SCI CSNET Protocol

Connector Configuration Parameters

Ctrl Deselect X10ms

The Control Timeout is the amount of time the Omnii-Comm will wait for an Execute message after receiving a Select message. If the Execute is not received within the Control Deselect Time multiplied by 10msec the Select will be cancelled. Any subsequent Execute message will be ignored until a new Select is received Msg TimeoutX10ms This sets the maximum allowable pause between characters in a CSNET receive message. The receive message will be discarded if the timeout occurs.

RTS ON DelayX10ms

Enter a number from 0 to 255 (0 to 2.55 seconds) to delay sending a message after turning on Request To Send (RTS). Commonly used with modem communication to allow additional time for the modems to synchronize.

RTS OFF DelayX10ms

Enter a number from 0 to 255 (0 to 2.55 seconds) to keep RTS on after a message has been sent. Commonly used to keep a radio on for a short period of time at the end of a message.

Handshake Option

If Full Handshake is selected the Omnii-Comm will assert RTS and wait for CTS before sending a message. RTS will be turned off after the message has been sent. If Constant Carrier is selected the Omnii-Comm will assert RTS when it sends its first message and leave it asserted. It will wait for CTS before sending. If Ignore CTS is selected, RTS will be asserted before sending a message and removed at the end of the message. The CTS input will be ignored. If No Handshake is selected, RTS will be asserted when the Omnii-Comm sends its first message. RTS will not be turned off at the end of the message. The CTS input will be ignored. If Activity Monitor is selected, the Omnii-Comm will check the DCD input before sending a message. If DCD is ON, the Omnii-Comm will delay sending the message.

Option Bit Parameters

Use Radio Key

If checked, Bit 0 in a register specified by the "Radio Key Address" on the Header configuration screen will be turned ON before a message is sent and turned OFF after the message has been completed.

No Resp if PLC fail

This option permits the user to select the mode of operation should the data being read be marked as BAD. If this box is checked, the Omnii-Comm will not respond if a read is received for data that is marked as bad. If the box is unchecked, the Omnii-Comm will respond with a NAK if the data is bad.

Rpt. Tanks in FC84

If this option is checked, Tank data will be included in a FC84 (Confidence Scan) response. If this option is unchecked, Tanks will not be included.

Exceptions on FC20

If this option is checked, the receipt of a FC20, Begin Processing message will cause all points to be put in exception.

Clr Tbls on FC21

If this option is checked, the receipt of a FC21, Suspend Processing message will clear all descriptor table information. If this bit is set, then you can download tables over and over and redefine point addresses at will. If it is not set, then you can only define the tables once and then must use the Add, Modify and Delete commands to change the tables.

Protocol Extension Table Parameters

The Protocol extension table is used to define additional parameters required for CSNET operation. Click on the box to enable the Protocol Extension Table. Click on the button to bring up the specific options as detailed below.

Command Control Data Type

This entry identifies the Data Type that will be used to store the Command Flags, Time Data, Timer Data and Well Flow Data and Accumulator Reset Data.

Flag Offset

This is the offset in the Command Control Data Type where the Command Flags will be stored. Commands are initiated when a Command Flag goes from OFF to ON. CSNET protocol supports 6 commands.

BIT	Function
0	Begin Processing (FC20)
1	Suspend Processing (FC21)
2	Begin Ladder Logic (FC22)
3	Suspend Ladder Logic (FC23)
4	Remote Boot-restart (FCA1)
5	Remote Boot-restart clear RAM (FCA1)

Time Data Offset

This is the offset in the Command Control Data Type where the Time Data will be stored. A total of 7 words are required.

Timer Data Offset

This is the offset in the Command Control Data Type where the Timer Data will be stored. A total of 20 words are required.

Well Flow Offset

This is the offset in the Command Control Data Type where the Well Flow Data will be stored. A total of 5 words are required.

Accumulator Reset Offset

This is the offset in the Command Control Data Type where the Accumulator Reset Data will be stored. A total of 6 words are required. Accumulator Freeze is handled in the PLC. When we receive a "Freeze Accumulator" (FC92) message we will write to a block of 6 registers in the PLC. The first 3 registers are the Freeze Hour, Minute and Second (if 255 then time is immediate). The last 3 registers are used to define which accumulators to freeze. Bit 0 of the first word controls the first accumulator, Bit 1 the second and so on. Bit 0 of the second word controls Accumulator #17 and so on up to a maximum of 48 accumulators.

Starting Card and Number of Cards

The Starting Card and Number of Cards for each of the 5 CSNET Data Types is specified in the next 5 entries. Enter the numbers as a HEX number with the high byte set to the starting ID and the low byte set to the number of cards.

Logical Offsets

Optional offsets can be defined for all the CSNET Logical Data types. Enter the offset as a HEX number.

Poll Table Read Parameters

INVALID FUNCTION. Can not read from the SCI CSNET Slave port.

Poll Table Write and Error Parameters

INVALID FUNCTION. Write operations are not supported from the poll table.
Note: System Error Protocol Definitions are the same as Poll Table Write and Error Parameters

Database Extension Table Parameters

Index	Name	Size:Max Length
0	Digital Inputs	2:256
1	Analog Inputs	2:256
2	Accumulators	4:128
3	Digital Out	2:256
4	Analog Out	2:256
5	Controls	2:256
8	Tanks	4:128
11	Logical DI	2:32
12	Logical AI	2:32
13	Logical DO	2:32
14	Logical AO	2:32
20	Frozen Accum	4:128