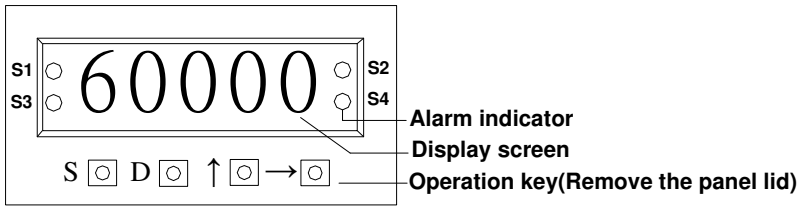
DMU RPM,Speed, Pulse, Length, Flow Meter

☐Operation Panel



☐Keys

Key	Function	Instruction
S	Enter key	Enter setting mode
D	Confirm key	Confirm setting
↑	Change number	Change number
→	Change position	Change position

☐Parameter Setting

Press 〝S〞 to enter function option: 01、02、03、04、05、07、08、09.

Press 〝↑〞 and 〝→〞 to set parameter.

	Function	Instruction	Note
01	XXXXXXXX	No need to set. Press 〝S〞 to enter 02.	
02	Parameter(K) setting	Press 〝↑〞 and 〝→〞 to set parameter (K) Press 〝D〞 to enter 03.	Set K according to Input range: (10~200 HZ) Set K=100 (200~2 K) Set K=10 (2K~20K) Set K=1
03	Parameter setting	Press 〝↑〞 and 〝→〞 to set 03 parameter. Press 〝D〞 to enter 04.	Formula: 03 = Display value × 1000 / Input HZ × K
04	Decimal point setting	Press 〝→〞 to choose decimal point position. Press 〝D〞 to enter 05.	Pay attention to the change. 1888.8
05	Output selection	Press 〝↑〞 to choose output signal: 0-20ma/4-20ma/0-10ma or 0-5V/0-10V/1-5V Press 〝D〞 to enter 06.	*V / mA can't exchange. *No need to set without output function.
06	Baud Rate	Press 〝↑〞 to choose Baud Rate: 1200-4800-9600-4800-19200 Press 〝D〞 to enter 07.	Preset value: 9600 No need to set without RS 485 output.
07	Address	Press 〝↑〞 and 〝→〞 to set. Press 〝D〞 to enter 08.	Address: 1-99 No need to set without RS 485 output.
08	Output corresponding value setting (SPAN /ZERO)	Press 〝↑〞 and 〝→〞 to set SPAN value. Press 〝D〞 to set ZERO value. Press 〝D〞 to enter 09.	EX: DISPLAY :0-600.0RPM OUTPUTP : 4-20mA Set Span as 6000 Set Zero as 0000
09	Save	Press 〝D〞 to enter 99 mode. Press 〝D〞 to save.	Setting will be effective after keying in 99.

☐Alarm Setting (Optional)

Press 〝S〞 to enter 〝00 〞

Press 〝→〞 to enter 51-52-53.....59 function code ,press 〝D〞 to set.

Code	Function	Instruction
51	S1 value setting 0～19999	Press 〝↑〞 and 〝→〞 to set S1 value. Press 〝D〞 to enter 52.
52	S1 deadband 0～9999	Press 〝↑〞 and 〝→〞 to set S1 deadband value. Press 〝D〞 to enter 53
53	S1 delay time 0～99 secs	Press 〝↑〞 and 〝→〞 to set S1 delay time Press 〝D〞 to enter 54
54	S2 value setting 0～19999	Press 〝↑〞 and 〝→〞 to set S2 value Press 〝D〞 to enter 55
55	S2 deadband 0～9999	Press 〝↑〞 and 〝→〞 to set S2 deadband value Press 〝D〞 to enter 56.
56	S2 delay time 0～99 secs	Press 〝↑〞 and 〝→〞 to set S2 delay time Press 〝D〞 to enter 57.
57	S1；S2 HI-LO setting	Press 〝↑〞 and 〝→〞 to set the HI-LO function. (1=Hi. 0=Lo) Hi-Hi. Hi-Lo. Lo-Hi. Lo-Lo (Programmable) Press 〝D〞 to enter 58
58	Start Delay Time setting 0～99 secs	Press 〝↑〞 and 〝→〞 to set the value. Set between 0 to 99,no alarm function within the time. Press 〝D〞 to enter 59.
59	Save	Press 〝D〞 to enter 99 mode. Press 〝D〞 to save.

S3 S4 alarm setting is the same as the above procedures.

Press 〝S〞 to enter 〝00 〞 .Press 〝↑〞 key to enter function option: 61-62-63-64-65-66-67

☐ Formula (Applicable to input range 100-20KHZ)

02 Parameter (K) setting

Input HZ	10-200HZ	200-2K	2K-20K
Set K as	100	10	1

$$03 = \frac{\text{Display value} \times 1000}{\text{Input HZ} \times K}$$ 1000(Built-in parameter)

☐Example:

1. I/P：0~1800 RPM (1RPM/4Pulse) Display: 0~1800RPM

O/P：DC 4-20mA 0~1800RPM 設定 08 = 1800

Calculate input HZ：1800*4/60=120HZ

Set 02 as 100

Set 03 as (1800 × 1000) ÷ (120 × 100) = 1500

Press S to enter setting mode. 〝0 0〞 blinks.

Press D to enter 02 Parameter (K) setting. Press 〝↑〞 〝→〞 to set as 0100 Press 〝D〞 to enter 03

Press D to enter 03 Parameter setting Press 〝↑〞 〝→〞 to set as 1500 Press 〝D〞 to enter 04

Press D to enter 04 Decimal point setting. Press 〝→〞 to set as 18888 Press 〝D〞 to enter 05

Press D to enter 05 Output selection. Press 〝↑〞 to set as 4-20 Press 〝D〞 to enter 06

Press D to enter 06 ----------No need to set---------- Press 〝D〞 to enter 07

Press D to enter 07 ----------No need to set---------- Press 〝D〞 to enter 08

Press D to enter 08 Output correspondence. Press 〝↑〞 〝→〞 to set as 1800 Press 〝D〞 to enter 09

Press D to enter 09 to save. Press 〝D〞 to enter 99.Press D to save.

**Refer to the instructions below for alarm setting.

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☐Communication Protocol

MODBUS – RTU MODE

Data Form

(ID Number) 1Byte	(Function Code) 1Byte	(Data) N Byte	CRC 2 Byte

Function Code

03 (03H)	Read several parameters
06 (06H)	Set parameter.

***This model is without 06 function.**

Start byte: 1bit ，Data byte: 8 bits ，Stop byte: 1bit. **Without parity check bit**

EX. 1. Read meter display value.

Master sends message to Meter				
ID Number	Function	Address	DATA number	CRC
1Byte	1Byte	2Byte	2Byte	2Byte
(01H)	(03H)	(00 02H)	(00 01H)	(xxH,xxH)

Instruction: Master calls meter ID No.1 to read address 0002.Data number 0001

Supposing the meter displays 1000.

Meter responds to Master.				
ID Number	Function	Data Byte	Data	CRC
(01H)	(03H)	(02H)	(03E8H)	(xxH,xxH)

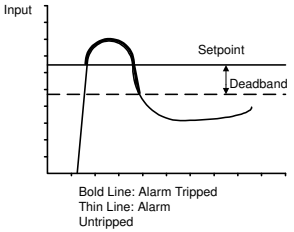
Values / Address Reference list. (Refer to ModScan32)

Address	Length	Name	Instruction	R(Read) W(Write)
40002	2Byte	Display		R
40003	2Byte	Decimal point / Polarity	0000 0000 0000 0000 Bit3 Bit2 Bit1 Bit0 Bit 3=No function Bit 2=Polarity 1=negative，0=positive Bit 1=No function Bit 0=Decimal point position	R
40004	2Byte	Alarm state	0000 0 0 0 0 0000 0000 1=ON S4 S3 S2 S1 LSB 0=OFF	R

☐Alarm Function Instruction

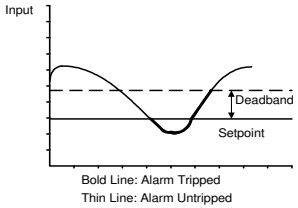
1.HIGH ALARM：

When input signal is over set point,relay starts until signal is below the Deadband.



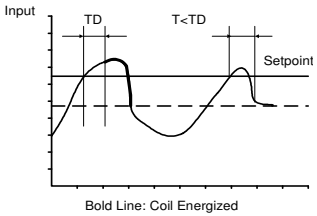
2.LOW ALARM：

When input signal is below the set point,relay starts until signal is over Deadband.



3.ON DELAYTIME：

When input signal is over set point,relay starts after the preset delaytime.

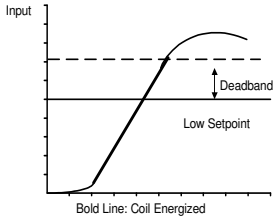


4.ZERO NO ALARM：

When input signal is below 0.3%,no function for LOW ALARM.

Alarm function starts when code 58 is over 0.

No alarm function when code 58 is 0.



5.START DELAY TIME：

No alarm function within the TS period.