

# Autonics

## DISPLAY UNIT D5Y/D5W SERIES

M A N U A L



Thank you very much for selecting Autonics products.  
For your safety, please read the following before using.

### Caution for your safety

- ※Please keep these instructions and review them before using this unit.
- ※Please observe the cautions that follow;
  - Warning** Serious injury may result if instructions are not followed.
  - Caution** Product may be damaged, or injury may result if instructions are not followed.
- ※The following is an explanation of the symbols used in the operation manual.
  - Caution:** Injury or danger may occur under special conditions.

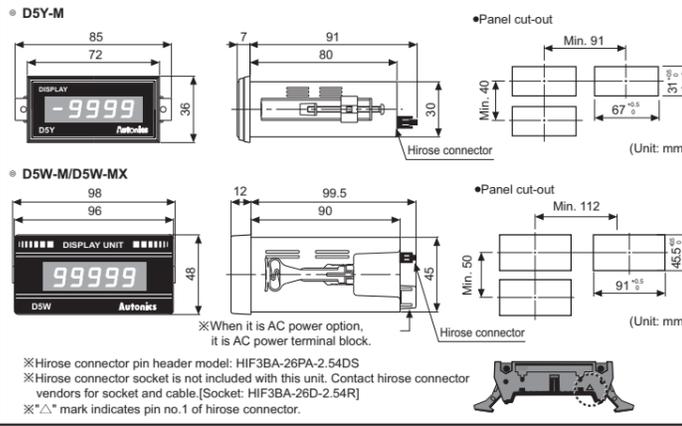
- Warning**
  - In case of using this unit with machinery(Ex: nuclear power control, medical equipment, ship, vehicle, train, airplane, combustion apparatus, safety device, crime/disaster prevention equipment, etc) which may cause damages to human life or property, it is required to install fail-safe device. It may cause a fire, human injury or damage to property.
  - This unit must be mounted on panel. It may cause electric shock.
  - Do not connect, inspect or repair this unit when power is ON. It may cause electric shock and a fire.
  - When supply the power to this unit, please check the number of terminal then connect wire. It may cause a fire.
  - Do not disassemble or modify this unit. Please contact us if it is required. It may cause electric shock and a fire.
- Caution**
  - This unit shall not be used outdoors. It may shorten the life cycle of the product or cause electric shock.
  - When wiring connection of power supply, tighten screws of terminal block with 0.74N-m to 0.90 N-m torque. It may cause a fire due to contact failure.
  - Please observe the rated specifications. It may shorten the life cycle of the product or cause electric shock.
  - In cleaning the unit, do not use water or organic solvent. And use dry cloth. It may cause a fire or give an electric shock.
  - Do not use this unit where there are flammable or explosive gas, humidity, direct ray of the sun, radiant heat, vibration, impact etc. It may cause a fire.
  - Do not inflow dust or wire dregs into the unit. It may cause a fire or malfunction.
  - Please connect wire properly after checking the polarity of power. It may cause a fire or explosion.

### Ordering information

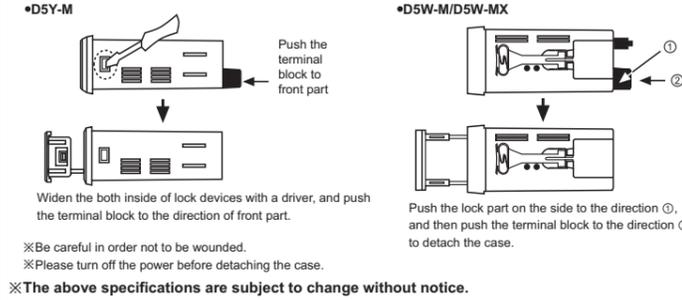
Model	Display digit	Size	Input	Power supply
D5Y-M	99999	DIN W72 x H36mm	Static, Dynamic, 4/5 Bit serial, Serial(16/20/25 Bit)	12-24VDC
D5W-M	(5 digit)	DIN W96 x H48mm		
D5W-MX				110/220VAC 50/60Hz ※1

※1: AC power is only for D5W and it is optional.

### Dimensions



### Case detachment

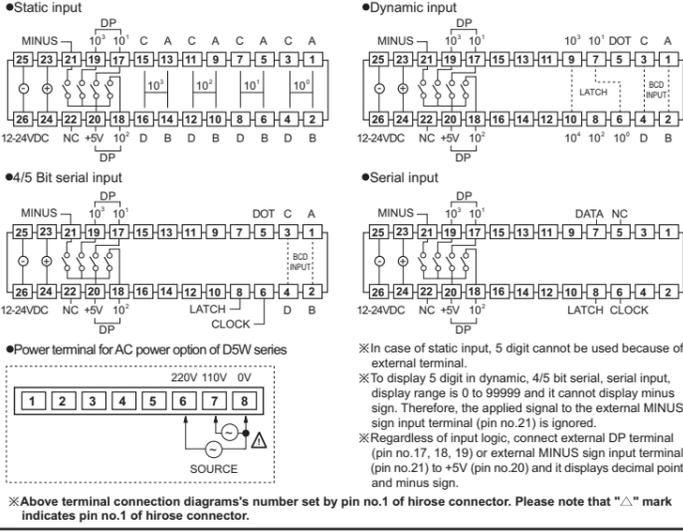


### Specifications

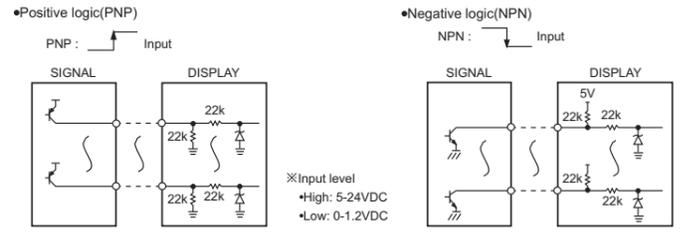
	D5Y-M	D5W-M	D5W-MX
Model	D5Y-M	D5W-M	D5W-MX
Power supply	12-24VDC		110/220VAC 50/60Hz
Allowable voltage range	90 to 110% of rated voltage		
Current consumption	1.1W		2VA
Size	DIN W72 x H36mm	DIN W96 x H48mm	
Display method	7Segment LED Display		
Display digit	4 digit(or 4 1/2 digit including sign bit), 5 digit		
Max. response CLOCK	100Hz to 5kHz(Except for Static input type)		
Input level	High: 5V-24V, Low: 0-1.2V		
Input logic	Positive logic (PNP), Negative logic (NPN)		
Input	Static, Dynamic, 4/5 Bit serial, Serial(16/20/25 Bit)		
Insulation resistance	100MΩ (at 500VDC megger)		
Dielectric strength	2000VAC 50/60Hz for 1 minute		
Noise resistance	±1kV the square wave noise(pulse width: 1μs) by the noise simulator		
Vibration	Mechanical: 0.75mm amplitude at frequency of 10 to 55Hz(for 1 min.) in each of X, Y, Z directions for 1 hour Malfunction: 0.5mm amplitude at frequency of 10 to 55Hz(for 1 min.) in each of X, Y, Z directions for 10 minutes		
Shock	Mechanical: 300m/s <sup>2</sup> (Approx. 30G) in X, Y, Z directions for 3 times Malfunction: 100m/s <sup>2</sup> (Approx. 10G) in X, Y, Z directions for 3 times		
Environment	Ambient temperature: -10 to 50°C, Storage: -25 to 65°C Ambient humidity: 35 to 85%RH, Storage: 35 to 85%RH		
Unit weight	Approx. 75g	Approx. 165g	Approx. 267g

※Environment resistance is rated at no freezing or condensation.

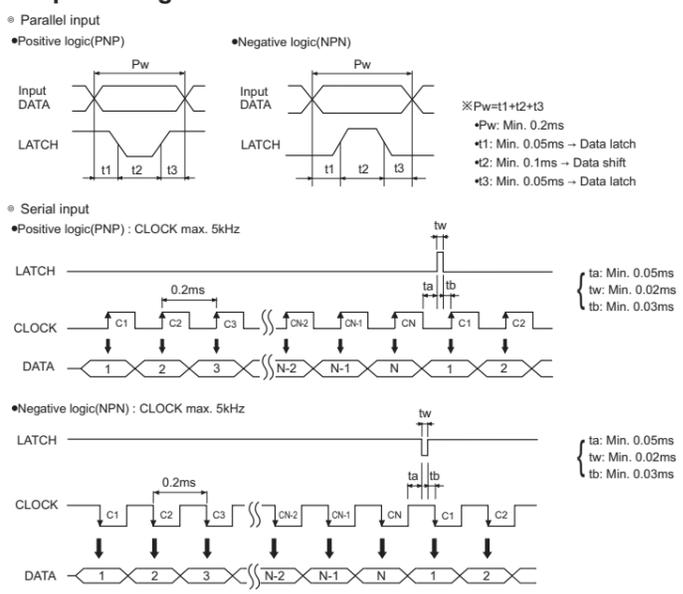
### Connections



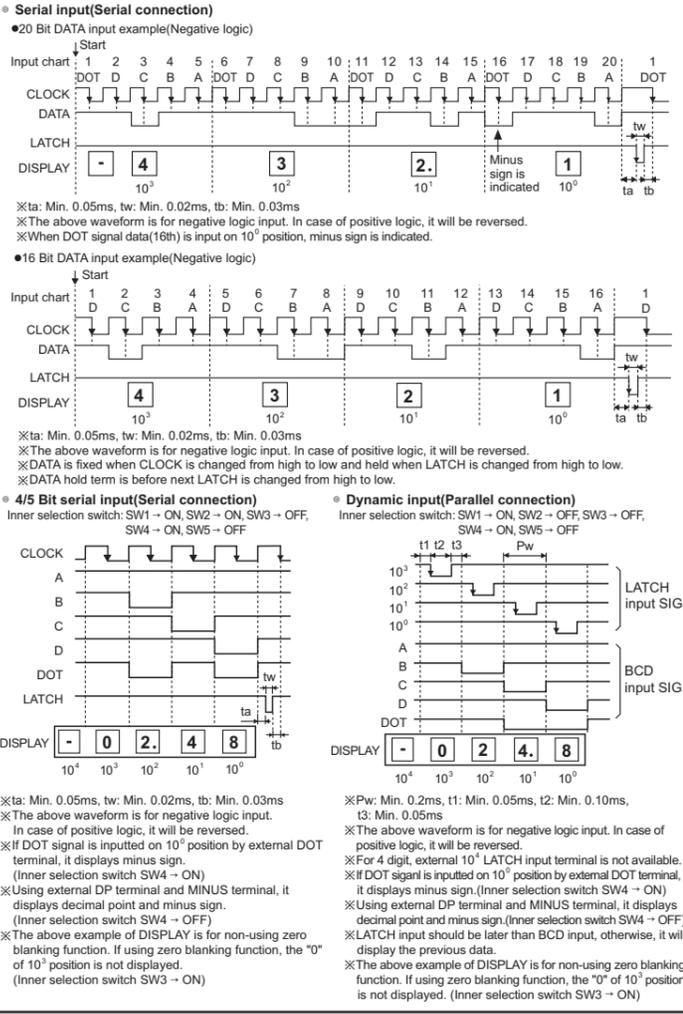
### Input circuit



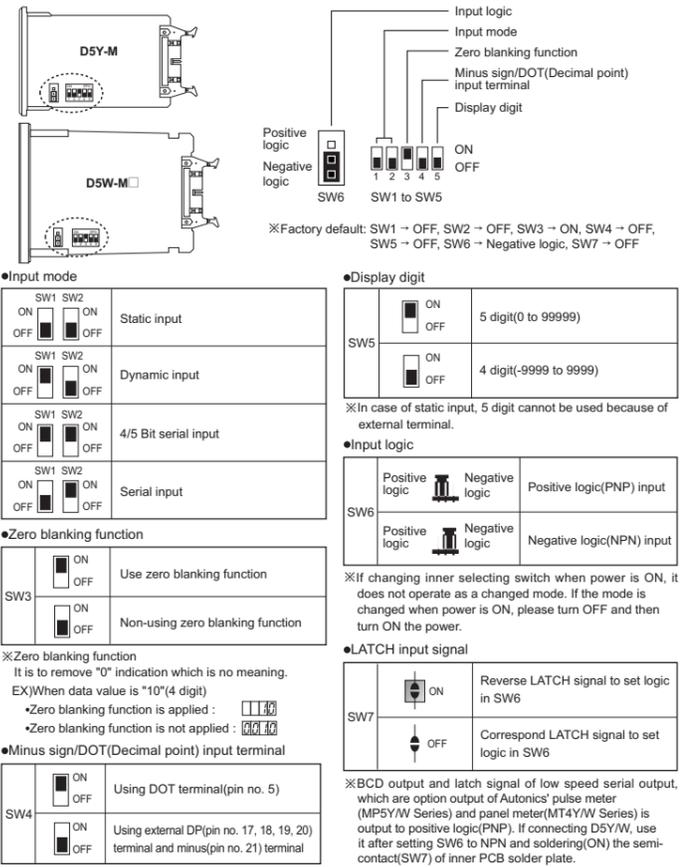
### Input timing



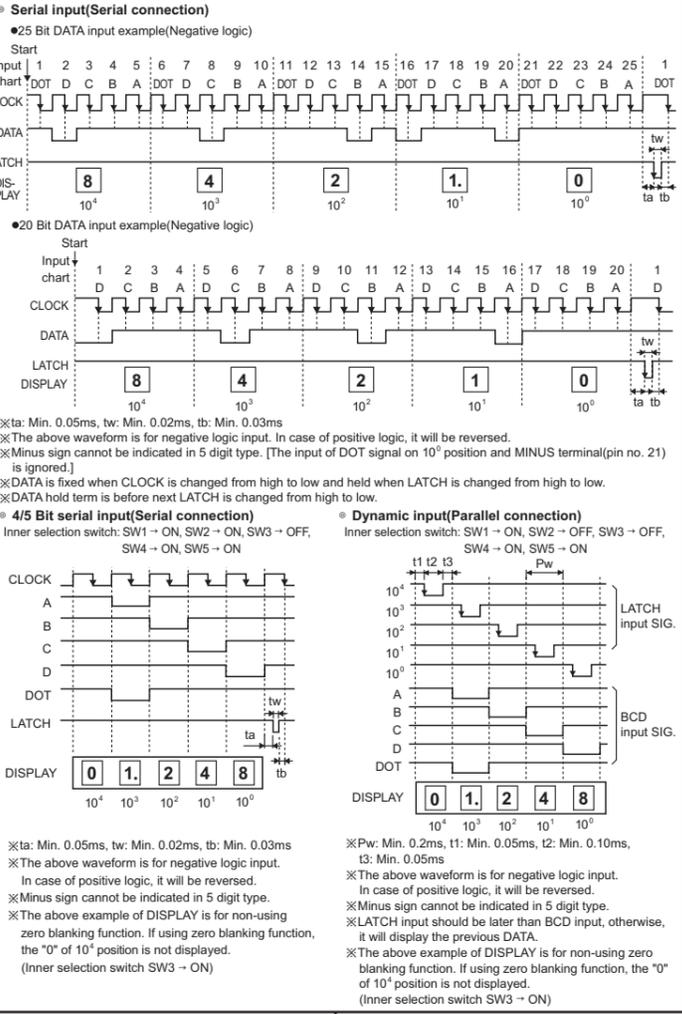
### Time chart(4 digit)



### Inner selection switch



### Time chart(5 digit)



### Input DATA chart

•Negative logic(NPN) input

Display	A	B	C	D	LATCH
0	H	H	H	H	L
1	L	H	H	H	L
2	H	L	H	H	L
3	L	L	H	H	L
4	H	H	L	H	L
5	L	H	L	H	L
6	H	L	L	H	L
7	L	L	L	H	L
8	H	H	H	L	L
9	L	H	H	L	L
Hold	X	X	X	X	H

※Above DATA chart is for negative logic (NPN). In case of positive logic (PNP), DATA input levels are reversed.  
 ※Input level: High → 5-24VDC, Low → 0-1.2VDC  
 ※"X": Either high or low level can be input.

### Decimal point

•DOT (decimal point) and minus sign input is not Serial input.[SW4 = OFF]

Terminal 17-20: 8888.8  
 18-20: 8888.88  
 19-20: 8888.888  
 21-20: -8888.8  
 OPEN: 8888.8

•DOT (decimal point) and minus sign input is Serial input.[SW4 = ON]

①When it is dynamic input and 4/5 bit input, it connects with no.5 pin.(Refer to time chart (4 digit).)  
 ②When it is serial input, 1 bit of serial data should have DOT and minus sign and the DATA is input.(Refer to time chart (4 digit).)

### Caution for using

- Separate this unit cable from high voltage line, power line to avoid inductive noise.
  - Power switch or circuit breaker should be installed in order to cut off the power supply.
  - The switch or circuit-breaker should be installed near by users.
  - In case of making power line and input signal line close, please install Line filter at AC power line.
  - Avoid installing controllers adjacent to high frequency noise generating units including high frequency soldering machine, high frequency sewing machine, and high capacity SCR controllers and motors.
  - It is difficult to install the noise protection device in this small unit, therefore please install the filter, varistor or noise absorber at external line when the equipment has high frequency such as power relay or magnet SW is operating or it is effected by spark with high voltage and lightning stroke.
  - Please use insulated transformer for the DC power supply.
  - Installation environment
    - ①It shall be used indoor.
    - ②Altitude Max. 2,000m
    - ③Pollution Degree 2
    - ④Installation Category II
- ※It may cause malfunction if above instructions are not followed.

### Major products

- Area sensors
- Door/Door side sensors
- Counters
- Rotary encoders
- Power controllers
- Panel meters
- Temperature controllers
- Temperature/Humidity transducers
- Stepping motors/drivers/motion controllers
- Laser marking system(CO<sub>2</sub>, Nd:YAG)
- Laser welding/soldering system
- Photoelectric sensors
- Fiber optic sensors
- Pressure sensors
- Timers
- Display units
- Sensor controllers
- Graphic/Logic panels
- Tachometer/Pulse(Rate) meters

**Autonics Corporation**  
<http://www.autonics.com>

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