9V	 9 V	String option	Direct input	Direct input code	}	
9W	 9 W	String option	Direct input	Direct input code	~	
Q0	 Q 0	String option	Direct input	Direct input numeric	0	
Q1	 Q 1	String option	Direct input	Direct input numeric	1	
Q2	 Q 2	String option	Direct input	Direct input numeric	2	

Universal ID	Universal Menu label	Class	Group	Title	Settings	Default
ZZ	 Z Z	Menu	Menu	Menu	Start (SET) / End (END)	
Q3	 Q 3	String option	Direct input	Direct input numeric	3	
Q4	 Q 4	String option	Direct input	Direct input numeric	4	
Q5	 Q 5	String option	Direct input	Direct input numeric	5	
Q6	 Q 6	String option	Direct input	Direct input numeric	6	
Q7	 Q 7	String option	Direct input	Direct input numeric	7	
Q8	 Q 8	String option	Direct input	Direct input numeric	8	
Q9	 Q 9	String option	Direct input	Direct input numeric	9	
0A	 0 A	String option	Direct input	Direct input upper case character	A	
0B	 0 B	String option	Direct input	Direct input upper case character	B	
0C	 0 C	String option	Direct input	Direct input upper case character	C	
0D	 0 D	String option	Direct input	Direct input upper case character	D	
0E	 0 E	String option	Direct input	Direct input upper case character	E	
0F	 0 F	String option	Direct input	Direct input upper case character	F	
0G	 0 G	String option	Direct input	Direct input upper case character	G	

Universal ID	Universal Menu label	Class	Group	Title	Settings	Default
ZZ	 Z Z	Menu	Menu	Menu	Start (SET) / End (END)	
0H	 0 H	String option	Direct input	Direct input upper case character	H	
0I	 0 I	String option	Direct input	Direct input upper case character	I	
0J	 0 J	String option	Direct input	Direct input upper case character	J	
0K	 0 K	String option	Direct input	Direct input upper case character	K	
0L	 0 L	String option	Direct input	Direct input upper case character	L	
0M	 0 M	String option	Direct input	Direct input upper case character	M	
0N	 0 N	String option	Direct input	Direct input upper case character	N	
0O	 0 O	String option	Direct input	Direct input upper case character	O	
0P	 0 P	String option	Direct input	Direct input upper case character	P	
0Q	 0 Q	String option	Direct input	Direct input upper case character	Q	
0R	 0 R	String option	Direct input	Direct input upper case character	R	
0S	 0 S	String option	Direct input	Direct input upper case character	S	
0T	 0 T	String option	Direct input	Direct input upper case character	T	
0U	 0 U	String option	Direct input	Direct input upper case character	U	

Universal ID	Universal Menu label	Class	Group	Title	Settings	Default
ZZ	 Z Z	Menu	Menu	Menu	Start (SET) / End (END)	
0V	 0 V	String option	Direct input	Direct input upper case character	V	
0W	 0 W	String option	Direct input	Direct input upper case character	W	
0X	 0 X	String option	Direct input	Direct input upper case character	X	
0Y	 0 Y	String option	Direct input	Direct input upper case character	Y	
0Z	 0 Z	String option	Direct input	Direct input upper case character	Z	
\$A	 \$ A	String option	Direct input	Direct input lower case character	a	
\$B	 \$ B	String option	Direct input	Direct input lower case character	b	
\$C	 \$ C	String option	Direct input	Direct input lower case character	c	
\$D	 \$ D	String option	Direct input	Direct input lower case character	d	
\$E	 \$ E	String option	Direct input	Direct input lower case character	e	
\$F	 \$ F	String option	Direct input	Direct input lower case character	f	
\$G	 \$ G	String option	Direct input	Direct input lower case character	g	
\$H	 \$ H	String option	Direct input	Direct input lower case character	h	
\$I	 \$ I	String option	Direct input	Direct input lower case character	i	

Universal ID	Universal Menu label	Class	Group	Title	Settings	Default
ZZ	 Z Z	Menu	Menu	Menu	Start (SET) / End (END)	
\$J	 \$ J	String option	Direct input	Direct input lower case character	j	
\$K	 \$ K	String option	Direct input	Direct input lower case character	k	
\$L	 \$ L	String option	Direct input	Direct input lower case character	l	
\$M	 \$ M	String option	Direct input	Direct input lower case character	m	
\$N	 \$ N	String option	Direct input	Direct input lower case character	n	
\$O	 \$ O	String option	Direct input	Direct input lower case character	o	
\$P	 \$ P	String option	Direct input	Direct input lower case character	p	
\$Q	 \$ Q	String option	Direct input	Direct input lower case character	q	
\$R	 \$ R	String option	Direct input	Direct input lower case character	r	
\$S	 \$ S	String option	Direct input	Direct input lower case character	s	
\$T	 \$ T	String option	Direct input	Direct input lower case character	t	
\$U	 \$ U	String option	Direct input	Direct input lower case character	u	
\$V	 \$ V	String option	Direct input	Direct input lower case character	v	
\$W	 \$ W	String option	Direct input	Direct input lower case character	w	

Universal ID	Universal Menu label	Class	Group	Title	Settings	Default
ZZ	 Z Z	Menu	Menu	Menu	Start (SET) / End (END)	
\$X	 \$ X	String option	Direct input	Direct input lower case character	x	
\$Y	 \$ Y	String option	Direct input	Direct input lower case character	y	
\$Z	 \$ Z	String option	Direct input	Direct input lower case character	z	
9G	 9 G	String option	Direct input	Direct input control character	^@ (NULL)	
1A	 1 A	String option	Direct input	Direct input control character	^A (SOH)	
1B	 1 B	String option	Direct input	Direct input control character	^B (STX)	
1C	 1 C	String option	Direct input	Direct input control character	^C (ETX)	
1D	 1 D	String option	Direct input	Direct input control character	^D (EOT)	
1E	 1 E	String option	Direct input	Direct input control character	^E (ENQ)	
1F	 1 F	String option	Direct input	Direct input control character	^F (ACK)	
1G	 1 G	String option	Direct input	Direct control character	^G (BEL)	
1H	 1 H	String option	Direct input	Direct input control character	^H (BS)	
1I	 1 I	String option	Direct input	Direct input control character	^I (HT)	
1J	 1 J	String option	Direct input	Direct input control character	^J (LF)	

Universal ID	Universal Menu label	Class	Group	Title	Settings	Default
ZZ	 Z Z	Menu	Menu	Menu	Start (SET) / End (END)	
1K	 1 K	String option	Direct input	Direct input control character	^K (VT)	
1L	 1 L	String option	Direct input	Direct input control character	^L (FF)	
1M	 1 M	String option	Direct input	Direct input control character	^M (CR)	
1N	 1 N	String option	Direct input	Direct input control character	^N (SO)	
1O	 1 O	String option	Direct input	Direct input control character	^O (SI)	
1P	 1 P	String option	Direct input	Direct input control character	^P (DLE)	
1Q	 1 Q	String option	Direct input	Direct input control character	^Q (DC1)	
1R	 1 R	String option	Direct input	Direct input control character	^R (DC2)	
1S	 1 S	String option	Direct input	Direct input control character	^S (DC3)	
1T	 1 T	String option	Direct input	Direct input control character	^T (DC4)	
1U	 1 U	String option	Direct input	Direct input control character	^U (NAK)	
1V	 1 V	String option	Direct input	Direct input control character	^V (SYN)	
1W	 1 W	String option	Direct input	Direct input control character	^W (ETB)	
1X	 1 X	String option	Direct input	Direct input control character	^X (CAN)	

Universal ID	Universal Menu label	Class	Group	Title	Settings	Default
ZZ	 Z Z	Menu	Menu	Menu	Start (SET) / End (END)	
1Y	 1 Y	String option	Direct input	Direct input control character	^Y (EM)	
1Z	 1 Z	String option	Direct input	Direct input control character	^Z (SUB)	
9A	 9 A	String option	Direct input	Direct input control character	^[(ESC)	
9B	 9 B	String option	Direct input	Direct input control character	^ \ (FS)	
9C	 9 C	String option	Direct input	Direct input control character	^] (GS)	
9D	 9 D	String option	Direct input	Direct input control character	^^ (RS)	
9E	 9 E	String option	Direct input	Direct input control character	^ _ (US)	
9F	 9 F	String option	Direct input	Direct input control character	DEL (ASCII 127)	
\$2	 \$ 2	String option	Direct input	Direct input code ID /length	Code ID	
\$1	 \$ 1	String option	Direct input	Direct input code ID /length	Code ID (AIM ID)	
\$3	 \$ 3	String option	Direct input	Direct input code ID /length	Code length (1D/2D : 2/6 digits)	
\$6	 \$ 6	String option	Direct input	Direct input code ID /length	Code length (1D/2D : 6/6 digits)	
S0	 s 0	Read option	Read option	Read mode option	Single read	Y
S1	 s 1	Read option	Read option	Read mode option	Multiple read	

Universal ID	Universal Menu label	Class	Group	Title	Settings	Default
ZZ	 Z Z	Menu	Menu	Menu	Start (SET) / End (END)	
S2	 S 2	Read option	Read option	Read mode option	Continuous read	
XA	 X A	Read option	Read option	Read mode option	Disable add-on wait mode	
XB	 X B	Read option	Read option	Read mode option	Add-on wait mode 0.25 sec.	
XC	 X C	Read option	Read option	Read mode option	Add-on wait mode 0.50 sec.	Y
XD	 X D	Read option	Read option	Read mode option	Add-on wait mode 0.75 sec.	
S7	 S 7	Read option	Read option	Read mode option	Disable trigger	
S8	 S 8	Read option	Read option	Read mode option	Enable trigger	Y
/K	 / K	Read option	Read option	Read mode option	Disable trigger repeat	Y
/M	 / M	Read option	Read option	Read mode option	Enable trigger repeat	
AH	 A H	Read option	Read option	Multiple read reset time	Multiple read reset time = 50 ms	
AI	 A I	Read option	Read option	Multiple read reset time	Multiple read reset time = 100 ms	
AJ	 A J	Read option	Read option	Multiple read reset time	Multiple read reset time = 200 ms	
AK	 A K	Read option	Read option	Multiple read reset time	Multiple read reset time = 300 ms	
AL	 A L	Read option	Read option	Multiple read reset time	Multiple read reset time = 400 ms	

Universal ID	Universal Menu label	Class	Group	Title	Settings	Default
ZZ	 Z Z	Menu	Menu	Menu	Start (SET) / End (END)	
AM	 A M	Read option	Read option	Multiple read reset time	Multiple read reset time = 500 ms	Y
AN	 A N	Read option	Read option	Multiple read reset time	Multiple read reset time = 600 ms	
AG	 A G	Read option	Read option	Multiple read reset time	Multiple read reset time = infinite	
YN	 Y N	Read option	Read option	Quiet zone option	No margin check	
YO	 Y O	Read option	Read option	Quiet zone option	Margin check 1/7 nominal	
YP	 Y P	Read option	Read option	Quiet zone option	Margin check 2/7 nominal	
YQ	 Y Q	Read option	Read option	Quiet zone option	Margin check 3/7 nominal	
YR	 Y R	Read option	Read option	Quiet zone option	Margin check 4/7 nominal	
YS	 Y S	Read option	Read option	Quiet zone option	Margin check 5/7 nominal	
YT	 Y T	Read option	Read option	Quiet zone option	Margin check 6/7 nominal	
YU	 Y U	Read option	Read option	Quiet zone option	Margin check nominal	Y
Y0	 Y 0	Read option	Read time option	Read time option	0 sec.	
Y1	 Y 1	Read option	Read time option	Read time option	1 sec.	
Y2	 Y 2	Read option	Read time option	Read time option	2 sec.	Y

Universal ID	Universal Menu label	Class	Group	Title	Settings	Default
ZZ		Menu	Menu	Menu	Start (SET) / End (END)	
ZZ		Menu	Menu	Menu	Start(SET) / End(END)	
Y3		Read option	Read time option	Read time option	3 sec.	
Y4		Read option	Read time option	Read time option	4 sec.	
Y5		Read option	Read time option	Read time option	5 sec.	
Y6		Read option	Read time option	Read time option	6 sec.	
Y7		Read option	Read time option	Read time option	7 sec.	
Y8		Read option	Read time option	Read time option	8 sec.	
Y9		Read option	Read time option	Read time option	9 sec.	
YM		Read option	Read time option	Read time option	Read time infinite	
YL		Read option	Read time option	Read time option	Read time 10 times	
V2		Read option	Positive Negative bar codes	Positive Negative bar codes	Positive bar codes	Y
						
V3		Read option	Positive Negative bar codes	Positive Negative bar codes	Negative bar codes (applied to menu labels)	

Universal ID	Universal Menu label	Class	Group	Title	Settings	Default
ZZ		Menu	Menu	Menu	Start (SET) / End (END)	
V4	 	Read option	Positive Negative bar codes	Positive Negative bar codes	Positive and negative bar codes	
X0		Read option	Read redundancy	Redundancy	Read 1 time, redundancy = 0	Y
X1		Read option	Read redundancy	Redundancy	Read 2 times, redundancy = 1	
X2		Read option	Read redundancy	Redundancy	Read 3 times, redundancy = 2	
X3		Read option	Read redundancy	Redundancy	Read 4 times, redundancy = 3	
W0		Indicator option	Buzzer	Buzzer	Disable buzzer	
W8		Indicator option	Buzzer	Buzzer	Enable software buzzer	Y
W1		Indicator option	Buzzer	Buzzer	Single tone buzzer	Y
W2		Indicator option	Buzzer	Buzzer	High- low buzzer	
W3		Indicator option	Buzzer	Buzzer	Low-high buzzer	
W7		Indicator option	Buzzer	Buzzer	Buzzer duration 50 msec	Y
W4		Indicator option	Buzzer	Buzzer	Buzzer duration 100 msec	
W5		Indicator option	Buzzer	Buzzer	Buzzer duration 200 msec	

Universal ID	Universal Menu label	Class	Group	Title	Settings	Default
ZZ	 Z Z	Menu	Menu	Menu	Start (SET) / End (END)	
W6	 W 6	Indicator option	Buzzer	Buzzer	Buzzer duration 400 msec	
T0	 T 0	Indicator option	Buzzer	Buzzer	Buzzer loudness: maximum	Y
T1	 T 1	Indicator option	Buzzer	Buzzer	Buzzer loudness: loud	
T2	 T 2	Indicator option	Buzzer	Buzzer	Buzzer loudness: normal	
T3	 T 3	Indicator option	Buzzer	Buzzer	Buzzer loudness: minimum	
VY	 V Y	Indicator option	Buzzer	Buzzer	Buzzer before transmission	Y
VZ	 V Z	Indicator option	Buzzer	Buzzer	Buzzer after transmission	
GD	 G D	Indicator option	Buzzer	Buzzer	Disable startup buzzer	
GC	 G C	Indicator option	Buzzer	Buzzer	Enable startup buzzer	Y
T4	 T 4	Indicator option	Good read LED	Good read LED	Disable indicator	
T5	 T 5	Indicator option	Good read LED	Good read LED	Indicator duration: 0.2 sec	Y
T6	 T 6	Indicator option	Good read LED	Good read LED	Indicator duration: 0.4 sec	
T7	 T 7	Indicator option	Good read LED	Good read LED	Indicator duration: 0.8 sec	
Z1	 Z 1	Miscellaneous	Miscellaneous	Miscellaneous	Transmit software version	

Universal ID	Universal Menu label	Class	Group	Title	Settings	Default
ZZ	 Z Z	Menu	Menu	Menu	Start (SET) / End (END)	
Z3	 Z 3	Miscella neous	Miscella neous	Miscella neous	Transmit settings	
ZA	 Z A	Miscella neous	Miscella neous	Miscella neous	Transmit ASCII printable string	
YV	 Y V	Miscella neous	Miscella neous	Miscella neous	Transmit ASCII control string	
TS	 T S	Miscella neous	Miscella neous	Miscella neous	Disable configuration via RS232	
TT	 T T	Miscella neous	Miscella neous	Miscella neous	Enable configuration via RS232	Y
8B	 8 B	Miscella neous	Miscella neous	Miscella neous	Disable trigger via RS232	
8C	 8 C	Miscella neous	Miscella neous	Miscella neous	Enable trigger via RS232	Y
WB	 W B	Miscella neous	Miscella neous	Miscella neous	Disable buzzer via RS232	
WA	 W A	Miscella neous	Miscella neous	Miscella neous	Enable buzzer via RS232	Y
TY	 T Y	Miscella neous	Miscella neous	Miscella neous	Disable good read LED via RS232	
TZ	 T Z	Miscella neous	Miscella neous	Miscella neous	Enable good read LED via RS232	Y
WD	 W D	Miscella neous	Miscella neous	Miscella neous	Disable ACK/NAK for RS232 comm.	Y
WC	 W C	Miscella neous	Miscella neous	Miscella neous	Enable ACK/NAK for RS232 comm.	
ZY	 Z Y	Miscella neous	Miscella neous	Miscella neous	Transmit ROM checksum	

Universal ID	Universal Menu label	Class	Group	Title	Settings	Default
ZZ	 Z Z	Menu	Menu	Menu	Start (SET) / End (END)	
TG	 T G	Miscellaneous	Miscellaneous	Miscellaneous	Clear error messages No label and No decode	
TH	 T H	Miscellaneous	Error message	Error message	Error message No label	
TI	 T I	Miscellaneous	Error message	Error message	Error message No decode	
D39	 D 3 9	Read option	Read option	Illumination LED control	Enable illumination LED	Y
D3A	 D 3 A	Read option	Read option	Illumination LED control	Disable illumination LED	
D3B	 D 3 B	Read option	Read option	Illumination LED control	Alternating illumination LED	
D3Q	 D 3 Q	Read option	Read option	Illumination LED control	Prevent specular reflection of illumination LED	
Z6	 Z 6	Read option	Power control	Low power mode control	Enable Low Power mode	
Z5	 Z 5	Read option	Power control	Low power mode control	Disable Low Power mode	Y

Note:

	GS1 bar code	Former name
*1	GS1 DataBar Omnidirectional	RSS-14
	GS1 DataBar Truncated	RSS-14 Truncated
	GS1 DataBar Stacked	RSS-14 Stacked
	GS1 DataBar Stacked Omnidirectional	RSS-14 Stacked Omnidirectional
*2	GS1 DataBar Limited	RSS Limited
*3	GS1 DataBar Expanded	RSS Expanded
	GS1 DataBar Expanded Stacked	RSS Expanded Stacked
*4	GS1-128	UCC/EAN128
*5	GS1 DataBar	RSS