Manostar Electronic Micro Differential Pressure Measurement System

Manosys Pressur	e Transmitter	EMT6	General nurnos	e compact	tvn	۵
RoHS compliant					. typ	6
70						
 Compact and lightwork differential pressure trans Small hysteresis is re 	mitter alized by the					
 silicone rubber diaphrag Zero adjustments can be turning zero adjuster at 	done easily by	-				
even after installed.		RI				
		2	-0	2		
			EM	IT6		
<example field="" main="" of="" use=""></example>	Product code	-	Pressure range code			
Manufacturing machine parts semi-conductors	EMI6B	0 FV	D 100 \	(example)		
Measuring negative pressure in I filter and differential pressure in	air			Installation positions	V	Vertical
conditioners Monitoring of pressure loss in filt	ers			positions	H Blank	Upward horizontal Vertical and upward horizontal
Production lines of precision mach Air conditioning control system				Pressure range		alue of scale
factory				Unit	D	Pa
<pre><example of="" use=""> Measuring inner pressure of ind</example></pre>	por			onit	E	kPa
equipments Detector of a pressure loss in an air fi				Tube tap	FV	For vinyl or plastic tube
Detector of a pressure loss in a bag f	ter			Output	0	Two wires method from 4 to 20 mA DC
Measuring of dynamic pressure ventilator and an exhauster				Туре	В	Exposed terminal connection
Measuring the inside pressure clean rooms	 If you order or ask, 		product code and the pressure ir velocity, specification of pres	-		type
*(refer to p.93) EMT6 Installation po	is needed. Please to	ell us the data for o	alculating air volume and veloci	ty. (refer to p.83)		
Pressure range specified ve horizontal that is standard in $0 \sim 50 \text{ Pa} \sim 0 \sim$	stallation position 300 Pa	from ver	sition of specified pressure is ical to upward horizontal. $500 \text{ Pa} \sim 0 \sim 5 \text{ kPa}$	1		
Vertical plane			Vertical plane			lation panel, following s available.
Vertical	Res 18		Vertical			
U U U U U U U U U U U U U U U U U U U	ward horizontal	Not installing	Upward horizontal	Horizontal		
CELIES HILL Following Possibility Possibil	20.0		Vertical	//		
10 • 10				e	ad (a. x. 0	1
a Spec	fied installation position	b Following in	stallation position is available	Standa	rd installat	ion position

In case of ordering out of standard installation position, specify installation position and angle .
 In case of ordering standerd installation position, you do not specify installation position. Specify the pressure range code in the specification table.

Yamamoto Electric Works Co.,Ltd. The first edition contrasted with the 9th Japanese product catalog

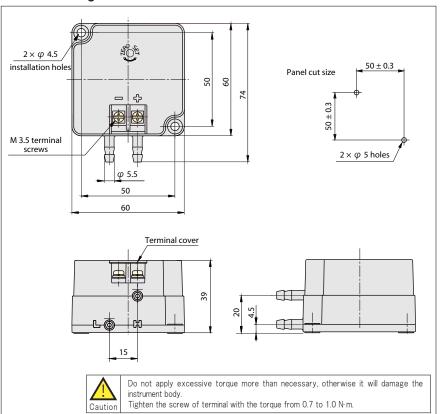
EMT6

Specification

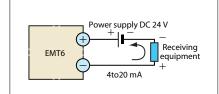
Pressure unitsPa, kPaAmbient humidity90 % RH or less (no dewing)Pressure measuring methodMeasuring differential pressureAir or non-corrosive gas (not liquid)5 to 10 Hz Acceleration : 39 m / s² (each two hours on triaxial directions)FRSPressure receiving elementDiaphragm (silicon rubber)10 kPa (refer to p.104)Withstanding pressure of receiving element10 kPa (refer to p.104)100 m / s² (each six times on triaxial directions)MMWithstanding pressure of instrument body50 kPa (refer to p.104)50 kPa (refer to p.104)100 m / s² (each six times on triaxial directions)MMWithstanding pressure of electric signal haulation resistance Equeme each terminal and case20 M Q or more (500 V DC megger)MassMassAppricable piping Appricable pipingMMPressure range codesPressure rangesStandard installation positionsAccuracy (at 20 °C)Temperature characteristic (zero + span)Output and transmission methodMMP 50 V0 ~ 50 Pa D 100 H0 ~ 100 Pa VerticalUpward horizontal (specified position)Two wires method : Output signal from 4 to 20 m ADCEN	Specification						
Pressure units Pa, kPa Ambient humidity 90 % RH or less (no dewing) Pressure measuring method Measuring differential pressure Air or non-corrosive gas (not liquid) 5 to 10 Hz Acceleration : 39 m / s ² (each two hours on triaxial directions) 5 to 10 Hz Acceleration : 39 m / s ² (each two hours on triaxial directions) FRS Withstanding pressure receiving element Diaphragm (silicon rubber) 10 kPa (refer to p.104) Withstanding impact 100 m / s ² (each six times on triaxial directions) MM Withstanding pressure of instrument body of electric signal fields inductance S0 kPa (refer to p.104) Tube tap polarity Tube tap polarity The part of tube tap is marking "H" on high pressure side and "L" on low pressure side. MMS Material of the outer case of electric signal field and ambient temperature 0 to 50 °C (no freezing) Standard installation spositions Accuracy (at 20 °C) Temperature characteristic (zero + span) Output and transmission method MS D 50 H 0 ~ 50 Pa Upward horizontal (specified position) Upward horizontal (specified position) Two wires method : Output signal from 4 to 20 mA DC EN D 100 V 0 ~ 100 Pa Upward horizontal (specified position) Two wires method : Output signal from 4 to 20 mA DC EN	Туре	EMT6					WO70
Gas to be measured Gas to be measured Pressure receiving element withstanding pressure of instrument bodyAir or non-corrosive gas (not liquid) Diaphragm (silicon rubber)Initiation of the measured to to 50 Hz Acceleration : 39 m / s² (each two hours on triaxial directions)FRAWithstanding pressure of instrument body Waterial of the outer case conversion method of electric signal headon resistance: Between each terminal and caseAir or non-corrosive gas (not liquid) Diaphragm (silicon rubber)Withstanding impact to kPa (refer to p.104)Not the measured terminal and caseNot the measured terminal and caseNot the measured (conversion method)Not the measured terminal and caseNot the measured (conversion method)Not the measured terminal and caseNot the measured terminal and caseNot the measured (conversion method)Not the measured terminal and caseNot the measured (conversion method)Not the measured terminal and caseNot terminal and case<	Pressure units	Pa, kPa		Ambient humidit	90 % RH or less (no	110/0	
Link of the function of the output galaxyMatch output galaxyMatch output galaxyMatch output galaxyPressure receiving element of receiving element twithstanding pressure of receiving element of receiving element of receiving element withstanding pressure of receiving element of receiving element withstanding pressure of receiving element withstanding pressure of receiving element withstanding pressure of receiving element withstanding pressure of receiving element of receiving element withstanding pressure polyamide resin MXD6 Variable inductance 20 M Ω or more (500 V DC megger) 0 to 50 °C (no freezing)Withstanding impact Applicable piping Tube tap polarity Tube tap polarity Tube tap polarity Tube tap polarity Tube tap polarity Tube tap polarity Tube tap polarity The part of tube tap is marking "H" on high pressure side and "L" on low pressure side. Approximately 110 gMst Match of tube tap is marking "H" on high pressure side and "L" on low pressure side. Approximately 110 gPressure range codesPressure ranges Pressure rangesStandard installation positionsAccuracy (at 20 °C)Temperature characteristic (zero + span)Output and transmission method (zero + span)D 50 H D 200 H D 200 H D 200 H0 ~ 50 Pa 0 ~ 50 Pa D 100 VUpward horizontal (specified position)Two wires method : Output signal from 4 to 20 mA DCEN EN <th>Pressure measuring method</th> <th>Measuring differential pres</th> <th>sure</th> <th>Withstanding vibration</th> <th>1 5 to 10 Hz Amplitude</th> <th></th>	Pressure measuring method	Measuring differential pres	sure	Withstanding vibration	1 5 to 10 Hz Amplitude		
Pressure reading element of receiving element of receiving element withstanding pressure of instrument body Applicable piping 100 m / s ² (each six times on triaxial directions) Material directions) Mater	Gas to be measured	Air or non-corrosive gas (not liquid)			FR51A	
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Of electric signal Insulation resistance: Between each terminal and case Medium and ambient temperatureVanable inductanceMassApproximately 110 gModePressure range codes20 M Ω or more (500 V DC megger) 0 to 50 °C (no freezing)0 to 50 °C (no freezing)MassApproximately 110 gMassPressure range codesPressure rangesStandard installation positionsAccuracy (at 20 °C)Temperature characteristic (zero + span)Output and transmission methodD50 H0 ~ 50 Pa 0 ~ 100 PaUpward horizontal (specified position)Upward horizontal (specified position)Two wires method : Output signal from 4 to 20 mA DCEtc.		5			and "L" on low pressu	MS61A	
each terminal and case 20 W 32 00 Hiddle (000 V DD Hidggel) Medium and ambient temperature O to 50 °C (no freezing) Pressure range codes Pressure ranges Standard installation positions Accuracy (at 20 °C) Temperature characteristic (zero + span) Output and transmission method Effective transmission D 50 H 0 ~ 50 Pa Upward horizontal (specified position) Upward horizontal (specified position) Two wires method : Output signal from 4 to 20 mA DC Effective transmission Two wires method : Output signal from 4 to 20 mA DC Effective transmission	of electric signal			Mas	Approximately 110 g		
temperature 0 to 30° C (no meezing) Mission Pressure range codes Pressure ranges Standard installation positions Accuracy (at 20°C) Temperature characteristic (zero + span) Output and transmission method D 50 H 0 ~ 50 Pa Upward horizontal (specified position) Image: Comparison of the com	each terminal and case	20 M Ω or more (500 V D	IC megger)				
Pressure range codesPressure rangesStandard instantion positionsAccuracy (at 20 °C)characteristic (zero + span)Output and transmission methodD50 H0 ~ 50 Pa Upward horizontal (specified position)Upward horizontal (specified position)Upward horizontal (specified position)EMD50 V0 ~ 200 Pa (specified position)Upward horizontal (specified position)Two wires method : Output signal from 4 to 20 mA DCD50 V0 ~ 50 Pa (specified position)Two wires method : Output signal from 4 to 20 mA DCTwo wires method : Output signal from 4 to 20 mA DC	Medium and ambient temperature	0 to 50 ℃ (no freezing)					MS65
D 50 H 0 ~ 50 Pa Upward horizontal (specified position) Two wires method : Output signal from 4 to 20 mA DC Effective		Pressure ranges		Accuracy	characteristic	Output and transmission method	
D 00 H 00			positions		(zero + span)		EB3C
D 200 H 0 ~ 200 Pa Opward Holizontal (specified position) EM D 300 H 0 ~ 300 Pa Two wires method : Output signal from 4 to 20 mA DC Two wires method : Output signal from 4 to 20 mA DC Two wires method : Output signal from 4 to 20 mA DC Two wires method : Output signal from 4 to 20 mA DC Two wires method : Output signal from 4 to 20 mA DC Two wires method : Output signal from 4 to 20 mA DC Two wires method : Output signal from 4 to 20 mA DC Two wires method : Output signal from 4 to 20 mA DC Two wires method : Output signal from 4 to 20 mA DC Two wires method : Output signal from 4 to 20 mA DC Two wires method : Output signal from 4 to 20 mA DC Two wires method : Output signal from 4 to 20 mA DC Two wires method : Output signal from 4 to 20 mA DC Two wires method : Output signal from 4 to 20 mA DC Two wires method : Output signal from 4 to 20 mA DC Two wires method : Output signal from 4 to 20 mA DC Two wires method : Output signal from 4 to 20 mA DC Two wires method : Output signal from 4 to 20 mA DC Two wires method i from 4 to 20 mA DC Two wires method i from 4 to 20 mA DC Two wires method i from 4 to 20 mA DC Two wires method i from 4 to 20 mA DC Two wires method i from 4 to 20 mA DC Two wires method i from 4 to 20 mA DC Two wires method i from 4 to 20 mA DC Two wires method i from 4 to 20 mA DC Two wires method i from 4 to 20 mA DC Two wires method i from 4 to 20 mA DC							EDGC
D 300 H 0 ~ 300 Pa EN D 50 V 0 ~ 50 Pa Two wires method : Output signal from 4 to 20 mA DC EN							
D 50 V 0 ~ 50 Pa D 100 V 0 ~ 100 Pa Vertical from 4 to 20 mA DC			(specified position)				EMD8
D 100 V 0 ~ 100 Pa Vertical from 4 to 20 mA DC						-	LMDO
						1 0	
1 1 1 1 1 1 1 1 1 1				± 2.5 % FS	± 0.15 % FS/°C	(load resistance : 500 Ω or less.)	EMD7
D 300 V $0 \sim 300$ Pa							EMB
D 500 0 ~ 500 Pa (ripple : within 0.2 V P-P)							
			Following installation				EMT6
E 2 0 c 2 kPa position is available from			· · · · · · · · · · · · · · · · · · ·				
E 3 $0 \sim 3 \text{ kPa}$ upward horizontal to vertical	E 3	0 ~ 3 kPa					
	E 5	0 \sim 5 kPa					EMT1

◆For measuring combustible gas or using in combustible gas area, use EMT1H type (refer to p.63) that is intrinsically safe apparatus type.

Outline drawing

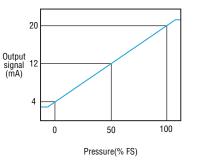


Terminal connection diagram



◆ Manosys receiver is equipped with DC power supply circuit for two wires method Manosys transmitter. Therefore, in using combination with Manosys receiver, there is no need of the DC power supply equipment which is separately available.(refer to p.72)

Transmission output diagram (differential pressure-output signal)



WO81

EMP5

EMA3

EMRT1

HWS15

Combination of Manosys

Accessories

Application Cautions for use Maintenance

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Product Warranty

Warranty Period

This product warranty is valid for one year from the date of delivery to a place specified by an ordering party who has transacted directly with Yamamoto Electric Works Co., Ltd.

Coverage

If a product breaks down due to a reason for which we are responsible during the warranty period and you return the product to us, we will either repair or replace the product free of charge. This warranty does not cover:

- (1) Usage of the product under any inappropriate conditions or environment contrary to what is described in our product catalog, specifications or manual.
 Handling or usage of the product other than as described in our product catalog, specifications or manual.
- (2) Breakdown due to a reason other than a fault within our product.
- (3) Any product that has been modified or repaired by a party other than us.
- (4) Any breakdown due to a reason that was not foreseeable based on scientific and technical standards applied at the time of shipment.
- (5) Any breakdown due to a reason not attributable to us such as a natural calamity or other disaster.

These terms of warranty represent our entire liability with respect to the product, and we shall have no liability for any other loss arising in connection with a breakdown of the product.

*This product warranty is only valid within Japan.

This document is a translation from the original Japanese version, and the original Japanese version has priority over this translation.

Be sure to refer to the original Japanese for the details of this warranty.



The Japanese original document shall always take precedence over the translated versions.

You should be sure to refer to the Japanese original document.



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