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Sistema Qualità Certificato

TKM60P PROFIBUS ENCODER

Rev. 4 - 09/10/2008

CLASS 1 SINGLETURN:

Input data: 16 bit (position value)

Output data: none

- ***Standard profile parameters:***

  Increasing direction: bit 0: 0: clockwise 1: counter clockwise

- ***Test and debug parameters:***

  Simulation speed: 1-255 (1 high … 255 low)
  Simulation: 0 disabled (disks reading) 1: enabled
  Simulation count: 0: suspended 1: running (the value is automatically increased)
  Diagnostic mode:
  0: 16 diagnostic bytes for Class 1 and 64 diagnostic bytes for Class 2 when Class 2 functionality is enabled (normal mode)
  1: 16 diagnostic bytes for Class 1 and 64 diagnostic bytes for Class 2 (immediately after configuration)
  2: 64 diagnostic bytes both for Class 1 and Class 2
  3: 16 diagnostic bytes both for Class 1 and Class 2

CLASS 1 MULTITURN:

Input data: 32 bit (position value)

Output data: none

- ***Standard profile parameters:***

  Increasing direction: bit 0: 0: clockwise 1: counter clockwise

- ***Test and debug parameters:***

  Simulation speed: 1-255 (1 high … 255 low)
  Simulation: 0: disabled (disks reading) 1: enabled
  Simulation count: 0: suspended 1: running (the value is automatically increased)
  Diagnostic mode:
  0: 16 diagnostic bytes for Class 1 and 64 diagnostic bytes for Class 2 when Class 2 functionality is enabled (normal mode)
  1: 16 diagnostic bytes for Class 1 and 64 diagnostic bytes for Class 2 (immediately after configuration)
  2 64 diagnostic bytes both for Class 1 and Class 2
  3: 16 diagnostic bytes both for Class 1 and Class 2

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CLASS 2 SINGLETURN:

Input data: 16 bit (position value)

Output data: 16 bit (pre-set value: active only if bit 15 is set)
Attention: the pre-set value is in scaled units (if scaling is enabled)

- ***Standard profile parameters:***

Increasing direction	bit 0: 0: clockwise 1: counter clockwise
Class 2 functionality	bit 1: 0 :disabled (default) 1: enabled
Scaling	bit 3: 0: disabled (default) 1: enabled
Measuring unit per revolution	0-8192
Total measuring range	0-33554432

- ***Test and debug parameters:***

Simulation speed	1-255 (1 high … 255 low)
Simulation	0: disabled (disks reading) 1: enabled
Simulation count	0: suspended 1: running (the value is automatically increased)
Diagnostic mode	0: 16 diagnostic bytes for Class 1 and 64 diagnostic bytes for Class 2 when Class 2 functionality is enabled (normal mode) 1: 16 diagnostic bytes for Class 1 and 64 diagnostic bytes for Class 2 (immediately after configuration) 2: 64 diagnostic bytes both for Class 1 and Class 2 3: 16 diagnostic bytes both for Class 1 and Class 2

CLASS 2 MULTITURN:

Input data: 32 bit (position value is only 24 bit)

Output data: 32 bit (pre-set value: active only if bit 31 is set)
Attention: the pre-set value is intended in scaled units (if scaling is enabled)

- ***Standard profile parameters:***

Increasing direction	bit 0: 0: clockwise 1: counter clockwise
Class 2 functionality	bit 1: 0 :disabled (default) 1: enabled
Scaling	bit 3: 0: disabled (default) 1: enabled
Measuring units per revolution	0-8192
Total measuring range	0-33554432

- ***Test and debug parameters:***

Simulation speed	1-255 (1 high … 255 low)
Simulation	0: disabled (disks reading) 1: enabled
Simulation count	0: suspended 1: running (the value is automatically increased)
Diagnostic mode	0: 16 diagnostic bytes for Class 1 and 64 diagnostic bytes for Class 2 when Class 2 functionality is enabled (normal mode) 1: 16 diagnostic bytes for Class 1 and 64 diagnostic bytes for Class 2 (immediately after configuration) 2: 64 diagnostic bytes both for Class 1 and Class 2 3: 16 diagnostic bytes both for Class 1 and Class 2

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DIAGNOSTIC LEDS:

Yellow led	Green led	
Off	Off	System blocked (during power-on and FPGA configuration)
On	Blinking	System ready
Blinking	On	Configuration or parameterisation error
On	Off	Communication activated
Blinking	Blinking	E2PROM error

SETTING THE SLAVE ADDRESS

The address of the encoder can be set up acting on the appropriate dip-switch called ADDRESS, the address is shaped on 7 bit therefore is possible to set up from address 0 till address 125 (the 126 and the 127 are not admitted and are forced to 125). The eighth dip-switch is only used for diagnostic purposes and for memorizing address on the encoder according with following procedure:

- with encoder not fed dip-switch 8 is set up on ON and the required address (between 0 and 125) is set up as well.
- turn on the encoder and wait till green and yellow leds are alternately blinking
- turn off the encoder and return the dip-switch 8 back to OFF
- turn on the encoder, the new address is active.

Apart from procedure above described, in conditions of normal functioning, dip-switch 8 must be disactivated.
The address is read a single time, at every power-on of the device.

SETTING LINE TERMINATOR

Line terminator can be set through the TERMINATOR dip-switch. Default setting is OFF, to insert terminator on the Profibus line move both the switch to ON position.

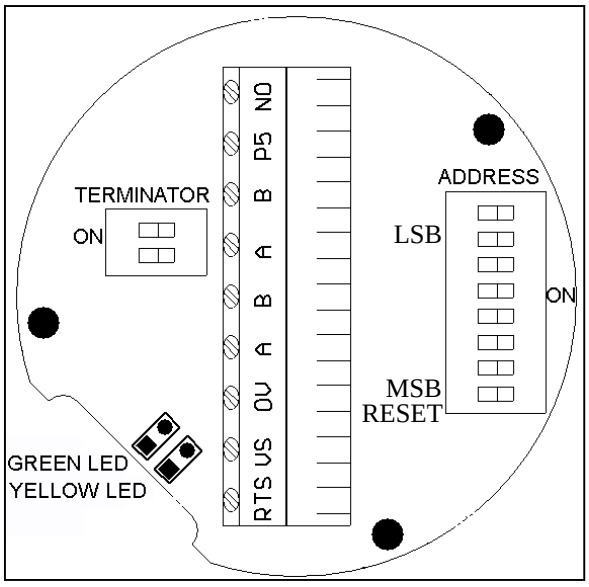
CONNECTIONS:

Internal connector:

RTS	CNTR-P (RTS)
A	RxD/TxD-N A wire minus green
B	RxD/TxD-P B wire plus red
P5	VP (+5V isolated)
N0	DGND (0V isolated)
Screw	Shield/Earth (optional)
VS	Power supply input 11-30 Vcc
0V	0 Volt (GND)

Dip-Switch

ADDRESS	Encoder address
TERMINATOR	Line terminator



REVISION:

Rev.	Revision date	Description
1	19/09/2002	Default address set to 99 instead of 126.
2	05/03/2003	Test and debug parameters is set to 64 bytes instead of 63 bytes.
3	09/04/2003	Dip-switch for encoder address and default address change to 0.
4	09/10/2008	Detailed description how to set correctly the encoder address.