

# General Specifications

# MN1 DA Transmitter

JUXTA

This plug-in type DA Transmitter converts 0~7999 binary coded decimal (BCD CODE) or 0~8191 binary code (BINARY CODE) into isolated current or voltage analog signal. Setting of input range (output range is fixed as per range of the order), zero/span adjustment, monitoring of input/output values can be made through communication with Handy Terminal.

Input & Output Specifications	
Input signal	Logic Negative logic or positive logic Code BCD (0~7999) or BINARY (0~8191) Dry voltage contact : Detecting current 1.0mA Open collector saturation voltage : Less than 1V 5V CMOS level Input connector : 40 pin (Fujitsu FCN-365P040-AU) * Recommended suitable connector FUJITSU Body : FCN-361J040-AU Cover : FCN-360C040-B
Output signal	One DC voltage or one current signal
Output setup range	Output type & setup range 1 : Span more than 0.1V at 0~10V DC Accuracy limits for span below 0.5V or elevation over 150% 2 : Span more than 10mV at 0~100mV DC Accuracy limits for elevation over 150% 3 : Span more than 0.2V at -10~+10V DC Accuracy limits for span below 1V or elevation over -125~25% 4 : Span more than 20mV at -100~+100mV DC Accuracy limits for elevation over -125~25% A : Span more than 2mA at 0~20mA DC Accuracy limits for span below 8mA or elevation over 150% B : Span more than 1mA at 0~5mA DC Accuracy limits for span below 2mA or elevation over 150%
Permissible load resistance	Output type 1 : Over 2k $\Omega$ (output below 5V), Over 10k $\Omega$ (output over 5V) 2 : Over 250k $\Omega$ 3 : Over 10k $\Omega$ 4 : Over 250k $\Omega$ A : Below 15/OUT,... $\Omega$ B : Below 15/OUT,... $\Omega$ OUT,... : 100% output current value
Zero adjustment range	$\pm 10\%$ of span
Span adjustment range	$\pm 10\%$ of span
Standard Performance	
Accuracy rating	$\pm 0.1\%$ of span
Insulation resistance	100M $\Omega$ (500V DC) between input~output~power supply~ground
Voltage withstand	2000V AC/1 minute between input~output~power supply~ground
Temperature range	0~50C
Humidity range	5~90%RH (no condensation)
Power supply voltage	85~264V AC 47~63Hz or 12~48V
Effect of power supply voltage fluctuation	$\pm 0.1\%$ of span for fluctuation of 85~264V AC or 12~48V DC
Effect of ambient temperature change	$\pm 0.2\%$ of span for change of 10C
Current dissipation	24V DC 130mA, 110V DC 40mA
Power dissipation	100V AC 7VA, 200V AC 9VA
Mounting, Shape & Accessories	
Material	Case ABS plastic
Mounting method	Wall mounting
Connecting method	M3.5 screw terminal
External dimension	85x50x123mm (HxWxD) including terminal
Weight	Body : about 250g, Socket : about 60g
Accessories	Spacer ..... 1 Range label .... 2

MN1-□□-□/□

Model \_\_\_\_\_

Input Signal \_\_\_\_\_  
 1 : 0~7999 negative logic BCD code  
 2 : 0~7999 positive logic BCD code  
 3 : 0~8191 negative logic BINARY code  
 4 : 0~8191 positive logic BINARY code

Output Signal \_\_\_\_\_  
 1 : Span more than 0.1V at 0~10V DC  
 2 : Span more than 10mV at 0~100mV DC  
 3 : Span more than 0.2V at -10~+10V DC  
 4 : Span more than 20mV at -100~+100mV DC  
 A : Span more than 2mA at 0~20mA DC  
 B : Span more than 1mA at 0~5mA DC

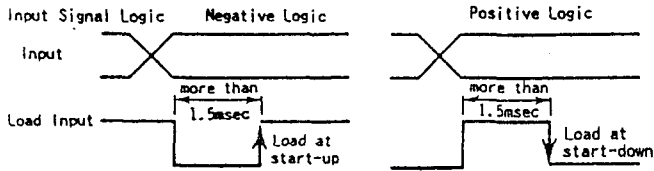
Power Supply \_\_\_\_\_  
 3 : 24V DC  $\pm 10\%$   
 4 : 85~132V AC/85~150V DC  
 5 : 170~264V AC

Data Take-in Trigger \_\_\_\_\_  
 TE : Data Take-in Trigger EXTERNAL  
 TA : Data Take-in Trigger AUTO

ORDERING INFORMATION	
● Model Code	: (Example) MN1-1A-3/TA
● Input Range	: (Example) 0~1000
● Output Range	: (Example) 4~20mA

FUNCTION

DA Conversion Timing Chart  
When Data Take-in Trigger is EXTERNAL



When Data Take-in Trigger is AUTO  
Sampling of input signal is made on every about 2mS.  
Input is taken when all the input indicates same value continuously twice.

BCD Code

Binary coded decimal  
Each digit of 0~9 of decimal code is indicated by 0000~1001 of binary code.

(Example) 254 .. 11111110 ..... binary code  
                  0010 0101 0100 .... binary coded decimal  
                                  2      5      4

Logic of input signal

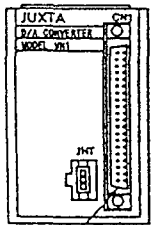
List below shows relation between input feature and recognition of [0] and [1].

Input signal specs.	Input feature		
	Below 1.5V or contact point ON	Over 3.5V or contact point OFF	Input Open
Negative Logic	1	0	0
Positive Logic	0	1	1 (Note)

(Note) Input open when positive logic is recognized at [1].  
For this reason, drop to COM for input terminal not connected to signal.

CONNECTOR LIST

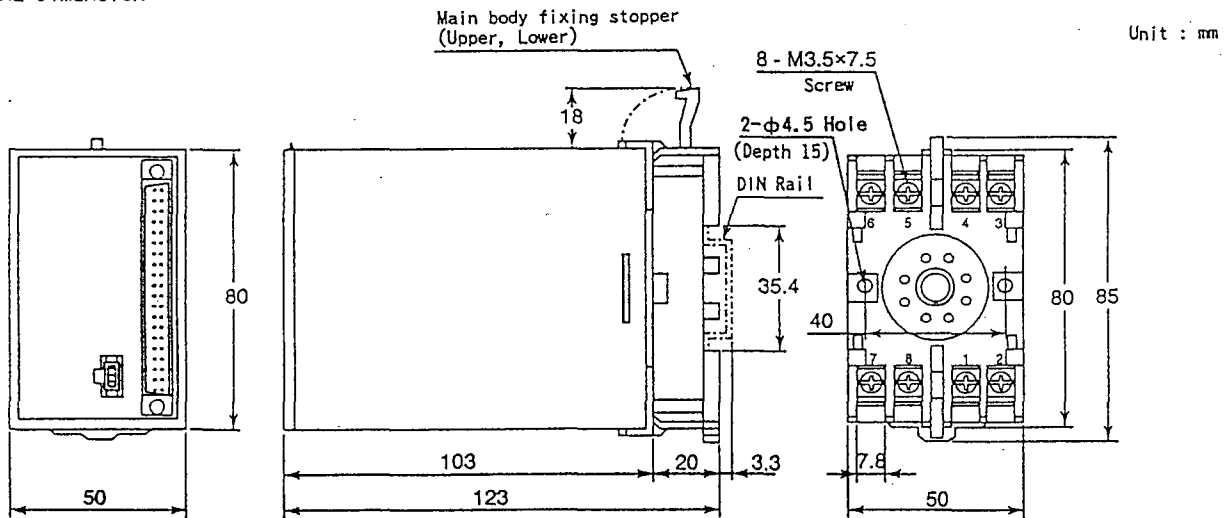
Input connector (40 pin)



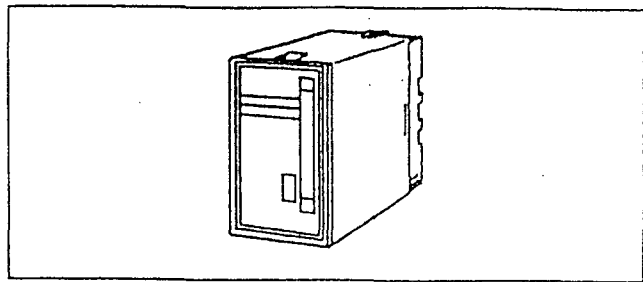
Pin No.	Content (weight of bit)		Pin No.	Content
	BCD	BINARY		
A1	1x10 <sup>0</sup>	2 <sup>0</sup> (LSB)	B1	
A2	2x10 <sup>0</sup>	2 <sup>1</sup>	B2	
A3	4x10 <sup>0</sup>	2 <sup>2</sup>	B3	
A4	8x10 <sup>0</sup>	2 <sup>3</sup>	B4	
A5	1x10 <sup>1</sup>	2 <sup>4</sup>	B5	
A6	2x10 <sup>1</sup>	2 <sup>5</sup>	B6	
A7	4x10 <sup>1</sup>	2 <sup>6</sup>	B7	
A8	8x10 <sup>1</sup>	2 <sup>7</sup>	B8	
A9	1x10 <sup>2</sup>	2 <sup>8</sup>	B9	N.C.
A10	2x10 <sup>2</sup>	2 <sup>9</sup>	B10	
A11	4x10 <sup>2</sup>	2 <sup>10</sup>	B11	
A12	8x10 <sup>2</sup>	2 <sup>11</sup>	B12	
A13	1x10 <sup>3</sup>	2 <sup>12</sup> (MSB)	B13	
A14	2x10 <sup>3</sup>	DONT CARE	B14	
A15	4x10 <sup>3</sup>	DONT CARE	B15	
A16	LOAD		B16	
A17			B17	
A18	COM		B18	COM
A19			B19	
A20	N.C.		B20	N.C.

N.C. : Unused terminal  
LOAD : Load signal

EXTERNAL DIMENSION

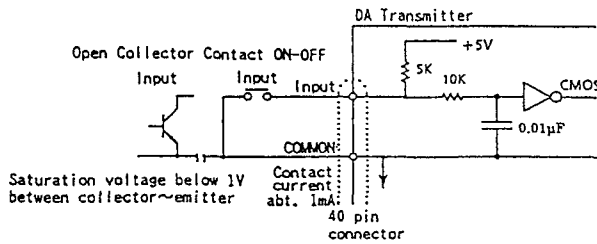


Subject to change without notice for grade up quality and performance



Dry Voltage Contact or Open Collector

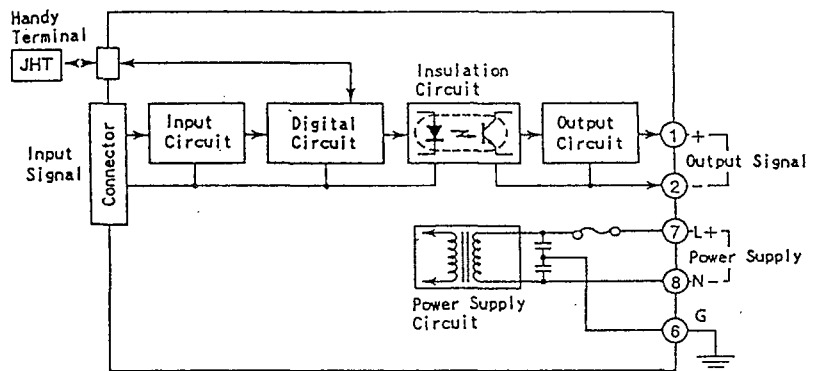
ON-OFF signal through relay operation contact and ON-OFF signal of open collector contact through transistor switch depend on condition of dry voltage in either case. However, input circuit is same.



Resolution

Resolution means minimum change of input signal. In case of DA transmitter, minimum resolutions are 1/7999 for BCD input and 1/8191 for BINARY input. In case input range is designated, 1/input span is resolution.

BLOCK DIAGRAM



Unit : mm