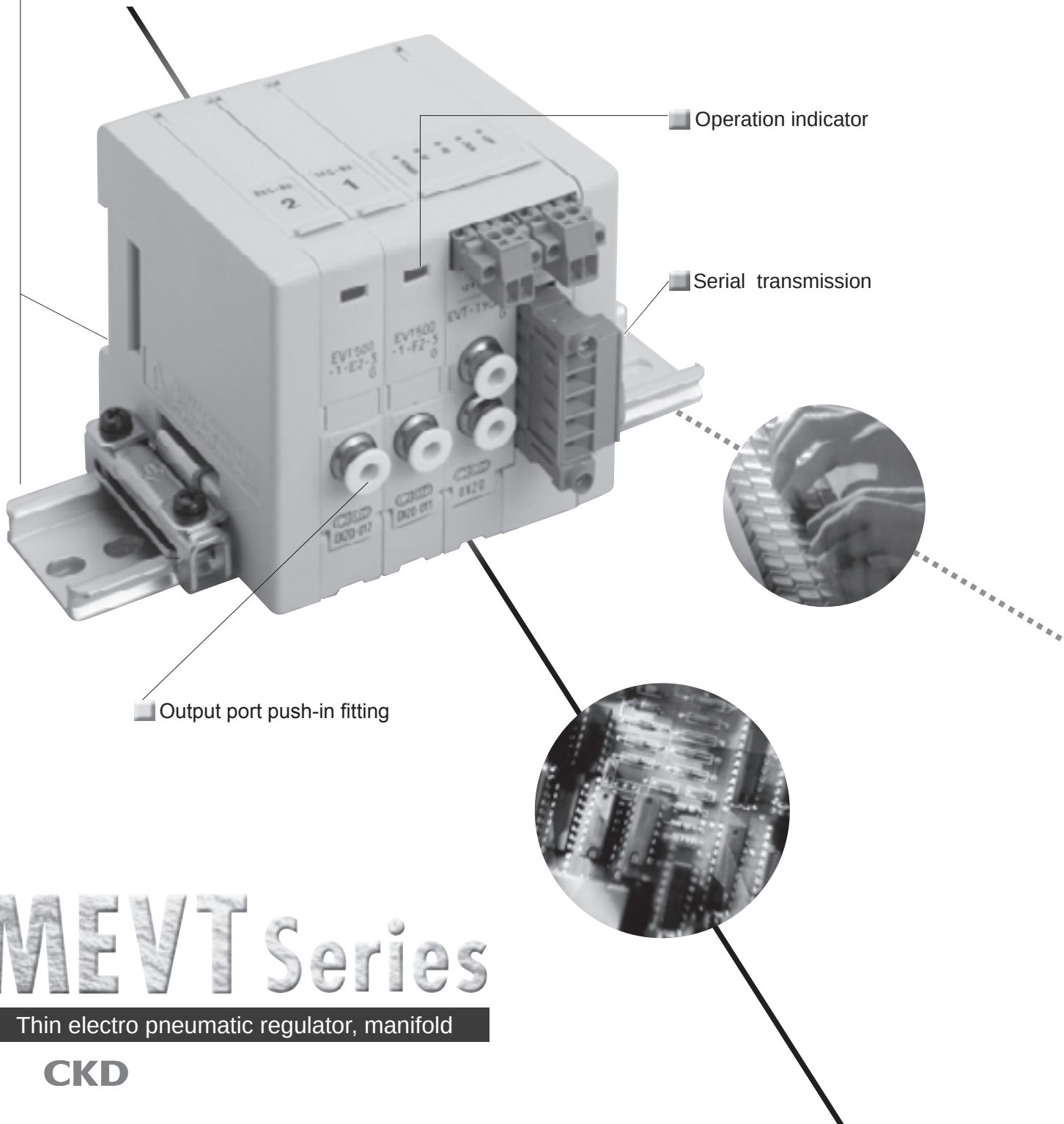
Much-awaited series in the fields of ultra precision and micro systems

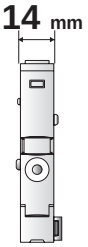
Thin electro pneumatic regulator manifold
for PC control can reduce wiring.
Ideal for pressure control and fine speed cylinder control, etc.,
in semiconductor fields and precise processing fields, etc.



MEVT Series

Thin electro pneumatic regulator, manifold

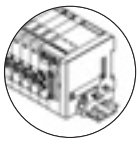
14 mm thin and 80 g light



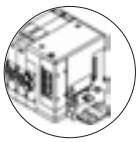
With this high integration, up to 12 manifold stations available.

Network-compatible

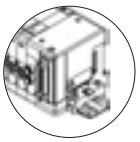
A serial transmission, common terminal block and D sub-connector are available for electric block.



● Serial transmission



● Common terminal block



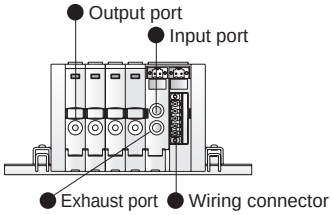
● D sub-connector

2-color display of operation status

2-color operation display (PAT.PEND). Green: pressure is within the set pressure. Red: pressure is outside the set pressure, or error.

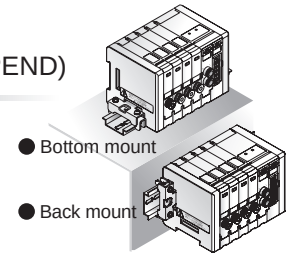
Easy to pipe/wire

Piping and wiring have been centralized on the body front, improving workability and reducing space.



2 installation directions (PAT.PEND)

This regulator can be installed either on the bottom or on the back. The surface for mounting and work can be selected freely.



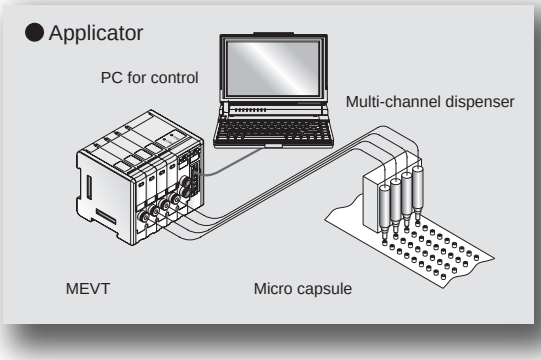
High precision/high-speed response

High precision and high speed response control of fluid pressure using electric signals. Repeatability is 0.3% F.S. and response time is 0.1 sec. (with no load) * Refer to specifications

Eco-friendly product

Material are shown on the major components to make recycling easier.

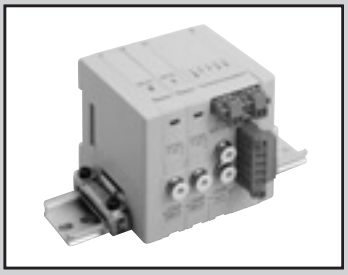
Examples



Other applications

● Fluid precise constant discharge system
- IC chip bonding
- PCB cream soldering
- PCB coating
- UV adhesive, etc.

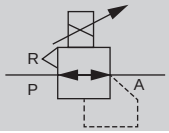
● CMP grinder



Thin electro pneumatic regulator
Reduced wiring manifold

MEVT Series

JIS symbol



Specifications (*1)

Descriptions		EVT100	EVT500
Working fluid		Clean compressed air (JIS B 8392-1 2012: Grade 1.3.2 or equivalent)	
Max. working pressure		200 kPa	0.7 MPa
Min. working pressure		Control pressure + max. control pressure × 0.1	
Proof pressure	Inlet side	300 kPa	1.05 MPa
	Outlet side	150 kPa	0.75 MPa
Pressure control range		0 to 100 kPa	0 to 0.5 MPa
Power supply voltage		24 VDC ± 10% (stabilized power supply with ripple rate 1% or less)	
Current consumption		0.1 A or less	
Input signal (input impedance)		0 to 10 VDC (6.6 kΩ) 0 to 5 VDC (3.3 kΩ) 4 to 20 mA (250Ω)	
Analog output *2		1 to 5 VDC (load impedance 1 kΩ and over)	
Insulation resistance		100 MΩ (500 VDC) and over	
Withstand voltage		1500 VAC 1 min.	
Hysteresis *3		0.4% F.S. or less	
Linearity *3		±0.5% F.S. or less	
Resolution *3		0.1% F.S. or less	
Repeatability *3		0.3% F.S. or less	
Temperature characteristics	Zero drift	0.15% F.S./°C or less	
	Span drift	0.07% F.S./°C or less	
Max. flow rate (ANR) *4		2 ℓ/min	6 ℓ/min
Step response *5	No load	0.1 s or less	
	15 cm^3 load	0.5 s or less	
Ambient temperature		5 to 50°C	
Fluid temperature		5 to 50°C	
Operation display *6		2-color display	
Lubrication		Not available	
Mounting orientation		Free	
Atmosphere		Containing corrosive gas is not permissible	
Main dimensions		W14 × D75 × H75	
Port size		ø4, ø6 push-in fitting (selectable)	
Weight (main body)		80 g	

*1: Above characteristics are the values where power voltage is 24 ± 0.1 VDC, and measured at room temperature.
*2: Monitor output is not available for the serial transmission.
DeviceNet-compatible (T9DAR) and CC-Link-compatible (T9GAR) have pressure monitor data. (Refer to the serial transmission slave station specifications on page 881.)
*3: The condition of the values above is: 25 ± 3°C ambient temperature, no load, working pressure of the max. control pressure × 1.1 (EVT100: 110 kPa, EVT500: 0.55 MPa), and 10 to 100% control pressure.
Limited to a closed circuit in the secondary side, the pressure may fluctuate if used for blowing, etc.
*4: The value above is obtained at the max. working pressure and max. control pressure.
*5: The value above is obtained at the max. working pressure and when the step amount changes from
- 50% F.S. → 100% F.S.
- 50% F.S. → 60% F.S.
- 50% F.S. → 40% F.S.

Note 6: Operational indicator is just for reference, but not to assure the accuracy.

Manifold specifications

Descriptions		Electric/supply and exhaust block	
		T11R/T30R	T9DAR/T9GAR
Manifold		Block manifold	
Mounting method		DIN rail mount	
Supply and exhaust method		Common supply/common exhaust	
Max. station number		8 stations	12 stations *1
Port size	Output port (A)	ø4, ø6 push-in fitting (selectable)	
	Input (P)/exhaust (R) ports	ø4, ø6 push-in fitting (selectable)	

*1: The max. station No. per slave unit is 4 (T9DAR/T9GAR).

How to order

Manifold model No.

MEVT 500 - 0 C4 - T11R - 8 - U - 3 - P70 * Be sure to fill in the "manifold specifications" (page 886).

Discrete EVT model No.

EVT 500 - 0 C4 — E2 — 3 - P70

Model No.

Ⓐ Pressure control range

Ⓑ Input control signal

Ⓒ Port size *1 *2

Ⓓ Electric/supply and exhaust block

Ⓔ Lead wire

Ⓕ Station No.

Ⓖ DIN rail mounting direction

Ⓗ Voltage

Ⓘ Clean room specifications

Code	Content
Ⓐ Pressure control range	
100	0 to 100 kPa
500	0 to 0.5 MPa

Ⓑ Input control signal		Electric/supply and exhaust block			
		T11R	**T30R**	**T9DAR**	**T9GAR**
0	0 to 10 VDC	●	●		
1	0 to 5 VDC	●	●	●	●
2	4 to 20 mA	●	●		

Ⓒ Port size (output port (A))	
C4	ø4 push-in fitting
C6	ø6 push-in fitting

Ⓓ Electric/supply and exhaust block	
T11R	Common terminal block
T30R	D sub-connector
T9DAR	Serial transmission (DeviceNet 4 input points/4 output points)
T9GAR	Serial transmission (CC-Link Ver1.10 4 input points/4 output points)

Ⓔ Lead wire		Electric/supply and exhaust block			
		T11R	**T30R**	**T9DAR**	**T9GAR**
E2	4P connector	●	●	●	●

Ⓕ Station No.	
1	1 station
to	(May vary depending on reduced wiring specifications.)
12	12 stations (Refer to the manifold specifications on page 886.)

Ⓖ DIN rail mounting direction	
U	Bottom
B	Back

Ⓗ Voltage	
3	24 VDC

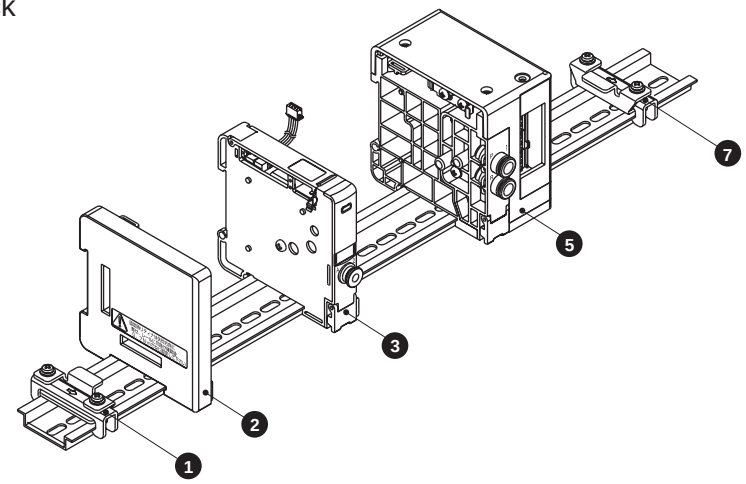
Ⓘ Clean room specifications	
	Structure
P70	Exhaust treatment

⚠ Note on selection guide

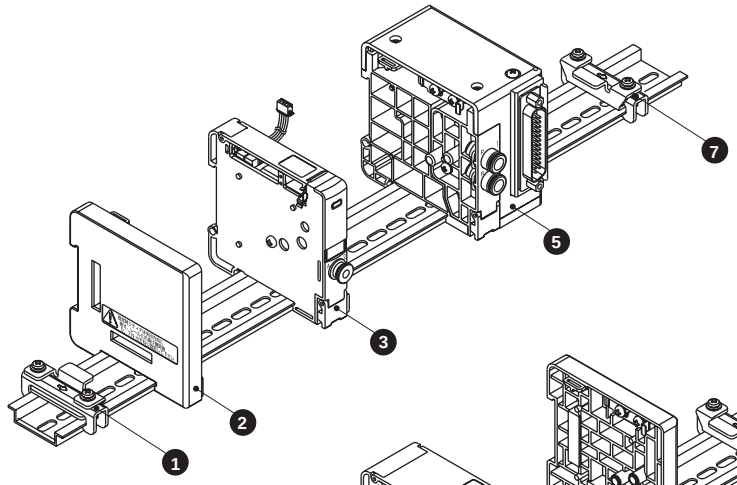
*1: Specify the input (P)/exhaust (R) port sizes in the electric, supply and exhaust block section of manifold specifications.
*2: A filter is built in the input (P)/output (A) ports.

MEVT components and parts list

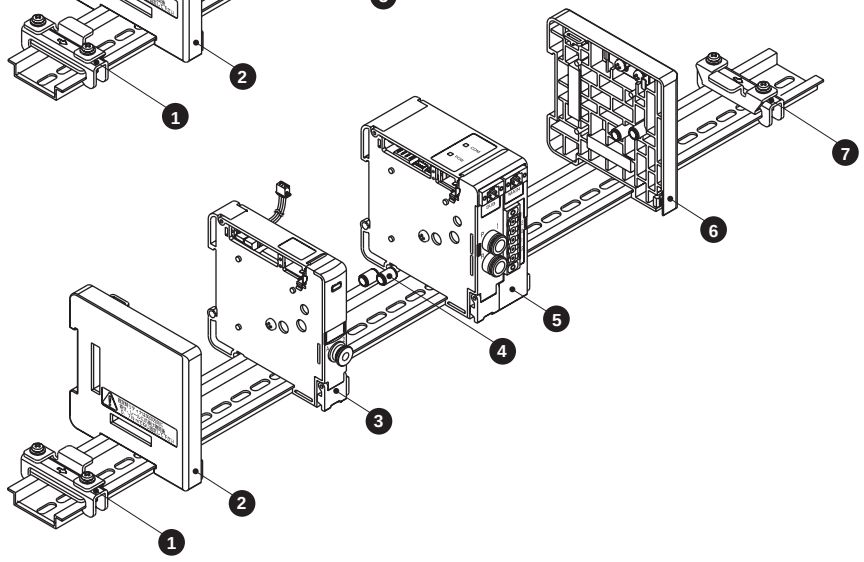
Common terminal block



D sub-connector



Serial transmission



Main parts list

No.	Block component name	Model No.	No.	Block component name	Model No.
1	Retainer L	EVT-HL-P70	5	Electric/supply and exhaust block	EVT-T*-P70
2	End block L	EVT-EL-P70	6	End block R	EVT-ER-P70
3	EVT	EVT*OO-P70	7	Retainer R	EVT-HR-P70
4	Piping fitting	EVT-P-P70			

Weight

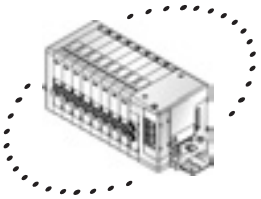
(g)

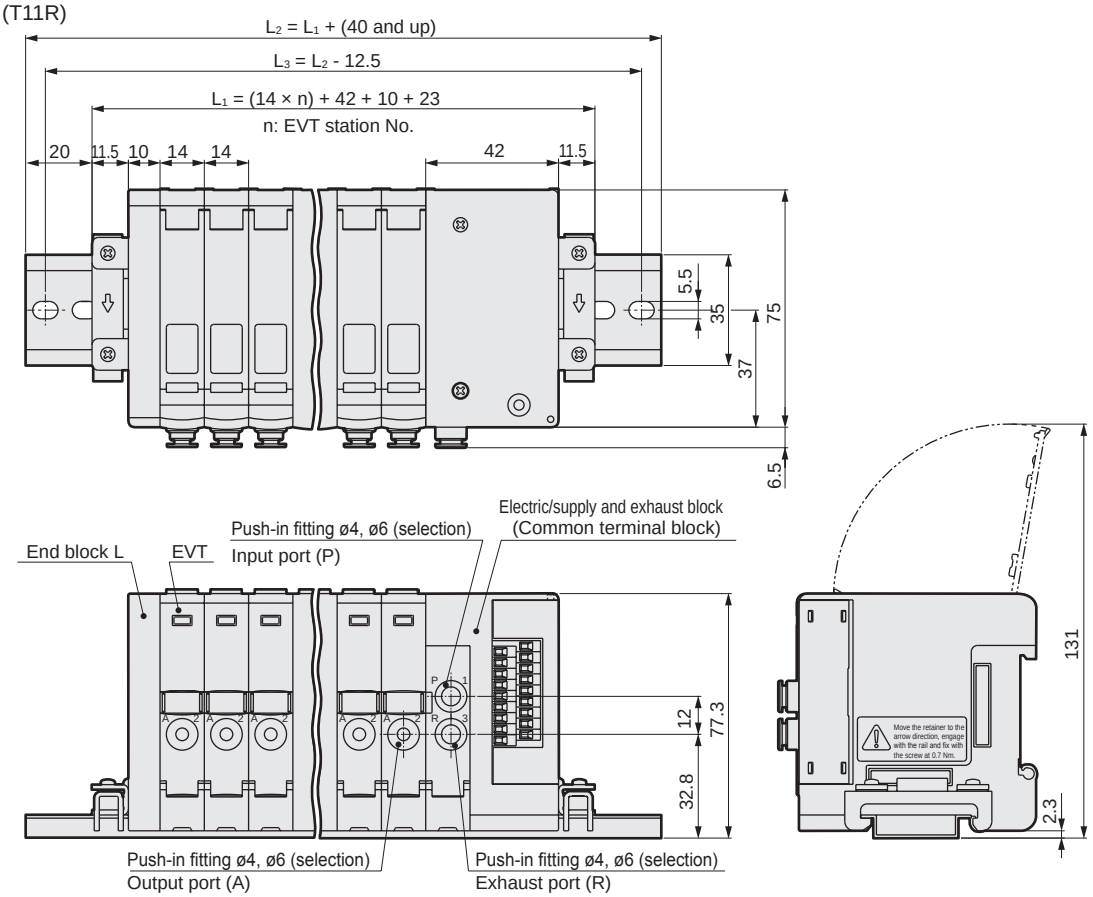
Block		Weight	Block		Weight
EVT	EVT*OO-P70	80	Electric/supply and exhaust block	T11R-P70	115
End block	EVT-EL-P70	30		T30R-P70	125
	EVT-ER-P70	30		T9*R-P70	145
			Retainer	EVT-H*-P70	25
			Piping fitting	EVT-P-P70	-

Dimensions

MEVT-P70

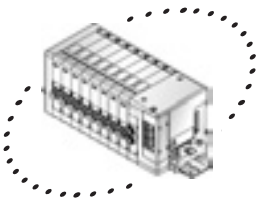
● Common terminal block (T11R)

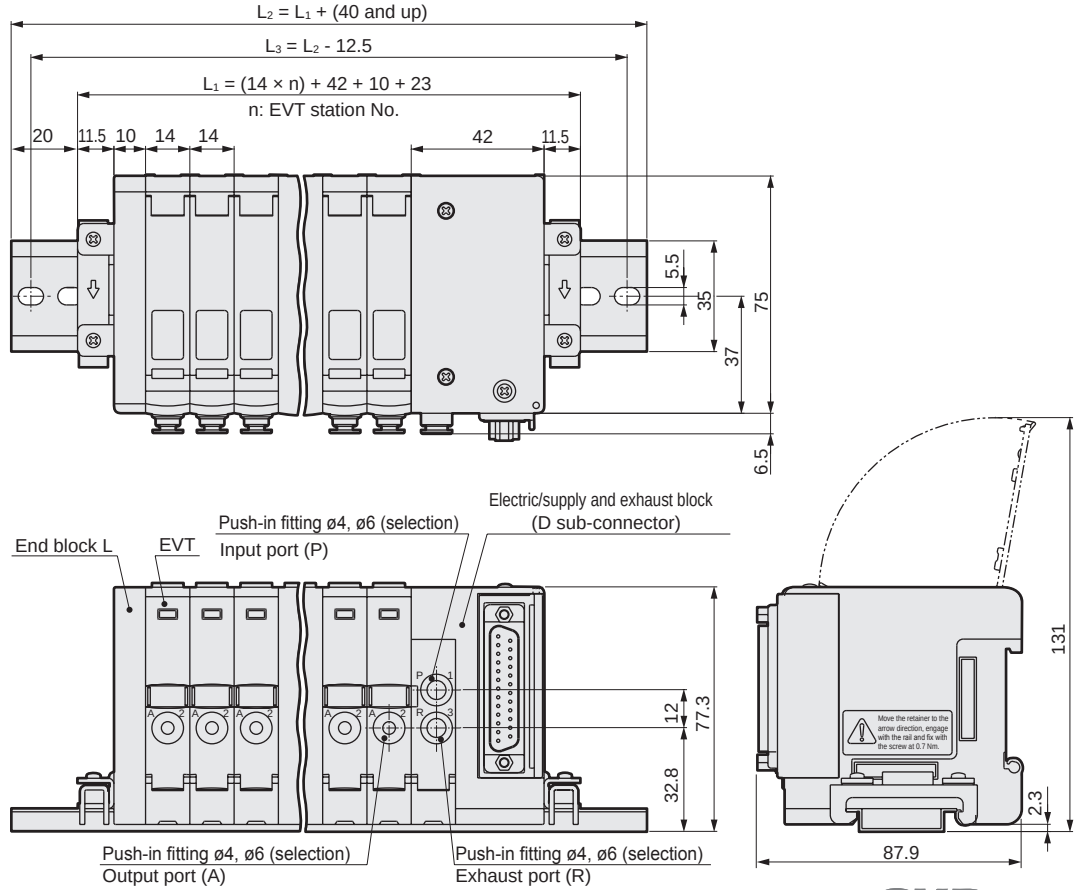




MEVT-P70

● D sub-connector (T30R)

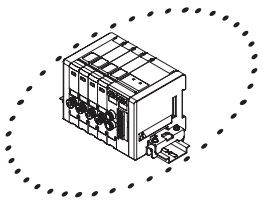


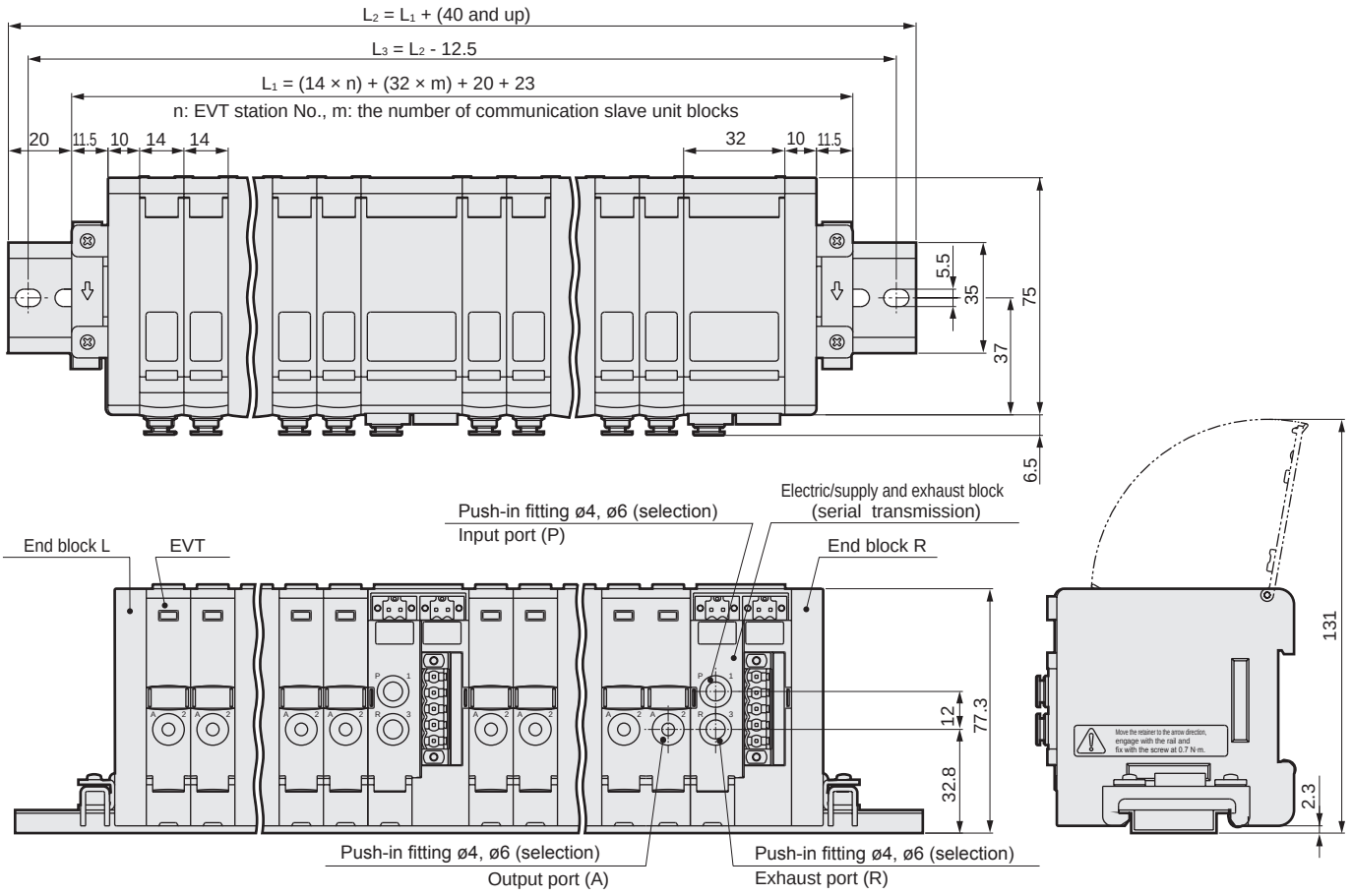


Dimensions

MEVT-P70

● Serial transmission (T9*)

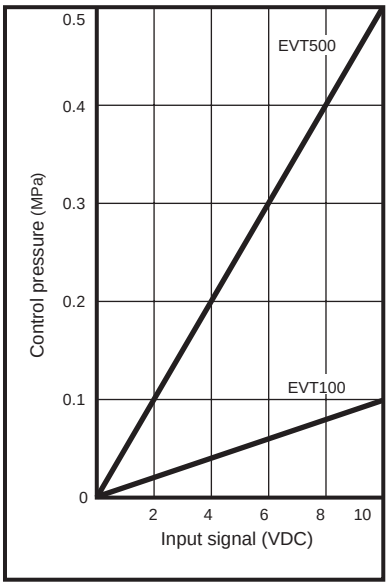




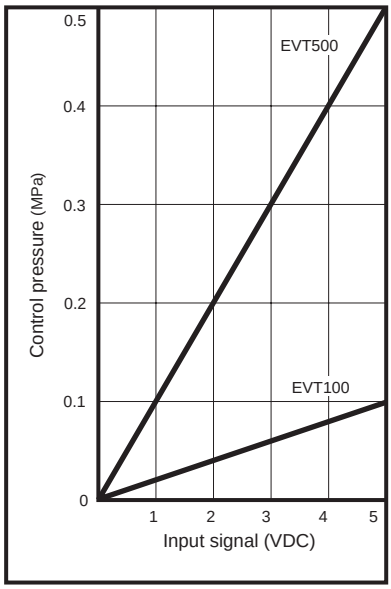
*1: The max. station No. per slave unit is 4 (T9DAR/T9GAR).

I/O characteristics

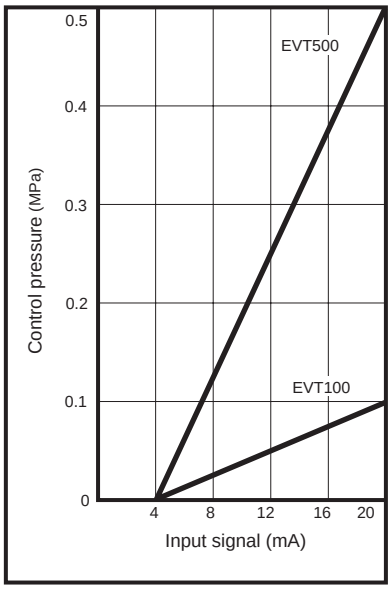
● Input signal 0-10 VDC



● Input signal 0-5 VDC

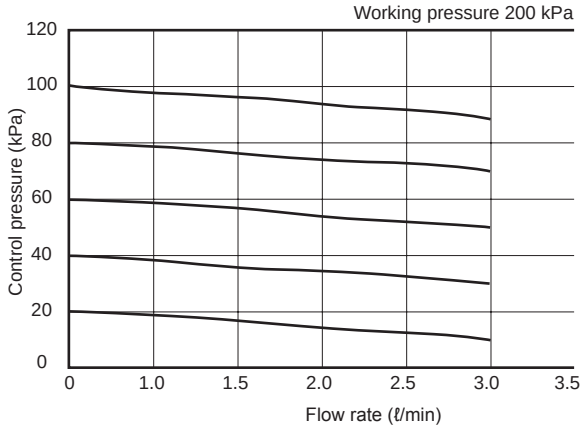


● Input signal 4-20 mA

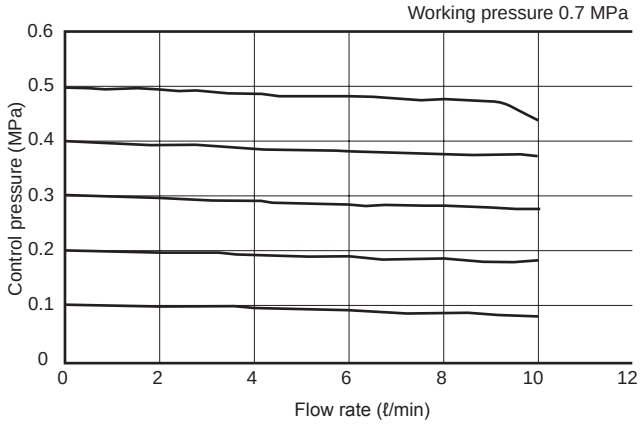


Flow characteristics

● EVT100



● EVT500



MEVT: Block configurations

● EVT discrete

(1) Required station No. of EVT can be placed on DIN rail.
However, the max. station No. is limited depending on the method. (Refer to page 868.)

(2) Viewed from the fitting, nominal station No. of EVT is assigned as 1, 2, 3, ⋯ from right.

(3) As shown on the wiring cover of EVT, REG-No. is assigned as 1, 2, 3, per electric/supply and exhaust block from the nearest side.

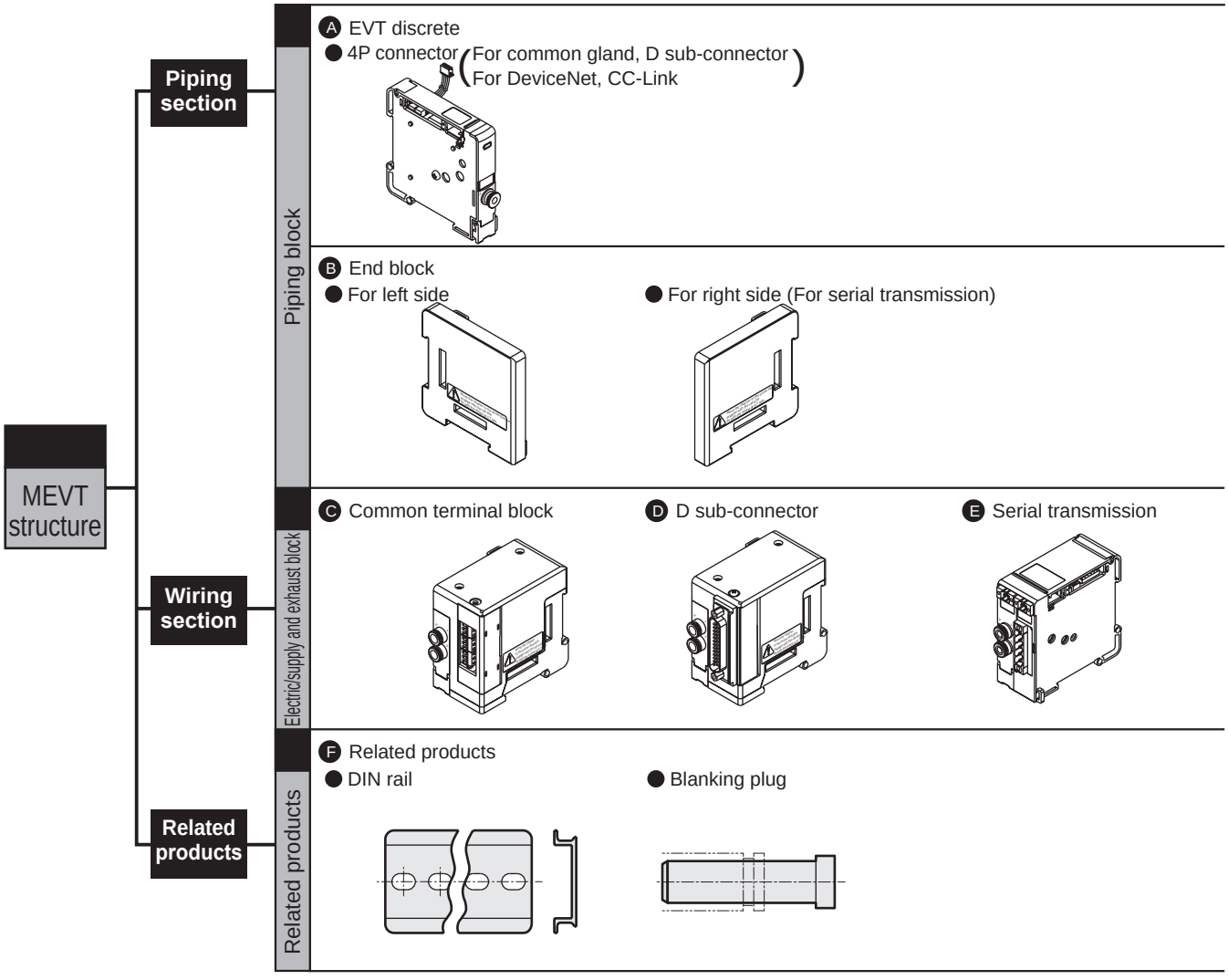
● Electric/supply and exhaust block

(1) Required number can be placed onto the connecting section per block.

● End block

(1) For the serial transmission install the blocks to both sides.

(2) If common terminal block or D sub-connector install this block on the opposite face of electric/supply and exhaust block.



Piping section

A.EVT discrete

Refer to pages 868, 869 for selection guide.

B. End block

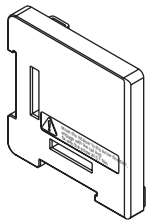
For the serial transmission (T9*), install the block to both ends of manifold.

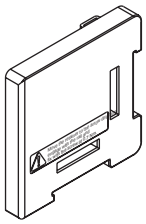
When using the common terminal block (T11R) or D sub-connector (T30R), mount it only on the opposite side to the electric and supply/exhaust block (EVT-EL).

EVT - E R - P70

Model No. Ⓐ Type Ⓑ Mounting position Ⓒ Clean room specifications

Ⓐ Type		Ⓑ Mounting position		Ⓒ Clean room specifications	
E	Common exhaust	L	For left side		Structure
		R	For right side (For serial transmission)	P70	Exhaust treatment





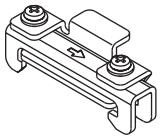
[Retainer]

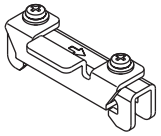
Fix at both ends of manifold.

EVT - H R - P70

Model No. Ⓐ Mounting position Ⓑ Clean room specifications

Ⓐ Mounting position		Ⓑ Clean room specifications	
L	For left side		Structure
R	For right side	P70	Exhaust treatment





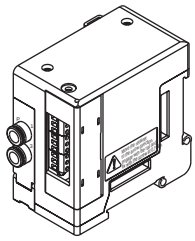
Electric/supply and exhaust block

C. Common terminal block

EVT - T11R - C6 - P70

Model No. Type Ⓐ Input (P)/exhaust (R) port sizes Ⓑ Clean room specifications

Ⓐ Input (P)/exhaust (R) port sizes		Ⓑ Clean room specifications	
C4	ø4 push-in fitting		Structure
C6	ø6 push-in fitting	P70	Exhaust treatment

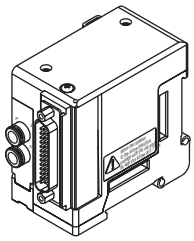


D. D sub-connector

EVT - T30R - C6 - P70

Model No. Type Ⓐ Input (P)/exhaust (R) port sizes Ⓑ Clean room specifications

Ⓐ Input (P)/exhaust (R) port sizes		Ⓑ Clean room specifications	
C4	ø4 push-in fitting		Structure
C6	ø6 push-in fitting	P70	Exhaust treatment

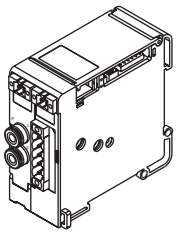


E. Serial transmission

EVT - T9DAR - C6 - P70

Model No. Ⓐ Type Ⓑ Input (P)/exhaust (R) port sizes Ⓒ Clean room specifications

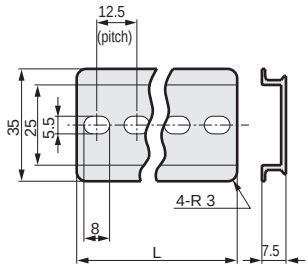
Ⓐ Type		Ⓑ Input (P)/exhaust (R) port sizes		Ⓒ Clean room specifications	
T9DAR	DeviceNet 4 input points/4 output points	C4	ø4 push-in fitting		Structure
T9GAR	CC-Link Ver1.10 4 input points/4 output points	C6	ø6 push-in fitting	P70	Exhaust treatment



Related products DIN rail, silencer, blanking plug

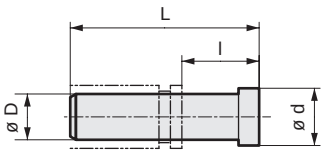
DIN rail

EVT-BAA [length] -P70



* Select [Length] from the DIN rail length selection table L_2 on page 886.

Blanking plug



Model No.	D	L	l	d	Weight g
GWP4-B-P70	ø4	27	9	6	0.4
GWP6-B-P70	ø6	29	11	8	0.8

Common terminal block (T11R): Wiring method

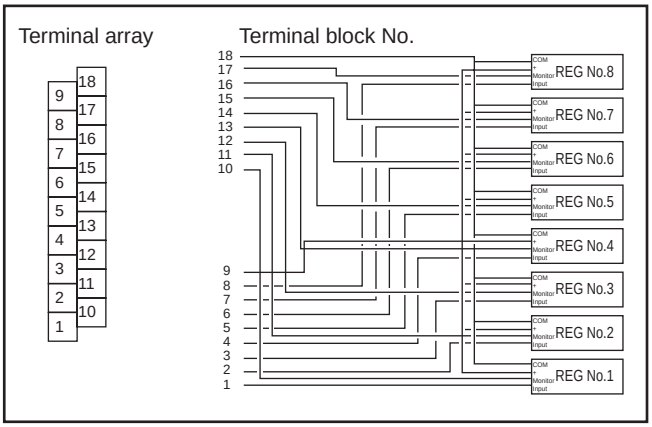
Notes on wiring

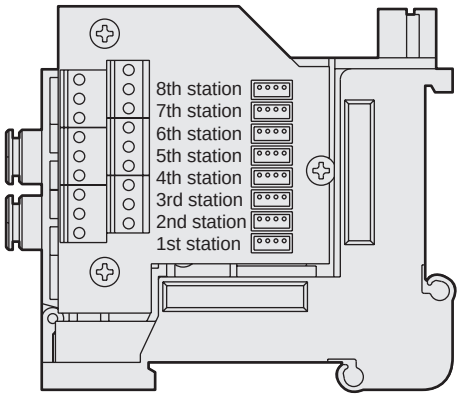
[Cautions for common terminal block (T11R)]

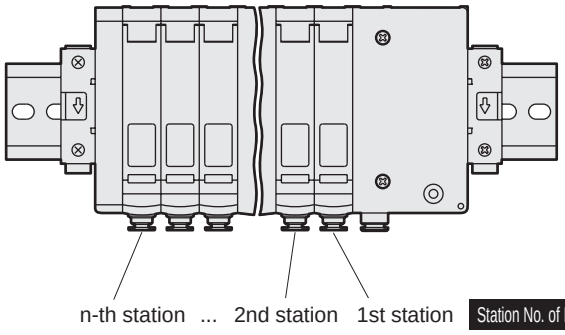
Viewed from piping port, station No. of EVT is numbered from right. If voltage may drop depending on simultaneous communication or cable length, 4 - 20 mA of current is recommended for input signal.

Terminal box recommended screw tightening torque 0.2 N·m

Internal wiring method of T11R (up to 8 stations for EVT)







Terminal array of wiring method T11R

* Max. station No. of EVT is 8 stations.

Terminal No.

18	17	16	15	14	13	12	11	10
9	8	7	6	5	4	3	2	1

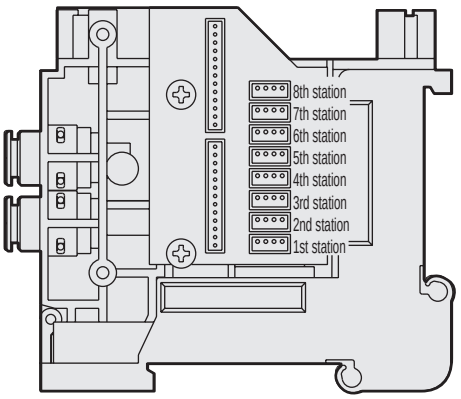
[Standard wiring]

Terminal No.	**18**	**17**	**16**	**15**	**14**	**13**	**12**	**11**	**10**
Terminal array	COM	Analog output 8	Analog output 7	Analog output 6	Analog output 5	Analog output 4	Analog output 3	Analog output 2	Analog output 1
Terminal No.	**9**	**8**	**7**	**6**	**5**	**4**	**3**	**2**	**1**
Terminal array	Power supply+	Input signal 8	Input signal 7	Input signal 6	Input signal 5	Input signal 4	Input signal 3	Input signal 2	Input signal 1

D sub-connector (T30R): Wiring method

D sub-connector (T30R)

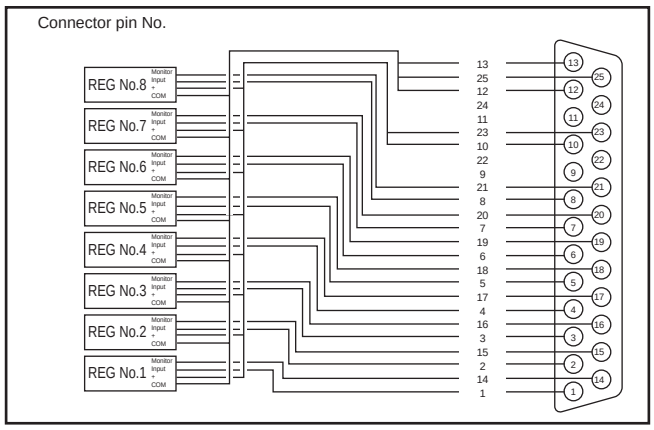
A connector used for wiring method T30R is generally called as D sub-connector and widely used in FA and OA components. Especially, 25P type complying RS-232C standards is a dedicating connector widely used in PC communication board.

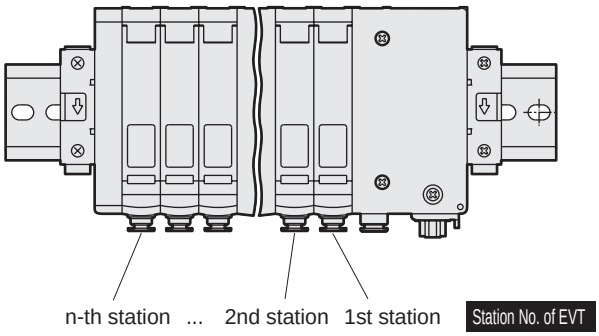


[Cautions for D sub-connector (T30R)]

Viewed from piping port, station No. of EVT is numbered from right.

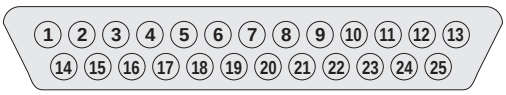
If voltage may drop depending on simultaneous communication or cable length, 4 - 20 mA of current is recommended for input signal.





Connector pin array of wiring method T30R

* Max. station No. of EVT is 8 stations.



Pin No.	1	2	3	4	5	6	7	8	9	10	11	12	13
Pin array	Input signal 1	Input signal 2	Input signal 3	Input signal 4	Input signal 5	Input signal 6	Input signal 7	Input signal 8	(Void)	Power supply+	(Void)	COM	COM
Pin No.	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**21**	**22**	**23**	**24**	**25**	
Pin array	Analog output 1	Analog output 2	Analog output 3	Analog output 4	Analog output 5	Analog output 6	Analog output 7	Analog output 8	(Void)	Power supply+	(Void)	COM	

How to order cable with D sub-connector

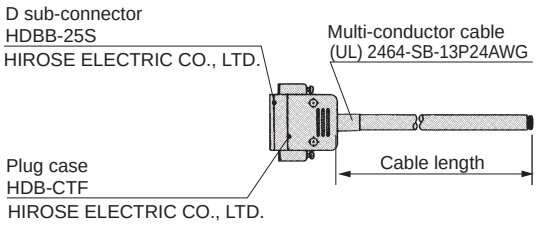
EVT - CABLE - D 0 0 - 5 - P70

- C Clean room specifications
- A User interface
- B Cable length

	Model
	EVT
Code	
A 0	Cutting only
B 5	5 m
C	Structure
P70	Exhaust treatment

D sub-connector pin No. and conductor

● EVT-CABLE-D00-B



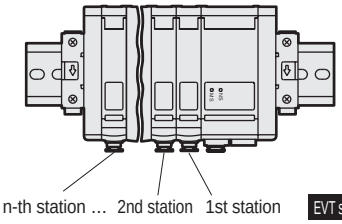
Cable length	Weight g
5 m	793

D sub-connector pin No.		1	2	3	4	5	6	7	8	9	10	11	12	13
Conductor	Insulator color	Yellow	Green	Gray	White	Yellow	Green	Gray	White	Yellow	Orange	Green	Orange	Orange
	Mark type	1 point	1 point	1 point	1 point	2 point	2 point	2 point	2 point	3 point	1 point	3 point	1 point	2 point
	Mark color	Black	Black	Black	Black	Black	Black	Black	Black	Black	Red	Black	Black	Black

D sub-connector pin No.		14	15	16	17	18	19	20	21	22	23	24	25	
Conductor	Insulator color	Yellow	Green	Gray	White	Yellow	Green	Gray	White	Yellow	Orange	Orange	Orange	
	Mark type	1 point	1 point	1 point	1 point	2 point	2 point	2 point	2 point	3 point	2 point	3 point	3 point	
	Mark color	Red	Red	Red	Red	Red	Red	Red	Red	Red	Red	Red	Black	

Serial transmission (T9*): Wiring method

[Cautions for serial transmission (T9*)]



- The slave unit's output No. differs with the maker. The internal connector No. and EVT correspond as shown below.
- EVT station are set in order from the right facing the piping port.
- Since internal connectors are wired in order, if there are fewer EVT stations on the left face of the electric and supply/exhaust block than total connectors, some connectors are left open. Do not use these open connectors for drives other than EVTs in use.
- Do not remove protective connectors connected to void connectors or a failure may occur.
- The working power is 24 VDC.
- A slave unit for each communication system is used. Contact CKD for compatible PLC and host station models and communication system specifications. (Refer to page 881)
- To ensure network reliability, use the communication cable recommended for each communication system.
- Securely fix the enclosed connector with set screw.

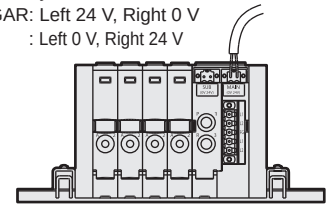
(Refer to the right table for proper torque)

	Cable fixing screw	Connector fixing screw
Power supply connector	0.25 N·m	0.4 N·m
Communication connector	0.5 N·m	

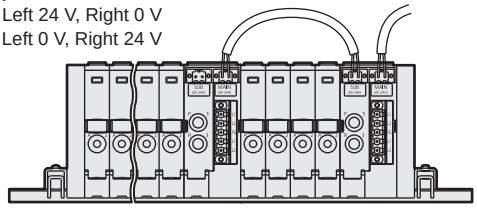
- The SUB power supply terminal is only for crossover wiring. Use the MAIN power supply terminal when connecting a single wire. Do not allow power to be applied to both SUB and MAIN power supply terminals. Otherwise malfunction may occur.
- MAIN and SUB power terminals are connected internally. When not using the SUB power terminal, connect the enclosed connector to prevent short-circuiting.

[Wiring power cable]

When using one electrical block (electric, supply and exhaust block), connect the power cable to MAIN.
* Check power polarity.
T9DAR/T9GAR: Left 24 V, Right 0 V
: Left 0 V, Right 24 V



When using more than one wiring block (electric, supply and exhaust block)
Connect one power cable to the first MAIN, and then from SUB to the next MAIN.
* Check power polarity.
T9DAR/T9GAR: Left 24 V, Right 0 V
: Left 0 V, Right 24 V



* Refer to the table below for EVT station No.

EVT max. station number

Slave unit (electric, supply and exhaust block) model No.	Communication system name	EVT max. station number		
		When using 1 slave unit	When using 2 slave unit	When using 3 slave unit
T9DAR	DeviceNet	4 units	8 units	12 units
T9GAR	CC-Link	4 units	8 units	12 units

Up to three slave units can be connected per manifold.

Correspondence of wiring method T9* channel No. and connector No.

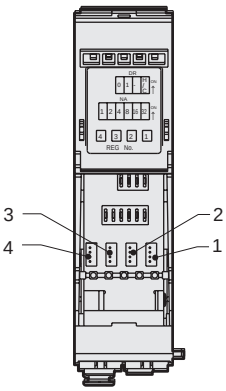
T9DAR				
Channel No. (pressure setting data)	0 (1)	1 (2)	2 (3)	3 (4)
Channel No. (pressure monitor data)	0 (1)	1 (2)	2 (3)	3 (4)
Connector No. (REG No.) (EVT station No.)	**1**	**2**	**3**	**4**

* The channel No. may be counted from "1" depending on the master.

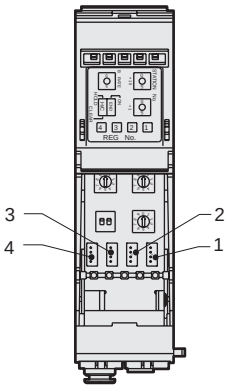
T9GAR				
Channel No. (pressure setting data)	1	2	3	4
Channel No. (pressure monitor data)	1	2	3	4
Connector No. (REG No.) (EVT station No.)	**1**	**2**	**3**	**4**

Internal connector No.

T9DAR



T9GAR



Serial transmission slave unit specifications (Refer to the table below for the applicable PLC correspondence table)

Descriptions		T9DAR	T9GAR
Communication subject		DeviceNet *1	CC-Link Ver1.10 *2
Communication speed		125 kbps/250 kbps/500 kbps	156 kbps/625 kbps/2.5 Mbps/ 5 Mbps/10 Mbps
Power supply voltage		24 VDC ± 10% *3 (Unit power supply/regulator power supply common terminal) Communication power supply (V+, V-): 11 to 25 VDC	24 VDC ± 10% *3 (Unit power supply/regulator power supply common terminal)
Current consumption		60 mA or less Load current is not included Communication power supply (V+, V-): 50 mA or less	80 mA or less Load current is not included
Max. output No. (DA output)		4 point	
Max. input No. (AD input)		4 point	
DA output	Pressure setting data	12 bit	
	Accuracy *4	±1% F.S. or less	
AD input	Pressure monitor data	12 bit	
	Accuracy *5	±6% F.S. or less	
Occupied		Occupied output memory: 2 × n (byte) *6 Occupied input memory: 2 × n (byte) *6	Occupied unit No.: 1 station (Remote device station)

*1 Contact CKD for EDS file.
*2 Contact CKD for profile.
*3 To secure output accuracy, use safety power supply with 1% or less of ripple ratio.
*4 DA output accuracy does not include EVT accuracy.
*5 AD input accuracy includes EVT monitor accuracy.
*6 The slave unit's memory occupied by the PLC is determined by the number of EVT units (n) connected when the slave unit's power is turned ON. (Note that if no units are connected, the memory for four units is occupied)

Compatible PLC table

Model No.	Manufacturer name (recommended body)	Series	Communication system name	Host station model No.
T9DAR	ODVA	DeviceNet compatible PLCs, computers and SBCs of various manufacturers	DeviceNet	Connected to the masters compatible with the manufacturers' DeviceNet systems
	OMRON	SYSMAC CS Series SYSMAC CJ Series SYSMAC CV Series SYSMAC α Series SYSMAC C200HS Series Others	DeviceNet (CompoBus/D)	CS1W-DRM21-V1 CJ1W-DRM21 CVM1-DRM21-V1 C200HW-DRM21-V1 ITNC-EI□01-DRM (PLC with master) 3G8B3-DRM21 (VME board) Other DeviceNet compatible masters
	TOYODA	PC3J/2J Series PC3JD PC2F/PC2FS	DeviceNet (DLNK)	THK-5398 TIC-5642 (master integrated PLC) TFU-5359 Other DeviceNet compatible masters
T9GAR	CLPA	CC-Link compatible PLCs, computers and SBCs of various manufacturers	CC-Link	Connected to the masters compatible with the manufacturers' CC-Link
	MITSUBISHI	MELSEC A Series MELSEC QnA Series MELSEC Q Series Others	CC-Link	AJ61BT11 AJ61QBT11 A1SJ61BT11 A1SJ61QBT11 QJ61BT11 A80BD-J61BT11 (for PCI bus) Other CC-Link compatible masters

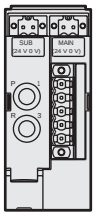
Model No.	LED display	Wiring and setting method

T9DAR

☐ NS
☐ MS

LED name	Display description
NS	Displays network status
MS	Displays slave unit's status

Wiring method



Previous station

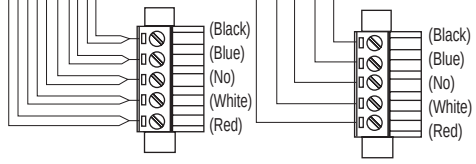
(Black)	V-
(Blue)	CAN_L
(No)	Drain
(White)	CAN_H
(Red)	V+

DeviceNetcable

T branch tap

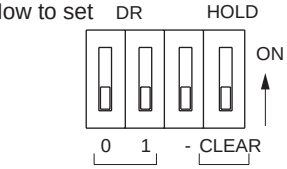
Following station

V-
CAN_L
Drain
CAN_H
V+



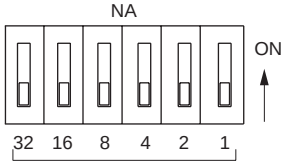
The wiring section connector is included.
Check power's polarity. (Left: 24 V, right: 0 V)
Unit power and regulator power use a common terminal.
The power connector (24 V, 0 V) is insulated from communication power (V+, V-).

How to set



Set the communication speed.

Set output status if a communication error occurs.



Set the slave unit address.

Communication speed	0	1
125 kbps	OFF	OFF
250 kbps	ON	OFF
500 kbps	OFF	ON
Setting not available	ON	ON

HOLD/CLEAR setting

◆ HOLD
If a communication error occurs, the status of output is held in the state just before the error occurred. (Only for set addresses)
Note: Output may not be held depending on the state of the error.

◆ CLEAR
If a communication error occurs, all channels are turned OFF (0 data output to EVT). (Only for set addresses)

Caution

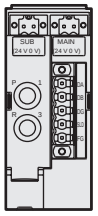
- Output to EVT is output simultaneously for all channels.
- Refer to the slave unit specifications for details on occupied memory.
- Contact CKD for information on EDS file.

T9GAR

☐ LERR
☐ LRUN
☐ RD
☐ SD
☐ POWER

LED name	Display description
LERR	Lights when transmission error occurs. Turns off when the time limit is exceeded. Lights when station No. setting or transmission speed setting is incorrect. Blinks when station No. setting or transmission speed setting changes midway.
LRUN	Turns on when accurate data is received, and turns off when the time limit is exceeded. (Lights when correct data is received.)
RD	Turns on when receiving data.
SD	Turns on when sending data.
POWER	Lights when power is ON.

Wiring method



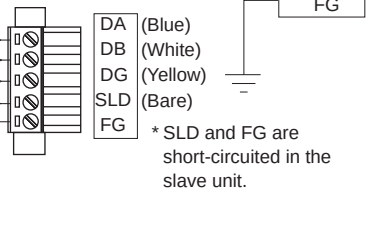
Previous station

(Blue)	DA
(White)	DB
(Yellow)	DG
(Bare)	SLD
	FG

CC-Link dedicating cable

Following station

DA
DB
DG
SLD
FG



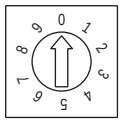
* SLD and FG are short-circuited in the slave unit.

The wiring section connector is included.
Check power's polarity. (Left: 24 V, right: 0 V)
Unit power and regulator power use a common terminal.

How to set

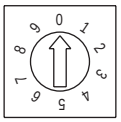
Set the transmission speed.

0: 156 kbps 3: 5 Mbps
1: 625 kbps 4: 10 Mbps
2: 2.5 Mbps 5 and over: Not used

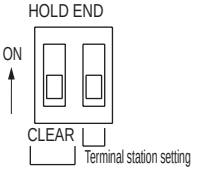


B RATE

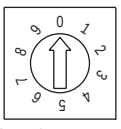
Set the slave unit's station No. (1st place)



STATION No. (× 1)



Set output status if a communication error occurs.



STATION No. (× 10)

Set the slave unit's station No. (tens place)

HOLD/CLEAR setting

♦HOLD
- When the "analog output enabling signal" flag turns OFF, output of the corresponding channel is held in the status just before the flag turned OFF.
- If a communication error occurs, the status of all channels' outputs are held in the state just before the error occurred. (Only for set addresses)
  Note: Output may not be held depending on the state of the error.

♦CLEAR
- When the "analog output enabling signal" flag turns OFF, output of the corresponding channel is turned OFF (0 data output to EVT).
- If a communication error occurs, all channels are turned OFF (0 data output to EVT). (Only for set addresses)

Terminal station setting

This product has a 110 Ω terminator between DA and DB communication lines. The terminal station is set by turning the terminal station setting switch ON. A terminator need not be connected to this product's connector.

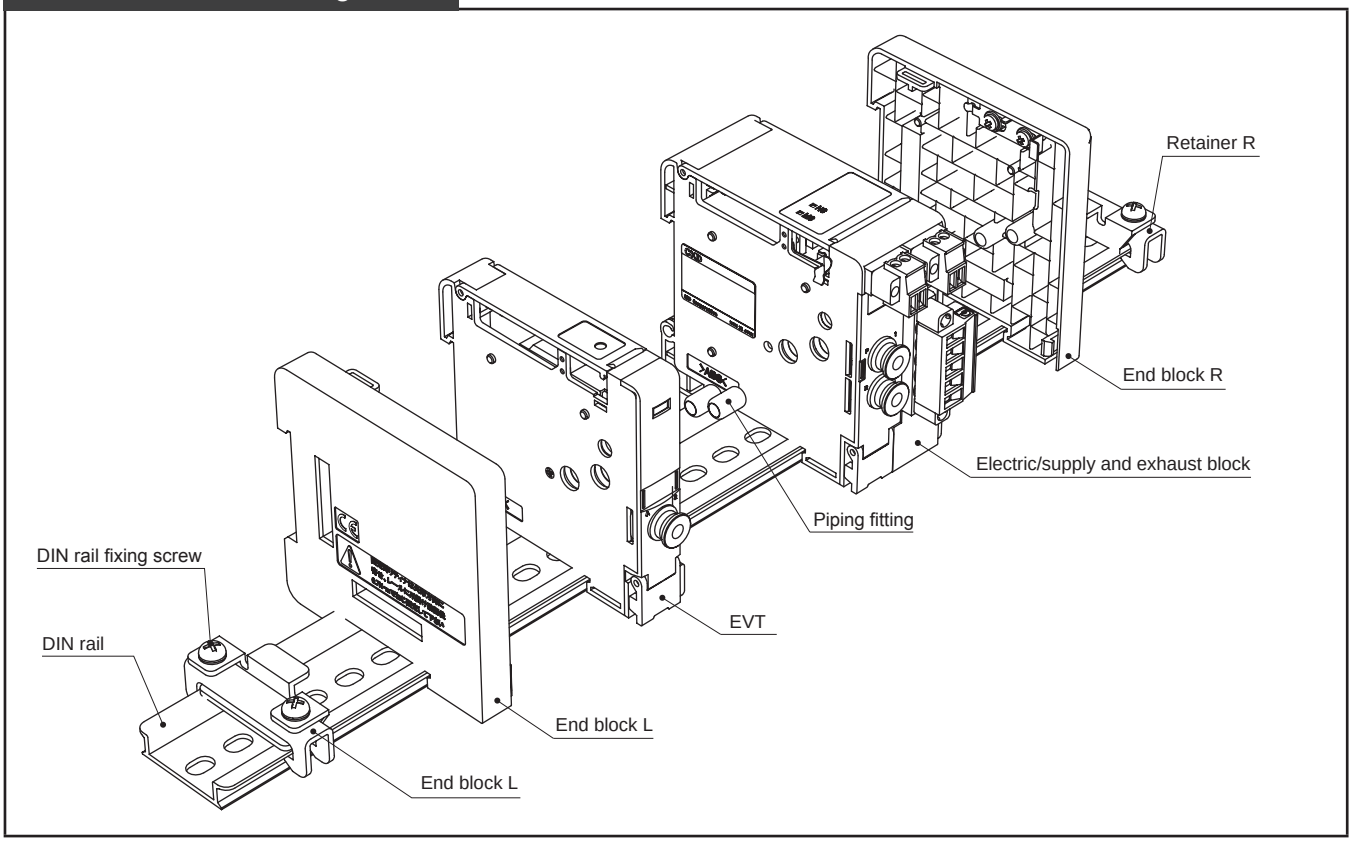
[CAUTION]
Be sure to turn the terminal station setting switch off when this product is the terminal station and a CC-Link-dedicated cable (CC-Link dedicated high performance cable (Kurashige Denko FANCSBH)) requiring a terminal resistance other than 110 Ω is used for the communication cable. This also applies when the terminator's connection differs due to the T-branch connection. Connect a commercially available terminator or the one included with the master station to this product's connector based on connection conditions (specifications). Insulate this terminator.

Caution

- Output to EVT is output simultaneously for all channels.
- Contact CKD for profile.

MEMO

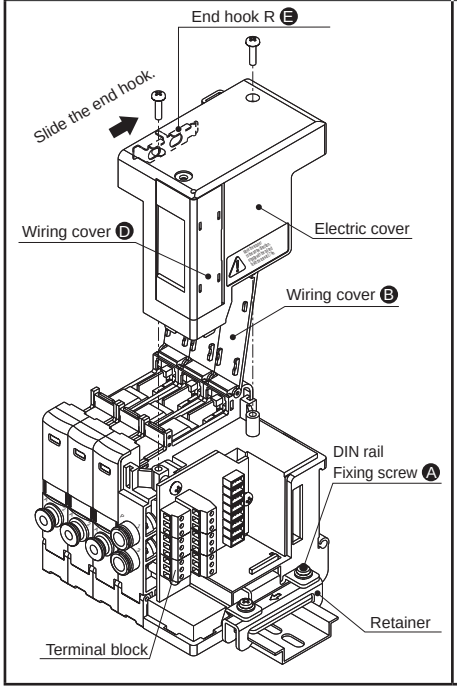
MEVT deal drawing



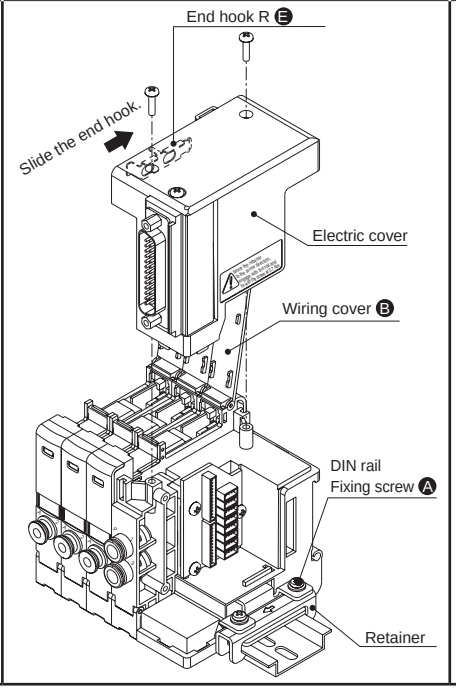
Increasing and reducing the EVT stations

1. Loosen the retainer's DIN rail set screw Ⓐ.
2. Open the EVT wiring cover Ⓑ.
3. When using the common terminal block or D sub-connector, slide end hook R Ⓔ and release the hook. Next, loosen and remove screws on the electric cover. In case of the serial transmission, open the wiring cover Ⓒ. (In case of the common terminal block, check that the wiring cover Ⓓ does not catch the terminal block.)

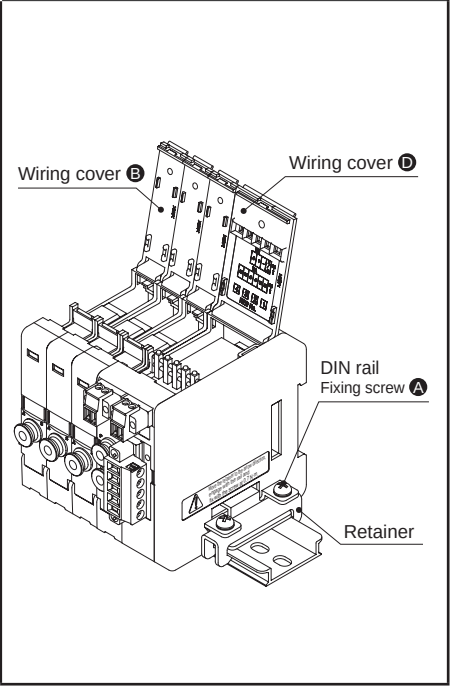
Common terminal block (T11R)



D sub-connector (T30R)

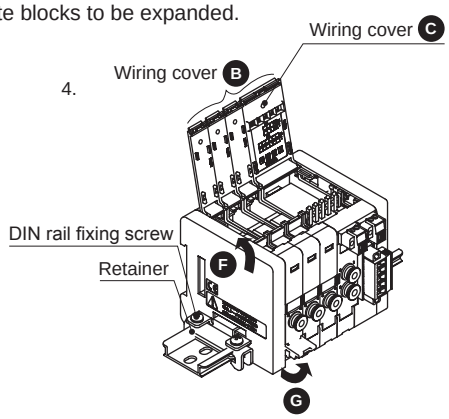


Serial transmission (T9*)

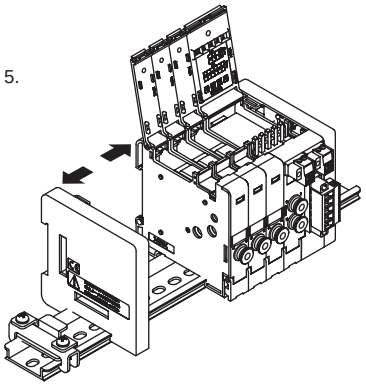


4. Remove the connecting hook spring Ⓕ and connecting hook plate Ⓖ where the manifold is to be increased, and remove the connection between blocks.
5. Separate blocks to be expanded.

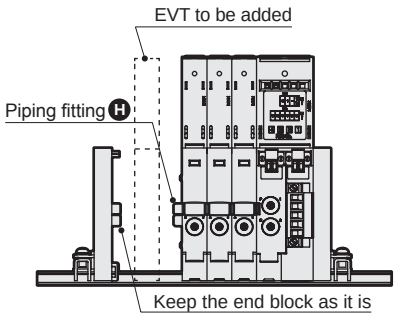
4.



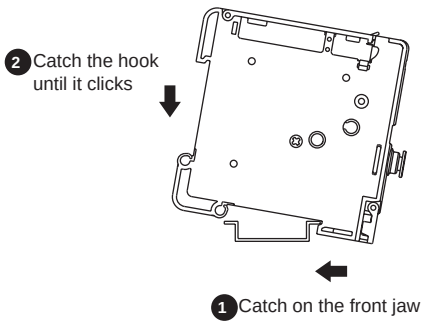
5.



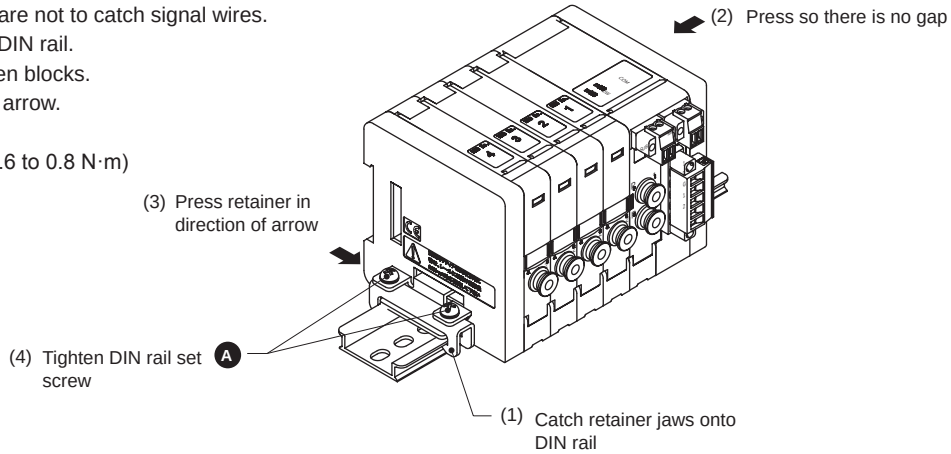
6. Insert two piping fittings Ⓗ into the input (P) and exhaust (R) ports at the separated section.
(Note: At the separated section, 2 piping fittings Ⓗ protrude from each side (4 fittings in all)).



7. Mount the EVT to be added to DIN rail.



8. Press so that there is no gap between blocks, and close the connecting hook spring Ⓕ and connecting hook plate Ⓖ to connect blocks.
9. Insert the signal wires of the added EVT to the internal connectors in the electric, supply and exhaust block.
10. For serial transmission, close the wiring cover Ⓒ. When using the common terminal block or D sub-connector, fit the electric cover on, fix it in place with screws, and return the end hook R Ⓔ to the original position.
(tightening torque: 0.35 to 0.5 N·m)
11. Close wiring cover Ⓑ while taking care not to catch signal wires.
12.(1) Catch the retainer jaws onto the DIN rail.
(2) Press so that there is no gap between blocks.
(3) Press the retainer in the direction of arrow.
(4) Tighten DIN rail set screw Ⓐ.
(Recommended tightening torque: 0.6 to 0.8 N·m)



MEVT How to fill manifold specifications sheet (Ver. 2)

● Example of manifold model No.

MEVT 500 - 1 C4 - T9DAR - 12 - U - 3 - P70

Model No. Ⓐ Pressure control range Ⓑ Input control signal Ⓒ Port size Ⓓ Electric/supply and exhaust block Ⓕ Station No. Ⓖ DIN rail mounting direction Ⓗ Voltage Ⓘ Clean room specifications

Part name	Model No.	Layout position 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Quantity
EVT	EVT 500 - 0 C4 - P70		○	○	○	○		○	○	○	○		○	○	○	○																	12
	EVT - - P70																																
	EVT - - P70																																
	EVT - - P70																																
	EVT - - P70																																
Electric/supply and exhaust block	EVT-T 9DA R- C4						○					○					○																3
End block	EVT-EL-P70 (for left side)	○																															1
	EVT-ER-P70 (for right side)																	○															1
DIN rail	L2 =	Accessories	Blanking plug GWP4-B		GWP6-B		Silencer SLW-H6																										

*1 DIN rail length (L_2)

(1) Find DIN rail length by the calculation shown below.
The obtained length is standard.

(2) For standard length, length (L_2) is not required on the specification sheet.
Indicate the length when using a non-standard length.
Select the length based on the following DIN rail length setting table L_2.

● How to calculate length of DIN rail

Manifold length (L_1) = $(A \times n)^{\text{EVT}} + (B \times m)^{\text{Electric / supply and exhaust block}} + (C \times l)^{\text{End block}} + D^{\text{Retainer}} \times 2$

DIN rail length (L_2) = L2' × 12.5

$$L_2' : \frac{L_1 + 40}{12.5} \rightarrow \text{Round up to integer}$$

DIN rail mounting pitch (L_3) = L_2 - 12.5

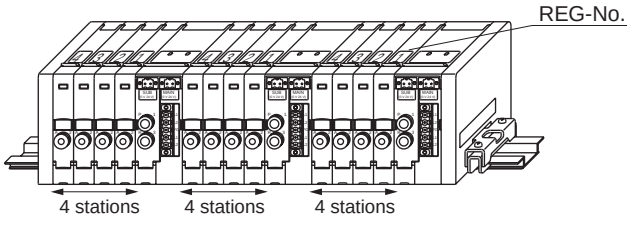
*2 Multiple combinations between the serial transmission

Multiple serial transmission types can be made and installed on the same DIN rail. (Max. station No.: 12 (T9DAR/T9GAR))

Install EVT or end block next to serial transmission slave unit.

Indicate the combination on the specification sheet.

Example) EVT: 12 stations, electric, supply and exhaust block T9DAR: 4 units × 3

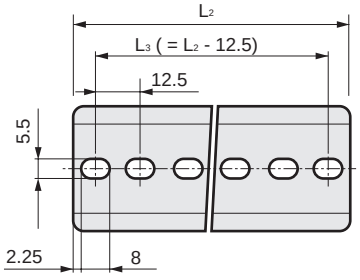


[Note]

- Viewed from piping port, layout position is assigned from left.
- Refer to the block components (pages 874 to 876) and select the model No.
- Allocation numbers 1 to 31 on the table above are for reference. As shown on the wiring cover of EVT, REG-No. is assigned as 1, 2, 3, ⋯ per electric/supply and exhaust block from the nearest side.

n, m and l show usage per block.
n: EVT m: Electric/supply and exhaust block l: End block
A/B/C/D indicates length (width) per block.

			Block width (mm)
A	EVT		14
B	Electric/ supply and exhaust block	T11R	42
		T30R	42
		T9*	32
C	End block		10
D	Retainer		11.5



● DIN rail length setting table

L1 ⋯ Manifold length	97.5 or less	Over 97.5 to 110 or less	110 to 122.5	122.5 to 135	135 to 147.5	147.5 to 160	160 to 172.5	172.5 to 185	185 to 197.5	197.5 to 210	210 to 222.5	222.5 to 235	235 to 247.5	247.5 to 260	260 to 272.5	272.5 to 285	285 to 297.5	297.5 to 310	310 to 322.5	322.5 to 335	335 to 347.5	347.5 to 360	360 to 372.5	372.5 to 385	385 to 397.5	397.5 to 410	410 to 422.5	422.5 to 435	435 to 477.5
L2 ⋯ Rail length	137.5	150	162.5	175	187.5	200	212.5	225	237.5	250	262.5	275	287.5	300	312.5	325	337.5	350	362.5	375	387.5	400	412.5	425	437.5	450	462.5	475	487.5
Pitch L3	125	137.5	150	162.5	175	187.5	200	212.5	225	237.5	250	262.5	275	287.5	300	312.5	325	337.5	350	362.5	375	387.5	400	412.5	425	437.5	450	462.5	475

Note 1: When L_1 exceeds this table range, calculate according to "How to calculate DIN rail length".

MEVT manifold specifications (Ver. 2)

● Manifold model No.

MEVT ☐ - ☐ ☐ - ☐ - ☐ - ☐ - ☐ - **P70**

Model No. Ⓐ Pressure control range Ⓑ Input control signal Ⓒ Port size Ⓓ Electric/supply and exhaust block Ⓕ Station No. Ⓖ DIN rail mounting direction Ⓗ Voltage Ⓘ Clean room specifications

Part name	Model No.	Layout position 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Quantity
EVT	**EVT** ☐-☐ ☐																																
	EVT ☐-☐ ☐																																
	EVT ☐-☐ ☐																																
	EVT ☐-☐ ☐																																
	EVT ☐-☐ ☐																																
Electric / supply and exhaust block	**EVT-T** ☐ **R-** ☐																																
End block	**EVT-EL** (for left side)																																
	EVT-ER (for right side)																																
DIN rail	L_2 = ☐	Accessories	Blanking plug **GWP4-B** ☐ **GWP6-B** ☐												Silencer **SLW-H6** ☐																		

・Viewed from piping port, arrange positions from left.
・REG-No. indicated on EVT wiring cover is counted as 1, 2, 3, ⋯from the nearest EVT for each electric and supply/exhaust block.
・Install electric/supply and exhaust block to right face of EVT.
Serial transmission allows left installation. Contact CKD.