9323

BCD OUTPUT MODULE

Technical Manual
and
Parts Catalog

INTRODUCTION

This publication is provided solely as a guide for individuals who have received METTLER TOLEDO Technical Training in servicing the METTLER TOLEDO product.

Information regarding METTLER TOLEDO Technical Training may be obtained by writing to:

METTLER TOLEDO
Training Center
P.O. Box 1705
Columbus, Ohio 43216
(614) 438-4400

FCC NOTE

This equipment has been tested and found to comply with the limits of the United States of America FCC rules for a Class A digital device, pursuant to Part 15 of the Communications. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

IMPORTANT!

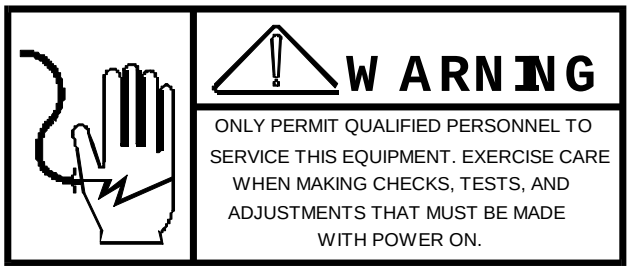
It is most important that the correct part number is used when ordering. Parts orders are machine processed, using only the part number and quantity as shown on the order. Orders are not edited to determine if the part number and description agree.

PRECAUTIONS

- **READ** this manual before operating or servicing this equipment.

- **ALWAYS REMOVE POWER** and wait at least 30 seconds **BEFORE** connecting or disconnecting any internal harnesses. Failure to observe these precautions may result in damage to, or destruction of the equipment.

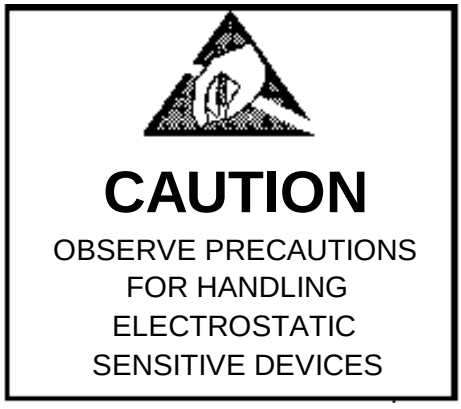
- **ALWAYS** take proper precautions when handling static sensitive devices.



- **DO NOT** connect or disconnect a load cell scale base to the equipment with power connected or damage will result.

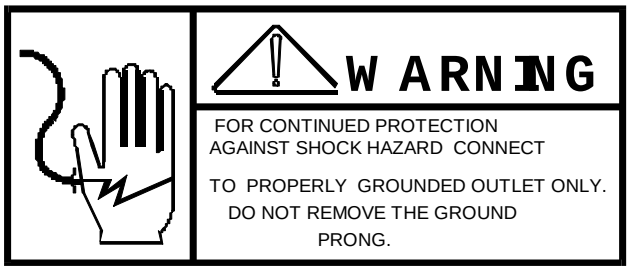
- **SAVE** this manual for future reference.

- **DO NOT** allow untrained personnel to operate, clean, inspect, maintain, service, or tamper with this equipment.



- **ALWAYS DISCONNECT** this equipment from the power source before servicing.

- **CALL** METTLER TOLEDO for parts, information, and service.



CAUTION
DO NOT APPLY POWER TO THE UNIT UNTIL ALL CONNECTIONS HAVE BEEN MADE, ALL JUMPERS HAVE BEEN PROPERLY INSTALLED AND ALL DIP SWITCHES HAVE BEEN PROPERLY SET.

CAUTION
DO NOT SET S3 SWITCHES WITH POWER APPLIED TO THE 9323. DO NOT APPLY POWER TO THE UNIT UNTIL ALL JUMPERS AND SWITCHES HAVE BEEN CONFIGURED.

CONTENTS

1. GENERAL DESCRIPTION

The 9323 BCD Output Module is designed to provide interface between any of the Toledo Indicators, the Masstron M5000 indicators or Mettler PM or SM Indicators and equipment requiring input data in BCD. The BCD Output Module will accept serial data from any of the Toledo, checksum, the Toledo continuous setpoint data format with checksum, the Masstron continuous format or Mettler continuous output format. The BCD Output Option provides BCD outputs that are isolated from the serial interface as well as the AC line. In addition, the module provides a serial output that may be selected to echo the data received, or output data to a printer.

The 9323-0001 Wall Mount BCD Output Modules are U.L. listed scale accessories and the 9323-0021 Panel Mount BCD Output Module is a U.L. recognized scale accessory.

2. SPECIFICATIONS

2.1 POWER

1). Input Voltage

115/230 VAC ± 10% selectable via input wiring. Refer to section 3.2 for voltage selection.

2). Input Frequency

50 / 60 HZ.

3). Power Consumption

10 watts maximum.

2.2 MECHANICAL CONFIGURATION

1). Packaging

The unit is packaged in either a mild steel or stainless steel wall mount enclosure or a panel mount version. The enclosure is 12.5" H x 11" W x 3.5" D. The panel mount assembly is 10.75" H x 8.88" W x 2.28" D.

2). Terminations

All connections to the PC boards for power, data and signal cables are via terminals strips. A fiber optic receive connector is also mounted on PC Board for fiber optic cable interface. Three CGB type fittings are provided on the enclosure for cable entry.

2.3 ENVIRONMENTAL

1). Storage Temperature

-50 to 100 °C (-58 to 212 °F).

2). Operation Temperature

0 to 40 °C (32 ° to 104 °F).

3). Humidity Range

10% to 95% relative humidity non-condensing.

2.4 SERIAL INPUT INTERFACE

The unit will automatically recognize the data format and the baud rate; however, the data must conform to the following specifications.

1). Interface Type

RS232, RS422/485, 20 mA current loop and fiber optic; all jumper selectable.

2). Message Format

Accepts serial data in either the Toledo continuous data format with checksum, the Toledo continuous setpoint data format with checksum, the Masstron M5000 continuous data format, or the Mettler PM or SM Indicator continuous output format.

3). Data Format

1 start bit, 7 data bits, 1 parity bit, and 1 or 2 stop bits. Parity may be even, odd or none.

4). Baud Rate

1200, 2400, 4800 and 9600 for Toledo and Mettler continuous format, 4800 for Masstron M5000 continuous format.

2.5 SERIAL OUTPUT INTERFACE

The serial output port maybe configured to output data to a printer, or it may be configured to echo the data received to provide an interface to additional accessories. It cannot be configured for both simultaneously.

2.6 PRINTER OUTPUT

1). Interface Type

RS232, RS422/485 and 20 mA current loop.

2). Message Format

Selectable to output displayed weight only, single line G-T-N, or three line G-T-N. Output is upon demand and is triggered by the indicator PRINT button. This printer output is not available when interfaced using the Masstron continuous data format, or the Mettler continuous format.

3). Data Format

2 start bit, 7 data bits, 1 even parity bit, and 1 stop bit.

4). Baud Rate

The baud rte is selectable at either 300 baud, or the same as the baud rate of the data being received.

2.7 ECHO DATA OUTPUT

1). Interface Type

RS232, RS422/485 and 20 mA current loop.

2). Message Format

The message format is identical to the format of the data being received.

3). Data Format

The data format is identical to the format of the data being received.

4). Baud Rate

The baud rate is the same as the baud rate of the data being received.

2.8 BCD OUTPUT

1). Output Type

Five digits of full parallel or gated BCD output, DIP switch selectable as negative or positive true BCD. Four status bit outputs for error, motion, under, and net. A sync output is also available that indicates when data is valid.

2). Output Drive

Isolated 5 VDC logic outputs capable of sinking or sourcing 6 mA each. When gate inputs are low, the outputs go to a high impedance state. The 4 status outputs are always active.

Output High Voltage = 3.5 VDC min @ 1 mA source current
Output Low Voltage = 0.4 VDC max @ 6 mA sink current

3). Control Inputs

Five gate inputs are provided to enable each digit of BCD output. A hold input is provided to freeze the BCD output at its current value. These inputs are 5 VDC logic inputs with 10k pull-up resistors. it requires 1 mA to sink each input to a low logic state.

Input High Voltage = 3.5 VDC min @ 1 mA
Input Low Voltage = 1.0 VDC max @ 3 mA

3. INSTALLATION INSTRUCTIONS

3.1 PRELIMINARY INSPECTION

Upon opening the shipping carton, inspect the unit for loose or damaged parts. If any damage is found, immediately notify the carrier.

Open the enclosure and verify that all internal harnesses are firmly seated in the correct connector.

! CAUTION
DO NOT APPLY POWER TO THE UNIT UNTIL ALL CONNECTIONS HAVE BEEN MADE, ALL JUMPERS HAVE BEEN PROPERLY INSTALLED AND ALL DIP SWITCHES HAVE BEEN PROPERLY SET.

3.2 MOUNTING

The enclosure provided must be secured to a flat surface by the installer. The “keyhole” holes in the mounting flange are designed to accept #10 to 1/4” diameter bolts for this purpose. For removal convenience, the “keyhole” holes have a major diameter of .62”. if the installer would use screws or bolts with head diameters less than 5/8”, the bolts would not have to be removed, only loosened, to remove the enclosure for service. The installer must then position the enclosure small diameter slot toward the top so it will not fall from its mounting.

If the enclosure is mounted to an ungrounded surface, (wood, masonry, etc.) means must be provided to ground the enclosure. This ground connection may be made via connecting conduit or with a separate # 12 awg (min.) green wire from the enclosure to a grounded object.

Mounting dimensions along with the enclosure size is shown in the figure below:

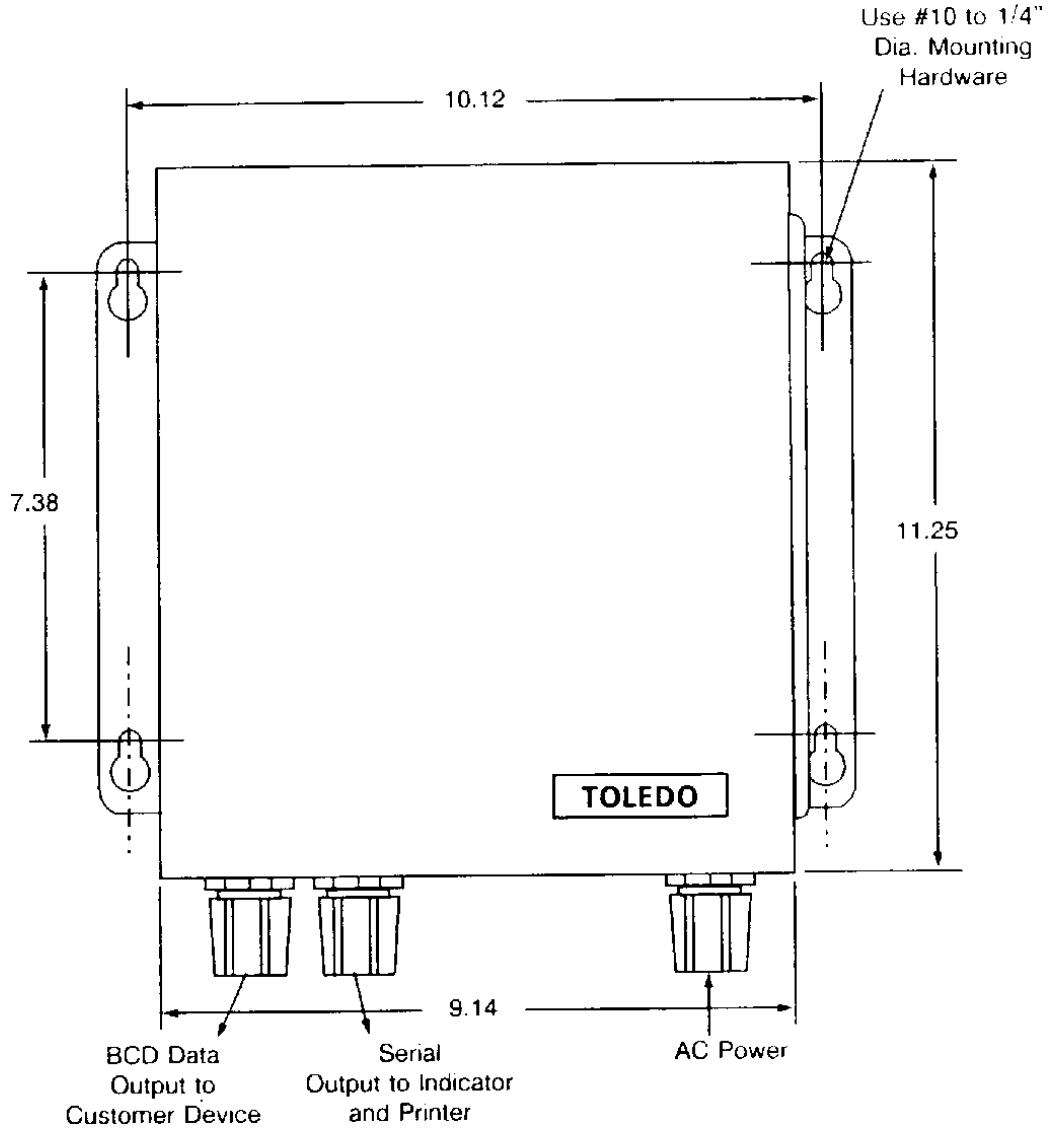


Figure 3.1 Mounting Dimensions

3.3 AC POWER

Verify that the AC wiring at TB1 is correct for the power being applied. Refer to drawing 900732 at the back of this manual for schematic wiring diagram.

115 VAC OPERATION	230 VAC OPERATION
1 - 115 VAC	1 - 230 VAC
3 - 115 VAC Common	6 - 230 VAC Common

Jumper 2 to 5

Jumper 3 to 5

Jumper 4 to 6

Connect Ground Wire to Ground Stud

Connect Ground Wire to Ground Stud

3.4 SERIAL INTERFACE

Connect the serial interface able from the indicator to TB2. If fiber optics interface is used, plug the fiber optic cable into the fiber optic receiver J14. If a printer or other accessory is used, connect its interface cable to TB2 also. Refer to drawing 900732 in the back of this manual for schematic wiring diagram. Mettler indictor output is current loop passive. Mettler data output must be set to "S.CONT", "0 pause" as well as correct parity and baud rate. Jumper W2 must be placed in the position corresponding to the type of serial interface used. The maximum recommended cable lengths are 50 ft for RS232, 1000 ft for 20 mA current loop, and 2000 ft for RS422/485.

1. RS232 TxD
2. RS232 RxD
3. Signal Ground
4. RS485 TA
5. RS485 TB
6. RS485 RA
7. RS485 RB
8. 20 mA RCL Sink
9. 20 mA RCL Source
10. 20 mA TCL Sink
11. 20 mA TCL Source
12. Shield

3.5 BCD OUTPUT

Connect the cable from the users device to terminal strips TB3, TB4 and TB5. Refer to drawing 900732 at the back of this manual for schematic wiring diagram. The maximum recommended cable length for the signal outputs is 15 feet. the recommended cable for use with the BCD output should contain 20 gauge, stranded wire.

TB3-BCD OUTPUT	TB4-BCD OUTPUT	TB5- BCD OUTPUT
1 UNITS 1	1 HUNDREDS 1	1 TEN THOUSANDS 1
2 UNITS 2	2 HUNDREDS 2	2 TEN THOUSANDS 2
3 UNITS 4	3 HUNDREDS 4	4 TEN THOUSANDS 4
4 UNITS 8	4 HUNDREDS 8	4 TEN THOUSANDS 8
5 UNITS GATE	5 HUNDREDS GATE	5 TEN THOUSANDS GATE
6 TENS GATE	6 THOUSANDS GATE	6 ERROR OUTPUT
7 TENS 1	7 THOUSANDS 1	7 MOTION OUTPUT
8 TENS 2	8 THOUSANDS 2	8 UNDER OUTPUT
9 TENS 4	9 THOUSANDS 4	9 NET OUTPUT
10 TENS 8	10 THOUSANDS 8	10 SYNC OUTPUT
		11 HOLD INPUT
		12 SIGNAL GROUND

Error Output - This output is held low as long as the 9323 is receiving valid data from the indicator, and the indicator is not indicating an error condition (i.e. over capacity, NOVRAM error, of data, or if the unit is setup to output the 5 least significant digits and 6 digits of data are received from the indicator.

Motion Output - This output is held low when the scale is in a no-motion condition as determined by the motion status bit received from the indicator. This output goes high when the scale is in motion.
Under Output - This output is held low when the weight is positive, and goes high when the weight is negative.

Net Output - This output is held low when the indicator is in the gross mode. This output will go high when the indicator is in the net mode.

Sync Output - This output indicates when the BCD data is valid. When this output is high the BCD data is valid. when this output goes low, the BCD outputs are being updated with new data. The sync signal stays low for 50 milliseconds to allow time for a remote device to read it. The actual time that the BCD outputs are in a state of change is only 650 nanoseconds.

Hold Input - If left disconnected this input is pulled up to +5VDC through a 10k resistor. When high the BCD output continues to update each time data is received from the indicator. When this output has been started before the hold input goes low, the update of the BCD output has been started before the hold input goes low, he update will be completed. This will be indicted by the sync output. This will be indicated by the sync output.

Gate Inputs - The five gate control inputs are used to enable or disable the individual BCD digit output drivers. When left disconnected, these inputs are pulled up to
+ 5 VDC thru 10k resistors. When these inputs are held low, the BCD digit drivers go to a high impedance state. This allows for multiplexing up to five BCD digits into a single BCD input.

3.6 JUMPER DESCRIPTION

The BCD Output Module PC boards include several jumpers that must be installed according to the application. Refer to figure 3.1 for jumper locations.

W1 - Jumper W1 is used to select whether the serial output port is to echo data received or to output printer data. If interfacing the serial output to another accessory, place the jumper in the ECHO position. If interfacing the serial output to a printer place the jumper in the DATA position.

W2 - Jumper W2 is used to select which serial receiving device is to be used. Place the jumper in the location corresponding to the receive interface used. this is dependent upon scale interfacing.

W3, W4- Jumpers W3 and W4 are used to install or remove termination resistors for the RS485 transmitter lines. Normally these jumpers are not installed. These jumpers may be required if the unit is connected to a receiving device that does not provide any type of termination for its receive lines.

W7 - Jumper W7 is used to configure the 20 mA receive port either active or passive. If the indictor is active, then the jumper must be placed in the PASSIVE position. If the indicator is passive, then the jumper must be placed in the ACTIVE position.

W8 - Jumper W8 is used to configure the 20 mA transmit port either active or passive. If the printer or accessory is active, then the jumper must be placed in the PASSIVE position. If the printer or accessory is passive, then the jumper must be placed in the ACTIVE position.

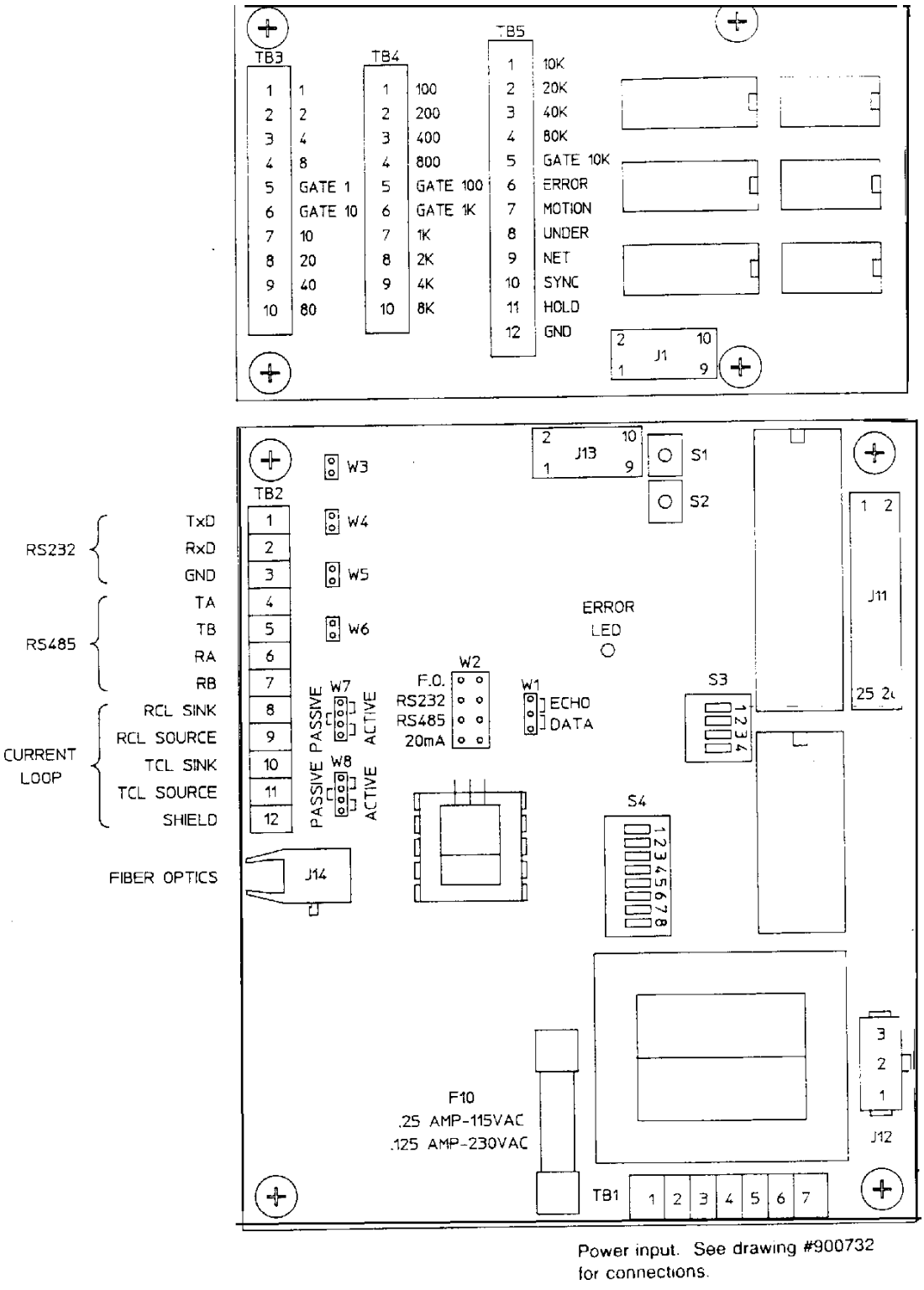


Figure 3.2 Jumper Locations

DIP SWITCH ASSIGNMENTS:

*S3

1	2	3	4	
OFF	ON	ON	OFF	SELECT 9323 PROGRAM-FACTORY SET FOR BCD OUTPUT MODULE

S4

1	OFF	=	NEGATIVE TRUE BCD OUTPUT
	*ON	=	POSITIVE TRUE BCD OUTPUT
2	OFF	=	SYNC PULSE STOPS DURING MOTION
	*ON	=	SYNC PULSE ACTIVE DURING MOTION
3	OFF	=	OUTPUT GROSS WEIGHT
	*ON	=	OUTPUT DISPLAYED WEIGHT
4	*OFF	=	OUTPUT 5 LEAST SIGNIFICANT DIGITS
	ON	=	OUTPUT 5 MOST SIGNIFICANT DIGITS
5	OFF	=	PRINT AT RECEIVE BAUD RATE
	*ON	=	PRINT AT 300 BAUD RATE
6	*OFF	=	NORMAL PRINT
	ON	=	EXPANDED PRINT

7	8	
OFF	OFF	NO PRINT OUTPUT
*ON	OFF	PRINT DISPLAYED DATA
OFF	ON	PRINT SINGLE LINE GROSS-TARE-NET
ON	ON	PRINT THREE LINE GROSS-TARE-NET

JUMPER ASSIGNMENTS

W1	1 TO 2 ECHO RECEIVED DATA
	*2 TO 3 OUTPUT PRINTER DATA
W2	1 TO 8 RECEIVE FIBER OPTIC
	2 TO 7 RECEIVE RS232
	3 TO 6 RECEIVE RS485
	*4 TO 5 RECEIVE 20 mA
W3,W4	TERMINATION FOR RS485 TRANSMIT LINES - IN = TERMINATION*
W5,W6	TERMINATION FOR RS485 RECEIVE LINES - IN -= TERMINATION*
W7	ACTIVE/PASSIVE SELECT FOR 20 mA RECEIVE - 1-2 & 3-4 = ACTIVE
	2-3 = PASSIVE*
W8	ACTIVE/PASSIVE SELECT FOR 20 mA XMIT - 1-2 & 3-4= ACTIVE*
	2-3 = PASSIVE

* = DEFAULT POSITIONS SET AT FACTORY

Figure 3.3 Jumper and Dip Switch Assignments

3.7 DIP SWITCH DESCRIPTION

Two banks of dip switches are used to configure the 9323 for operation. Figure 3.3 lists the switches and their functions. A detailed description of the switches and their functions is included here.

NOTE: The 9323 address switches (S3) must not be changed with power on. Doing so will cause incorrect operation.

S3-1 thru 4 These switches are used to select the program to be executed by the microprocessor. The eprom on this board contains several programs so that one PC board may be used in more than one product. The switches must be set as shown in figure 3.3 for proper operation in the 9323.

S4-1 This switch is used to select positive true or negative true (complimented) BCD output. Whenever this switch is ON, the BCD output data will be positive true logic. Otherwise the BCD output data will be negative true logic. The polarity of the status signals are all 0's if an error occurs. If positive true BCD is selected, the output will go to all 1's on an error condition. If negative true BCD is selected, the output will go to all 0's. The status outputs always go high during an error condition.

S4-2 This switch determines whether the sync pulse output is active all of the time or active only when there is no motion. If this switch is ON, the BCD output will represent the displayed weight. If this switch is OFF, the BCD output will represent the gross weight when the indicator is in the net or gross mode.

S4-3 This switch determines whether the BCD output will represent the displayed weight or the gross weight. If this switch is ON, the BCD output will represent the displayed weight. If this switch is OFF, the BCD output will represent the gross weight when the indicator is in the net or gross mode.

S4-4 This switch determines whether the 5 most significant or 5 lest significant digits will be output. If this switch is ON, the 5 most significant digits will be output. This is intended for sue when the indicator is counting by X10 or X100. If this switch is OFF, the 5 least significant digits will be output.

S4-5 This switch determines the baud rate at which the printer data will be sent. If this switch is ON, the printer data will be transmitted at 300 baud. If this switch is OFF, the printer data will be transmitted at the same baud rate as the data that is being received.

S4-6 This switch determines whether the weight will be printed in the expanded mode or in the normal mode. If this switch is ON, the expanded mode is enabled. In this mode, the weight field will be expanded. If G-T-N format is selected, only the net weight field will be expanded. If this switch is OFF, all data will be printed in the normal size. Reference Section 3.7 for printer format information.

S4-7 and 8 These switches are used to select the format of the printer data. The three formats that may be selected are single line of displayed weight, single line

of GROSS-TARE- NET, or three lines of GROSS-TARE-NET. Output is upon demand and is triggered by the indicator PRINT button. This printer output is not available when interfaced using the Masstron continuous data format or the Mettler continuous data format or the Mettler continuous format. If both of these switches are OFF, no data will be sent. Refer to the following examples for actual switch selections.

CAUTION
DO NOT CHANGE S3 SWITCHES WITH POWER APPLIED TO THE 9323. DO NOT APPLY POWER TO THE UNIT UNTIL ALL JUMPERS AND SWITCHES HAVE BEEN CONFIGURED.

3.8 PRINTER FORMATS

Printer data is selectable via S4 switch positions 6, 7, and 8. W1 must be in the data position. All printer output data is sent as 10-bit ASCII (1 start, 7 data bits, 1 even parity bit, 1 stop bit). The weight field will be shortened to 6 characters in length if the weight data does not include a decimal point. If the scale indicator is in the Gross weight mode, the printed data will not include the tare or net weights even if G-T-N is selected via setup switches. Leading zeros are transmitted as spaces.

The powerup message is available to the output of the 9323 even when printing is disabled via S4 switches. Jumper W1 determines whether the data will be transmitted or not.

CR	LF	M	O	D	E	L	SP	9	3	2	3	CR	LF	S	O	F	T	W	A	R	E

SP	N	U	M	B	E	R	SP	*	9	0	0	7	3	1	0	0	A	CR	LF

* May be space or letter indicating software revision.

POWER UP MESSAGE FORMAT

GROSS
WEIGHT
ONLY

STX	MSD	-	-	-	-	->	LSD	SP	L/k	B/g	CR	LF

OR

NET

WEIGHT
ONLY

STX	MSD	-	-	-	-	->	LSD	SP	L/k	B/g	SP	N	E	T	CR	LF

S4-6 OFF, 7 ON, 8 OFF

DISPLAYED WEIGHT ONLY - NORMAL PRINT

GROSS
WEIGHT
ONLY

STX	SO	MSD	-	-	-	-	->	LSD	SP	L/k	B/g	SP	N	E	T	CR	LF

OR

NET
WEIGHT
ONLY

STX	SO	MSD	-	-	-	-	->	LSD	SP	L/k	B/g	SP	N	E	T	SI	CR	LF

S4-6 ON, 7 ON, 8 OFF

DISPLAY WEIGHT ONLY - EXPANDED PRINT

GROSS
WEIGHT

STX	MSD	-	-	-	-	->	LSD	SP	L/k	B/g	CR	LF

TARE
WEIGHT

MSD	-	-	-	-	->	LSD	SP	L/k	B/g	SP	T	R	CR	LF

NET
WEIGHT

S O	M S D	-	-	-	-	->	L S D	S P	L / k	B / g	S P	N	E	T	S I	C R	L F

[WEIGHT DATA]

S4-6 OFF, 7 ON, 8 ON

GROSS, TARE, NET - MULTIPLE LINE - NORMAL PRINT

GROSS
WEIGHT

S T X	M S D	-	-	-	-	->	L S D	S P	L / k	B / g	C R	L F

TARE
WEIGHT

M S D	-	-	-	-	->	L S D	S P	L / k	B / g	S P	T	R	C R	L F

NET
WEIGHT

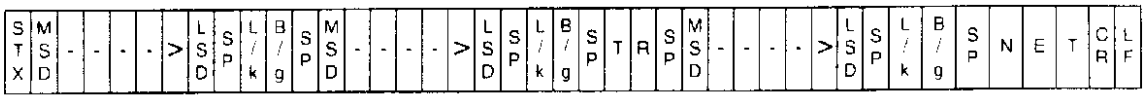
S O	M S D	-	-	-	-	->	L S D	S P	L / k	B / g	S P	N	E	T	S I	C R	L F

[WEIGHT DATA]

S4-6 ON, 7 ON, 8 ON

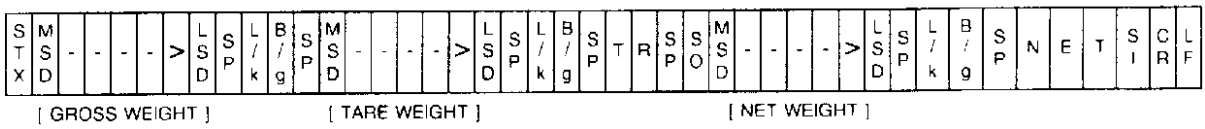
GROSS, TARE, NET - MULTIPLE LINE - EXPANDED PRINT

3.7 **PRINTER FORMATS (Continued)**



S4 - 6 OFF, 7 OFF, 8 ON

GROSS, TARE, NET - SINGLE LINE - NORMAL PRINT



S4 - 6 ON, 7 OFF, 8 ON

GROSS, TARE, NET - SINGLE LINE - EXPANDED PRINT

4. OPERATION

Once the 9323 BCD output Module has been set up, no operator intervention is required. The unit will output BCD data representative of the weight data received. The following software sequence describes the logic performed by the microprocessor.

1). Upon power up, the BCD output will be set to the error value as determined by S4-1. The Sync output is set high true at power up and will stay high until the 9323 has successfully recognized the received data string from the scale indicator and has passed it's self test.

2). Upon power up, the BCD output will be set to the error value as determined by S4-1. The Sync output is set high true at power up and will stay high until the 9323 has successfully recognized the received data string from the scale indicator and has passed it's self test.

3). The microprocessor will automatically recognize the format of the data being received from the indicator. While performing the auto-recognition, the LED on the PC board will blink 3 times then pause. This will continue until valid data is received.

4). Once the unit receives valid data and passes the ram test, the BCD output will represent the weight data received. The LED will alternately blink on and off once per second while data is being received. The power up message will be transmitted out the printer port.

5). If the unit fails to receive valid data within 2 seconds, or if the indicator goes negative or positive out of range, the BCD output will be set to the error value as determined by S4-1. The LED will blink the appropriate error code until valid data is received. Normal operation will then resume. See section 5.5 for error codes.

6). The Sync output will toggle at a frequency based upon the indictor update rate. during error codes 5 and 6 the sync output will continue to toggle but at a frequency determined by the error handing routine of the 9323, the Sync will toggle between error announcements.

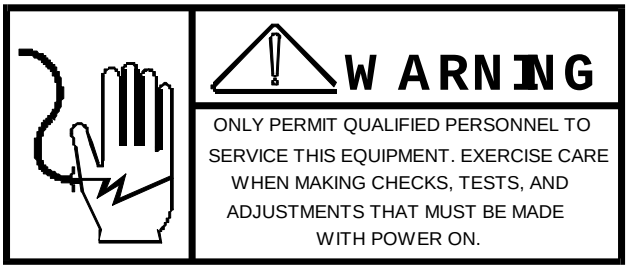
7). When the 5 least significant digits are selected for output but the indicator transmits more than 5 significant digits, the 9323 will go to an over capacity error condition.

8). Mettler autoranging scale indictors transmit a space character in the data filed when the Mettler display has blanked the low order digit. The 9323 interprets this space as a zero.

9). The BCD output may be read in a multiplexed fashion by using the gate control inputs to enable one digit of BCD output at a time. Leaving the gate input disconnected (Open) enables all of the BCD outputs. The status outputs are always active and therefore cannot be multiplexed with the digit data. To use the 9323 in the multiplexed mode, connect all of the BCD 1 lines together, all of the BCD 2 lines together, all of the BCD 4 lines together, and all of the BCD 8 lines together. All of the gate control inputs must be held low except for the one corresponding to the digit to be read.

CAUTION
IF MORE THAN ONE GATE LINE IS ENABLED (HIGH) AT THE SAME TIME WHILE THE BCD OUTPUTS ARE CONNECTED IN PARALLEL, DAMAGE TO THE OUTPUT DRIVERS MAY OCCUR.

5. TROUBLESHOOTING



1). Check to insure that the appropriate AC voltage is present at terminal strip TB1. Also check to ensure that the wiring is correct. Refer to drawing 900732 at the back of this manual for schematic wiring diagram.

2). Check the AC line fuse F10 on the Serial interface Controller. Refer to the LED error codes listed below for error codes and possible causes.

3). Observe the LED on the Serial Interface controller. Refer to the LED error codes listed below for error codes and possible causes.

4). If the LED does not light or show a legitimate error code, check the setting of the DIP switches on S3. If an invalid setting is selected, the

microprocessor will not run. Also make sure that these switches are set properly for the 9323. If the LED still doesn't light or show a legitimate error code, then replace the Serial Interface Controller PCB and check for proper operation.

5). If the unit is receiving data from the indicator, the LED will alternately blink on and off approximately once per second. If the unit appears to be receiving data, but the BCD data output does not seem to function properly, replace the BCD output PC board.

LED ERROR CODES

2 Blinks - RAM Error

The microprocessor has detected an error in its internal ram. Replace the serial interface controller board.

3 Blinks - Auto Recognition Error

The unit is waiting receive valid data from the indictor. Make sure that the jumpers are in the correct positions for the type of interface used. Check the interface wiring between the indicator and terminal strip TB2. Also make sure that the indictor is sending data with the checksum at one of the specified.

4 Blinks - Not Used

5 Blinks - Receive Error

The microprocessor has failed to receive valid data within 2 seconds. Check to insure that the indicator is sending data. This error will only occur once the unit has performed Auto Recognition successfully.

6 Blinks - Over Capacity Error

the indicator is sending status information telling the controller that the scale is over capacity.

6. PARTS LIST

Part number	Description
900740 00A	Serial Interface Controller PCB
900730 00A	BCD Output PCB
095920 00A	1/4 Amp Slo-Blo Fuse - F10 (115 VAC)
095919 00A	1/8 Amp Slo-Blo Fuse - F10 (230 VAC)
900742 00A	Ribbon Harness assembly
119241 00A	Power Terminal Strip Connector
134574 00A	10 Position Terminal Strip Connector

134316 00A	12 Position Terminal Strip Connector

7. DRAWINGS

Part Number	Description
900732	External Wiring Diagram
900737	Schematic, Serial Interface PCB
900730	Schematic, BCD Output PCB