Envelope-to: byron.sanders@cstservices.net
X-EN-OrigIP: 64.128.27.74
X-EN-IMPSID: kLF71q02x1bw5e801LFBkw
X-IronPort-AV: E=Sophos;i="5.13,673,1427778000";
d="pdf'?jpg'145?png'145,150?scan'145,150,208,217,150,145";a="23117350"
From: "Madden, Sing" <Sing.Madden@tic.toshiba.com>
To: "Byron K. Sanders" <byron.sanders@cstservices.net>
Subject: RE: EX100 programming cable
Thread-Topic: EX100 programming cable
Thread-Index: AdCfwQFJbOtpEWckTVG9FQ2HYGH/JQExNWZSAo0XngA=
Date: Wed, 24 Jun 2015 20:15:03 +0000
Accept-Language: en-US
X-MS-Has-Attach: yes
X-MS-TNEF-Correlator:
x-originating-ip: [10.98.224.27]

Byron San,
I found the following two sketches of the current converter, see if this will help you. Thanks in advance.

Sing Madden, MSE
Instrumentation Engineer
Field Service Department
Toshiba International
713 466 0277/800 231 1412, ext 26727
Sing.madden@tic.toshiba.com

From: Byron K. Sanders [mailto:byron.sanders@cstservices.net]
Sent: Thursday, June 11, 2015 2:38 PM
To: Madden, Sing; byron.sanders@cstservices.net
Subject: Re: EX100 programming cable

Greetings Sing,
At 11:56 AM 6/5/2015, Madden, Sing wrote:

Byron san,
See attached. Thanks

Sing Madden, MSE
Instrumentation Engineer
Field Service Department
Toshiba International
713 466 0277/800 231 1412, ext 26727
Sing.madden@tic.toshiba.com

Thank You for the picture of the EX100 Programming Cable EX25GP232A-TIC2.
I just figured out this is a current loop adapter not a RS232 to RS422/485.
What I have discovered through a lot of research is that it appears the following to be true:

TOSHIBA PLC: EX-100 SERIES USING EXPDD V.2 OR V.3 SOFTWARE:

2 WAYS TO CONNECT A LAPTOP TO THE EX-100:
1. PROGAM PORT- CURRENT LOOP CONVERTER
2. COMPUTER LINK PORT- RS-232 to RS-422 CONVERTER

HARDWARE CONNECTIONS:
PROGRAM PORT:

1. Locate the RS232 to Current Loop Converter (For EX100/200/250/500 or M20/40 only). Part #EX25GP232A-TIC2

2. Attach one end of the converter into COM1 or COM2.

3. Attach the other end of the converter to the programming port on your PLC.

4. If you have an EX100 with an enhanced CPU, make sure the PROGRM/LINK switch on the front of the CPU is in the PROGRM position.

5. A hardware key is included with your software package. The key is necessary to activate certain program features. Plug the key into the appropriate port. As this is being written, we are in the process of switching from a parallel port key to a serial port key. If the key is an off-white color, and says "Rainbow Technologies" on it, then it plugs into the printer port. The serial port key will have "serial port" on the label. Also note that the software protection has changed in this version. See the "What's New in Version 3.0" section to find out about this.

COMPUTER LINK PORT: ENHANCED CPU

RS232 to RS422 CONVERTER (COM 1 to Computer Link Port)

This converter does not require an external power supply. It gets its power from the serial port for short distances. The unit has been tested by the manufacturer at 19.2 Kbaud up to 4000 feet without a power supply.

Connections:

RS232-RS422		PLC
TD(A)	---------->	RXB
TD(B)	---------->	RXA
RD(A)	<----------	TXB
RD(B)	<----------	TXA

With that said, I ordered a *BnB 232CL9R Control Loop to 232 Converter.*
I built a cable using a FUJITSU FCN-361-P008 CONNECTOR to connect to the FCN-361-J008 on the Toshiba EX-100 PU11A CPU Program Port
http://www.plctalk.net/qanda/showthread.php?p=645693#post645693
Some of the guys have built their own converter, there is diagram for one on the forum I use.
Current loop converter.zip (61.7 KB, 105 views)
http://www.plctalk.net/qanda/showthread.php?t=69165&page=2

With all of that said, I have a few questions:

1. What are the specs of the "Current Loop" Program Port on the CPU PU11A?

2. Specifically, is it 20mA or 60mA or ??

3. Is the port Passive or Active?

4. Was the hardware key 25 pin parallel or serial?

5. What about a 9 pin key or USB key?

6. Sentinel emulation options?

I can edit online with one version, and go online with another version but it would be nice to have both with one version.

Thanks Again for the assistance.

Byron

Office Lens 20150624-150722.pdf

Office Lens 20150624-150910.pdf

SING MADDEN WITH TIC HOUSTON EMAILED TWO PDF's WITH SCANNED DOCUMENTS SHOWING HAND DRAWN SCHEMATICS FOR THE ORIGINAL EX25GP232A-TIC CONVERTER FOR THE EX100 PLC: CPU: PU11A and PU12 8 PIN FUJITSU PORT

THEY ARE IN THIS FILE: Original_Scans_EX25GP232A-TIC2_Sing_Madden_TIC_Houston.pdf

LINK:
http://www.cstservices.net/toshiba/Original_Scans_EX25GP232A-TIC2_Sing_Madden_TIC_Houston.pdf

ALSO: My modified DIY-TTY using BnB 232CL9R converter - modified for 5 VDC:
http://www.cstservices.net/toshiba/TOSHIBA_EX100_DIY_TTY_CSTS-001.pdf

06.24.2015 Byron K. Sanders C.S.T. SERVICES