

HPAN Series

Sensor controller

- Contact/non contact 2 outputs built in (HPAN-C7, HPAN-CT7)
- For connecting 2 sensors
- Corresponds to DIN rail



Specification

Model	HPAN-C7	HPAN-CT7	HPAN-C7W
Function classification	Common	High function (timer)	Connecting 2 internal sensors
	2 inputs 1 output		2 inputs 2 outputs
Power supply voltage	100 – 240 V AC (50/60 Hz) $\pm 10\%$		
Current consumption	approx 5 VA		
External output voltage	12 V DC ($\pm 10\%$), Load current : max 200 mA		
Input	[H] level 4 – 30 V DC, [L] level 0 – 2 V DC Internal pull up/pull down resistance connection due to the NPN/PNP switch setting(4.7 k Ω) NORM/INV input signal inversion		
Response time	Relay contact : approx 10 ms, NPN open collector : max 5 μ s		
Output	Contact	N.O contact : 250 V AC 3 A resistive load N.C contact : 250 V AC 2 A resistive load relay rated load durability: above 100 thousand times	
	Non contact	NPN open collector 30 V DC 200 mA MAX it is isolated (insulated with the internal circuit)	
External sync function	IN, ES time sync, output function	IN, ES time sync and derivative sync output function	–
Timer type	–	(cautious) 3 functions switching type	–

Note) function : ON DELAY, OFF DELAY, ONE SHORT DELAY

Timer time : 40 ms – 1 sec \leftrightarrow 0.4 s – 10 sec (Select by the DIP switch)

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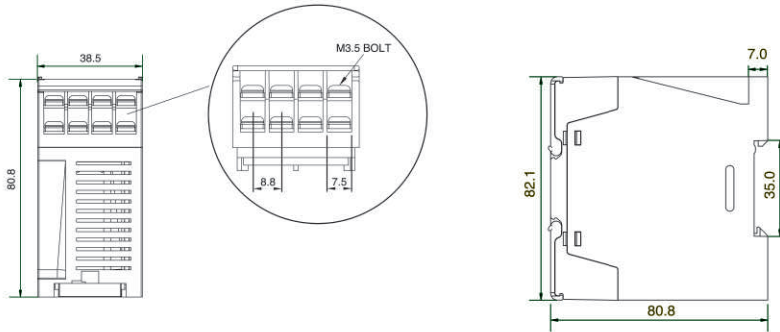
Photo
Sensor

Environment specification

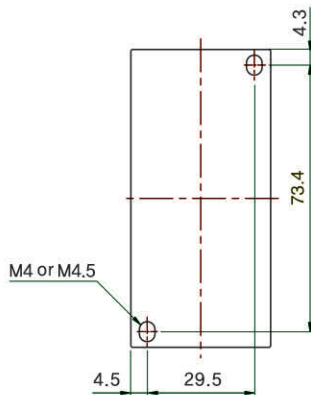
Ambient temperature	-10 ~ 50 °C
Ambient humidity	35 ~ 85 % RH(no icing allowed)
Noise immunity	Square wave shape due to the noise simulator (1μs per 16 ms) ±2000 V
Dielectric strength	1500 V AC 60 Hz For 1 min
Insulation resistance	10 MΩ (500 V DC mega Between recharging and case)
Vibration resistance	10 – 55 Hz (cycle for 1 min), double amplitude : x, y and z each direction for 2 hour (state where power is OFF)
Shock resistance	Durability : 100 m/s ² , x, y and z each direction for 2 times (state where power is OFF)
Weight	Approx. 160 g(Excluded the weight of packing box)

●● Dimension and panel cutout (Unit : mm)

■ Dimension

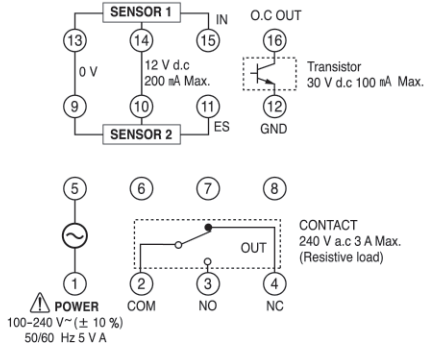


■ Panel cutout



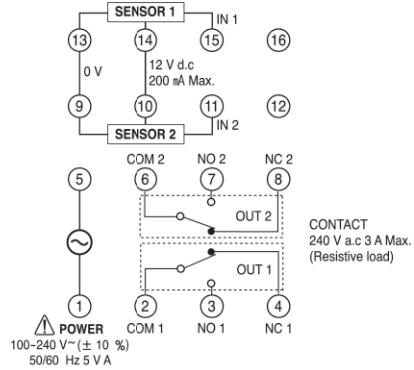
Connection diagram

HPAN-C7/CT7



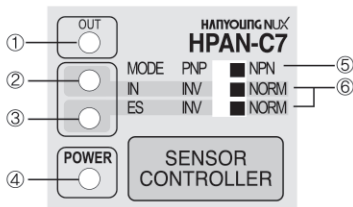
- IN/IN1/IN2: wire the control input
 - ES: wire the sync input
 - O.C. OUT: NPN open collector output (non contact output)
 - OUT/OUT1/OUT2: relay output (contact output)
- * Dotted area represents the internal circuit.

HPAN-C7W



Name and Function of Each Parts

HPAN-C7



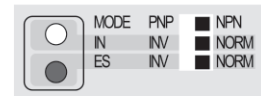
- ① Output display lamp (OUT) : display output operation
- ② Control input display lamp (IN) : display state of control signal input
- ③ Sync input display lamp (ES) : display state of sync signal input
- ④ Power display lamp (POWER) : Light on when power generated
- ⑤ Input selecting switch : switch over NPN/PNP input
 - When NPN input (none voltage input) : connect pull up resistance (4,7 k Ω) MODE PNP NPN
 - When PNP input (voltage input) : connect inner pull down resistance (4,7 k Ω) MODE PNP NPN

- * Refer to input logic of input connection.
- * Control input (IN) and sync input (ES) are applied at the same time (HPAN-CT/CT7)

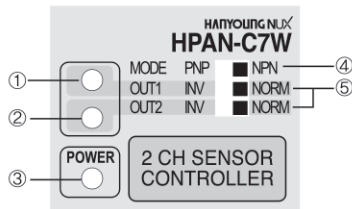
⑥ Input signal conversion switch: switch over INV/NORM input signal

- INV : input signal inversion output	IN	INV	<input type="checkbox"/>	NORM
	ES	INV	<input checked="" type="checkbox"/>	NORM
- NORM : input signal output	IN	INV	<input checked="" type="checkbox"/>	NORM
	ES	INV	<input type="checkbox"/>	NORM

- * When conversion switch of control input (IN) and sync input (ES) are same, control input and sync input (ES) display lamp will be lighted oppositely.
Ex) control input and sync input (ES) Low



■ HPAN-C7W



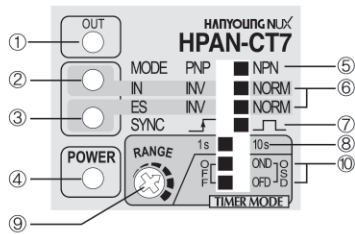
- ① Output display lamp 1 (OUT 1) : display output operation of control signal 1
- ② Output display lamp 2 (OUT 2) : display output operation of control signal 2
- ③ Power display lamp (POWER): Lighted when power Turn ON
- ④ Input selecting switch: NPN/PNP input conversion
 - * Name of each parts and the function : refer to PAN-C7 number 5
 - * Control input 1 and control input 2 applied at the same time
- ⑤ Input signal conversion switch: INV/NORM input conversion

- INV: Input signal inversion output

OUT1	INV	<input type="checkbox"/>	NORM
OUT2	INV	<input type="checkbox"/>	NORM
OUT1	INV	<input type="checkbox"/>	NORM
OUT2	INV	<input type="checkbox"/>	NORM
- NORM: Input signal output

OUT1	INV	<input type="checkbox"/>	NORM
OUT2	INV	<input type="checkbox"/>	NORM

■ HPAN-CT7



- ① Output display lamp(OUT) : display output operation
- ② Control input display lamp(IN) : display state of control signal input
- ③ Sync input display lamp(EN) : display state of sync input
- ④ Power display lamp(POWER) : Lighted when power Turn ON
- ⑤ Input selecting switch : NPN/PNP input conversion
 - * name of each parts anc the functions : refer to PAN-C7 number 5
- ⑥ Input signal conversion switch : INV/NORM input signal conversion
 - * Name of each parts and function : refer to PAN-C7 number 6
- ⑦ Differential sync conversion switch : time/differential sync conversion switch

- : Differential sync selection SYNC
- : time sync selection SYNC

* Set as the time sync mode only when using one control input

- ⑧ Timer time selecting switch : select max setting time
 - Time range with 1 s selection 40 ms - 1 s : approximately 1s 10s
 - Time range with 10 s selection 0,4 s - 10 s : approximately 1s 10s
- ⑨ Timer set up volume : adjusting in time range due to time set up
 - * timer set up range refer to number 8
- ⑩ Timer set up mode switch : 3 types of operation mode depending on setting
 - * ON DELAY, OFF DELAY, ONE SHORT DELAY mode



Photo Sensor