



Application Note for Using the Operator Station HE500TIU050/10X/11X/20X with the Micro3 and Open Net Controller Series PLCs

Protocol File Name

HE500TIU050 = Idecu3_R?.0xx

HE500TIU1xx = Idecu3_R?.1xx

HE500TIU2xx = Idecu3_R?.2xx

(The "?" = the TIU firmware revision)

Configuring the Operator Station

To verify the Automated Equipment type the Operator Station is setup for, watch the screen of the Operator Station on power up. The first screen message details the setup of the Operator Station. To configure the Operator Station for particular Automated Equipment, select the Automated Equipment in the Communication Settings from the Configure menu in **CBREEZE** software. Select the appropriate Manufacturer and the appropriate Remote Equipment Model. Then from the File menu select Update Protocol, the appropriate file name will appear in the file name field. The programmer may need to point to the correct folder name/location. If further information is required see the manual or **CBREEZE** help on update/change protocol.

Protocol Revisions

Version 1.00 Supports master only operation to the slave PLC using Micro3 register ranges.

Version 1.01 Internal Changes to protocol handling.

Version 1.02 Extended Registers ranges added for Open Net Controller

Serial Port Format

The Idec PLCs run at a fixed data format of 7 data bits, Even Parity and 1 stop bit. Baud Rate is adjustable but defaults to 9600 baud.

Connection to the Micro3 is via the programming port (8 Way Micro Din Connector) which implements a two wire RS485 interface.

Connection to the OpenNet Controller is via Port1 or Port2 (8 Way Micro Din Connector) which implement RS232, or via the RS485 screw terminal block port.

Node Address.

This should be in the range of 0 to 31.

Register Type Specification

Register Types fall into two categories Word type and Bit type.

Word Types

- Data registers
- Timer Values
- Counter Values

Bit Types

Reads and writes are performed on blocks of sixteen bits with the bits being packed into words at the Operator Station. The size of the block selected is in bits, hence for a block size of forty, forty eight contacts are transferred. For example read three words of inputs starting at X000...

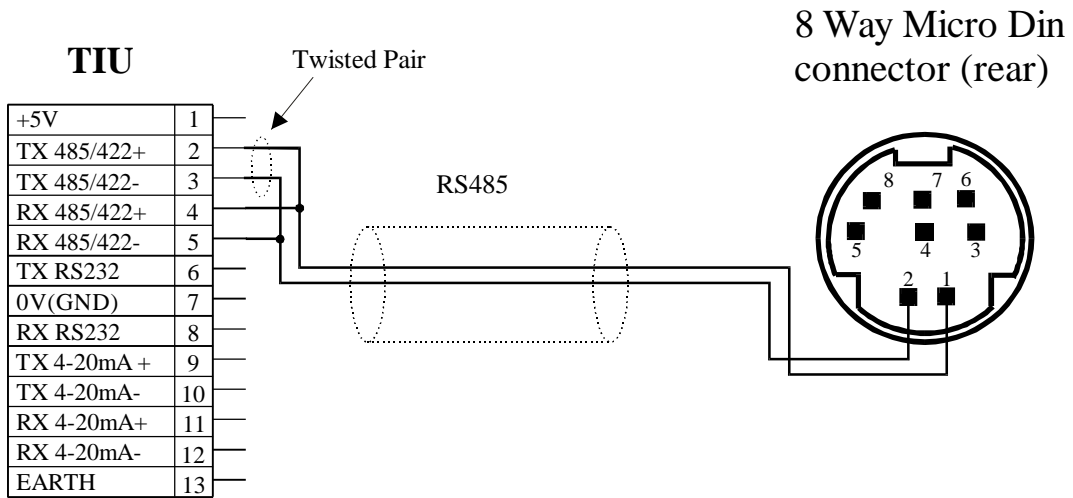
15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
X15	X14	X13	X12	X11	X10	X9	X8	X7	X6	X5	X4	X3	X2	X1	X0
X31	X30	X29	X28	X27	X26	X25	X24	X23	X22	X21	X20	X19	X18	X17	X16
X47	X46	X45	X44	X43	X42	X41	X40	X39	X38	X37	X36	X35	X34	X33	X32

Reads and Writes are supported to the following bit types...

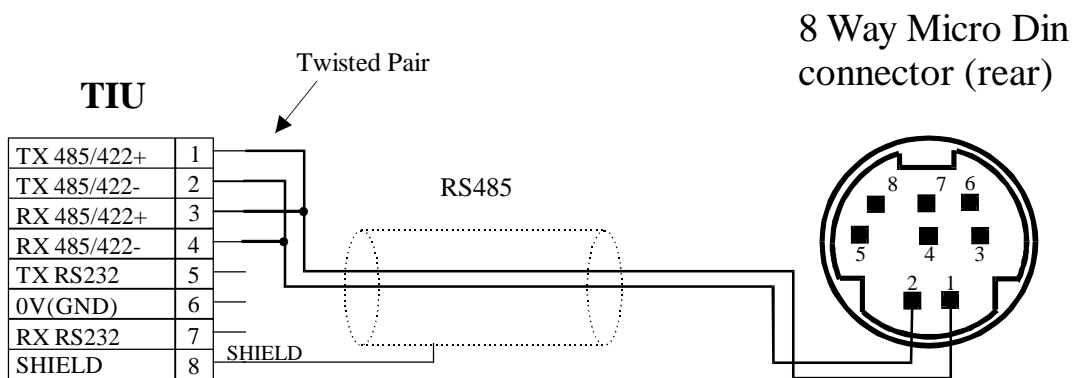
- Relays (M)
- Inputs
- Outputs
- Timer Status
- Counter Status
- Shift Register

CONNECTING AN OPERATOR STATION

An Idec Micro 3 PLC



TIU100/TIU110

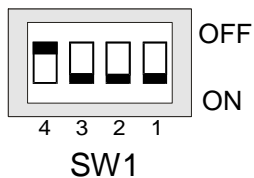


TIU 50/101/102/111/112/20X

Configuration Bank		
Switch	ON	OFF
1	Pull-up	No Pull-up
2	120 termination	No termination
3	Pull-down	No Pull-down
4	Reserved for future use	

Cable Screened Twisted Pair Beldon 9501

NOTE: Switch 1 and 3 must be used together.



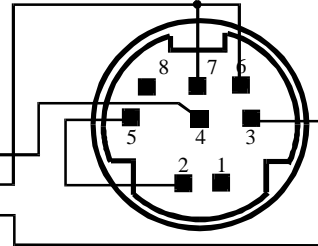
CONNECTING AN OPERATOR STATION

An Idec OPen Net Controller PLC

TIU

+5V	1
TX 485/422+	2
TX 485/422-	3
RX 485/422+	4
RX 485/422-	5
TX RS232	6
0V(GND)	7
RX RS232	8
TX 4-20mA +	9
TX 4-20mA-	10
RX 4-20mA+	11
RX 4-20mA-	12
EARTH	13

RS232



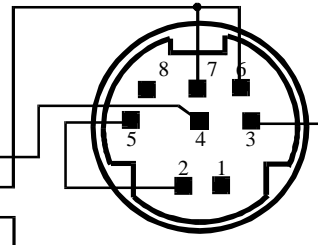
8 Way Micro Din
connector (rear)
Port 1 or 2

TIU100/TIU110

TIU

TX 485/422+	1
TX 485/422-	2
RX 485/422+	3
RX 485/422-	4
TX RS232	5
0V(GND)	6
RX RS232	7
SHIELD	8

RS232



8 Way Micro Din
connector (rear)
Port 1 or 2

TIU 50/101/102/111/112/20X