Programmable Display for BCD parallel Data Ports

OC 7520

Owner's Manual

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7520_V1.hex CS: 07CF

Vor dem Einschalten

Überzeugen Sie sich, ob Ihre Sendung das richtige Gerät Orbit Controls Modell OC 7520 beinhaltet, einschliesslich einer Betriebsanleitung OC 7520.
Vor dem Einschalten des Gerätes überprüfen Sie die Anschlüsse und die Versorgungsspannung. Ein falsch angeschlossenes Gerät kann beschädigt werden und damit auch die mitverbundene Folgeelektronik. Für falsche Handhabung wird jede Haftung abgelehnt.

ZU BEACHTEN

Dieses Gerät wurde sorgfältig verpackt. Falls es bei Ihnen in beschädigtem Zustand eintrifft, benachrichtigen Sie unverzüglich den Orbit Controls Kundendienst (Tel: +41 1 730 2753 oder Fax: +41 1 730 2783) und nehmen Sie einen Schadenrapport auf, welchen Sie auch von der Transportgesellschaft unterschreiben lassen. Bewahren Sie bitte das Verpackungsmaterial für eventuelle Reklamationen auf.

Unpacking Instructions

Remove the Packing List and verify that you have received all equipment, including the following:

Orbit Controls Model OC 7520 Programmable Controller.
Operator's Manual OC 7520.
If you have any questions about the shipment, please call the Orbit Controls Customer Service Department.

NOTE

When you receive the shipment, inspect the container and equipment for signs of damage. Note any evidence of rough handling in transit. Immediately report any damage to the Orbit Controls customer service, Phone +411 730 2753 or Fax +411 730 2783 and to the shipping agent.
The carrier will not honor damage claims unless all shipping material is saved for inspection. After examining and removing contents, save packing material and carton in event the reshipment is necessary.

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Programmable Display for BCD parallel Data Ports OC7520

- ✓ **6 Digit Display**
- ✓ **Monitor for BCD parallel Data**
- ✓ **Transmitter BCD parallel to RS232**
- ✓ **Four Set Poits**
- ✓ **Two Analog Outputs**

Orbit Controls OC7520 is a programmable display for connection to parallel BCD data ports. It is designed as a remote display for digital meters, programmable controllers, printers etc. In the measuring mode the 6 digit display shows the data from the port. In the programming mode the display shows the parameters.

By using the RS232 option, OC7520 can very simply convert the BCD parallel data into RS 232 serial string. The serial port parameters can be programmed via the keyboard.

The keyboard at the front permits the entry into the menu and setting of parameters. The menu contains the settings of four Set Point, parameters of the serial port and the type of the transmission.

Four Set Points can be programmed within the entire display range 0 ... ±999999. They activate four open collector NPN transistors or four mechanical relays.

When the instrument is used for conversion of BCD parallel into RS232 data string, the number of digits can be selected as well as the resolution, baud rate, transmission intervals, type of the transmission and ending of each telegram.

Isolated excitation for supplying of external sensors is available.

The parameters set in the menu are strored in a non-volatile memory also when the power is removed from the instrument.

1 SPECIFICATIONS

DISPLAY: 0 ... ± 999999, 7 segments red or green, 14.7 mm.

INPUTS: BCD parallel, 5…24V positiv oder negativ logik.

DATA OUTPUT: RS 232 isolated serial data port, 1 Start, 1 Stop, 8 bit, no Parity. Baud Rate: 300 to 19200 bd. The transmission interval is programmable: OFF, 0.1…10.0 Sek. and for request from PC after sending a command e.g. *ENTER* (CRLF). The telegram can be terminated with:

nul Null
CrLF Carrige Return, Line Feed
LF Line Feed
Cr Carrige Return
nonE nothing

The data port is isolated by 250 RMS.

SET POINTS: Four free programmable Set Points **SP1 ... SP4** activate four NPN transistors with open collector 100mA - 60V, or four mechanical relays with open or closed function, 5A-230VAC. The Set Point status is displayed with 4 LEDs at the front.

KEYBOARD: Five keys at the front: UP, DOWN, ACK, MENU, SET.

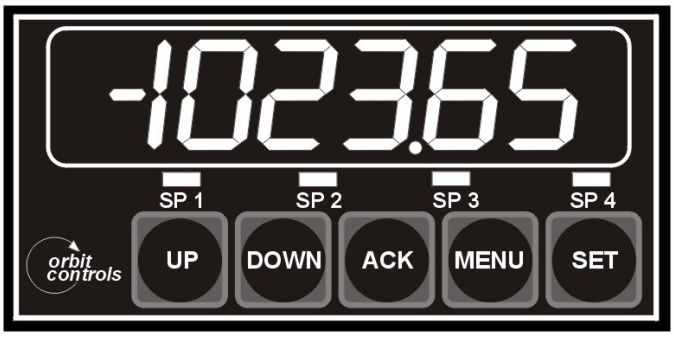
MEMORY: The programmed parameters are memorized in an EEPROM.

EXCITATION: 5…24V/50mA adjustable, isolated.

SUPPLY: 115/230V ±10%, 50-60Hz, 6VA. Option: 9-36 V DC, 4 W.

CABINET: DIN 48x96x150mm, Panel cut-out 45x93 mm.
Plugable screw terminals.

2 FRONT PANEL



3 PROGRAMMING

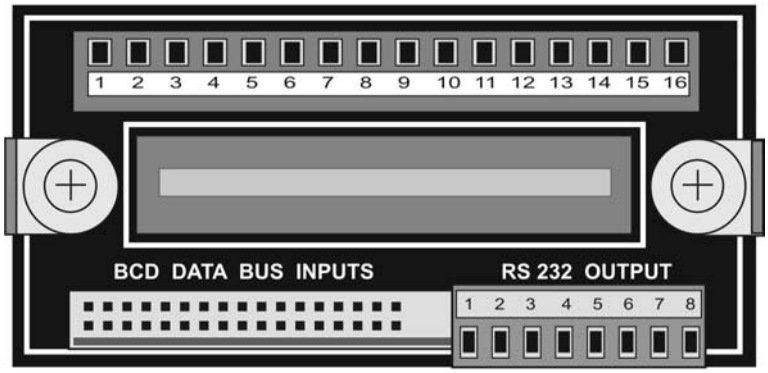
The menu will be opened with the key *MENU*. With the same key the submenu will scroll at the display The required parameter will be confirmed with *ACK*. Its value will be set with *UP* or *DOWN*. The flashing digit - Cursor - will be positioned with *ACK*. The sign and the decimal point can be set when the flashing display is positioned outside of the display (no digit flashing). The decimal point will be adjusted with *UP*, the sign with *DOWN.*

KEY	DISPLAY	FUNCTION
MENU	OrdEr	Display resolution
ACK	CCCC.dd	Select with UP, DOWN and SET from CCCCCC. to C.ddddd
MENU	SP1	Set Point 1
ACK	001000	Select with UP, DOWN and SET
MENU	SP2	Set Point 2
ACK	001500	Select with UP, DOWN and SET
MENU	SP3	Set Point 3
ACK	002500	Select with UP, DOWN and SET
MENU	SP4	Set Point 4
ACK	003000	Select with UP, DOWN and SET
MENU	BAUD	Baud Rate
ACK	19200	Select with UP, DOWN and SET from 300 to 19200 bd.
MENU	IntEr	Transmission Intervall of RS232
ACK	nonE	nonE, 0.1, 0.2, 0.5, 1.0, 3.0, 5.0, 10.0, Hand
MENU	Fn bcd	Number of digits for conversion into RS232
ACK	POS 6	POS 1 … POS 6 positive BCD parallel logik (*)
		nEG 1 … nEG 6 negative BCD parallel logik (*)
MENU	Fn SIG	Activation of SIGN
ACK	nEG	Selection of the SIGN control
		nEG “+” at Pin 25 illuminates the SIGN
		POS “0” at Pin 25 illuminates the SIGN
		OFF the SIGN is deactivated
MENU	OC7520	Measuring Mode

(*) Example for setting of **Fn bcd**:
BCD data input: 123456

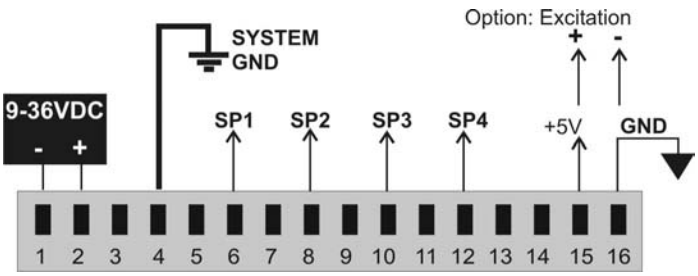
POS	Display	Transmission via RS232
1	100000	1
2	120000	12
3	123000	123
4	123400	1234
5	123450	12345
6	123456	123456

4 TERMINALS (Rear of the instrument)



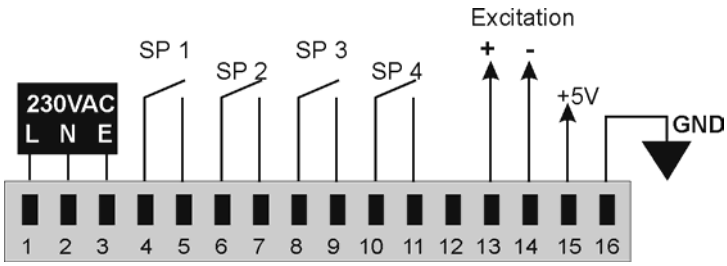
4.1 Upper Terminals (Supply 24VDC)

Set Points with transistor outputs



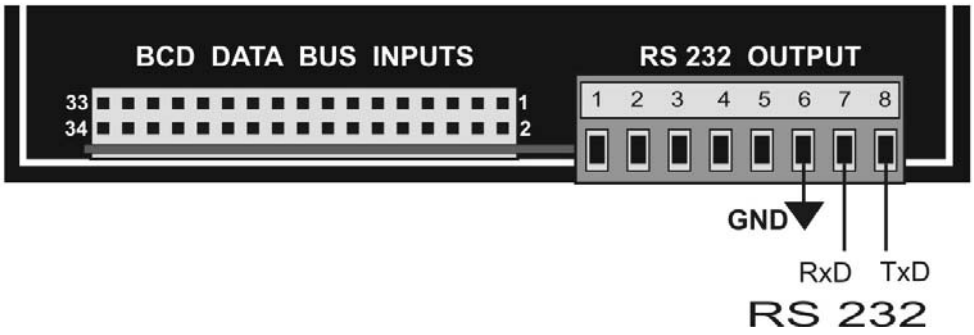
4.2 Upper Terminals (Supply 230VAC)

Set Points with four Relays



The relay and the transistor outputs can be combined. The relays can be assembled to close or to open when activated.

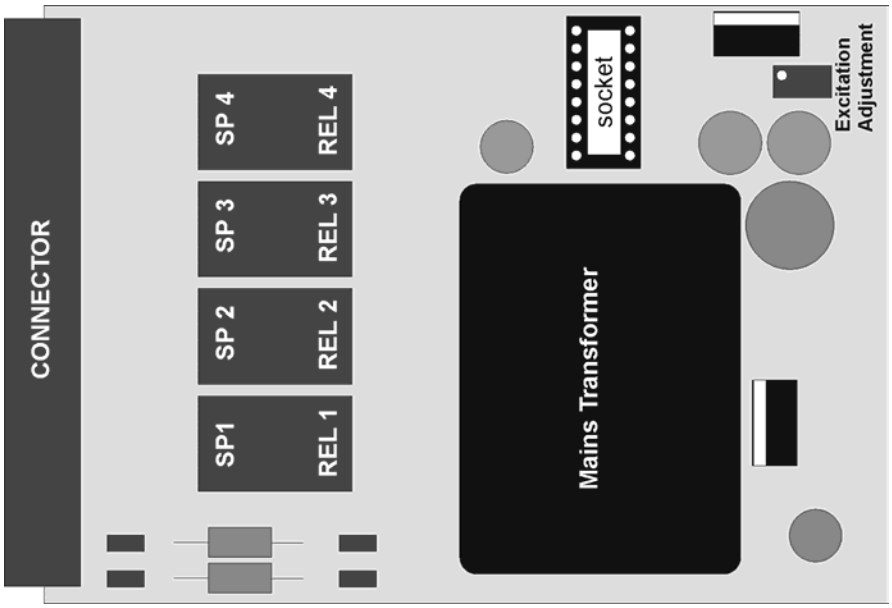
4.3 Terminals for BCD data inputs and RS232 data outputs



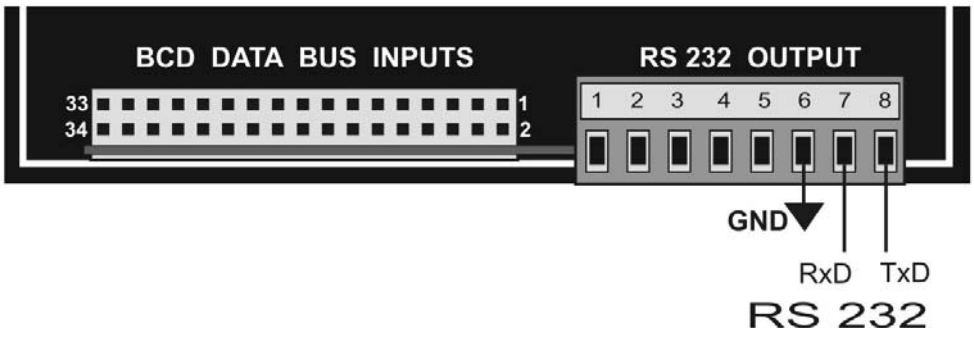
4.4 BCD parallel Inputs

Pin	INPUT		Pin	INPUT
1	800 000		2	400 000
3	200 000		4	100 000
5	80 000		6	40 000
7	20 000		8	10 000
9	8 000		10	4 000
11	2 000		12	1 000
13	800		14	400
15	200		16	100
17	80		18	40
19	20		20	10
21	8		22	4
23	2		24	1
25	SIGN		26	SIGN
27	GND		28	GND
29	do not use		30	do not use
31	do not use		32	do not use
33	do not use		34	do not use

4.5 Excitation - supply of external sensors



5 SERIAL DATA PORT



5.1 RS 232 – Data Format

Format: 1 Start, 1 Stop, 8 Bit no Parity

Baud Rate: Menu step **bAUd**: **300** to **19200** bd

Termination: Menu step **dElin**:

nul	Null
CrLF	Carrige Return Line Feed (0xd und 0xa)
LF	Line Feed (0xa)
CR	Carrige Return (0xd)
nonE	without

Transmitting Interval: Menu step **IntEr**:

none	Uninterrupted transmission
0.1 … 10.0	Seconds
Hand	Command from PC: any letter from the PC keyboard, or *ENTER*.

Number of digits: Menu step **Fn bcd**:

POS 1 … POS 6	for positive BCD logic
nEG 1 … nEG 6	for negative BCD logic

Example for setting of **Fn bcd**:
BCD data input: 123456

POS	**Display**	**Transmission via RS232**
1	100000	1
2	120000	12
3	123000	123
4	123400	1234
5	123450	12345
6	123456	123456

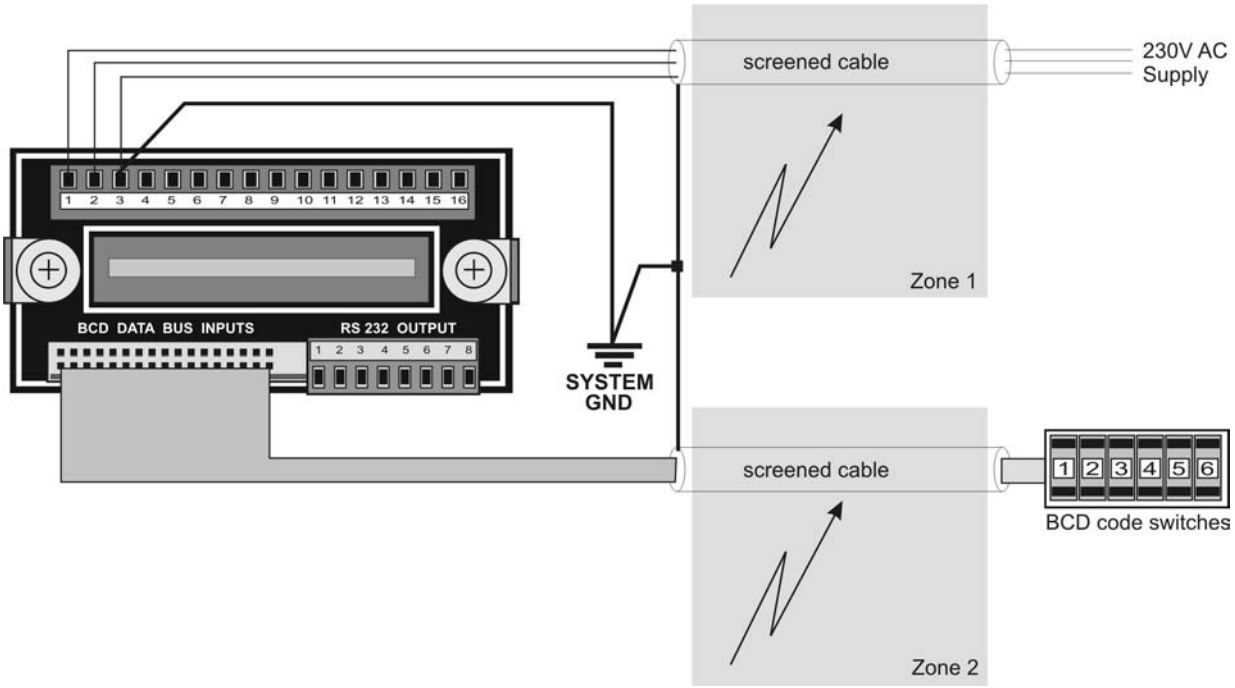
6 BURST TEST and RECOMMENDED CONNECTIONS

Tester: Burst-Surge Generator HILO, Model CE-Tester
E.U.T.: OC7520, SN:990818, Supply 230VA
Mode: BCD parallel
Input: 123456
Display: 123456

6.1 Test Conditions

According to Norms: IEC 801-4
IEC 1000-4-4
EN 50052-1

6.2 Test Set - Up



6.3 Test Results

Zone 1: 2kV Burst Display without change 123456
Zone 2: 2kV Burst Display without change 123456

Technician: Oliver Matthews 18. August 1999