

Teledyne/CA Slave Protocol

Connector Configuration Parameters

Ctrl Deselect X10ms

The length of time the Omnii-Comm will wait for an Execute Message after it receives a Select Message. If an Execute message is not received within this time period the Select will be negated. A complete Select/Execute sequence must be resent to perform a control operation.

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.

Mom. TimeX100ms

CA RTUs support Momentary Discrete Controls (FC30/31). If control data is being collected from a device that does not support momentary commands, for example a PLC, the Omnii-Comm simulates a momentary output by first sending a command to turn a bit on and then, later turning it off. Use this field to select the length of time a Momentary Control will be held active. The time is measured in 100msec increments (0 to 25.5 seconds)

Max Message Length

The length of a CA reply message can be limited by this field. The maximum number of characters will be set to 128 (default) if this field is 0, otherwise the number entered will be used.

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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.

El Paso

When checked, this option bit enables special operation of the CA Read All functions code as used by El Paso Natural gas. Standard CA protocol defines the Read All function code message bytes as follows:

Sync; Adx; Fun. Code; Data Selection Bits 0-7; Data Selection Bits 8-15, Max. Ana. and Max Acc. to return

If the El Paso protocol option bit is checked then the Read All function code message bytes are interpreted as:

Sync; Adx; Fun. Code; not used; not used; Unit and Station Select bits

Use ON/OFF Field

CA Function Code 30/31 (Momentary Discrete Control) has an ON/OFF field that is used to either turn an output OFF then ON or ON then OFF depending on the selection made when the command is sent. Some CA Masters do not use this byte and always send a zero which is interpreted as OFF the ON if this box is checked. If the box is unchecked the operation is always interpreted as an ON then OFF operation.

Anaheim

If this option is selected the Omnii-Comm will use a second Select message (identical to the first and within the Control Deselect time period) as an execute message. If this option is not selected then a properly formatted Execute message will be required to complete a control operation. This option derives its name from the unique mode of operation of the CA host at Shell in Anaheim

Execute Only

If this option is selected then controls are sent using only the Execute message. A select command is not required

Telephone

This option bit is only valid when the Report by Exception select bit is on. If the Report by Exception bit is selected and the Telephone bit is also selected, then the Omnii-Comm will attempt to dial a telephone number prior to reporting an exception. If the bit is off then no number will be dialed.

Report by Exception

If this box is checked then the standard CA report by exception protocol extensions will be used.

Protocol Extension Table Parameters

The Extension Table is not used with CA Slave protocol

Poll Table Read Parameters

INVALID SELECTION. Cannot read from CA SLAVE port.

Poll Table Write and Error Parameters

INVALID SELECTION. Cannot write to CA SLAVE port.

Note: System Error Protocol Definitions are the same as Poll Table Write and Error Parameters

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Database Extension Table Parameters

Index	Name	Size
0	Digital Input Wds	2:256
1	Analog Input	2:256
2	Accum-ulators	3:170
3	Digital Output Words	2:256
4	Analog Output	2:256
5	Calculated Integer	2:256
6	Data Type 06	2:256
7	Data Type 07	2:32
8	Tank Data	2:32
9	Internal Status	2:32
10	Latched Status	2:64
11	Data Type 11	2:32
12	Data Type 12	2:32
13	Data Type 13	2:32
14	Data Type 14	2:32
15	Data Type 15	2:32
16	Data Type 16	2:32