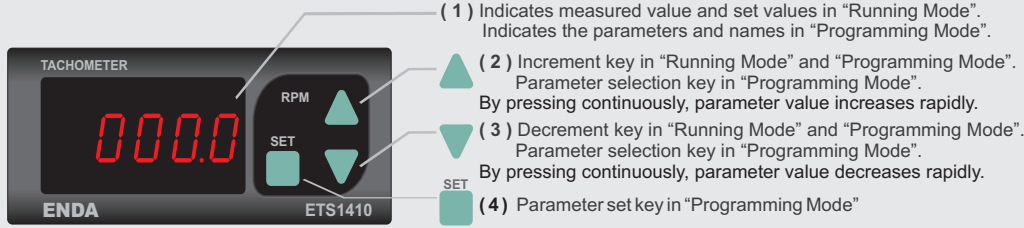


TERMS



(1) PV Göstergesi	7 Segment, 4 Digits Red LED display
Character Heights	12,5 mm
(2),(3),(4) Keypad	Micro switch

SETTING UP THE PARAMETERS

By pressing keys together for 2 seconds, "Programming Mode" is entered.

During a selected parameter, by pressing key, parameter value can be displayed. Parameter value can be changed with keys. If no operation performed for 3 seconds or during this time, if key is pressed while the parameter value displayed, parameter name will be displayed again. While parameter name displayed, if by pressing together keys, "Running Mode" is entered.

Provides to access to the next parameter in "Programming Mode". Increases the selected parameter value. By pressing continuously, parameter value increases rapidly.

Provides to access to the previous parameter in "Programming Mode". Decreases the selected parameter value. By pressing continuously, parameter value decreases rapidly.

DEVICE PARAMETERS

Parameter Name	Description	Min.	Max.	Unit	Default Value
<i>c</i>	Dividing parameter value	1	999		10
<i>dP</i>	Decimal place parameter	0	3		0

MODBUS PARAMETERS

Parameter Adı	Description	Min.	Max.	Unit	Default Value
<i>bAud</i>	Modbus Baudrate. 0 : 0FF, 1 : 1200 , 2 : 2400, 3 : 4800 , 4 : 9600, 5 : 19200)	0FF	1920	Bps	9600
<i>Adr5</i>	Modbus, slave device address.	1	247		1

EXAMPLES FOR USING DIVISOR PARAMETER

ENDA ETS1410 Pulse Input Tachometer divides the pulses from the input to the display by dividing it with the calibration value. The divisor value can be selected between 1 and 999. This feature allows the device to be used in precise speed measurements, instantaneous flow measurements and speed measurement applications. According to this, 1 as the divisor value must be entered for the one-to-one flow rate measurement. Calculation of dividing information can be formulated as follows :

$$\text{CAL(divider value)} = \frac{\text{Number of pulses per minute}}{\text{Desired value on the display}}$$

DIVISOR VALUE FOR LINE SPEED MEASUREMENT

25cm circumference of cylinder has 3 rpm turn. Speed of the belt passing over this cylinder will be measured in meter/min.

To measure the rotation of the cylinder, 50 pulse/cycle encoder will be used.

The dividing value is calculated as follows ;

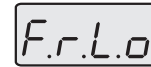
Display value : 3cycles/min X 25cm/rpm = 75cm/min

Number of pulses per minute : 3cycles/minute X 50pulses/rpm = 150 pulses/minute

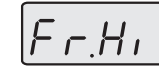
Then ;

$$\text{CAL(divider value)} = \frac{150 \text{ pulse/minute}}{75 \text{ cm/minute}} = 2$$

ERROR MESSAGES



Input frequency too low or no signal



High input frequency



Measured value is higher than 9999

ENDA ETS1410 TACHOMETER MODBUS PROTOCOL ADDRESS MAP

1. HOLDING REGISTERS

Holding Register Addresses		Data Type	Parameter Description	Parameter Name	Read / Write Permission
Decimal	Hex				
0000d	0x0000	word	ModBus device address (Can be adjusted between 1 and 247)	<i>Adr5</i>	R / W
0001d	0x0001	word	Modbus communication speed (Baudrate) (0 = Modbus cancel, 1 = 2400 bps, 2 = 4800 bps, 3 = 9600 bps, 4 = 19200 bps, 5 = 38400 bps)	<i>bAud</i>	R / W
0002d	0x0002	word	Decimal place parameter	<i>dP</i>	R / W
0003d	0x0003	word	Divider parameter	<i>c</i>	R / W

1. INPUT REGISTERS

Input Register Addresses		Data Type	Parameter Description	Parameter Name	Read / Write Permission
Decimal	Hex				
0000d	0x0000	word	Measured frequency	--	R