

Interface module

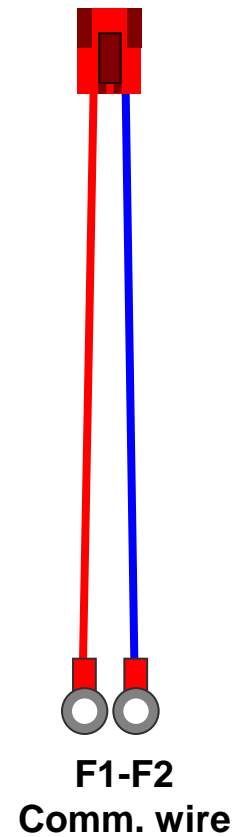
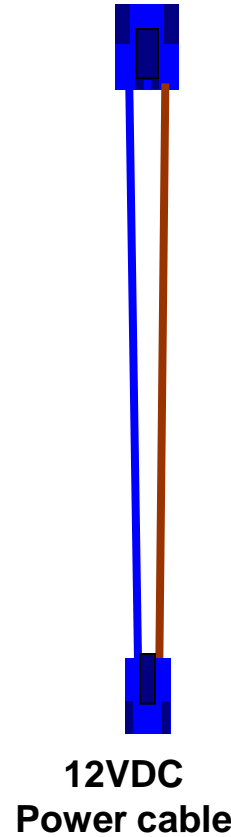


MIM-B07

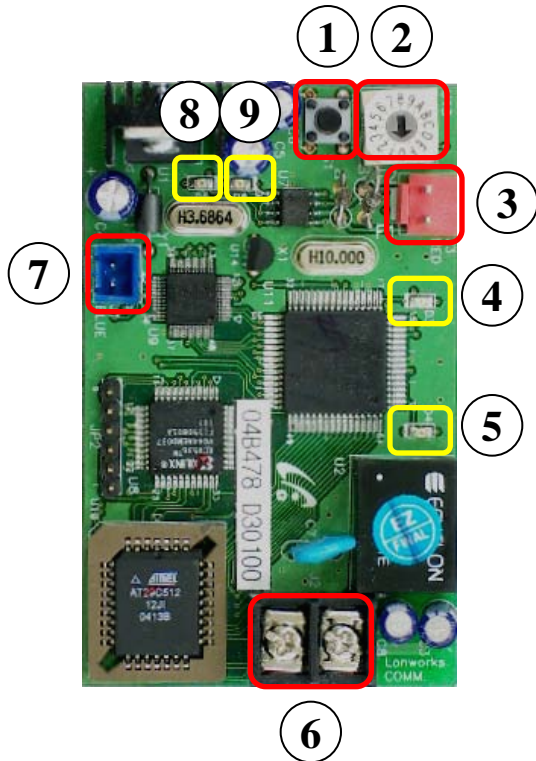
- Components



Interface module



- MIM-B07



1) Service button – Used for binding with a LonWorks BMS system

2) Selects indoor unit control range

0 : Indoor units of Main Address 0 to 11

1 : Indoor units of Main Address 12 to 23

2 : Indoor units of Main Address 24 to 35

3 : Indoor units of Main Address 36 to 47

3) RS485(F1-F2) communication line

4) Service Pin LED : Lights on when Service button A is pressed.

Display	State	Solution
OFF	Normal operation	
Blink	Unconfigured	Upper configuration required.
ON	No application software	Program loading required.

5) Blinks (0.2s) when command from the upper layer is received.

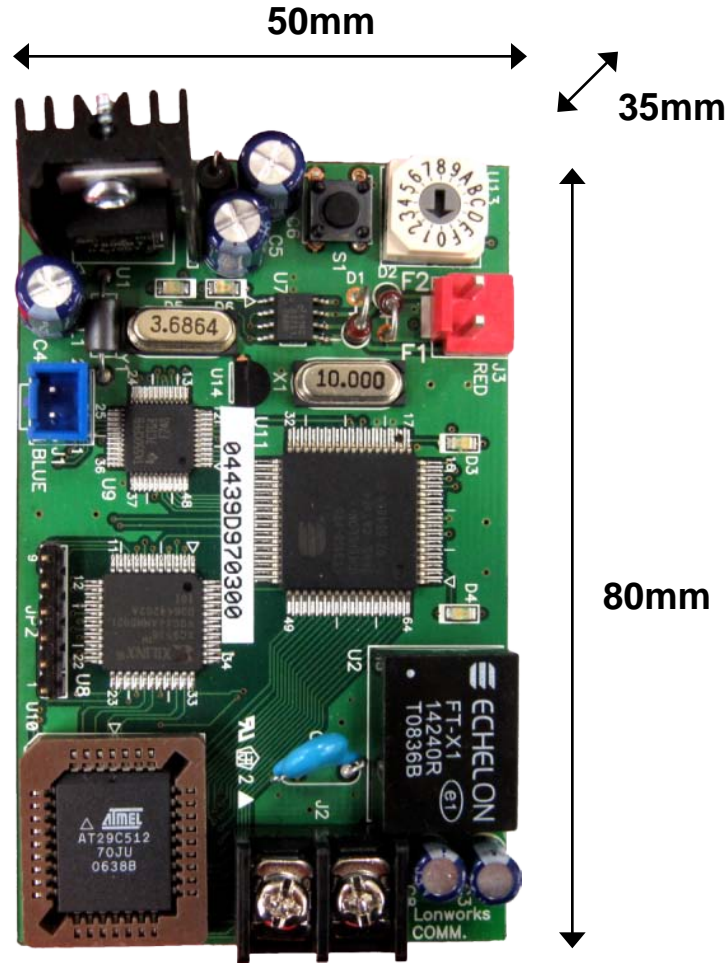
6) FTT-10A communication line with BMS networks (non-polarity)

7) Power supply (12VDC from outdoor unit)

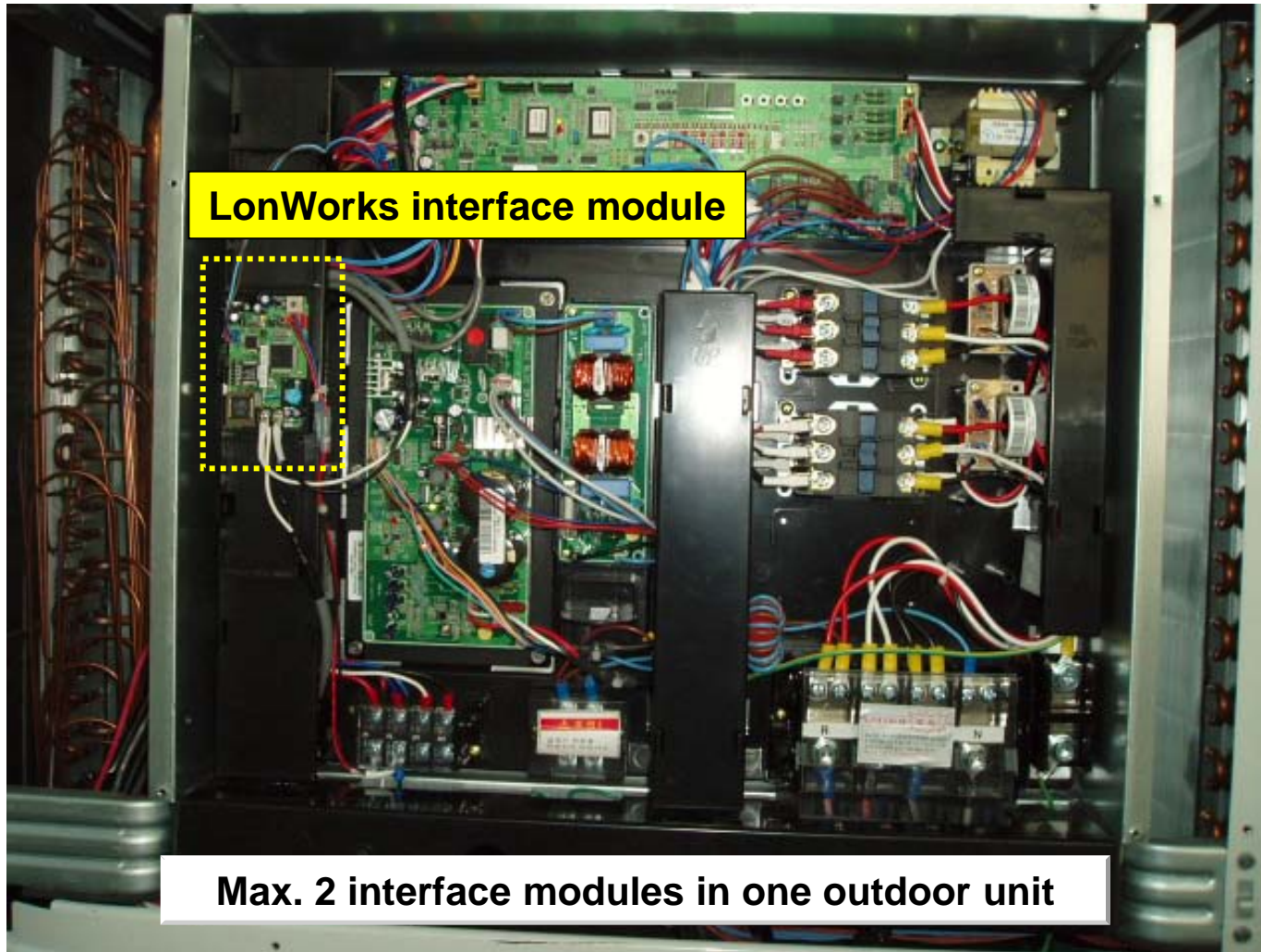
8) D5(RS485 Tx) : Blinks when data from the LonWorks is sent (0.06s).

9) D6(RS485 Rx) : Blinks whenever data from F1-F2 is received (0.06s) .

- Dimensions



- Installation



LonWorks interface module – MIM-B07

- Installation (DVM Plus III (HR))

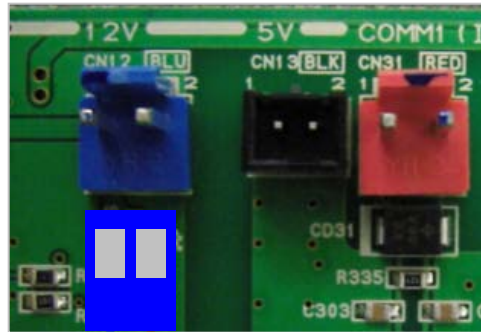
DVM Plus III (HR)



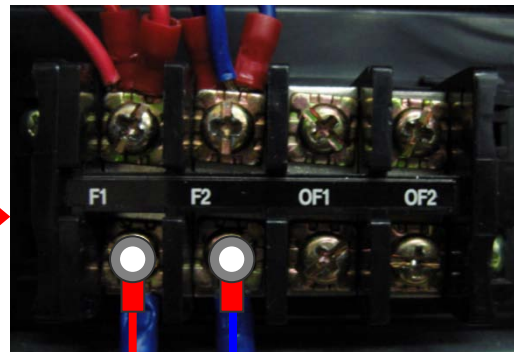
Power supply



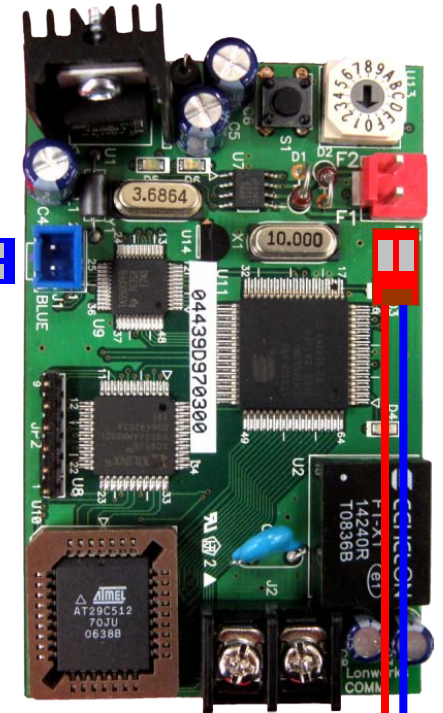
Communication



12VDC



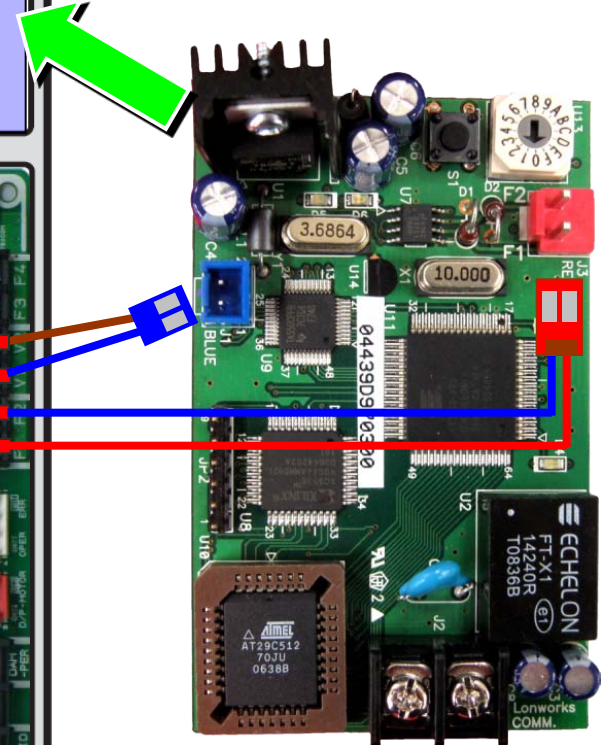
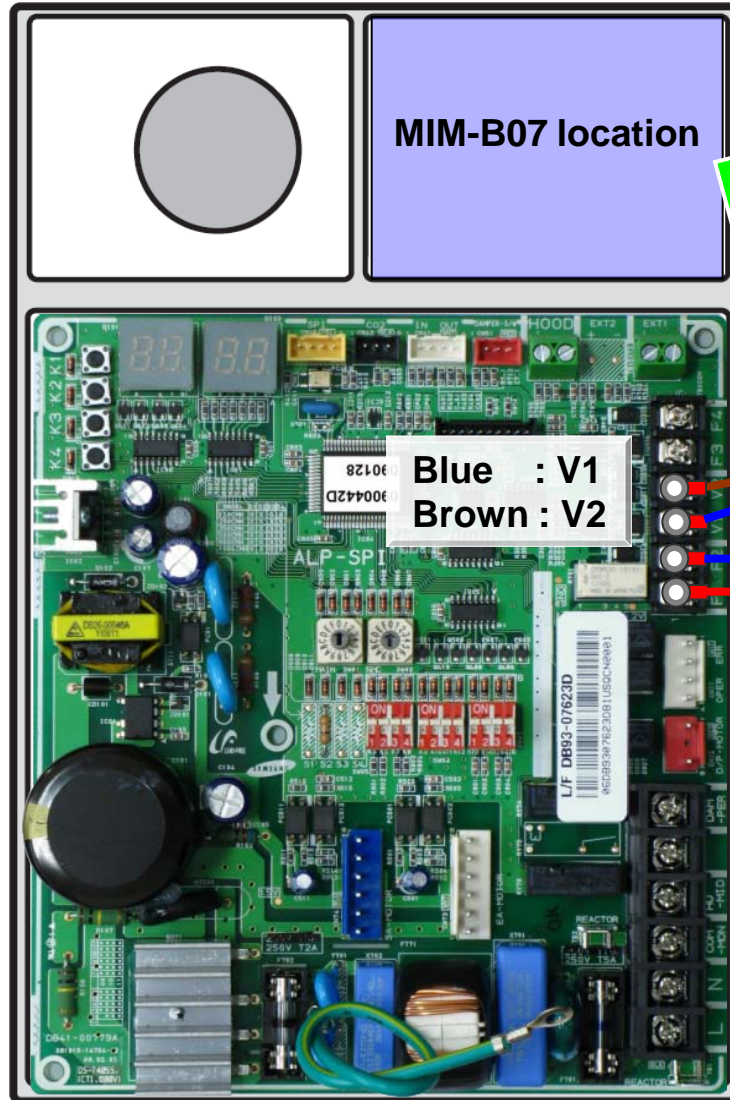
F1-F2



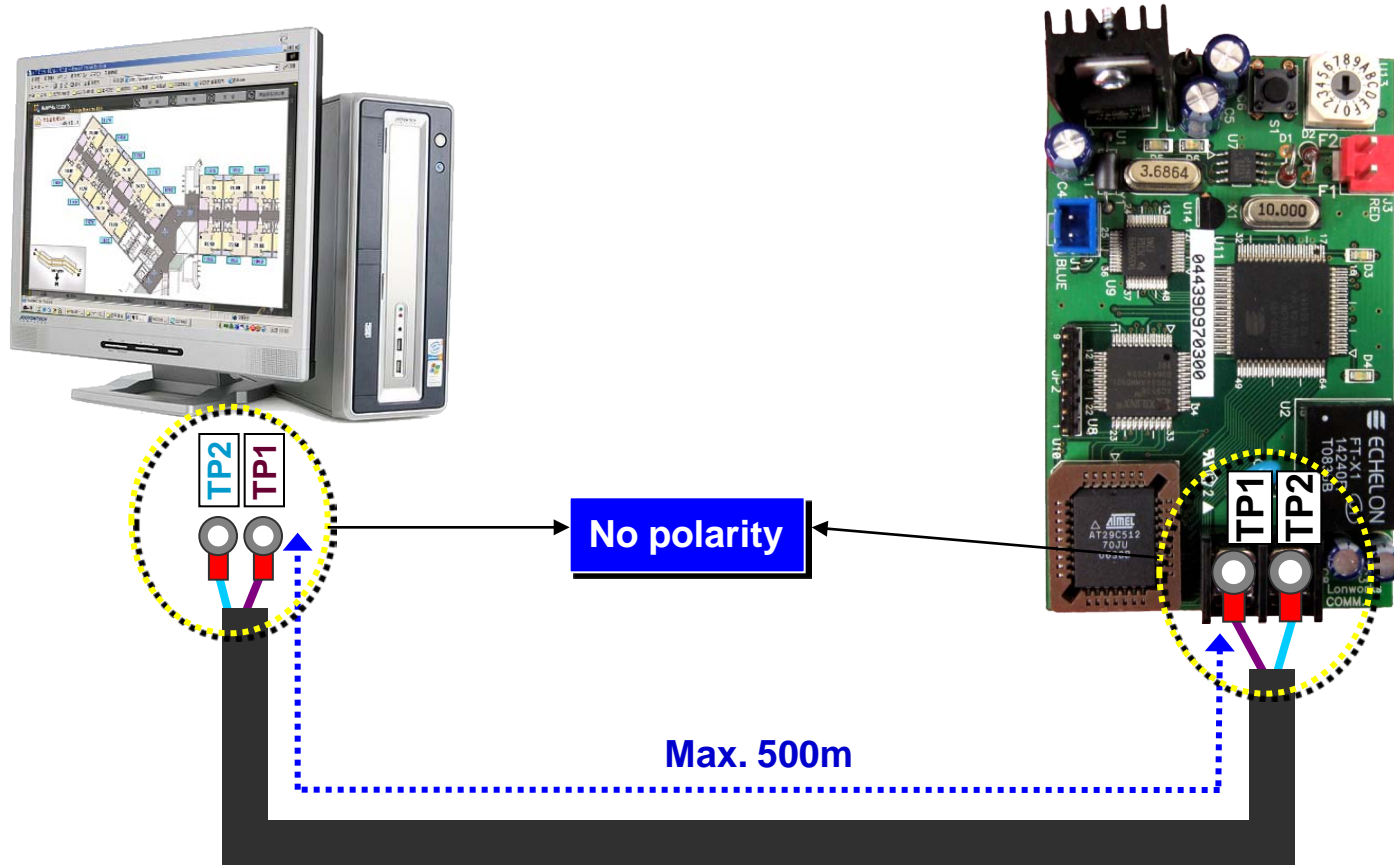
NOTE : No need to connect (black) 5VDC from the outdoor unit PCB

LonWorks interface module – MIM-B07

- Installation (ERV)



- Wiring to LonWorks BMS



Wire : Twisted pair (TP/FT-10, TP/XF-1250 and TP/XF-78)

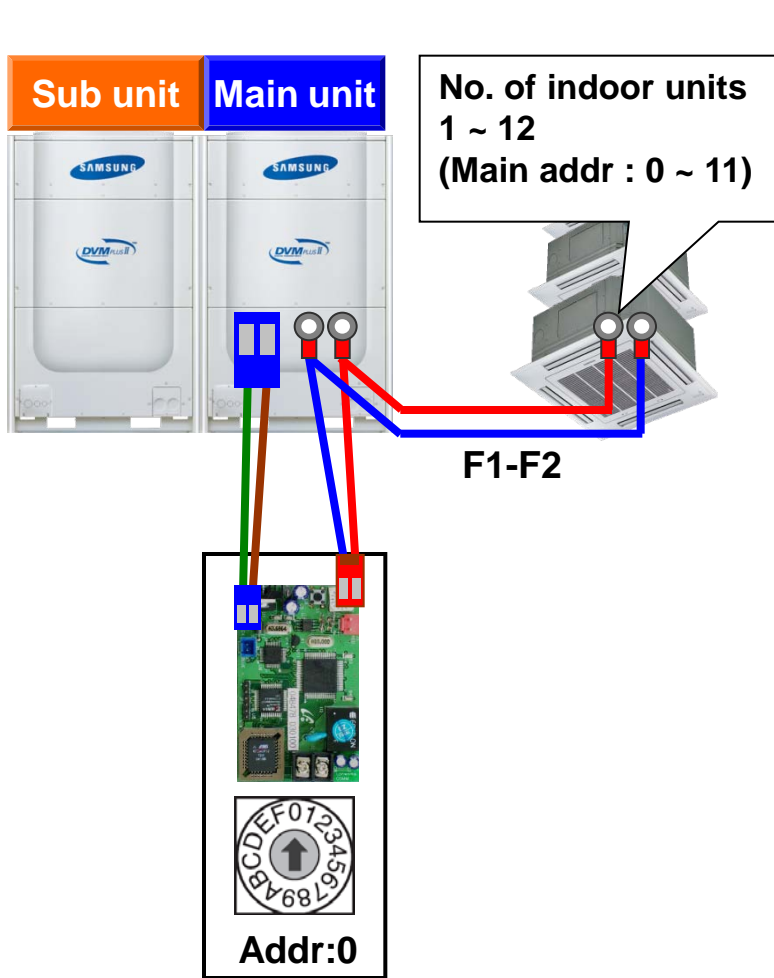
NOTE : The maximum distance for free topology connection → 500m between nodes

- Address setting

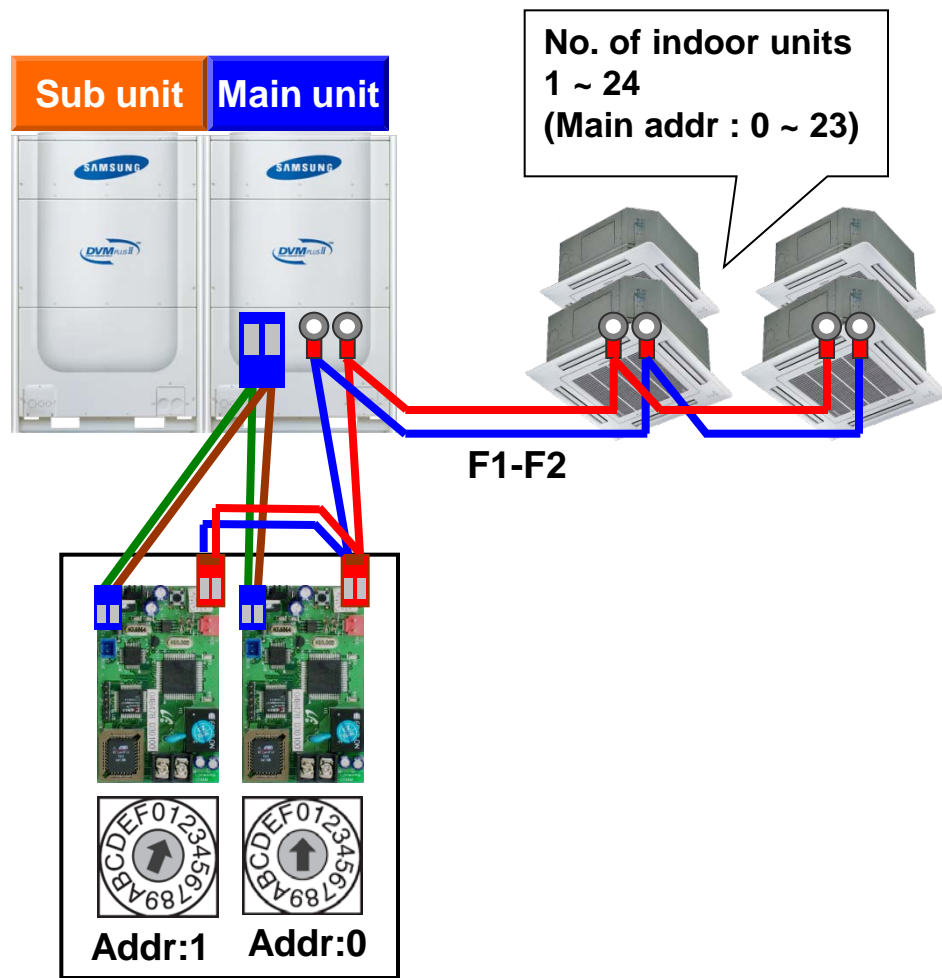
LonWorks I/M address	Indoor unit MAIN address	Description
0	0~11	<ul style="list-style-type: none"> - Each LonWorks I/M manages 12 indoor units. - One of the LonWorks I/M addresses must be “0”. (Always set the address to start from “0” – Factory setting : 0) - Do not install more than two LonWorks I/Ms on one outdoor unit (due to power shortage)
1	12~23	
2	24~35	
3	36~47	



- Address setting (EHP)

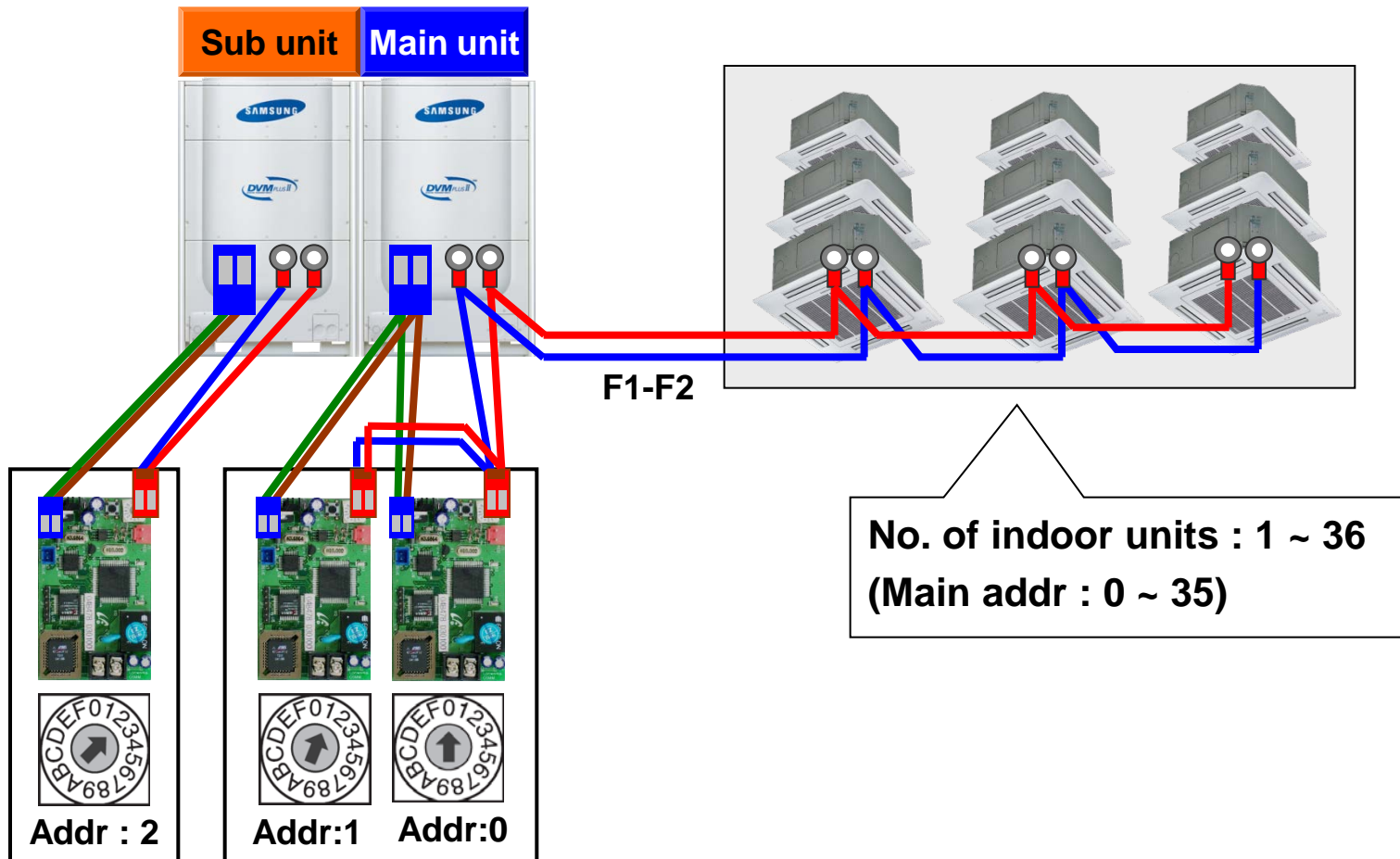


For the number of indoor units : 1~12



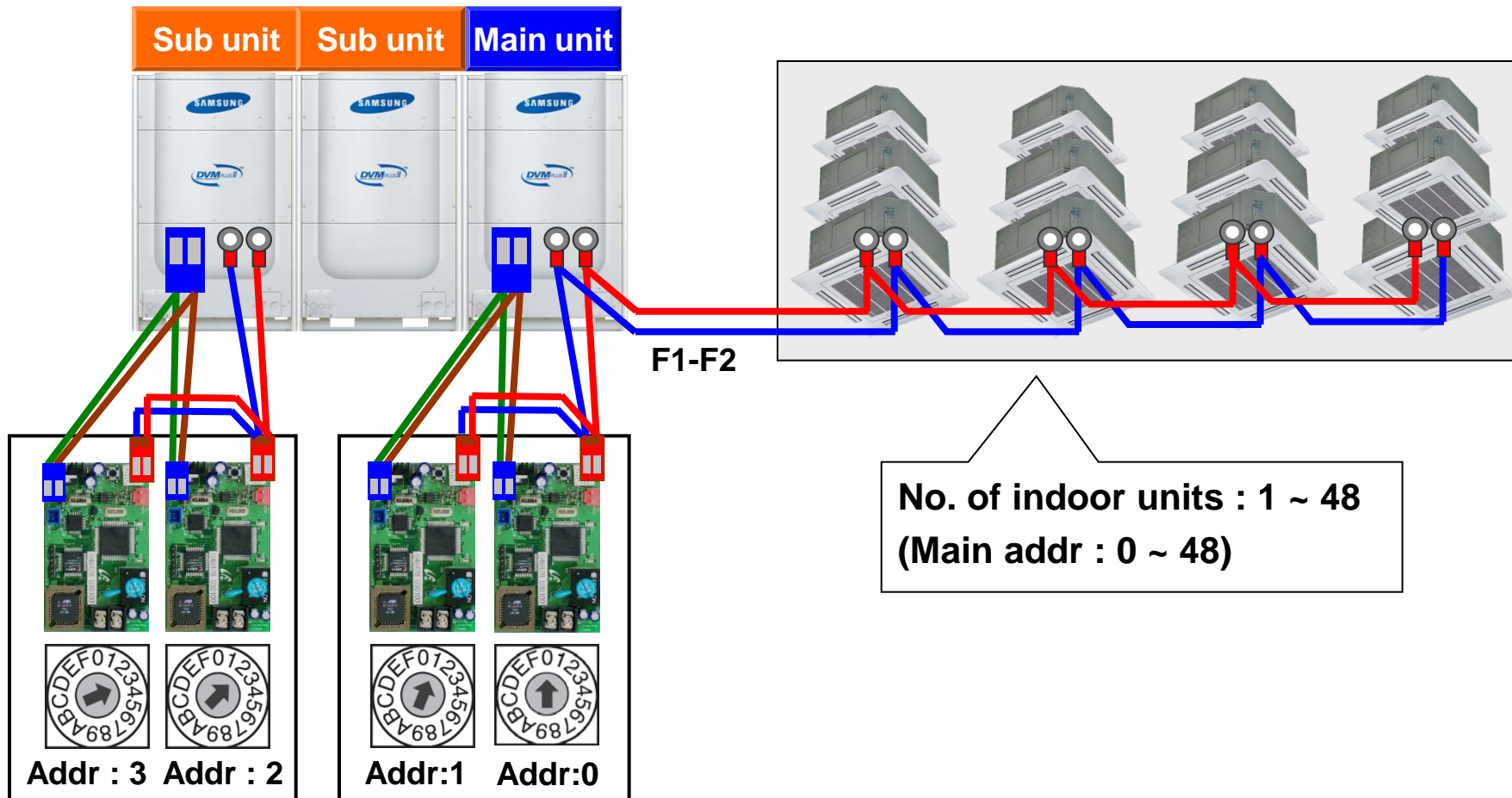
For the number of indoor units : 1~24

- Address setting (EHP)



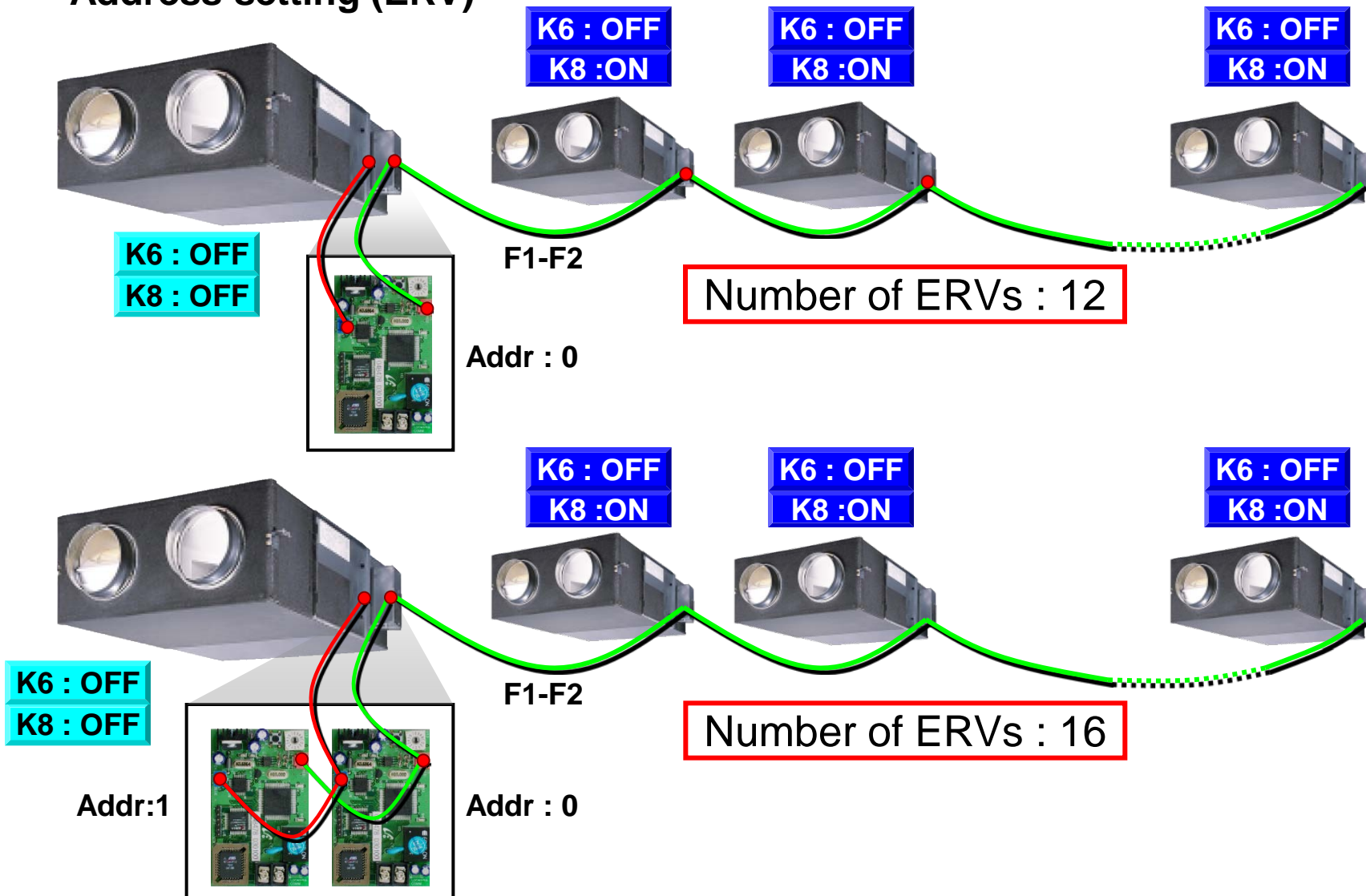
For the number of indoor units : 1~36

- Address setting (EHP)

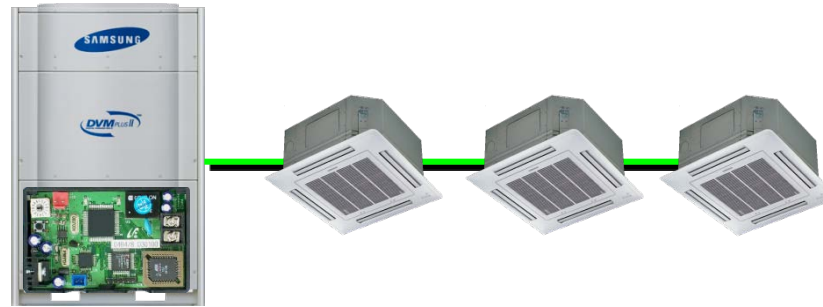


For the number of indoor units : 1~48







- Address setting (ERV)



- Communication check

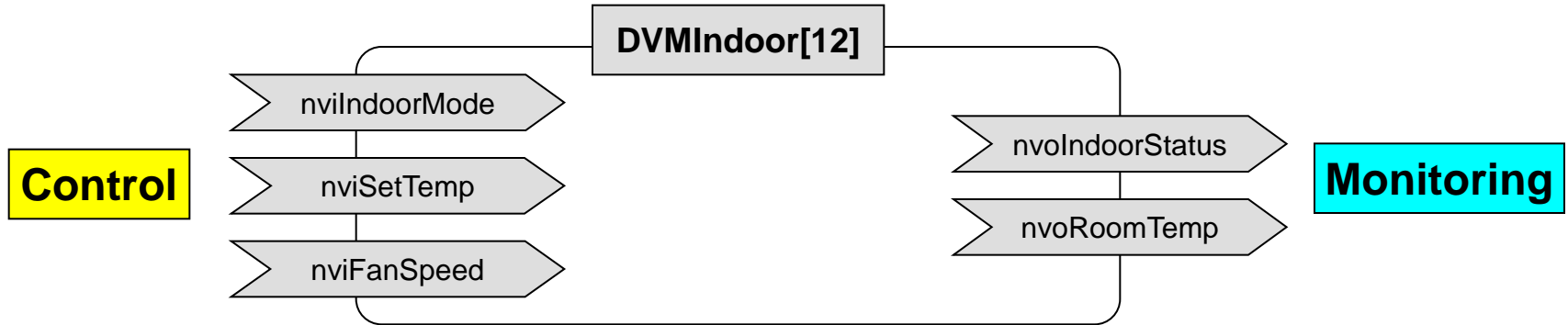


If the outdoor unit detects the LonWorks I/M, the display on the outdoor unit PCB shows the special character.

 <p>DVM Plus II (HR)</p>	 <p>ERV</p>	 <p>7-segment display</p>	 <p>Normal communication indication</p>
 <p>DVM Plus III (HR)</p>	 <p>7-segment display</p>		

Note : Unless the outdoor unit detects the existence of the LonWorks I/M, the upper LonWorks BMS can't see any parameters on the indoor unit operation.

- Network variable



No	NV Name	Index	NV Type	EHP Description	ERV Description
1	nviIndoorMode[12]	2~13	SNVT_hvac_mode	On/Off and operation mode	On/Off and operation mode
2	nviSetTemp[12]	14~25	SNVT_temp_f	Temperature setting	-
3	nviFanSpeed[12]	26~37	SNVT_switch	Fan speed	Fan speed
4	nvoRoomTemp[12]	38~49	SNVT_temp_f	Room temperature monitoring	-
5	nvoIndoorStatus[12]	50~61	SNVT_hvac_status	On/Off, Mode, Error	On/Off, Mode, Error

- Functional profile for EHP/ERV control

▪ Operation mode

SNVT_hvac_mode	Operation	DVM	ERV
HVAC_OFF	Off	-	-
HVAC_AUTO	ON	Auto	Auto
HVAC_COOL	ON	Cooling	Heat EX
HVAC_HEAT	ON	Heating	By-Pass
HVAC_FAN_ONLY	ON	Fan	Sleep

▪ Fan speed

state	value	DVM	ERV
0 or 1	0.0	Auto	-
	0.5	Low	-
	1.0	Mid	Low
	1.5	High	High
	No Turbo control support		

▪ Temperature setting : Cooling (18~30), Heating(16~30), **Not applied for ERV**

▪ State monitoring

Field	Type	Function (EHP)	Function (ERV)
mode	hvac_t	Operation mode	Operation mode
heat_output_primary	signed long	MAIN Address	MAIN Address
heat_output_secondary	signed long	Not used	Not used
cool_output	signed long	Not used	Not used
econ_output	signed long	Not used	Not used
fan_output	signed long	Error Code	Error Code
in_alarm	unsigned short	Error flag (True/False)	Error flag (True/False)

ERV MAIN address : $\text{heat_output_primary} \times 1000 / 5$

Error code : $\text{fan_output} \times 1000 / 5$