

# Autonics

## DISPLAY UNIT D5Y/D5W SERIES INSTRUCTION MANUAL



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

### Safety Considerations

- Please observe all safety considerations for safe and proper production operation to avoid hazards.
- Safety considerations are categorized as follows.
  - Warning** Failure to follow these instructions may result in serious injury or death.
  - Caution** Failure to follow these instructions may result in personal injury or product damage.
- The symbols used on the product and instruction manual represent the following
  - symbol represents caution due to special circumstances in which hazards may occur.

### Warning

- Fail-safe device must be installed when using the unit with machinery that may cause serious injury or substantial economic loss. (e.g. nuclear power control, medical equipment, ships, vehicles, railways, aircraft, combustion apparatus, safety equipment, crime/disaster prevention devices, etc.) Failure to follow this instruction may result in fire, personal injury, or economic loss.
- Install on a device panel to use. Failure to follow this instruction may result in electric shock or fire.
- Do not connect, repair, or inspect the unit while connected to a power source. Failure to follow this instruction may result in electric shock or fire.
- Check 'Connections' before wiring. Failure to follow this instruction may result in fire.
- Do not disassemble or modify the unit. Failure to follow this instruction may result in electric shock or fire.

### Caution

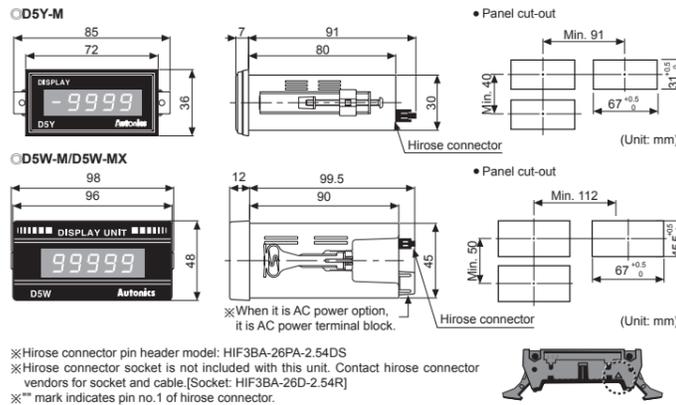
- When connecting the power input of D5W-MX, use AWG 24(0.20mm<sup>2</sup>) to AWG 15(1.65mm<sup>2</sup>) cable or over and tighten the terminal screw with a tightening torque of 0.98 to 1.18N·m. Failure to follow this instruction may result in fire or malfunction due to contact failure.
- Use the unit within the rated specifications. Failure to follow this instruction may result in fire or product damage.
- Use dry cloth to clean the unit, and do not use water or organic solvent. Failure to follow this instruction may result in electric shock or fire.
- Do not use the unit in the place where flammable/explosive/corrosive gas, humidity, direct sunlight, radiant heat, vibration, impact, or salinity may be present. Failure to follow this instruction may result in fire or explosion.
- Keep metal chip, dust, and wire residue from flowing into the unit. Failure to follow this instruction may result in fire or product damage.

### Model

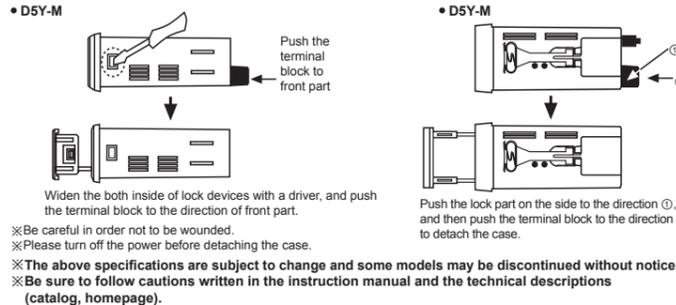
Model	Display digit	Size	Input	Power supply
D5Y-M	99999	DIN W72×H36mm	Static, Dynamic, 4/5 Bit serial, Serial(16/20/25 Bit)	12-24VDC
D5W-M	(5 digit)	DIN W96×H48mm		110/220VAC 50/60Hz*
D5W-MX				

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

### Dimensions



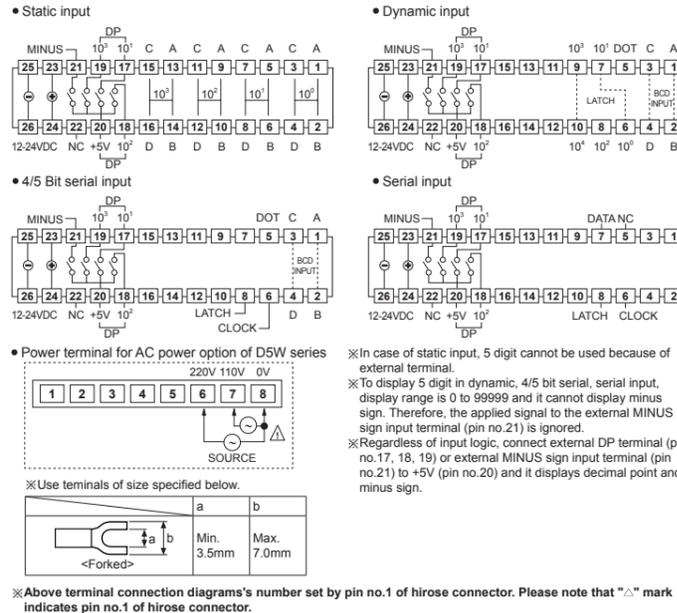
### Case Detachment



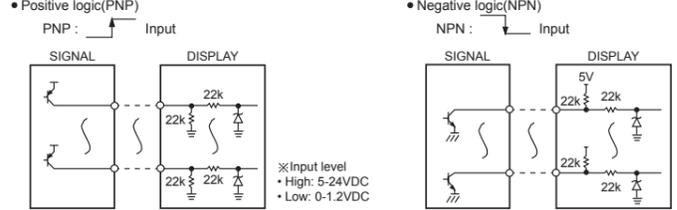
### Specifications

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×H36mm	DIN W96×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-24VDC, Low: 0-1.2VDC		
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		
Environ-ment	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.			

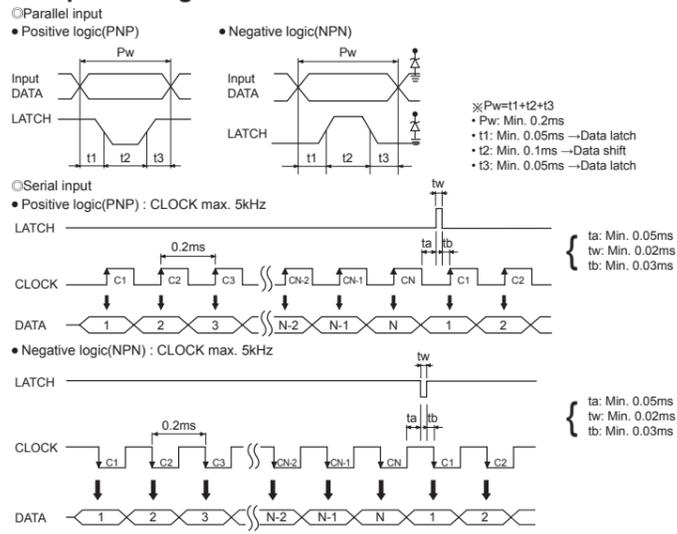
### Connections



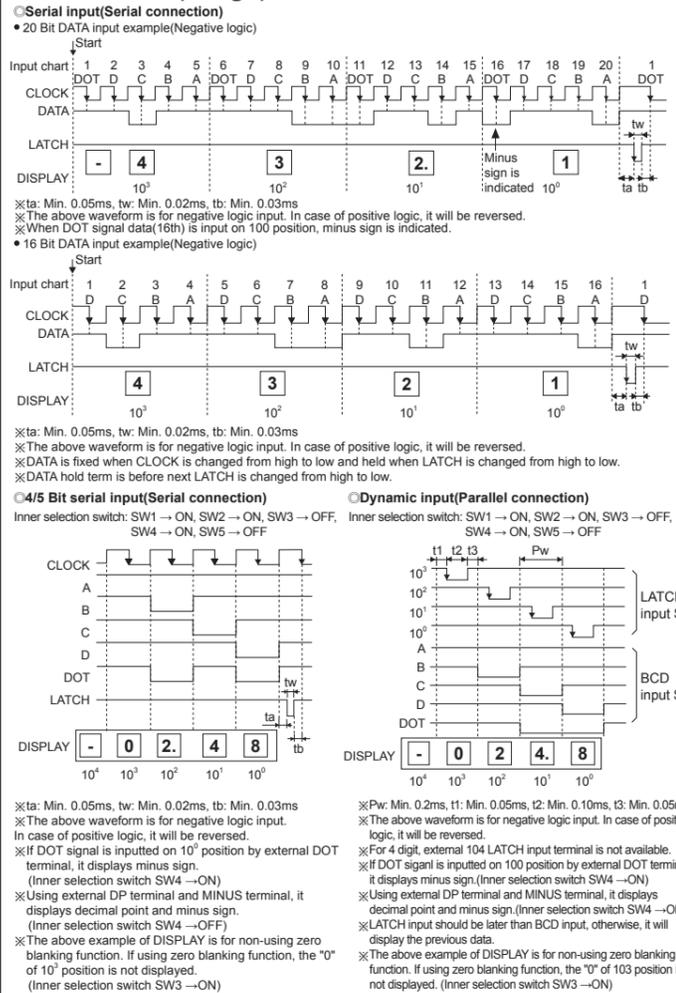
### Input Circuit



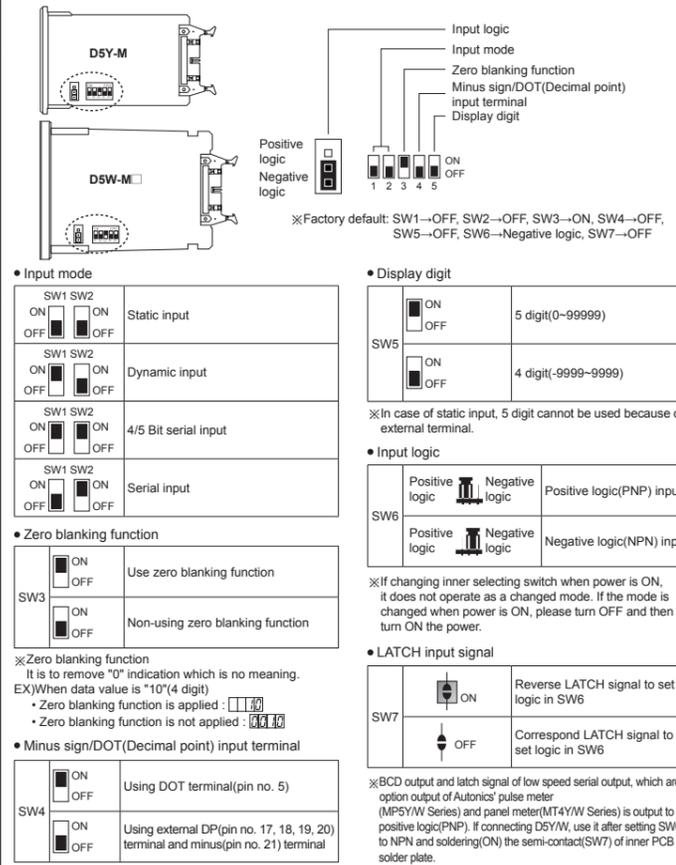
### Input Timing



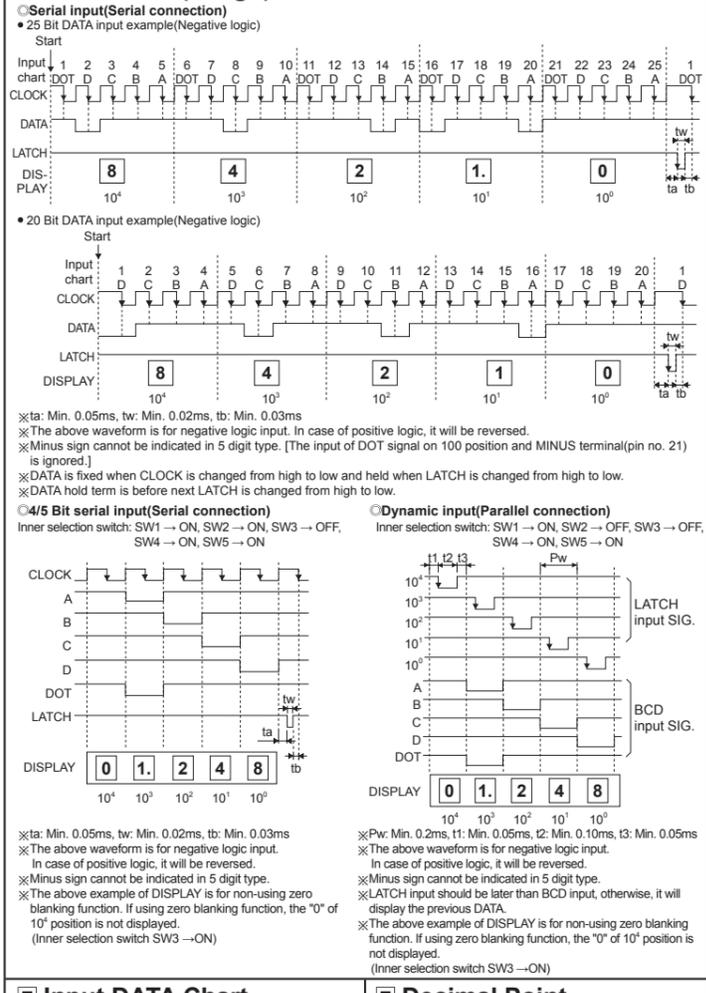
### Time Chart (4-digit)



### 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	H	H	L	H	L
4	H	H	H	L	L
5	L	H	H	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	X

※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: 88888

18-20: 88888

19-20: 88888

21-20: -88888

OPEN 88888

• 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).)

### Cautions during Use

- Follow instructions in 'Cautions during Use'. Otherwise, it may cause unexpected accidents.
- 12-24VDC power supply should be insulated and limited voltage/current or Class 2, SELV power supply device.
- Install a power switch or circuit breaker in the easily accessible place for supplying or disconnecting the power.
- Keep away from high voltage lines or power lines to prevent inductive noise. In case installing power line and input signal line closely, use line filter or varistor at power line and shielded wire at input signal line. Do not use near the equipment which generates strong magnetic force or high frequency noise.
- This unit may be used in the following environments.
  - Indoors (in the environment condition rated in 'Specifications')
  - Altitude max. 2,000m
  - Pollution degree 2
  - Installation category II

### Major Products

- Photoelectric Sensors
- Fiber Optic Sensors
- Door Sensors
- Door Side Sensors
- Area Sensors
- Proximity Sensors
- Pressure Sensors
- Rotary Encoders
- Connector/Sockets
- Switching Mode Power Supplies
- Control Switches/Lamps/Buzzers
- I/O Terminal Blocks & Cables
- Stepper Motors/Drivers/Motion Controllers
- Graphic/Logic Panels
- Field Network Devices
- Laser Marking System (Fiber, Co., Nd:YAG)
- Laser Welding/Cutting System
- Temperature Controllers
- Temperature/Humidity Transducers
- SSRs/Power Controllers
- Counters
- Timers
- Panel Meters
- Tachometers/Pulse (Rate) Meters
- Display Units
- Sensor Controllers

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