

Overview

This command supports Telnet based user interfaces with current controller state information required to update a real time view of the controller I/O set.

CS transmits one data set per request of enabled I/O as ASCII, comma delimited text.

CS – Current I/O state & value, Telnet only, ignored by browser

CS Configuration

Type	Syntax	Notes
Inputs A..N (0-14 lines)	(A..N), state, value_state, value \r\n	1.
Meters O..Z (0-12 lines)	(O..Z) M , state, value_state, volume_today \r\n	2.
Contacts O..Z (0-12 lines)	(O..Z) C , state, value_state, ontime_secs \r\n	3.
Outputs 1..10 Relays (0-10 lines)	(0..9), state, control_state, special_state, control_value, time_owed, time_on, time_blocked, time_special \r\n	4.
Outputs 11-18 4-20mA outputs (0-8 lines)	(0..7) I , state, control_state, control_value \r\n	5.

Notes 1. Analog Inputs 0-14 lines

State: 0-255 – Bit definitions

S_enabled 0x01 // State Field - disabled parameters are not logged, do not display, cannot be used in commands..
 S_alarmed 0x02 // State Field - execute alarm action bit(s)
 S_dialout 0x08 // State Field - dial-out on alarm
 S_arelay 0x10 // State Field - trip alarm relay on alarm

Value_state: 0-255 – Bit Definitions

V_outrange 0x01 // Vstate Field analog value >5VDC, data logging stops
 V_calfault 0x02 // Vstate Field most recent calibration failed, outside of defaults
 V_loopfail 0x04 // Vstate Field Set to zero, data logging stops
 V_fault 0x08 // Vstate Field Trips control
 V_offset 0x10 // Vstate Field Subtract hardware Offset, used for conductivity, bipolar pH-ORP voltages:
 prior to Gain & Offset
 V_closed 0x20 // Vstate Field Contact Set CLOSED, used with O...Z Only
 V_sampling 0x40 // Vstate Field update only at the end of a MEASURE
 V_io 0x80 // Vstate Field input used by 4-20mA output card, sets measured mV=0 to allow use as Manual, Calc....

Notes 2. Water Meters - 0 to 12 lines

Inputs O..Z are sent sequentially with type indicated by the 2nd, letter M or C

State: 0-255 – Bit definitions

S_enabled 0x01 // State Field - disabled parameters are not logged, do not display, cannot be used in commands..
S_alarmed 0x02 // State Field - execute alarm action bit(s)
S_dialout 0x08 // State Field - dial-out on alarm
S_arelay 0x10 // State Field - trip alarm relay on alarm

Value_state: 0

Notes 3. Contact Sets - 0 to 12 lines

Inputs O..Z are sent sequentially with type indicated by the 2nd, letter M or C

Contacts closed =Time ON in seconds. Contacts open = 0

State: 0-255 – Bit definitions

S_enabled 0x01 // State Field - disabled parameters are not logged, do not display, cannot be used in commands..
S_alarmed 0x02 // State Field - execute alarm action bit(s)
S_dialout 0x08 // State Field - dial-out on alarm
S_arelay 0x10 // State Field - trip alarm relay on alarm

Value_state: 0 | 0x20 – Bit Definitions

V_closed 0x20 // Vstate Field Contact Set CLOSED, used with O...Z Only

Notes 4. Outputs – 0 to 10 lines

All times in seconds.

State: 0-255 – Bit definitions

S_enabled 0x01 // State Field - disabled parameters are not logged, do not display, cannot be used in commands..
S_alarmed 0x02 // State Field - execute alarm action bit(s)
S_events 0x04 // State Field - timed events exist for this relay
S_dialout 0x08 // State Field - dial-out on alarm
S_arelay 0x10 // State Field - trip alarm relay on alarm
S_off 0x20 // State Field - Actively Turned OFF by Interlock, Lockout, Alarmed - reference cstate for cause
S_cal 0x40 // State Field - Special control CS, calibrating

Control_state: Integer – bit definitions

C_on 0x01 // Control Field, current state of Relay ON|OFF
C_ilocked 0x02 // Control Field, interlocked on contact set O..Z
C_tlocked 0x04 // Control Field, lockout on time
C_vary 0x08 // Control Field, varying cycle controls, adjusts setpoints
C_feed 0x10 // Control Field, feed verify controls
C_offonalarm 0x20 // Control Field, turn OFF on alarm, DEFAULT!
C_rlocked 0x40 // Control Field, interlocked by another relay
C_prebleed 0x80 // Control Field, turned on by another relay, mutually exclusive with meter-volume
C_special 0x100 // Control Field, control by special control
C_sequence 0x200 // Control Field, 2nd phase of an Q:P sequential volume control; ON for 'P'
C_forcedon 0x400 // Control Field, prebleed has turned relay ON, bypass setpoint ON/OFF but update .c_value
C_meters 0x80 // Control Field, control by Volume & Time

Special_state:0-255 – bit definitions

S_OFFLINE	0x01	// Power UP state, special control processor execute state machine
S_ON	0x02	// Turn ON if not blocked, interlocked or timed out
S_OFF	0x04	// Turn OFF
S_SAMPLE	0x08	// Turn ON if not blocked, interlocked or timed out
S_MEASURE	0x10	// Turn OFF, calculate at end of S_MEASURE
S_BDOWN	0x20	// Turn ON if not blocked, interlocked or timed out
S_WAIT	0x40	// Turn OFF

Notes 5. 4-20mA Outputs – 0-10 lines

Control_value = mA

Control_value = 0 to 100% if .state & S_manual

State: 0-255 – Bit definitions

S_enabled	0x01	// State Field - disabled parameters are not logged, do not display, cannot be used in commands..
S_off	0x20	// State Field - Actively Turned OFF by Interlock,
S_manual	0x80	// State Field - Set 4-20mA output to MANUAL

Control_state: Integer – bit definitions

C_ilocked	0x02	// Control Field, interlocked on contact set O..Z
C_forcedon	0x400	// Control Field, prebleed has turned relay ON, bypass setpoint ON/OFF but update .c_value
C_relay	0x08	// Control Field, 4-20mA output controlled by a relay .c_value
C_input	0x10	// Control Field, 4-20mA output controlled by an Analog sensor .value