

TESCOM ER3000 Pressure Controller

Information Sheet for Crimson v2.0

Compatible Devices

- Tescom ER3000 Electronic Pressure Controllers

Verified Device

- ER3000-S1

Device Options

Select the node address for the device.

Accessible Data - Alphabetic

Prefix	Description	Read Only	Notes
C85	AD_EXTRA1_TOGGLE		
C86	AD_EXTRA2_TOGGLE		
C01	AD_SETPOINT	Y	
C41	ARDG	Y	
C05	COMPENSATED_EXTERNAL_SENSOR	Y	
C77	COMPENSATED_EXTRA_AD1	Y	
C78	COMPENSATED_EXTRA_AD2	Y	
C06	COMPENSATED_INTERNAL_SENSOR	Y	
C09	CONTROL_MODE		
C92	DA_ANALOG_OUT		
C95	DA_ANALOG_WRITE_FLAG		
C76	DAC		
C88	DIGITAL_OUTPUT1		
C89	DIGITAL_OUTPUT2		
C90	DIGITAL_OUT1_INIT		
C91	DIGITAL_OUT2_INIT		
C72	ESTOP_FLAG		
C87	EXT_FEEDBACK_SOURCE		
C74	EXTRA_AD1	Y	
C75	EXTRA_AD2	Y	
C26	FACTORY_MIN_INLET		

C27	FACTORY_MIN_EXHAUST		
C44	FEEDBACK	Y	
C68	FEEDBACK_FILTER		
C39	GAIN		
C00	INNER_ACTUAL_ERROR	Y	
C03	INNER_D_COEF1		
C04	INNER_D_COEF2		
C10	INNER_DERIVATIVE	Y	
C11	INNER_EFFECTIVE_ERROR	Y	
C28	INNER_INTEGRAL_CONSTANT		
C66	INNER_INTEGRAL_DEADBAND		
C29	INNER_INTEGRAL_MAXIMUM		
C50	INNER_INTEGRAL_MINIMUM		
C30	INNER_INTEGRAL_SUM		
C35	INNER_PROPORTIONAL_CONSTANT		
C19	INNER_SENSOR_MIN		
C20	INNER_SENSOR_MAX		
C55	MAX_AD_SETPOINT		
C59	MAX_COMPENSATED_EXTERNAL_SENSOR		
C57	MAX_COMPENSATED_INTERNAL_SENSOR		
C61	MAX_INNER_ACTUAL_ERROR		
C63	MAX_OUTER_ACTUAL_ERROR		
C56	MIN_COMPENSATED_INTERNAL_SENSOR		
C58	MIN_COMPENSATED_EXTERNAL_SENSOR		
C60	MIN_INNER_ACTUAL_ERROR		
C54	MIN_AD_SETPOINT		
C48	MIN_EXHAUST		
C47	MIN_INLET		
C62	MIN_OUTER_ACTUAL_ERROR		
C42	NODE		
C40	OSET		
C14	OUTER_ACTUAL_ERROR	Y	
C16	OUTER_D_COEF1		
C17	OUTER_D_COEF2		
C18	OUTER_EFFECTIVE_ERROR	Y	
C21	OUTER_INTEGRAL_CONSTANT		
C67	OUTER_INTEGRAL_DEADBAND		
C22	OUTER_INTEGRAL_MAXIMUM		
C49	OUTER_INTEGRAL_MINIMUM		
C23	OUTER_INTEGRAL_SUM		
C25	OUTER_PROPORTIONAL_CONSTANT		
C34	OUTPUT	Y	
C70	PROFILE_STATE		

C71	PROFILE_STEP	Y	
C69	PROFILE_TYPE	Y	
C73	PULSE		
C83	PULSE_DEADBAND		
C84	PULSE_ENABLE		
C81	PULSE_PERIOD		
C82	PULSE_WIDTH		
C64	PWM_FAILSAFE		
C12	PWM_SHUTOFF_FLAG		
C65	PWM_VALUE	Y	
C80	RANGE_MIN_EXHAUST		
C79	RANGE_MIN_INLET		
C51	RAW_AD_SETPOINT	Y	
C07	RAW_EXTERNAL_SENSOR	Y	
C08	RAW_INTERNAL_SENSOR	Y	
C38	RAW_TEMP_SENSOR	Y	
C13	RTTASK_DELAY		
C98	SENSOR_FLAG		
C52	SERIAL_NUMBER		
C43	SETPOINT_FLAG		
C37	SETPOINT		
C46	SOLENOID_DIRECTION		
C93	TTL_ERR0		
C94	TTL_ERR4095		
C96	TTL_FLAG		
C100	UI_INIT	Y	
C101	UI_LOCK_FLAG	Y	
C102	UI_PASSWORD_ENABLE	Y	
C103	UI_USER_PASSWORD	Y	
C104	UI_GRAPH_MIN	Y	
C105	UI_GRAPH_MAX	Y	
C106	UI_GRAPH_TIME	Y	
C107	UI_GRAPH_CONTINUOUS	Y	
C108	UI_UNITS_CHAR1		
C109	UI_UNITS_CHAR2		
C110	UI_UNITS_CHAR3		
C111	UI_UNITS_CHAR4		
C112	UI_REMOTE_SP1	Y	
C113	UI_REMOTE_SP2	Y	
C114	UI_SCALE_MIN_LO		
C115	UI_SCALE_MIN_HI		
CMIN	UI_SCALE_MIN		1
C116	UI_SCALE_MAX_LO		

C117	UI_SCALE_MAX_HI		
C118	UI_SCALE_MAX		1
C119	UI_SP1OR2_FLAG	Y	
C120	UI_PROFILE_STARTRUN		
C121	UI_DECIMAL_POSITION	Y	
C122	UI_BACKLIGHT	Y	
C122	UI_CONTRAST	Y	
C53	VERSION_NUMBER		
PRT	PROFILE READ - Type	See Note 2	2
PR1V	PROFILE READ - Var1	Y	
PR2V	PROFILE READ - Var2	Y	
PWR	PROFILE WRITE		3
PWT	PWR Type		2
PW1V	PWR Var1		2
PW2V	PWR Var2		2

Note 1:

CMIN combines **UI_SCALE_MIN_LO** and **UI_SCALE_MIN_HI** into a single 32 bit IEEE-754 Real number, provided the data in those two locations are in that format.

CMAX combines **UI_SCALE_MAX_LO** and **UI_SCALE_MAX_HI** into a single 32 bit IEEE-754 Real number, provided the data in those two locations are in that format.

Note 2:

The "Element" value is the number of the profile. Ex. Profile 7 shown:

Select Address for Emerson ER3000

Data Item

- CMIN UI_SCALE_MIN
- C116 UI_SCALE_MAX_LO
- C117 UI_SCALE_MAX_HI
- CMAX UI_SCALE_MAX
- C118 *UI_SP1OR2_FLAG
- C119 UI_PROFILE_STARTRUN
- C120 *UI_DECIMAL_POSITION
- C121 *UI_BACKLIGHT
- C122 *UI_CONTRAST
- C53 VERSION_NUMBER
- PRT PROFILE READ - Type**

Data Type

Word as Word

Element

PRT 07

Details

Type: Word

Minimum: PRT00

Maximum: PRT31

Radix: Decimal

OK Cancel Help

Writing a value to **PRT**, other than what is currently being displayed, will copy the existing Type, Var1, and Var2, of that profile to **PWT**, **PW1V**, and **PW2V**.

Note 3:

Writing a non-zero value to **PWR** sends the data in **PWT**, **PW1V**, and **PW2V**.
When read, **PWR** will return 0.

Accessible Data – By Command Number

Prefix	Description
C00	INNER_ACTUAL_ERROR
C01	AD_SETPOINT
C03	INNER_D_COEF1
C04	INNER_D_COEF2
C05	COMPENSATED_EXTERNAL_SENSOR
C06	COMPENSATED_INTERNAL_SENSOR
C07	RAW_EXTERNAL_SENSOR
C08	RAW_INTERNAL_SENSOR
C09	CONTROL_MODE
C10	INNER_DERIVATIVE
C11	INNER_EFFECTIVE_ERROR
C12	PWM_SHUTOFF_FLAG
C13	RTTASK_DELAY
C14	OUTER_ACTUAL_ERROR
C16	OUTER_D_COEF1
C17	OUTER_D_COEF2
C18	OUTER_EFFECTIVE_ERROR
C19	INNER_SENSOR_MIN
C20	INNER_SENSOR_MAX
C21	OUTER_INTEGRAL_CONSTANT
C22	OUTER_INTEGRAL_MAXIMUM
C23	OUTER_INTEGRAL_SUM
C25	OUTER_PROPORTIONAL_CONSTANT
C26	FACTORY_MIN_INLET
C27	FACTORY_MIN_EXHAUST
C28	INNER_INTEGRAL_CONSTANT
C29	INNER_INTEGRAL_MAXIMUM
C30	INNER_INTEGRAL_SUM
C34	OUTPUT
C35	INNER_PROPORTIONAL_CONSTANT
C37	SETPOINT
C38	RAW_TEMP_SENSOR
C39	GAIN
C40	OSET
C41	ARDG
C42	NODE
C43	SETPOINT_FLAG
C44	FEEDBACK
C46	SOLENOID_DIRECTION
C47	MIN_INLET
C48	MIN_EXHAUST
C49	OUTER_INTEGRAL_MINIMUM
C50	INNER_INTEGRAL_MINIMUM
C51	RAW_AD_SETPOINT

C52	SERIAL_NUMBER
C53	VERSION_NUMBER
C54	MIN_AD_SETPOINT
C55	MAX_AD_SETPOINT
C56	MIN_COMPENSATED_INTERNAL_SENSOR
C57	MAX_COMPENSATED_INTERNAL_SENSOR
C58	MIN_COMPENSATED_EXTERNAL_SENSOR
C59	MAX_COMPENSATED_EXTERNAL_SENSOR
C60	MIN_INNER_ACTUAL_ERROR
C61	MAX_INNER_ACTUAL_ERROR
C62	MIN_OUTER_ACTUAL_ERROR
C63	MAX_OUTER_ACTUAL_ERROR
C64	PWM_FAILSAFE
C65	PWM_VALUE
C66	INNER_INTEGRAL_DEADBAND
C67	OUTER_INTEGRAL_DEADBAND
C68	FEEDBACK_FILTER
C69	PROFILE_TYPE
C70	PROFILE_STATE
C71	PROFILE_STEP
C72	ESTOP_FLAG
C73	PULSE
C74	EXTRA_AD1
C75	EXTRA_AD2
C76	DAC
C77	COMPENSATED_EXTRA_AD1
C78	COMPENSATED_EXTRA_AD2
C79	RANGE_MIN_INLET
C80	RANGE_MIN_EXHAUST
C81	PULSE_PERIOD
C82	PULSE_WIDTH
C83	PULSE_DEADBAND
C84	PULSE_ENABLE
C85	AD_EXTRA1_TOGGLE
C86	AD_EXTRA2_TOGGLE
C87	EXT_FEEDBACK_SOURCE
C88	DIGITAL_OUTPUT1
C89	DIGITAL_OUTPUT2
C90	DIGITAL_OUT1_INIT
C91	DIGITAL_OUT2_INIT
C92	DA_ANALOG_OUT
C93	TTL_ERR0
C94	TTL_ERR4095
C95	DA_ANALOG_WRITE_FLAG
C96	TTL_FLAG
C98	SENSOR_FLAG
C100	UI_INIT
C101	UI_LOCK_FLAG
C102	UI_PASSWORD_ENABLE
C103	UI_USER_PASSWORD
C104	UI_GRAPH_MIN
C105	UI_GRAPH_MAX
C106	UI_GRAPH_TIME

C107	UI_GRAPH_CONTINUOUS
C108	UI_UNITS_CHAR1
C109	UI_UNITS_CHAR2
C110	UI_UNITS_CHAR3
C111	UI_UNITS_CHAR4
C112	UI_REMOTE_SP1
C113	UI_REMOTE_SP2
C114	UI_SCALE_MIN_LO
C115	UI_SCALE_MIN_HI
C116	UI_SCALE_MAX_LO
C117	UI_SCALE_MAX_HI
C118	UI_SP1OR2_FLAG
C119	UI_PROFILE_STARTRUN
C120	UI_DECIMAL_POSITION
C121	UI_BACKLIGHT
C122	UI_CONTRAST
CMAX	UI_SCALE_MAX
CMIN	UI_SCALE_MIN
PR1V	PROFILE READ - Var1
PR2V	PROFILE READ - Var2
PRT	PROFILE READ - Type
PWR	PROFILE WRITE
PW1V	PWR Var1
PW2V	PWR Var2
PWT	PWR Type

Cable Information – RS485 2 Wire

ER 3000	G3	Kadet	Kadet Aux
Blue – B	1 or 7	1	9
Green – A	2 or 8	2	6
Grey – 0V	6	5	5