



# TC1100

## CCD Scanner

### Quick Reference Guide

The TC1100 is a linear CCD Scanner for OEM applications. It is available in two different versions:

Model	Description	Order Number
TC1100-1100	CCD scanner for linear codes	939501020
TC1100-1200	CCD scanner for linear and PDF417	939501030

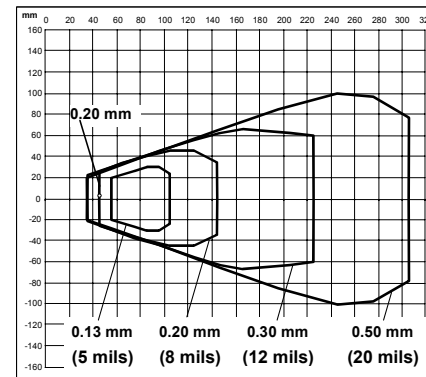
#### Technical Specifications

Power supply	5 Vdc ± 5%
Consumption	1.5 W
Interfaces	RS232, WEDGE, PEN Emulation
Max Scans/sec	270
Max resolution	0,076mm (3mils)
Readable codes:	EAN/UPC, Code 39, 2/5 family, Codabar, Code 128, EAN 128, ISBT 128, Code 93, pharmaceutical codes, Delta IBM, Code 16K, Code 49, (Telepen, MSI/Plessey, Pharmacode only TC1100-1100), (Codablock-A, Codablock-F Std, Codablock-F EAN, PDF417 only TC1100-1200)

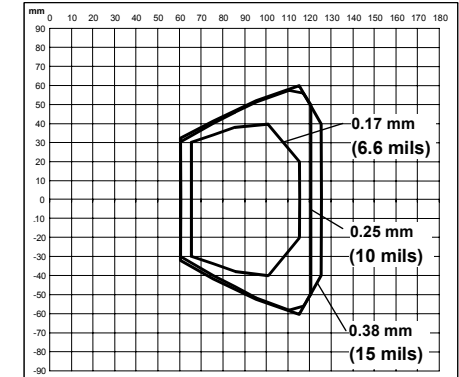
#### Default Configuration

Power Save	270 scans/sec, sleep disabled, standby disabled
Reading Parameters	On-Line
Code Selection	<ul style="list-style-type: none"> <li>Interleaved 2 of 5: Check Digit transmitted, length: min 4, max 99</li> <li>Code EAN8, EAN13, UPCA, UPCB: without ADD ON, Check Digit transmitted, no conversions</li> </ul>
Enabled codes	<ul style="list-style-type: none"> <li>Code 39: length: min 1, max 99</li> <li>Code 128: Check Digit not transmitted, length: min 1, max 99</li> </ul> (Only TC1100-1200) <ul style="list-style-type: none"> <li>PDF417</li> </ul>
Data Format	Code ID disabled, Header = <STX>, Terminator = <CR> <LF>, no Field Adjustment, Code length TX disabled, character replacement disabled, No Read Character = <CAN>
Decoding Parameters	Ink spread enabled, overflow control enabled, interdigit control enabled, Puzzle Solver™ disabled, decoding safety = 1 read
Enabled interface	RS232, 9600, N, 8, 1, no handshaking, ACK/NAK disabled, RX timeout 100 ms, FIFO enabled, inter-character delay disabled

#### Reading Diagrams



Reading Diagram TC1100-1100 (code 39)



Reading Diagram TC1100-1200 (PDF417)

CODE SELECTION		
<b>EAN/UPC disable</b>	<b>AA0</b>	
EAN 8/EAN 13/UPC A/UPC E enable	<b>AA1</b>	without ADD ON
	<b>AA5</b>	with ADD ON
	<b>AA8</b>	with and without ADD ON
EAN 8/EAN 13 enable	<b>AA3</b>	without ADD ON
	<b>AAK</b>	with ADD ON 2 ONLY
	<b>AAL</b>	with ADD ON 5 ONLY
	<b>AA6</b>	with ADD ON 2 AND 5
UPC A/UPC E enable	<b>AA4</b>	without ADD ON
	<b>AAM</b>	with ADD ON 2 ONLY
	<b>AAN</b>	with ADD ON 5 ONLY
	<b>AA7</b>	with ADD ON 2 AND 5
EAN 8 enable	<b>AAG0</b>	check digit transmission disable
	<b>AAG1</b>	check digit transmission enable
EAN 13 enable	<b>AAH0</b>	check digit transmission disable
	<b>AAH1</b>	check digit transmission enable
UPC A enable	<b>AAI0</b>	check digit transmission disable
	<b>AAI1</b>	check digit transmission enable
UPC E enable	<b>AAJ0</b>	check digit transmission disable
	<b>AAJ1</b>	check digit transmission enable
<b>Code 39 disable</b>	<b>AB0</b>	
Code 39 Standard enable	<b>AB11xxyy</b>	no check digit control
	<b>AB12xxyy</b>	check digit control and transmission
	<b>AB13xxyy</b>	check digit control without transmission
Code 39Full ASCII enable	<b>AB21xxyy</b>	no check digit control
	<b>AB22xxyy</b>	check digit control and transmission
<b>Code 2/5 family disable</b>	<b>AC0</b>	
Interleaved 2/5 enable	<b>AC11xxyy</b>	no check digit control
	<b>AC12xxyy</b>	check digit control and transmission
	<b>AC13xxyy</b>	check digit control without transmission
Normal 2/5 5 bars enable	<b>AC21xxyy</b>	no check digit control
	<b>AC22xxyy</b>	check digit control and transmission
	<b>AC23xxyy</b>	check digit control without transmission
Industrial 2/5 (IATA) enable	<b>AC31xxyy</b>	no check digit control
	<b>AC32xxyy</b>	check digit control and transmission
	<b>AC33xxyy</b>	check digit control without transmission
Matrix 2/5 3 bars enable	<b>AC41xxyy</b>	no check digit control
	<b>AC42xxyy</b>	check digit control and transmission
	<b>AC43xxyy</b>	check digit control without transmission
<b>Codabar family disable</b>	<b>AD0</b>	
Codabar standard enable	<b>AD111xxyy</b>	no start/stop character equality control - nor transmission
	<b>AD112xxyy</b>	no start/stop character equality control but transmission
	<b>AD121xxyy</b>	start/stop character equality control but no transmission
	<b>AD122xxyy</b>	start/stop character equality control and transmission
	<b>AD212xxyy</b>	ABC Codabar no start/stop character equality control but transmission
<b>Code 128 family disable</b>	<b>AI0</b>	
Code 128 enable	<b>AI11 xxyy</b>	control without transmission of check digit
EAN 128 enable	<b>AI21 xxyy</b>	control without transmission of check digit
Code Length	<b>AILxxyy</b>	
<b>Code 93 family disable</b>	<b>AK0</b>	
Code 93 enable	<b>AK1 xxyy</b>	control without transmission of check digit
<b>PDF417 disable</b>	<b>AR0</b>	
<b>PDF417 enable</b>	<b>AR1</b>	
<b>Pharmacode disable</b>	<b>AQ0</b>	
Pharmacode enable	<b>AQ1xxyy</b>	forward code tx direction
	<b>AQ2xxyy</b>	reverse code tx direction
Overflow ratio	<b>AQazz</b>	

**xxyy** = ASCII numbers that define:

**xx** = min. acceptable code length

**yy** = max. acceptable code length

**zz** = overflow ratio value

The minimum code length must always be less than or equal to the maximum.

For more detailed information on the TC1100 programmability and complete parameter list, please refer to the TC1100 Reference Manual.



## Electrical Connections

25-pin connector		
1	Shield	earth ground
2	TX	transmit data
3	RX	receive data
4	RTS	request to send
5	CTS	clear to send
6	nc	not connected
7	SGND	signal ground
8	EXT BEEPER	external beeper connection
9	VCC+	+5Vdc
10	nc	not connected
11	OUT+	See Figure 1
12	OUT-	
13	VCC+	+5Vdc
14	nc	not connected
15	nc	not connected
16	nc	not connected
17	nc	not connected
18	EXT TRIG+	See Figure 2
19	EXT TRIG-	
20	DATAIN_WAND	
21	DATAOUT	
22	OUT-	
23	CLKIN	
24	CLKOUT	
25	GND	power ground

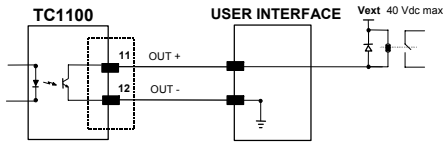
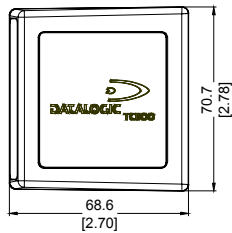
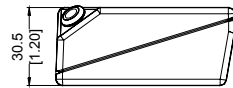


Figure 1 - Output Connection (Good Read). Example NPN

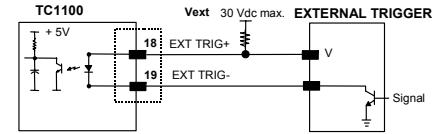
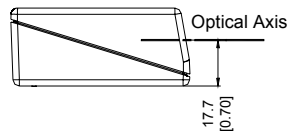
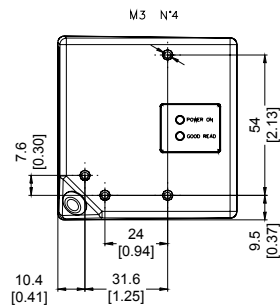


## Physical Dimensions

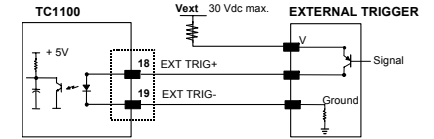
Width	70.7 mm	2.78 inches
Length	68.6 mm	2.70 inches
Height	30.5 mm	1.20 inches



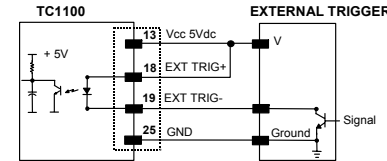
mm  
[in.]



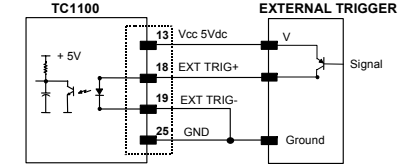
Input NPN command using external power



Input PNP command using external power



Input NPN command using TC1100 power



Input PNP command using TC1100 power

Figure 2 - Trigger Connections

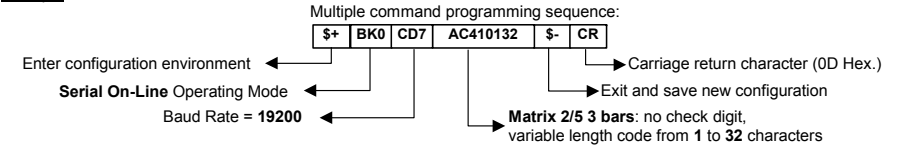
## Basic Commands for TC1100

The TC1100 default configuration can be changed by receiving commands through the RS232 Interface. The command syntax is given below with an example.

Command syntax

**\$+ Command(s) \$- <CR>** the new setting will be definitive (stored in FLASH EPROM)

Example:



Commands:

OPERATING MODES			
On-line	BK1		
Serial On-line	BK0		
Automatic	BK3		
Automatic / Lighting System Standby	BK2		
To enter in Test mode	#+DStat1<CR> (does not require \$+ or \$-)		
To exit Test mode	#+DStat0<CR> (does not require \$+ or \$-)		
GENERAL FEATURES			
RS232 interface selection	CP0		
RS232 Baud Rate	CD0 for 150 Baud up to CD8 for 38400 Baud		
WEDGE AT	CP500		
WEDGE Notebook	CP505		
Keyboard Nationality	FJ7 Belgian	FJ1 Italian	
	FJ4 English	FJ6 Spanish	
	FJ2 French	FJ5 Swedish	
	FJ3 German	FJ0 USA	
CCD Scan Rate	BT0 67 scans/sec		
	BT1 135 scans/sec		
	BT2 270 scans/sec		
Puzzle Solver	AU1 enable	AU0 disable	
Ink Spread	AX1 enable	AX0 disable	
Decoding safety	ED0 1 read	ED2 3 reads	
	ED1 2 reads	ED3 4 reads	
To restore the default configuration	\$+\$*<CR> (does not require \$-)		
To get configuration from the scanner	\$+\$&<CR> (does not require \$-)		

