40VMD006M-016S
Multiport Distribution Controller (MDC) for Variable Refrigerant Flow (VRF) Systems

Engineering Data Book

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MULTIPORT DISTRIBUTION CONTROLLER BASIC INFORMATION

Specifications

Table 1 —Data Table

MODEL			40VMD006M--3		
Number of ports			6		
Power source			208V/230V-1Ph-60Hz		
Power input		KW	0.08		
MCA		A	0.73		
External finish			Hot-dip galvanized steel plate with powder coating		
Connectable outdoor unit			38VMR – Heat Recovery		
Connectable sub-MDC unit			40VMD006S--3		
Maximum connected capacity			324,000Btu/h		
Capacity / Port		KBtu/h	< 54		
External dimension H×W×D		in.	12-3/4 x 37 x 22-5/8		
Refrigerant Piping	Connectable outdoor unit	Capacity (KBtu/h)	To outdoor unit		
			High pressure pipe		Low pressure pipe
		072K in. O.D	5/8 Brazed		3/4 Brazed
		096K in. O.D	3/4 Brazed		7/8 Brazed
		120K in. O.D	3/4 Brazed		1-1/8 Brazed
		144~192K in. O.D	7/8 Brazed		1-1/8 Brazed
		216K in. O.D	1-1/8 Brazed		1-1/8 Brazed
		240K in. O.D	1-1/8 Brazed		1-3/8 Brazed
	Connectable indoor unit	Capacity (KBtu/h)	To indoor unit		
			Liquid pipe		Gas pipe
		05K to 15K in. O.D	1/4 Brazed		1/2 Brazed
		18K to 54K in. O.D	3/8 Brazed		5/8 Brazed
		72K to 96K in. O.D	3/8 Brazed		7/8 Brazed
	Connectable Sub MDC	Capacity (KBtu/h)	To Sub MDC unit		
			High pressure pipe	Liquid pipe	Low pressure pipe
		to 72K in. O.D	5/8 Brazed	3/8 Brazed	3/4 Brazed
		73K to108K in. O.D	3/4 Brazed	3/8 Brazed	7/8 Brazed
		109K to 126K in. O.D	3/4 Brazed	1/2 Brazed	1-1/8 Brazed
		127K to 144K in. O.D	7/8 Brazed	1/2 Brazed	1-1/8 Brazed
		145K to 168K in. O.D	7/8 Brazed	5/8 Brazed	1-1/8 Brazed
Condensate		in. O.D	1		
Net weight		lbs	132		
Standard accessories			PQ connection wires, Adapter pipes, Flexible drainage pipe		

NOTES:

1. The equipment is for R410A refrigerant.
2. Install this unit in a location where noise emitted by the unit is acceptable. For use in quiet environments with low background noise, position the MDC controller at least 16.4ft away from any indoor units.
3. The data presented is based on a specific combination.

Table 2 —Data Table

MODEL			40VMD008M--3		
Number of ports			8		
Power source			208V/230V-1Ph-60Hz		
Power input		KW	0.097		
MCA		A	0.89		
External finish			Hot-dip galvanized steel plate with powder coating		
Connectable outdoor unit			38VMR – Heat Recovery		
Connectable sub-MDC unit			40VMD006, 008S--3		
Maximum connected capacity			360,000Btu/h		
Capacity / Port		KBtu/h	<54		
External dimension H×W×D		in.	12-3/4 x 37 x 22-5/8		
Refrigerant Piping	Connectable outdoor unit	Capacity (KBtu/h)	To outdoor unit		
			High pressure pipe	Low pressure pipe	
		072K in. O.D	5/8 Brazed	3/4 Brazed	
		096K in. O.D	3/4 Brazed	7/8 Brazed	
		120K in. O.D	3/4 Brazed	1-1/8 Brazed	
		144～192K in. O.D	7/8 Brazed	1-1/8 Brazed	
		216K in. O.D	1-1/8 Brazed	1-1/8 Brazed	
		240K in. O.D	1-1/8 Brazed	1-3/8 Brazed	
	Connectable indoor unit	Capacity (KBtu/h)	To indoor unit		
			Liquid pipe	Gas pipe	
		05K to 15K in. O.D	1/4 Brazed	1/2 Brazed	
		18K to 54K in. O.D	3/8 Brazed	5/8 Brazed	
		72K to 96K in. O.D	3/8 Brazed	7/8 Brazed	
	Connectable Sub MDC	Capacity (KBtu/h)	To Sub MDC unit		
			High pressure pipe	Liquid pipe	Low pressure pipe
		to 72K in. O.D	5/8 Brazed	3/8 Brazed	3/4 Brazed
		73K to108K in. O.D	3/4 Brazed	3/8 Brazed	7/8 Brazed
		109K to 126K in. O.D	3/4 Brazed	1/2 Brazed	1-1/8 Brazed
		127K to 144K in. O.D	7/8 Brazed	1/2 Brazed	1-1/8 Brazed
		145K to 168K in. O.D	7/8 Brazed	5/8 Brazed	1-1/8 Brazed
Condensate		in. O.D	1		
Net weight		lbs	137		
Standard accessories			PQ connection wires, Adapter pipes, Flexible drainage pipe		

NOTES:

1. The equipment is for R410A refrigerant.
2. Install this unit in a location where noise emitted by the unit is acceptable. For use in quiet environments with low background noise, position the MDC controller at least 16.4 ft away from any indoor units.
3. The data presented is based on a specific combination.

Table 3 —Data Table

<table>
<tr><th colspan="3">MODEL</th><th colspan="4">40VMD010M--3</th></tr>
<tr><td colspan="3">Number of ports</td><td colspan="4">10</td></tr>
<tr><td colspan="3">Power source</td><td colspan="4">208V/230V-1Ph-60Hz</td></tr>
<tr><td colspan="2">Power input</td><td>KW</td><td colspan="4">0.113</td></tr>
<tr><td colspan="2">MCA</td><td>A</td><td colspan="4">1.05</td></tr>
<tr><td colspan="3">External finish</td><td colspan="4">Hot-dip galvanized steel plate with powder coating</td></tr>
<tr><td colspan="3">Connectable outdoor unit</td><td colspan="4">38VMR – Heat Recovery</td></tr>
<tr><td colspan="3">Connectable sub-MDC unit</td><td colspan="4">40VMD006, 008, 010S--3</td></tr>
<tr><td colspan="3">Maximum connected capacity</td><td colspan="4">360,000Btu/h</td></tr>
<tr><td colspan="2">Capacity / Port</td><td>KBtu/h</td><td colspan="4"><54</td></tr>
<tr><td colspan="2">External dimension H×W×D</td><td>in.</td><td colspan="4">12-3/4 x 37 x 22-5/8</td></tr>
<tr><td rowspan="12">Refrigerant Piping</td><td rowspan="7">Connectable outdoor unit</td><td rowspan="2">Capacity (KBtu/h)</td><td colspan="4">To outdoor unit</td></tr>
<tr><td colspan="2">High pressure pipe</td><td colspan="2">Low pressure pipe</td></tr>
<tr><td>072K in. O.D</td><td colspan="2">5/8 Brazed</td><td colspan="2">3/4 Brazed</td></tr>
<tr><td>096K in. O.D</td><td colspan="2">3/4 Brazed</td><td colspan="2">7/8 Brazed</td></tr>
<tr><td>120K in. O.D</td><td colspan="2">3/4 Brazed</td><td colspan="2">1-1/8 Brazed</td></tr>
<tr><td>144～192K in. O.D</td><td colspan="2">7/8 Brazed</td><td colspan="2">1-1/8 Brazed</td></tr>
<tr><td>216K in. O.D</td><td colspan="2">1-1/8 Brazed</td><td colspan="2">1-1/8 Brazed</td></tr>
<tr><td>240K in. O.D</td><td colspan="2">1-1/8 Brazed</td><td colspan="2">1-3/8 Brazed</td></tr>
<tr><td rowspan="4">Connectable indoor unit</td><td rowspan="2">Capacity (KBtu/h)</td><td colspan="4">To indoor unit</td></tr>
<tr><td colspan="2">Liquid pipe</td><td colspan="2">Gas pipe</td></tr>
<tr><td>05K to 15K in. O.D</td><td colspan="2">1/4 Brazed</td><td colspan="2">1/2 Brazed</td></tr>
<tr><td>18K to 54K in. O.D</td><td colspan="2">3/8 Brazed</td><td colspan="2">5/8 Brazed</td></tr>
<tr><td>72K to 96K in. O.D</td><td colspan="2">3/8 Brazed</td><td colspan="2">7/8 Brazed</td></tr>
<tr><td rowspan="6">Connectable Sub MDC</td><td rowspan="2">Capacity (KBtu/h)</td><td colspan="4">To Sub MDC unit</td></tr>
<tr><td>High pressure pipe</td><td>Liquid pipe</td><td colspan="2">Low pressure pipe</td></tr>
<tr><td>to 72K in. O.D</td><td>5/8 Brazed</td><td>3/8 Brazed</td><td colspan="2">3/4 Brazed</td></tr>
<tr><td>73K to108K in. O.D</td><td>3/4 Brazed</td><td>3/8 Brazed</td><td colspan="2">7/8 Brazed</td></tr>
<tr><td>109K to 126K in. O.D</td><td>3/4 Brazed</td><td>1/2 Brazed</td><td colspan="2">1-1/8 Brazed</td></tr>
<tr><td>127K to 144K in. O.D</td><td>7/8 Brazed</td><td>1/2 Brazed</td><td colspan="2">1-1/8 Brazed</td></tr>
<tr><td>145K to 168K in. O.D</td><td>7/8 Brazed</td><td>5/8 Brazed</td><td colspan="2">1-1/8 Brazed</td></tr>
<tr><td colspan="2">Condensate</td><td>in. O.D</td><td colspan="4">1</td></tr>
<tr><td colspan="2">Net weight</td><td>lbs</td><td colspan="4">143</td></tr>
<tr><td colspan="3">Standard accessories</td><td colspan="4">PQ connection wires, Adapter pipes, Flexible drainage pipe</td></tr>
</table>

NOTES:

1. The equipment is for R410A refrigerant.
2. Install this unit in a location where noise emitted by the unit is acceptable. For use in quiet environments with low background noise, position the MDC controller at least 16.4ft away from any indoor units.
3. The data presented is based on a specific combination.

Table 4 —Data Table

<table>
<tr><th colspan="3">MODEL</th><th colspan="4">40VMD016M--3</th></tr>
<tr><td colspan="3">Number of ports</td><td colspan="4">16</td></tr>
<tr><td colspan="3">Power source</td><td colspan="4">208V/230V-1Ph-60Hz</td></tr>
<tr><td colspan="2">Power input</td><td>KW</td><td colspan="4">0.163</td></tr>
<tr><td colspan="2">MCA</td><td>A</td><td colspan="4">1.54</td></tr>
<tr><td colspan="3">External finish</td><td colspan="4">Hot-dip galvanized steel plate with powder coating</td></tr>
<tr><td colspan="3">Connectable outdoor unit</td><td colspan="4">38VMR-Heat Recovery</td></tr>
<tr><td colspan="3">Connectable sub-MDC unit</td><td colspan="4">40VMD006, 008, 010, 016S--3</td></tr>
<tr><td colspan="3">Maximum connected capacity</td><td colspan="4">360,000Btu/h</td></tr>
<tr><td colspan="2">Capacity / Port</td><td>KBtu/h</td><td colspan="4">＜54</td></tr>
<tr><td colspan="2">External dimension H×W×D</td><td>in.</td><td colspan="4">12-3/4 x 46-1/2 x 22-5/8</td></tr>
<tr><td rowspan="15">Refrigerant Piping</td><td rowspan="7">Connectable outdoor unit</td><td rowspan="2">Capacity (KBtu/h)</td><td colspan="4">To outdoor unit</td></tr>
<tr><td colspan="2">High pressure pipe</td><td colspan="2">Low pressure pipe</td></tr>
<tr><td>072K in. O.D</td><td colspan="2">5/8 Brazed</td><td colspan="2">3/4 Brazed</td></tr>
<tr><td>096K in. O.D</td><td colspan="2">3/4 Brazed</td><td colspan="2">7/8 Brazed</td></tr>
<tr><td>120K in. O.D</td><td colspan="2">3/4 Brazed</td><td colspan="2">1-1/8 Brazed</td></tr>
<tr><td>144～192K in. O.D</td><td colspan="2">7/8 Brazed</td><td colspan="2">1-1/8 Brazed</td></tr>
<tr><td>216K in. O.D</td><td colspan="2">1-1/8 Brazed</td><td colspan="2">1-1/8 Brazed</td></tr>
<tr><td>240K in. O.D</td><td colspan="2">1-1/8 Brazed</td><td colspan="2">1-3/8 Brazed</td></tr>
<tr><td rowspan="4">Connectable indoor unit</td><td rowspan="2">Capacity (KBtu/h)</td><td colspan="4">To indoor unit</td></tr>
<tr><td colspan="2">Liquid pipe</td><td colspan="2">Gas pipe</td></tr>
<tr><td>05K to 15K in. O.D</td><td colspan="2">1/4 Brazed</td><td colspan="2">1/2 Brazed</td></tr>
<tr><td>18K to 54K in. O.D</td><td colspan="2">3/8 Brazed</td><td colspan="2">5/8 Brazed</td></tr>
<tr><td>72K to 96K in. O.D</td><td colspan="2">3/8 Brazed</td><td colspan="2">7/8 Brazed</td></tr>
<tr><td rowspan="6">Connectable Sub MDC</td><td rowspan="2">Capacity (KBtu/h)</td><td colspan="4">To Sub MDC unit</td></tr>
<tr><td>High pressure pipe</td><td>Liquid pipe</td><td colspan="2">Low pressure pipe</td></tr>
<tr><td>to 72K in. O.D</td><td>5/8 Brazed</td><td>3/8 Brazed</td><td colspan="2">3/4 Brazed</td></tr>
<tr><td>73K to108K in. O.D</td><td>3/4 Brazed</td><td>3/8 Brazed</td><td colspan="2">7/8 Brazed</td></tr>
<tr><td>109K to 126K in. O.D</td><td>3/4 Brazed</td><td>1/2 Brazed</td><td colspan="2">1-1/8 Brazed</td></tr>
<tr><td>127K to 144K in. O.D</td><td>7/8 Brazed</td><td>1/2 Brazed</td><td colspan="2">1-1/8 Brazed</td></tr>
<tr><td>145K to 168K in. O.D</td><td>7/8 Brazed</td><td>5/8 Brazed</td><td colspan="2">1-1/8 Brazed</td></tr>
<tr><td colspan="2">Condensate</td><td>in. O.D</td><td colspan="4">1</td></tr>
<tr><td colspan="2">Net weight</td><td>lbs</td><td colspan="4">190</td></tr>
<tr><td colspan="3">Standard accessories</td><td colspan="4">PQ connection wires, Adapter pipes, Flexible drainage pipe</td></tr>
</table>

NOTES:

1. The equipment is for R410A refrigerant.
2. Install this unit in a location where noise emitted by the unit is acceptable. For use in quiet environments with low background noise, position the MDC controller at least 16.4ft away from any indoor units.
3. The data presented is based on a specific combination.

Table 5 —Data Table

<table>
<tr><th colspan="3">MODEL</th><th colspan="4">40VMD016ML-3</th></tr>
<tr><td colspan="3">Number of ports</td><td colspan="4">16</td></tr>
<tr><td colspan="3">Power source</td><td colspan="4">208V/230V-1Ph-60Hz</td></tr>
<tr><td colspan="2">Power input</td><td>KW</td><td colspan="4">0.163</td></tr>
<tr><td colspan="2">MCA</td><td>A</td><td colspan="4">1.54</td></tr>
<tr><td colspan="3">External finish</td><td colspan="4">Hot-dip galvanized steel plate with powder coating</td></tr>
<tr><td colspan="3">Connectable outdoor unit</td><td colspan="4">38VMR – Heat Recovery</td></tr>
<tr><td colspan="3">Connectable sub-MDC unit</td><td colspan="4">40VMD006, 008, 010, 016S--3</td></tr>
<tr><td colspan="3">Maximum connected capacity</td><td colspan="4">504,000Btu/h</td></tr>
<tr><td colspan="2">Capacity / Port</td><td>KBtu/h</td><td colspan="4"><54</td></tr>
<tr><td colspan="2">External dimension H×W×D</td><td>in.</td><td colspan="4">12-3/4 x 46-1/2 x 22-5/8</td></tr>
<tr><td rowspan="14">Refrigerant Piping</td><td rowspan="8">Connectable outdoor unit</td><td rowspan="2">Capacity (KBtu/h)</td><td colspan="4">To outdoor unit</td></tr>
<tr><td colspan="2">High pressure pipe</td><td colspan="2">Low pressure pipe</td></tr>
<tr><td>072K in. O.D</td><td colspan="2">5/8 Brazed</td><td colspan="2">3/4 Brazed</td></tr>
<tr><td>096K in. O.D</td><td colspan="2">3/4 Brazed</td><td colspan="2">7/8 Brazed</td></tr>
<tr><td>120K in. O.D</td><td colspan="2">3/4 Brazed</td><td colspan="2">1-1/8 Brazed</td></tr>
<tr><td>144~192K in. O.D</td><td colspan="2">7/8 Brazed</td><td colspan="2">1-1/8 Brazed</td></tr>
<tr><td>216K in. O.D</td><td colspan="2">1-1/8 Brazed</td><td colspan="2">1-1/8 Brazed</td></tr>
<tr><td>240~288K in. O.D</td><td colspan="2">1-1/8 Brazed</td><td colspan="2">1-3/8 Brazed</td></tr>
<tr><td>312~336K in. O.D</td><td colspan="2">1-1/8 Brazed</td><td colspan="2">1-5/8 Brazed</td></tr>
<tr><td rowspan="5">Connectable indoor unit</td><td rowspan="2">Capacity (KBtu/h)</td><td colspan="4">To indoor unit</td></tr>
<tr><td colspan="2">Liquid pipe</td><td colspan="2">Gas pipe</td></tr>
<tr><td>05K to 15K in. O.D</td><td colspan="2">1/4 Brazed</td><td colspan="2">1/2 Brazed</td></tr>
<tr><td>18K to 54K in. O.D</td><td colspan="2">3/8 Brazed</td><td colspan="2">5/8 Brazed</td></tr>
<tr><td>72K to 96K in. O.D</td><td colspan="2">3/8 Brazed</td><td colspan="2">7/8 Brazed</td></tr>
<tr><td rowspan="6">Connectable Sub MDC</td><td rowspan="2">Capacity (KBtu/h)</td><td colspan="4">To Sub MDC unit</td></tr>
<tr><td>High pressure pipe</td><td>Liquid pipe</td><td colspan="2">Low pressure pipe</td></tr>
<tr><td>to 72K in. O.D</td><td>5/8 Brazed</td><td>3/8 Brazed</td><td colspan="2">3/4 Brazed</td></tr>
<tr><td>73K to108K in. O.D</td><td>3/4 Brazed</td><td>3/8 Brazed</td><td colspan="2">7/8 Brazed</td></tr>
<tr><td>109K to 126K in. O.D</td><td>3/4 Brazed</td><td>1/2 Brazed</td><td colspan="2">1-1/8 Brazed</td></tr>
<tr><td>127K to 144K in. O.D</td><td>7/8 Brazed</td><td>1/2 Brazed</td><td colspan="2">1-1/8 Brazed</td></tr>
<tr><td>145K to 168K in. O.D</td><td>7/8 Brazed</td><td>5/8 Brazed</td><td colspan="2">1-1/8 Brazed</td></tr>
<tr><td colspan="2">Condensate</td><td>in. O.D</td><td colspan="4">1</td></tr>
<tr><td colspan="2">Net weight</td><td>lbs</td><td colspan="4">196</td></tr>
<tr><td colspan="3">Standard accessories</td><td colspan="4">PQ connection wires, Adapter pipes, Flexible drainage pipe</td></tr>
</table>

NOTES:

1. The equipment is for R410A refrigerant.
2. Install this unit in a location where noise emitted by the unit is acceptable. For use in quiet environments with low background noise, position the MDC controller at least 16.4ft away from any indoor units.
3. The data presented is based on a specific combination.

Table 6 —Data Table

<table>
<tr><th colspan="3">MODEL</th><th colspan="4">40VMD006S--3</th></tr>
<tr><td colspan="3">Number of ports</td><td colspan="4">6</td></tr>
<tr><td colspan="3">Power source</td><td colspan="4">208V/230V-1Ph-60Hz</td></tr>
<tr><td colspan="2">Power input</td><td>KW</td><td colspan="4">0.075</td></tr>
<tr><td colspan="2">MCA</td><td>A</td><td colspan="4">0.69</td></tr>
<tr><td colspan="3">External finish</td><td colspan="4">Hot-dip galvanized steel plate with powder coating</td></tr>
<tr><td colspan="3">Connectable outdoor unit</td><td colspan="4">38VMA096~336RDS(L) model</td></tr>
<tr><td colspan="3">Connectable Main MDC Unit</td><td colspan="4">40VMD006, 008, 010, 016M--3, 40VMD016ML-3</td></tr>
<tr><td colspan="3">Maximum connected capacity</td><td colspan="4">126 Btu/h*</td></tr>
<tr><td colspan="2">Capacity / Port</td><td>KBtu/h</td><td colspan="4"><54</td></tr>
<tr><td colspan="2">External dimension H×W×D</td><td>in.</td><td colspan="4">12-3/4 x 37 x 22-5/8</td></tr>
<tr><td rowspan="10">Refrigerant Piping</td><td rowspan="5">Connectable indoor unit</td><td rowspan="2">Capacity (KBtu/h)</td><td colspan="4">To indoor unit</td></tr>
<tr><td colspan="2">Liquid pipe</td><td colspan="2">Gas pipe</td></tr>
<tr><td>05K to 15K in. O.D</td><td colspan="2">1/4 Brazed</td><td colspan="2">1/2 Brazed</td></tr>
<tr><td>18K to 54K in. O.D</td><td colspan="2">3/8 Brazed</td><td colspan="2">5/8 Brazed</td></tr>
<tr><td>72K to 96K in. O.D</td><td colspan="2">3/8 Brazed</td><td colspan="2">7/8 Brazed</td></tr>
<tr><td rowspan="5">Total indoor unit capacity in sub MDC*</td><td rowspan="2">Capacity (KBtu/h)</td><td colspan="4">To Main MDC unit</td></tr>
<tr><td>High pressure pipe</td><td>Liquid pipe</td><td colspan="2">Low pressure pipe</td></tr>
<tr><td>to 72K in. O.D</td><td>5/8 Brazed</td><td>3/8 Brazed</td><td colspan="2">3/4 Brazed</td></tr>
<tr><td>73K to108K in. O.D</td><td>3/4 Brazed</td><td>3/8 Brazed</td><td colspan="2">7/8 Brazed</td></tr>
<tr><td>109K to 126K in. O.D</td><td>3/4 Brazed</td><td>1/2 Brazed</td><td colspan="2">1-1/8 Brazed</td></tr>
<tr><td>127K to 144K in. O.D</td><td>7/8 Brazed</td><td>1/2 Brazed</td><td colspan="2">1-1/8 Brazed</td></tr>
<tr><td>145K to 168K in. O.D</td><td>7/8 Brazed</td><td>5/8 Brazed</td><td colspan="2">1-1/8 Brazed</td></tr>
<tr><td colspan="2">Condensate</td><td>in. O.D</td><td colspan="4">1</td></tr>
<tr><td colspan="2">Net weight</td><td>lbs</td><td colspan="4">126</td></tr>
<tr><td colspan="3">Standard accessories</td><td colspan="4">PQ connection wires, Adapter pipes, Flexible drainage pipe</td></tr>
</table>

NOTES:

1. The equipment is for R410A refrigerant.
2. Install this unit in a location where noise emitted by the unit is acceptable. For use in quiet environments with low background noise, position the MDC controller at least 16.4ft away from any indoor units.
3. The data presented is based on a specific combination.

* If two sub MDC are used, the total capacity is the summation of the two, which must not exceed 168 KBtu/h.

Table 7 —Data Table

<table>
<tr><th colspan="3">MODEL</th><th colspan="4">40VMD008S--3</th></tr>
<tr><td colspan="3">Number of ports</td><td colspan="4">8</td></tr>
<tr><td colspan="3">Power source</td><td colspan="4">208V/230V-1Ph-60Hz</td></tr>
<tr><td colspan="2">Power input</td><td>KW</td><td colspan="4">0.092</td></tr>
<tr><td colspan="2">MCA</td><td>A</td><td colspan="4">0.85</td></tr>
<tr><td colspan="3">External finish</td><td colspan="4">Hot-dip galvanized steel plate with powder coating</td></tr>
<tr><td colspan="3">Connectable outdoor unit</td><td colspan="4">38VMR – Heat Recovery</td></tr>
<tr><td colspan="3">Connectable Main MDC Unit</td><td colspan="4">40VMD008, 010, 016M--3, 40VMD016ML-3</td></tr>
<tr><td colspan="2">Maximum connected capacity</td><td>KBtu/h</td><td colspan="4">126*</td></tr>
<tr><td colspan="2">Capacity / Port</td><td>KBtu/h</td><td colspan="4"><54</td></tr>
<tr><td colspan="2">External dimension H×W×D</td><td>in.</td><td colspan="4">12-3/4 x 37 x 22-5/8</td></tr>
<tr><td rowspan="11">Refrigerant Piping</td><td rowspan="4">Connectable indoor unit</td><td rowspan="2">Capacity (KBtu/h)</td><td colspan="4">To indoor unit</td></tr>
<tr><td colspan="2">Liquid pipe</td><td colspan="2">Gas pipe</td></tr>
<tr><td>05K to 15K in. O.D</td><td colspan="2">1/4 Brazed</td><td colspan="2">1/2 Brazed</td></tr>
<tr><td>18K to 54K in. O.D</td><td colspan="2">3/8 Brazed</td><td colspan="2">5/8 Brazed</td></tr>
<tr><td>72K to 96K in. O.D</td><td colspan="2">3/8 Brazed</td><td colspan="2">7/8 Brazed</td></tr>
<tr><td rowspan="6">Total indoor unit capacity in sub MDC*</td><td rowspan="2">Capacity (KBtu/h)</td><td colspan="4">To Main MDC unit</td></tr>
<tr><td>High pressure pipe</td><td>Liquid pipe</td><td colspan="2">Low pressure pipe</td></tr>
<tr><td>to 72K in. O.D</td><td>5/8 Brazed</td><td>3/8 Brazed</td><td colspan="2">3/4 Brazed</td></tr>
<tr><td>73K to108K in. O.D</td><td>3/4 Brazed</td><td>3/8 Brazed</td><td colspan="2">7/8 Brazed</td></tr>
<tr><td>109K to 126K in. O.D</td><td>3/4 Brazed</td><td>1/2 Brazed</td><td colspan="2">1-1/8 Brazed</td></tr>
<tr><td>127K to 144K in. O.D</td><td>7/8 Brazed</td><td>1/2 Brazed</td><td colspan="2">1-1/8 Brazed</td></tr>
<tr><td>145K to 168K in. O.D</td><td>7/8 Brazed</td><td>5/8 Brazed</td><td colspan="2">1-1/8 Brazed</td></tr>
<tr><td colspan="2">Condensate</td><td>in. O.D</td><td colspan="4">1</td></tr>
<tr><td colspan="2">Net weight</td><td>lbs</td><td colspan="4">130</td></tr>
<tr><td colspan="3">Standard accessories</td><td colspan="4">PQ connection wires, Adapter pipes, Flexible drainage pipe</td></tr>
</table>

NOTES:

1. The equipment is for R410A refrigerant.
2. Install this unit in a location where noise emitted by the unit is acceptable. For use in quiet environments with low background noise, position the MDC controller at least 16.4ft away from any indoor units.
3. The data presented is based on a specific combination.

* If two sub MDC are used, the total capacity is the summation of the two, which must not exceed 168 KBtu/h.

Table 8 —Data Table

MODEL			40VMD010S--3		
Number of ports			10		
Power source			208V/230V-1Ph-60Hz		
Power input		KW	0.109		
MCA		A	1.01		
External finish			Hot-dip galvanized steel plate with powder coating		
Connectable outdoor unit			38VMR – Heat Recovery		
Connectable main MDC unit			40VMD010, 16M--3, 40VMD016ML-3		
Maximum connected capacity			126 KBtu/h*		
Capacity / Port		KBtu/h	<54		
External dimension H×W×D		in.	12-3/4 x 37 x 22-5/8		
Refrigerant Piping	Connectable indoor unit	Capacity (KBtu/h)	To indoor unit		
			Liquid pipe	Gas pipe	
		05K to 15K in. O.D	1/4 Brazed	1/2 Brazed	
		18K to 54K in. O.D	3/8 Brazed	5/8 Brazed	
		72K to 96K in. O.D	3/8 Brazed	7/8 Brazed	
	Total indoor unit capacity in sub MDC *	Capacity (KBtu/h)	To Main MDC unit		
			High pressure pipe	Liquid pipe	Low pressure pipe
		to 72K in. O.D	5/8 Brazed	3/8 Brazed	3/4 Brazed
		73K to108K in. O.D	3/4 Brazed	3/8 Brazed	7/8 Brazed
		109K to 126K in. O.D	3/4 Brazed	1/2 Brazed	1-1/8 Brazed
		127K to 144K in. O.D	7/8 Brazed	1/2 Brazed	1-1/8 Brazed
		145K to 168K in. O.D	7/8 Brazed	5/8 Brazed	1-1/8 Brazed
Condensate		in. O.D	1		
Net weight		lbs	137		
Standard accessories			PQ connection wires, Adapter pipes, Flexible drainage pipe		

NOTES:

1. The equipment is for R410A refrigerant.
2. Install this unit in a location where noise emitted by the unit is acceptable. For use in quiet environments with low background noise, position the MDC controller at least 16.4ft away from any indoor units.
3. The data presented is based on a specific combination.

* If two sub MDC are used, the total capacity is the summation of the two, which must not exceed 168 KBtu/h.

Table 9 —Data Table

<table>
<tr><th colspan="3">MODEL</th><th colspan="4">40VMD016S--3</th></tr>
<tr><td colspan="2">Number of ports</td><td></td><td colspan="4">16</td></tr>
<tr><td colspan="2">Power source</td><td></td><td colspan="4">208V/230V-1Ph-60Hz</td></tr>
<tr><td colspan="2">Power input</td><td>KW</td><td colspan="4">0.159</td></tr>
<tr><td colspan="2">MCA</td><td>A</td><td colspan="4">1.49</td></tr>
<tr><td colspan="2">External finish</td><td></td><td colspan="4">Hot-dip galvanized steel plate with powder coating</td></tr>
<tr><td colspan="2">Connectable outdoor unit</td><td></td><td colspan="4">38VMR – Heat Recovery</td></tr>
<tr><td colspan="2">Connectable main MDC unit</td><td></td><td colspan="4">40VMD016M--3, 40VMD016ML-3</td></tr>
<tr><td colspan="2">Maximum connected capacity</td><td></td><td colspan="4">126 KBtu/h*</td></tr>
<tr><td colspan="2">Capacity / Port</td><td>KBtu/h</td><td colspan="4"><54</td></tr>
<tr><td colspan="2">External dimension H×W×D</td><td>in.</td><td colspan="4">12-3/4 x 46-1/2 x 22-5/8</td></tr>
<tr><td rowspan="10">Refrigerant Piping</td><td rowspan="4">Connectable indoor unit</td><td rowspan="2">Capacity (KBtu/h)</td><td colspan="4">To indoor unit</td></tr>
<tr><td colspan="2">Liquid pipe</td><td colspan="2">Gas pipe</td></tr>
<tr><td>5K to 15K in. O.D</td><td colspan="2">1/4 Brazed</td><td colspan="2">1/2 Brazed</td></tr>
<tr><td>18K to 54K in. O.D</td><td colspan="2">3/8 Brazed</td><td colspan="2">5/8 Brazed</td></tr>
<tr><td>72K to 96K in. O.D</td><td colspan="2">3/8 Brazed</td><td colspan="2">7/8 Brazed</td></tr>
<tr><td rowspan="6">Total indoor unit capacity in sub MDC *</td><td rowspan="2">Capacity (KBtu/h)</td><td colspan="4">To Main MDC unit</td></tr>
<tr><td>High pressure pipe</td><td>Liquid pipe</td><td colspan="2">Low pressure pipe</td></tr>
<tr><td>to 72K in. O.D</td><td>5/8 Brazed</td><td>3/8 Brazed</td><td colspan="2">3/4 Brazed</td></tr>
<tr><td>73K to108K in. O.D</td><td>3/4 Brazed</td><td>3/8 Brazed</td><td colspan="2">7/8 Brazed</td></tr>
<tr><td>109K to 126K in. O.D</td><td>3/4 Brazed</td><td>1/2 Brazed</td><td colspan="2">1-1/8 Brazed</td></tr>
<tr><td>127K to 144K in. O.D</td><td>7/8 Brazed</td><td>1/2 Brazed</td><td colspan="2">1-1/8 Brazed</td></tr>
<tr><td>145K to 168K in. O.D</td><td>7/8 Brazed</td><td>5/8 Brazed</td><td colspan="2">1-1/8 Brazed</td></tr>
<tr><td colspan="2">Condensate</td><td>in. O.D</td><td colspan="4">1</td></tr>
<tr><td colspan="2">Net weight</td><td>lbs</td><td colspan="4">183</td></tr>
<tr><td colspan="2">Standard accessories</td><td></td><td colspan="4">PQ connection wires, Adapter pipes, Flexible drainage pipe</td></tr>
</table>

NOTES:

1. The equipment is for R410A refrigerant.
2. Install this unit in a location where noise emitted by the unit is acceptable. For use in quiet environments with low background noise, position the MDC controller at least 16.4ft away from any indoor units.
3. The data presented is based on a specific combination.

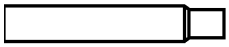
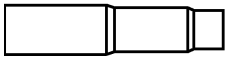
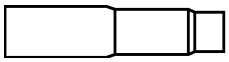
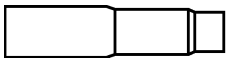
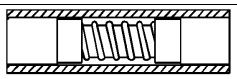
* If two sub MDC are used, the total capacity is the summation of them, which must not exceed 168 KBtu/h.

Table 10 —Number of MDCs that can be Connected to ODU

ODU (KBbtu/h)	Max. connected MDC Quantity 1 = Main MDC 2 = Main MDC + 1 Sub 3 = Main MDC + 2 Subs	Max. connected IDU Quantity (inlc. combination of IDUs on main and sub MDCs)
72	1	15
96	2	20
120	2	24
144	2	29
168	3	34
192	3	39
216	3	44
240	3	49
264	3	54
288	3	59
312	3	64
336	3	64

Accessories

Table 10 —Table of Accessories

NAME	SHAPE	QUANTITY	FUNCTION
Adapter pipe for liquid line		Same as MDC ports	Use for indoor unit (capacity 05～15Btu/h)
Adapter pipe for gas line		Same as MDC ports	
Adapter pipe for liquid line		2	Use for the connection between the main MDC and 1 sub MDC unit (available only with the sub MDC)
Adapter pipe for low pressure line		2	
Adapter pipe for high pressure line		2	
Clamp		2	To fasten the connector between flexible condensate pipe and MDC condensate
Condensate connection		2	Reducer for smaller pipe diameter (only for size 018 unit)
PQE connection wire		No. of Ports + 3	Connects outdoor unit, indoor unit, and MDC
Adapter pipe (for high pressure line)		1	Only for 40VMD016ML-3, used for connection to 072-240 size outdoor unit
Adapter pipe (for low pressure line)		1	

DIMENSIONS

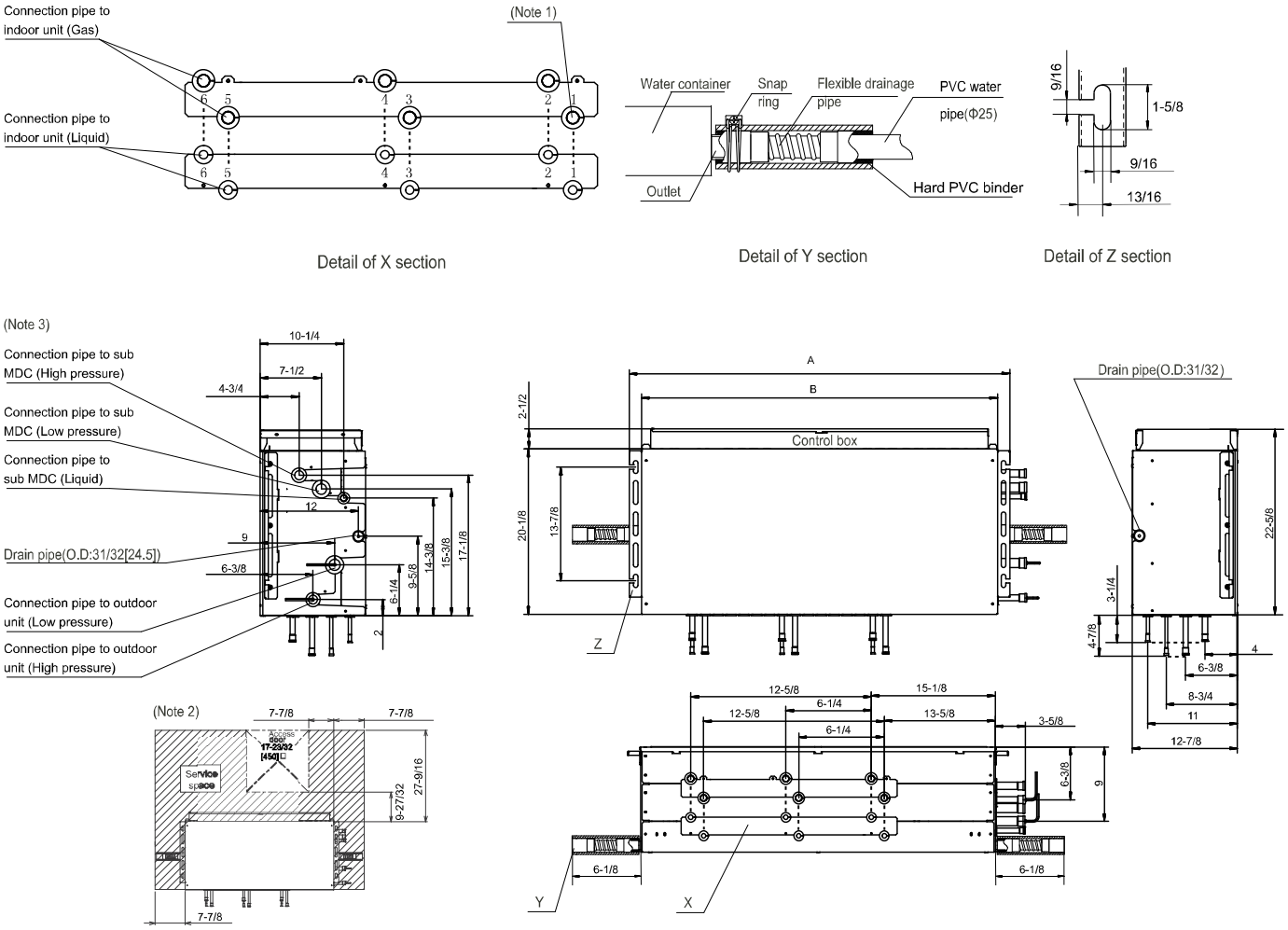


Fig. 1 —40VMD006M---3

SYMBOL	DIMENSION
A	37
B	33-7/8

NOTES:

1. An indoor unit must be connected to port #1 to avoid communication error.
2. Provide adequate service clearance.
3. Refer to Installation Manual for piping sizes.
4. All Dimensions are shown in inches.

DIMENSIONS (CONT.)

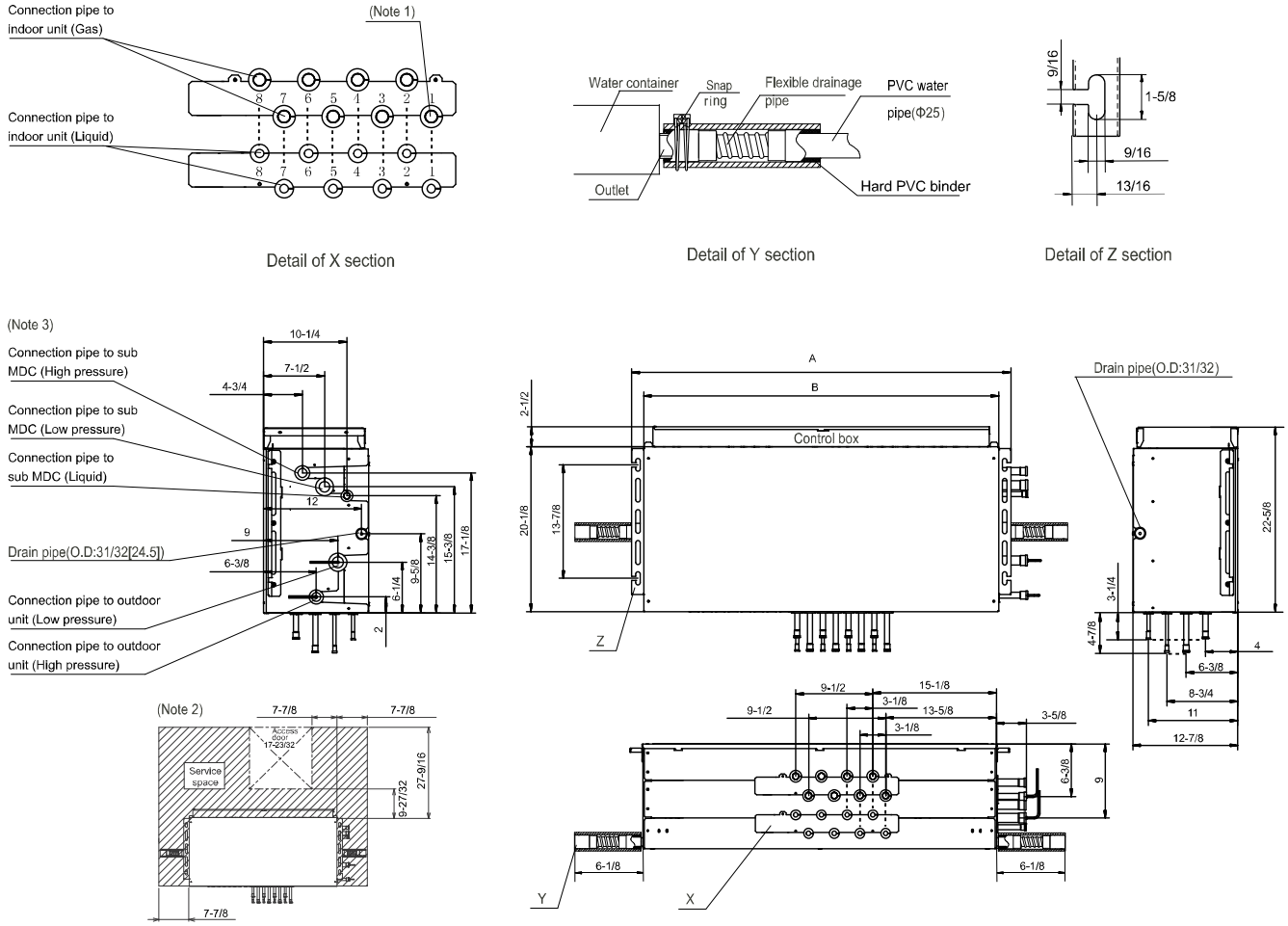


Fig. 2 —40VMD008M---3

SYMBOL	DIMENSION
A	37
B	33-7/8

NOTES:

1. An indoor unit must be connected to port #1 to avoid communication error.
2. Provide adequate service clearance.
3. Refer to Installation Manual for piping sizes.
4. All Dimensions are shown in inches.

DIMENSIONS (CONT.)

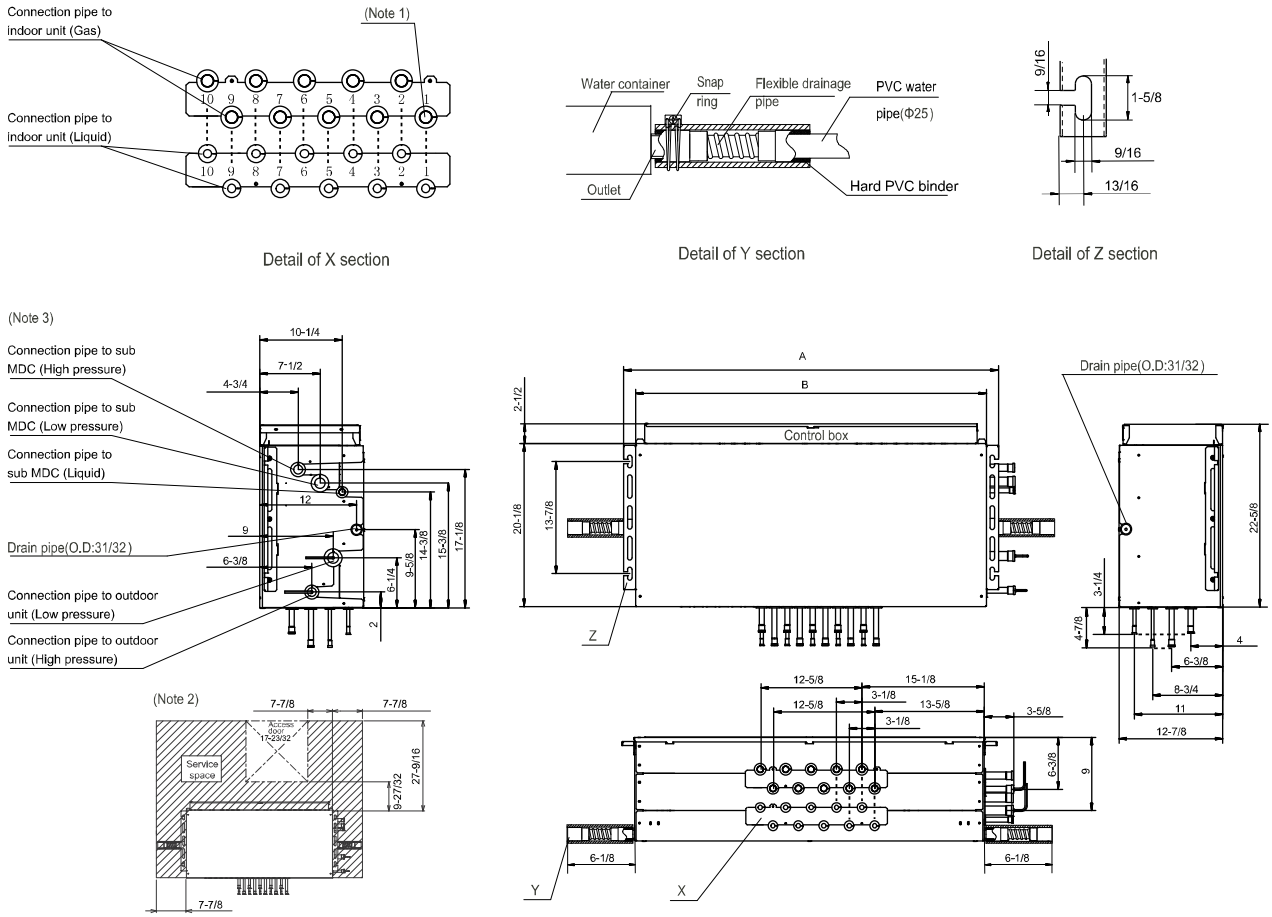


Fig. 3 —40VMD010M--3

SYMBOL	DIMENSION
A	37
B	33-7/8

NOTES:

1. An indoor unit must be connected to port #1 to avoid communication error.
2. Provide adequate service clearance.
3. Refer to Installation Manual for piping sizes.
4. All Dimensions are shown in inches.

DIMENSIONS (CONT.)

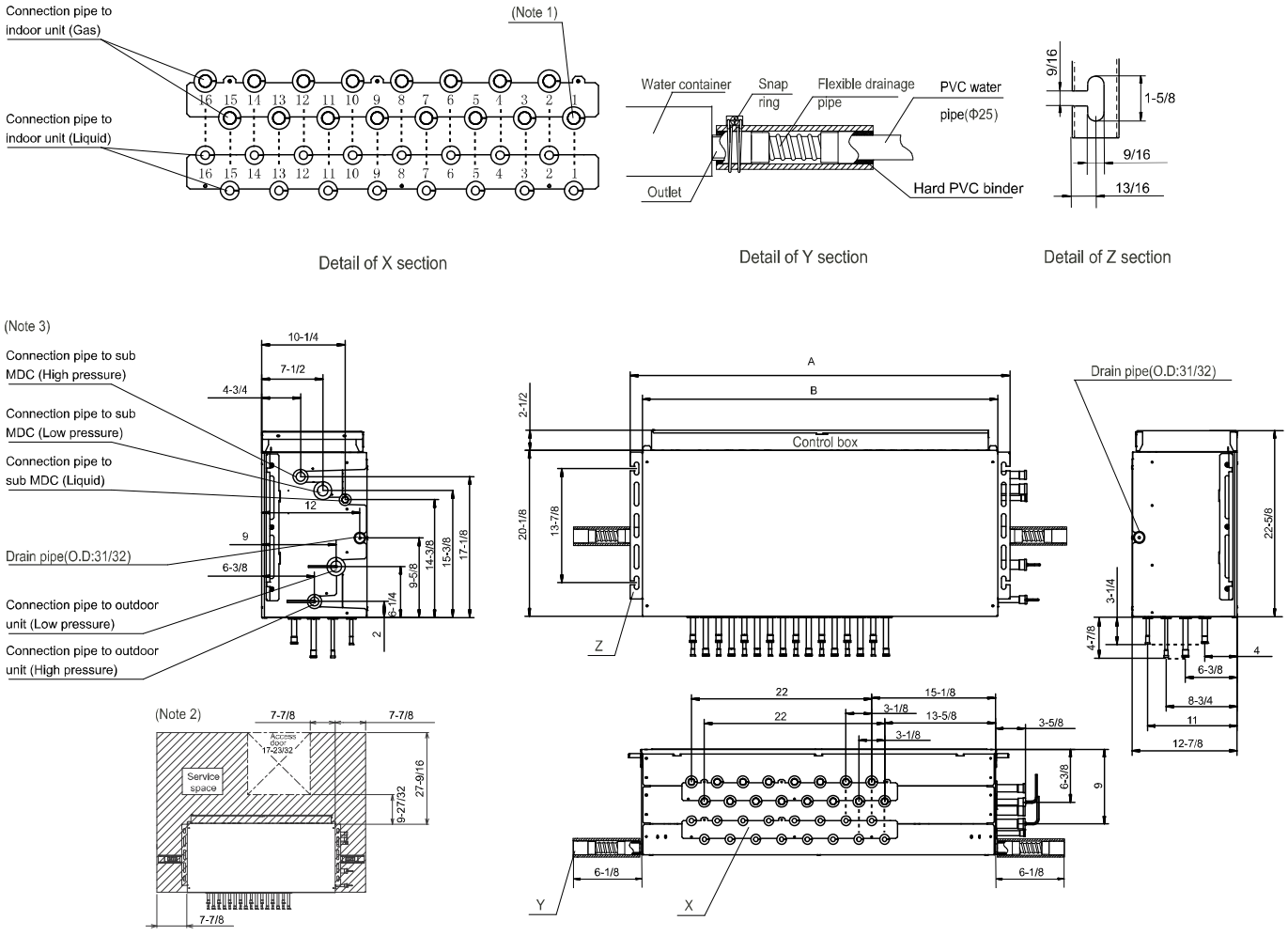


Fig. 4 —40VMD016M--3

SYMBOL	DIMENSION
A	46-1/2
B	43-1/4

NOTES:

1. An indoor unit must be connected to port #1 to avoid communication error.
2. Provide adequate service clearance.
3. Refer to Installation Manual for piping sizes.
4. All Dimensions are shown in inches.

DIMENSIONS (CONT.)

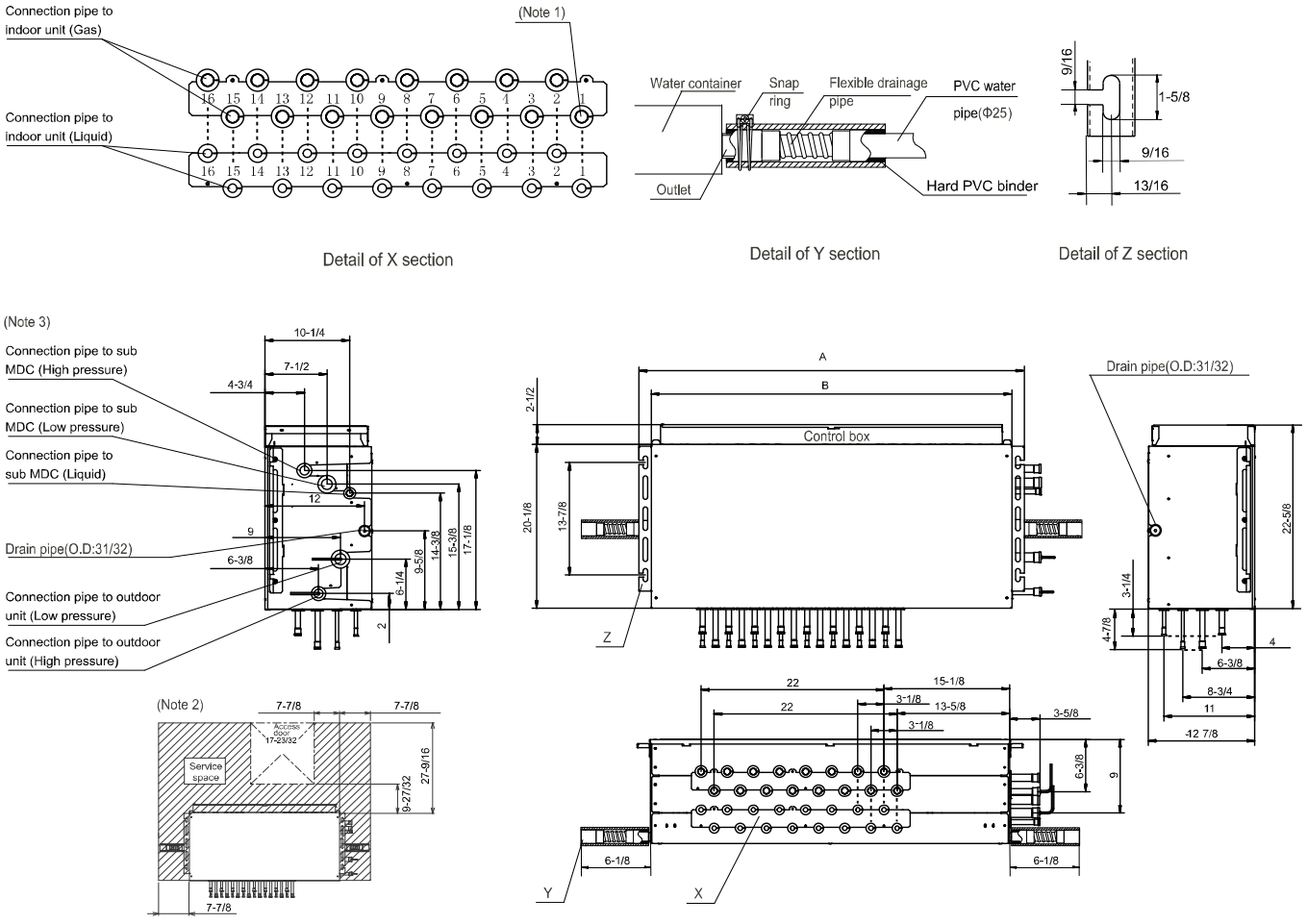


Fig. 5 —40VMD016ML--3

SYMBOL	DIMENSION
A	46-1/2
B	43-1/4

NOTES:

1. An indoor unit must be connected to port #1 to avoid communication error.
2. Provide adequate service clearance.
3. Refer to Installation Manual for piping sizes.
4. All Dimensions are shown in inches.

DIMENSIONS (CONT.)

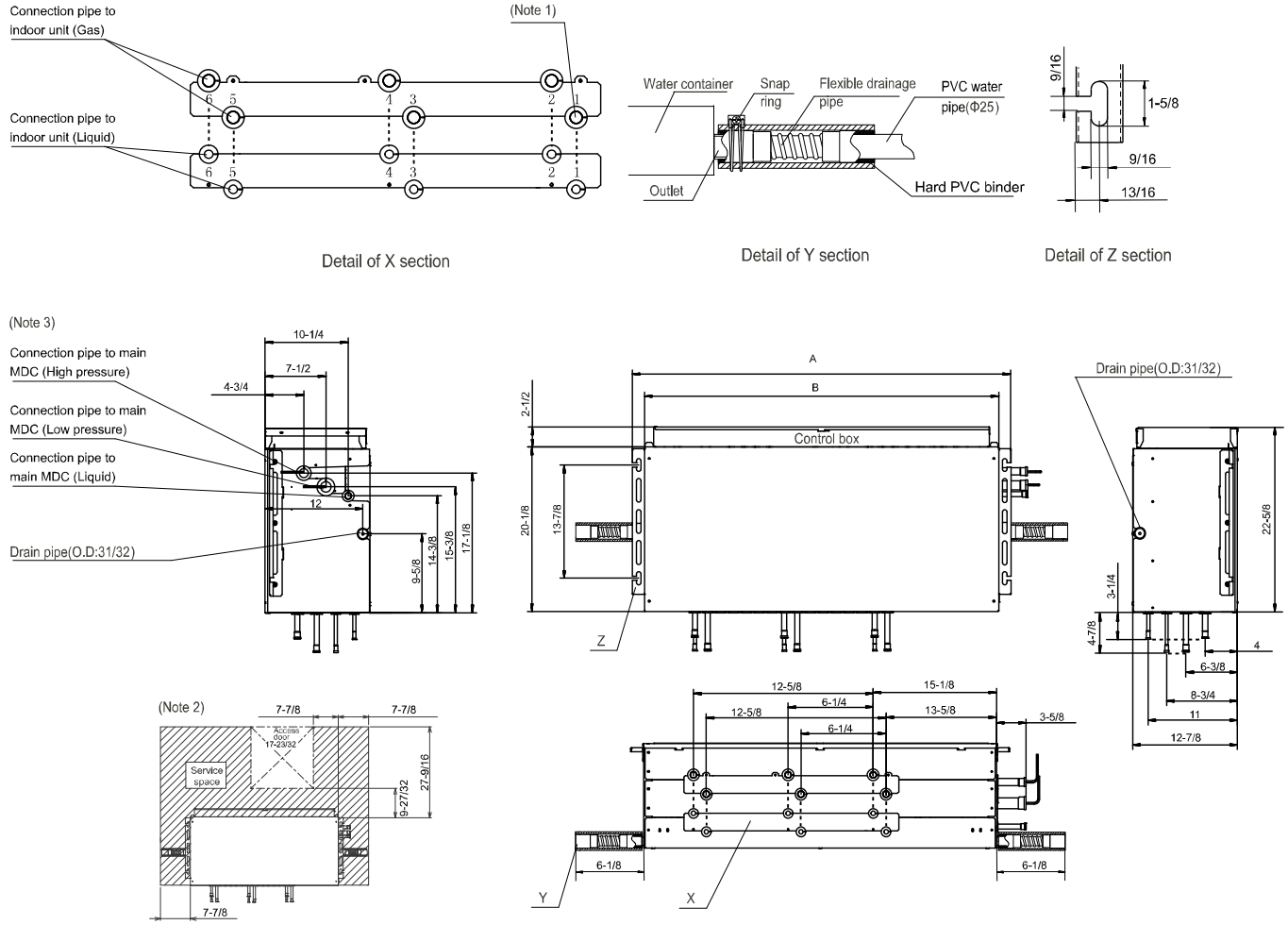


Fig. 6 —40VMD006S--3

SYMBOL	DIMENSION
A	37
B	33-7/8

NOTES:

1. An indoor unit must be connected to port #1 to avoid communication error.
2. Provide adequate service clearance.
3. Refer to Installation Manual for piping sizes.
4. All Dimensions are shown in inches.

DIMENSIONS (CONT.)

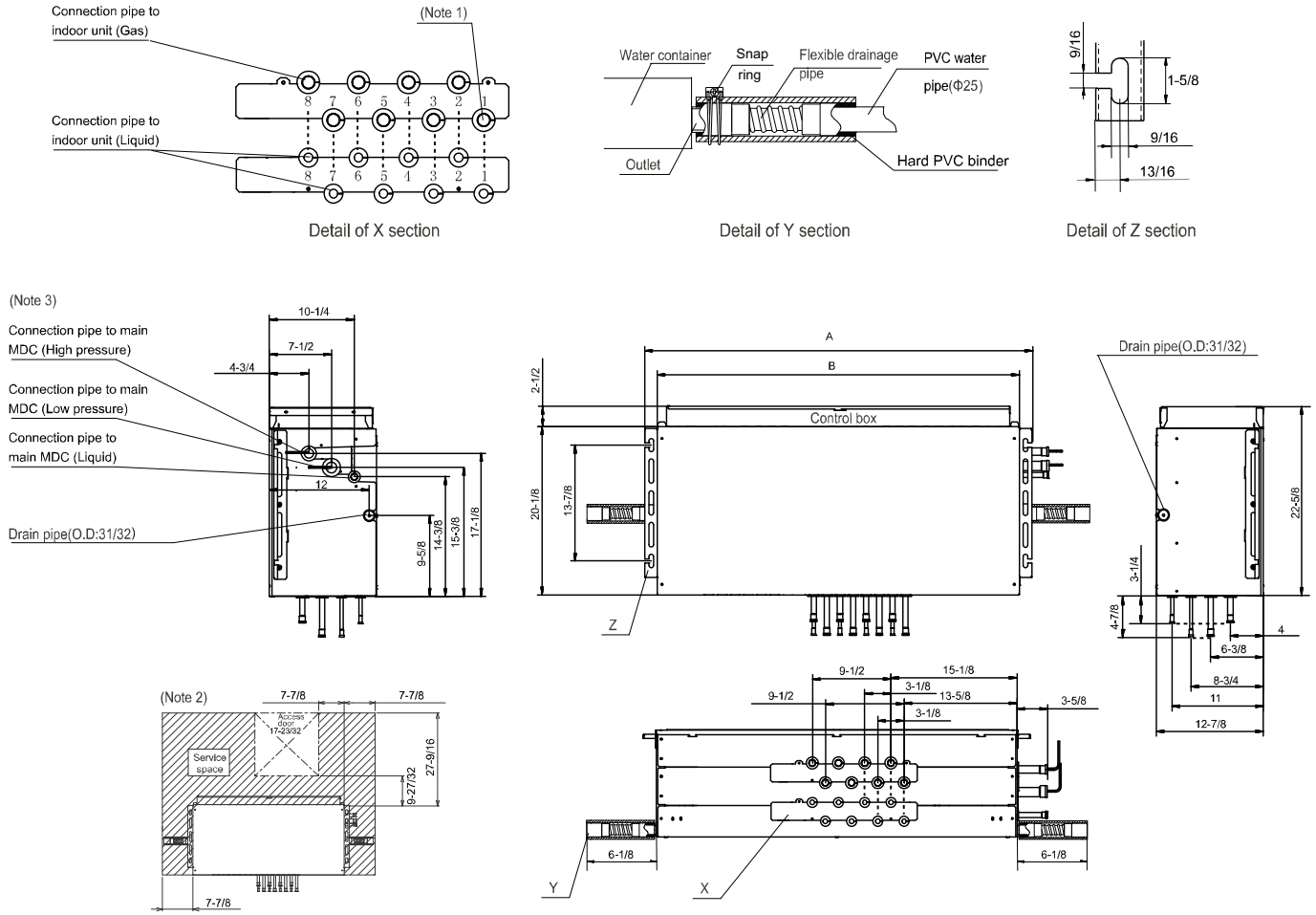
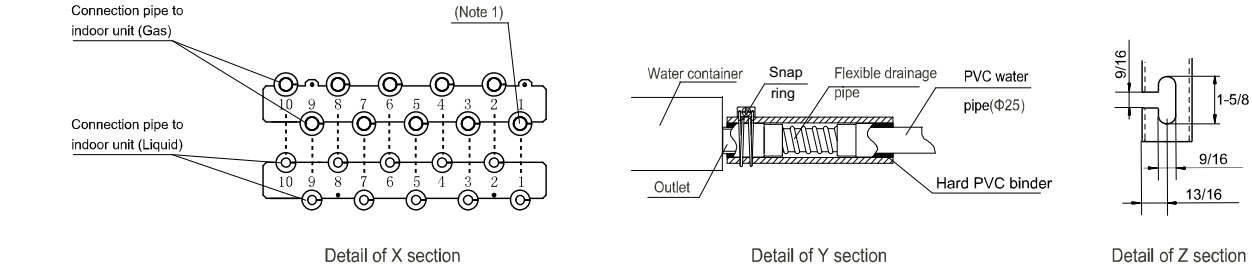


Fig. 7 —40VMD008S--3

SYMBOL	DIMENSION
A	37
B	33-7/8

NOTES:
1. An indoor unit must be connected to port #1 to avoid communication error.
2. Provide adequate service clearance.
3. Refer to Installation Manual for piping sizes.
4. All Dimensions are shown in inches.

DIMENSIONS (CONT.)



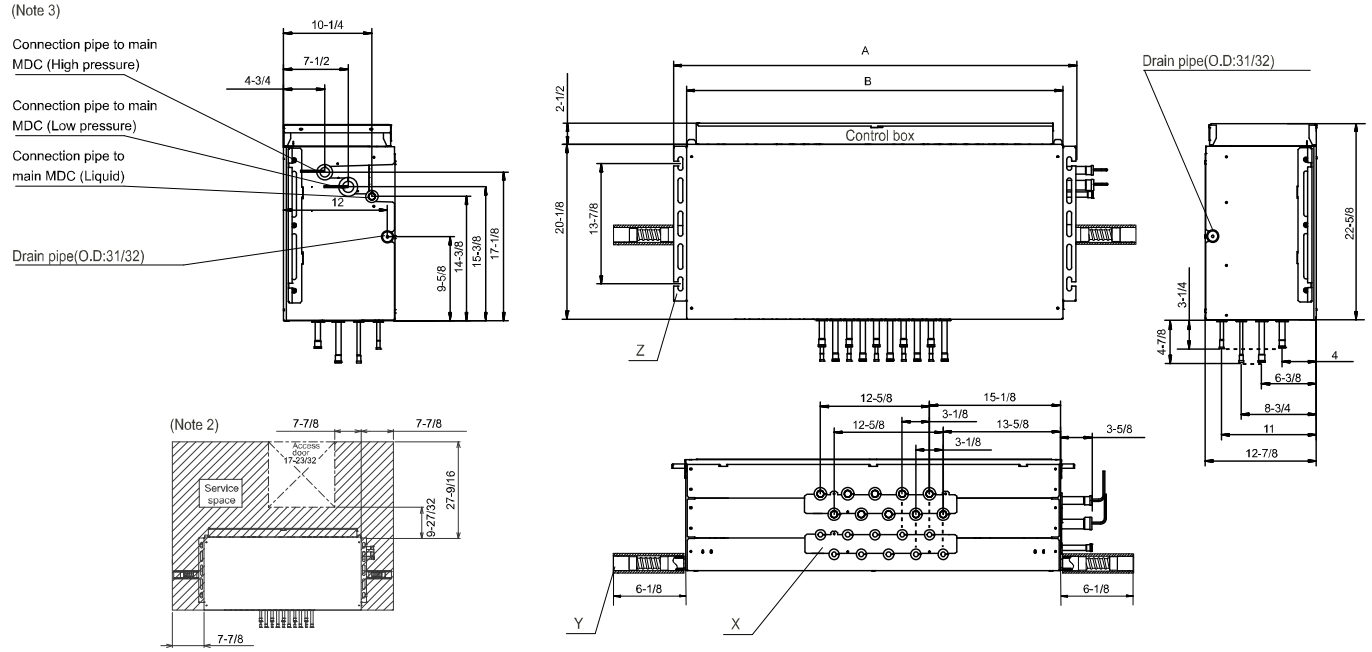


Fig. 8 —40VMD010S--3

SYMBOL	DIMENSION
A	37
B	33-7/8

NOTES:
1. An indoor unit must be connected to port #1 to avoid communication error.
2. Provide adequate service clearance.
3. Refer to Installation Manual for piping sizes.
4. All Dimensions are shown in inches.

DIMENSIONS (CONT.)

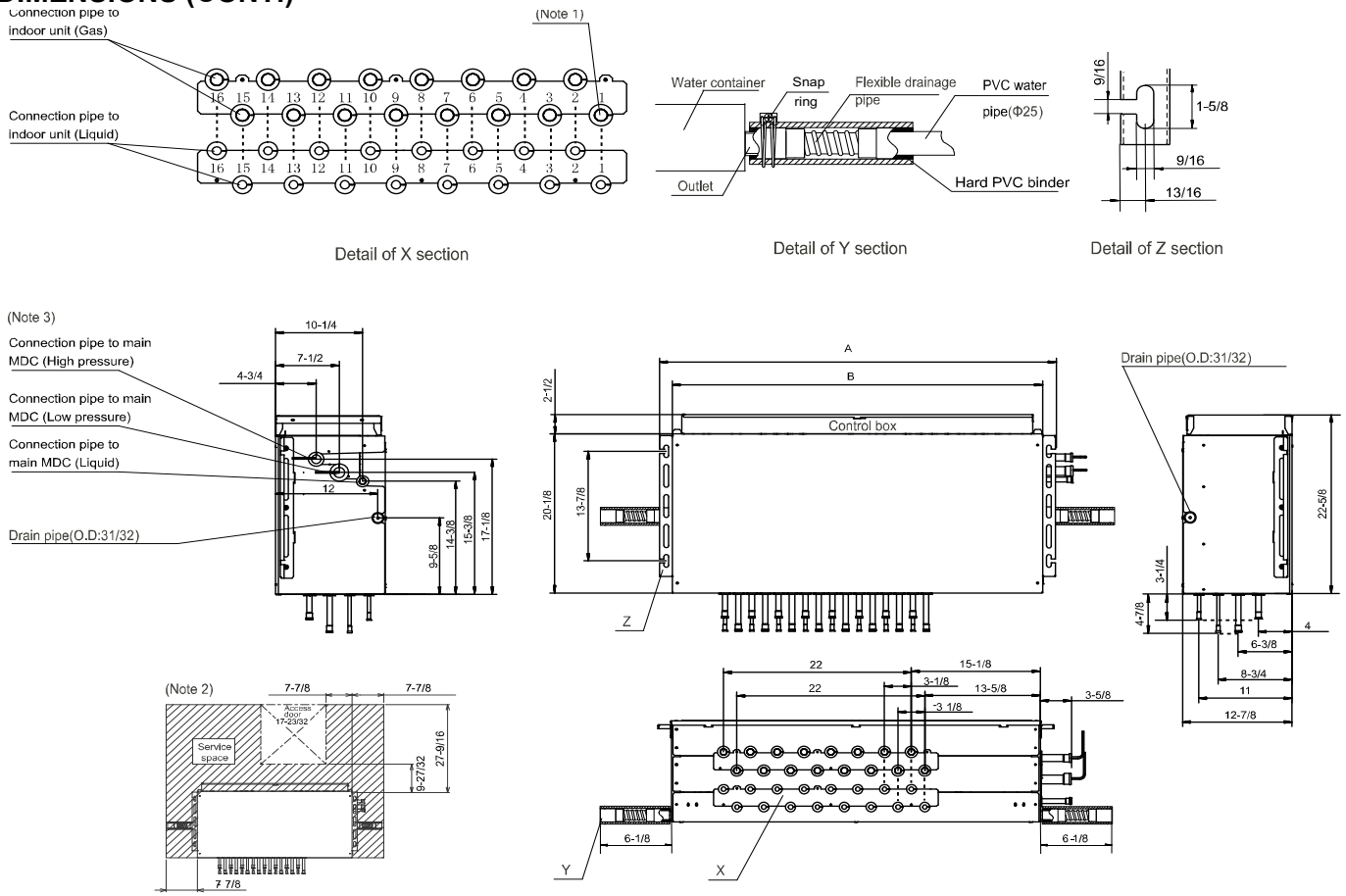


Fig. 9 —40VMD016S--3

SYMBOL	DIMENSION
A	46-1/2
B	43-1/4

NOTES:
1. An indoor unit must be connected to port #1 to avoid communication error.
2. Provide adequate service clearance.
3. Refer to Installation Manual for piping sizes.
4. All Dimensions are shown in inches.

WIRING DIAGRAM

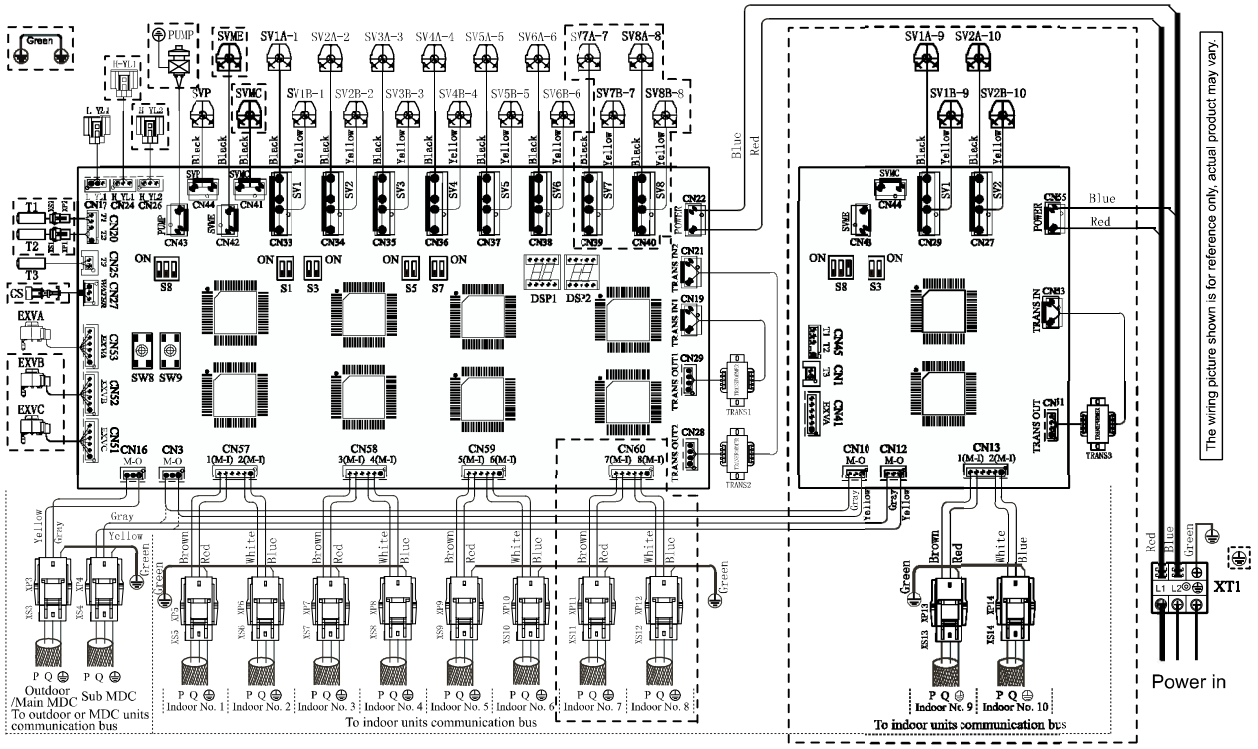


Fig. 10 —Wiring Diagram (40VMD006/008/010M(S)--3)

Table 11 —DSP1 and DSP2 Display Content

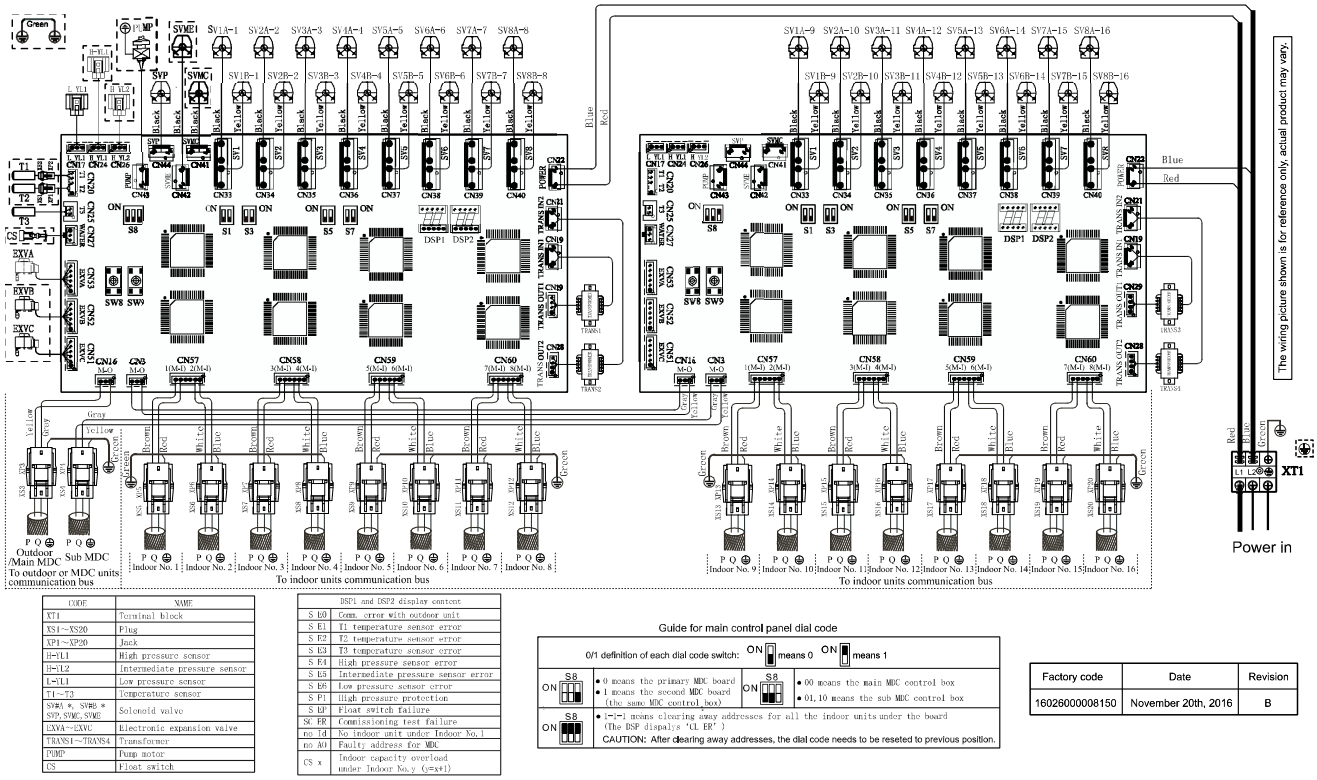
S E0	Comm. Error with Outdoor Unit
S E1	T1 Temperature Sensor Error
S E2	T2 Temperature Sensor Error
S E3	T3 Temperature Sensor Error
S E4	High Pressure Sensor Error
S E5	Intermediate Pressure Sensor Error
S E6	Low Pressure Sensor Error
S P1	High Pressure Protection
S EP	Float Switch Failure
SC ER	Commissioning Test Failure
no ID	No Indoor Unit Under Indoor No.1
no AD	Faulty Address for MDC
CS x	Indoor Capacity Overload Under Indoor No. y (y=x/1)

Table 12 —SW1 Definition

XT1	Terminal Block
XS1 XS20	Plug
XP1 XP20	Jack
H-YL1	High Pressure Sensor
H-YL2	Intermediate Pressure Sensor
L-YL1	Low Pressure Sensor
T1 T3	Temperature Sensor
SV#A-*, SV#B-*, SVP, SVMC, SVME	Solenoid Valve
EXVA EXVC	Electronic Expansion Valve
TRANS1 TRANS4	Transformer
PUMP	Pump Motor
CS	Float Switch

Table 13 —Main Control Panel Dial Code

0/1 definition of each dial code switch ON means 0 ON means 1			
ON S8	• 0 means the primary MDC board • 0 means the secondary MDC board (the same MDC control box)	ON S8	• 00 means the main MDC control box • 01, 10 means the sub MDC control box
ON S8	1-1-1 means clearing away addresses for all the indoor units under the board (The DSP displays CL ER) CAUTION: After clearing away addresses, the dial code needs to be reset to the previous position.		



CODE	NAME
XT1	Terminal block
XS1～XS20	Plug
XP1～XP20	Jack
H-YL1	High pressure sensor
H-YL2	Intermediate pressure sensor
L-YL1	Low pressure sensor
T1～T3	Temperature sensor
SV#A-*, SV#B-*, SVP, SVMC, SVME	Solenoid valve
EXVA～EXVC	Electronic expansion valve
TRANS1～TRANS4	Transformer
PUMP	Pump motor
CS	Float switch

DSP1 and DSP2 display content	
S E0	Comm. error with outdoor unit
S E1	T1 temperature sensor error
S E2	T2 temperature sensor error
S E3	T3 temperature sensor error
S E4	High pressure sensor error
S E5	Intermediate pressure sensor error
S E6	Low pressure sensor error
S P1	High pressure protection
S EP	Float switch failure
SC ER	Commissioning test failure
no Id	No indoor unit under Indoor No.1
no AD	Faulty address for MDC
CS x	Indoor capacity overload under Indoor No.y (y=x+1)

Factory code	Date	Revision
16026000008150	November 20th, 2016	B

Fig. 11 —40VMD016M, ML, S

Table 14 —DSP1 and DSP2 Display Content

S E0	Comm. Error with Outdoor Unit
S E1	T1 Temperature Sensor Error
S E2	T2 Temperature Sensor Error
S E3	T3 Temperature Sensor Error
S E4	High Pressure Sensor Error
S E5	Intermediate Pressure Sensor Error
S E6	Low Pressure Sensor Error
S P1	High Pressure Protection
S EP	Float Switch Failure
SC ER	Commissioning Test Failure
no ID	No Indoor Unit Under Indoor No.1
no AD	Faulty Address for MDC
CS x	Indoor Capacity Overload Under Indoor No. y (y=x/1)

Table 15 —SW1 Definition

XT1	Terminal Block
XS1～XS20	Plug
XP1～XP20	Jack
H-YL1	High Pressure Sensor
H-YL2	Intermediate Pressure Sensor
L-YL1	Low Pressure Sensor
T1～T3	Temperature Sensor
SV#A-*, SV#B-*, SVP, SVMC, SVME	Solenoid Valve
EXVA～EXVC	Electronic Expansion Valve
TRANS1～TRANS4	Transformer
PUMP	Pump Motor
CS	Float Switch

Table 16 —Main Control Panel Dial Code

0/1 definition of each dial code switch ON means 0 ON means 1			
ON S8	• 0 means the primary MDC board • 0 means the secondary MDC board (the same MDC control box)	ON S8	• 00 means the main MDC control box • 01, 10 means the sub MDC control box
ON S8	1-1-2 means clearing away addresses for all the indoor units under the board (The DSP displays CL ER) CAUTION: After clearing away addresses, the dial code needs to be reset to the previous position		

REFRIGERANT CIRCUIT DIAGRAMS

Table 17 —Refrigerant Circuits

Name	Symbol		Major Function
	Refrigerant Circuit Diagram	Wiring Diagram	
Pressure sensor	PS1	H-YL1	Used to detect high pressure and control EXVB and EXVC
	PS2	H-YL2	Used to detect medium pressure and control EXVB and EXVC
	PS3	L-YL1	Used to detect low pressure and control EXVA
Thermistor	Tm1	T1	Used to calculate subcooling (SCm1)
	Tm2	T2	Used to calculate subcooling (SCm2)
	Tm3	T3	Used to calculate superheat degree (SHm3)
Solenoid valve	SVMC		1) Opens during cooling and de-frost modes 2) Abnormal High-pressure-rise prevention
	SVME		Used for high-pressure prevention and high-temperature protection
	SVP		1) Superheat control in cooling mode 2) Used to control discharge superheat in heating mode
	SVmA-n *NOTE		Provides refrigerant to indoor unit in cooling operation
	SVmB-n *NOTE		Provides refrigerant to indoor unit in heating operation
Electronic expansion valve	EXVA		Combined with SVP 1) Superheat control in cooling mode 2) Used to control discharge superheat in heating mode
	EXVB		1) Opens during cooling and de-frost modes 2) Pressure differential control during main-cooling mode
	EXVC		

NOTES:

- m = The micro-processor number of MDC board. This can be between 1 and 8.
- n = The port No. of MDC unit. This can be between 1 and 16.

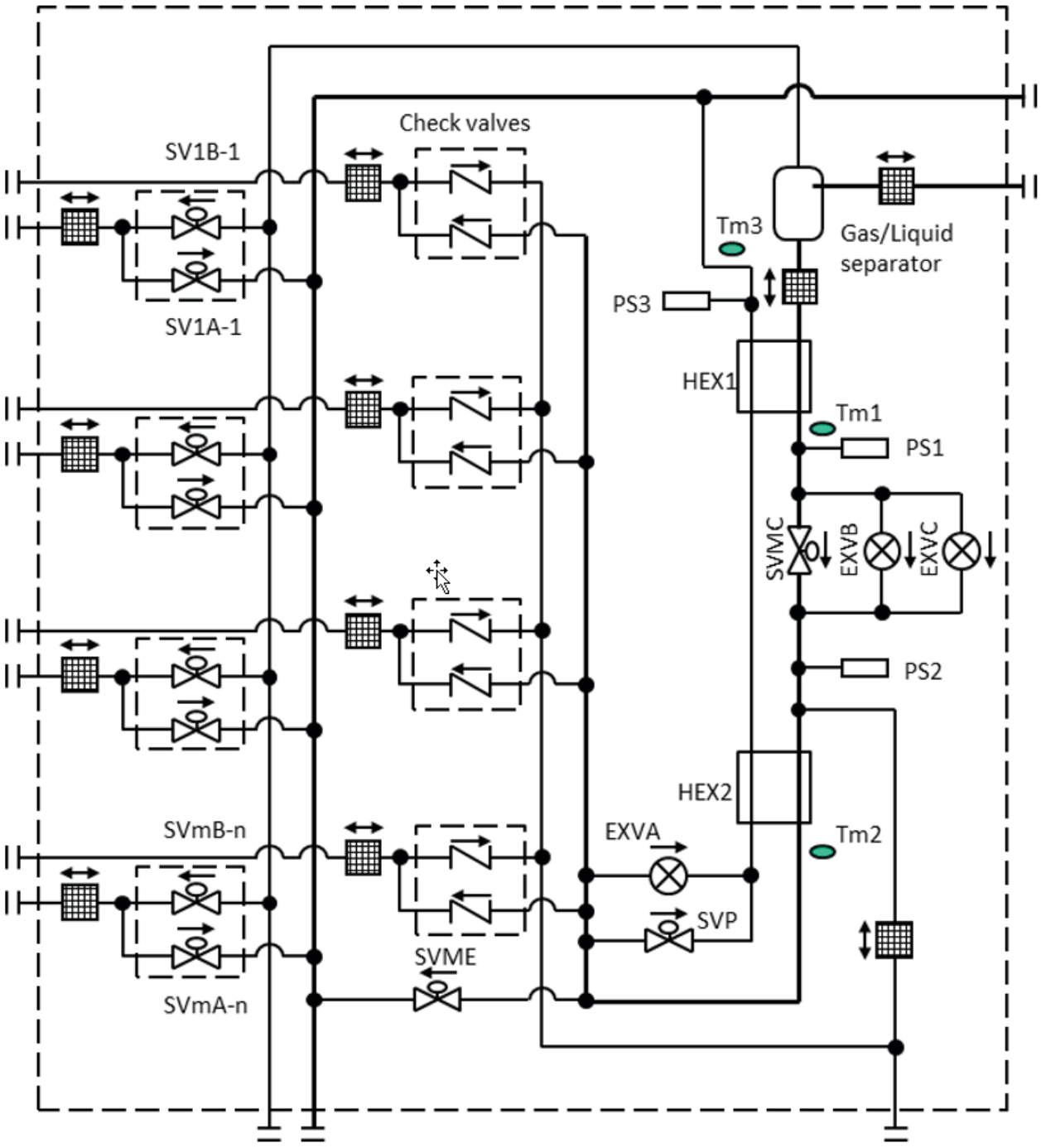


Fig. 12 —40VMD006, 008, 010, 016M—3 (Main Type)

SVmA-n: Cooling solenoid valve
SVmB-n: Heating solenoid valve

LEGEND:
m is the intel processor No. of MDC board
n is the port No. of MDC unit

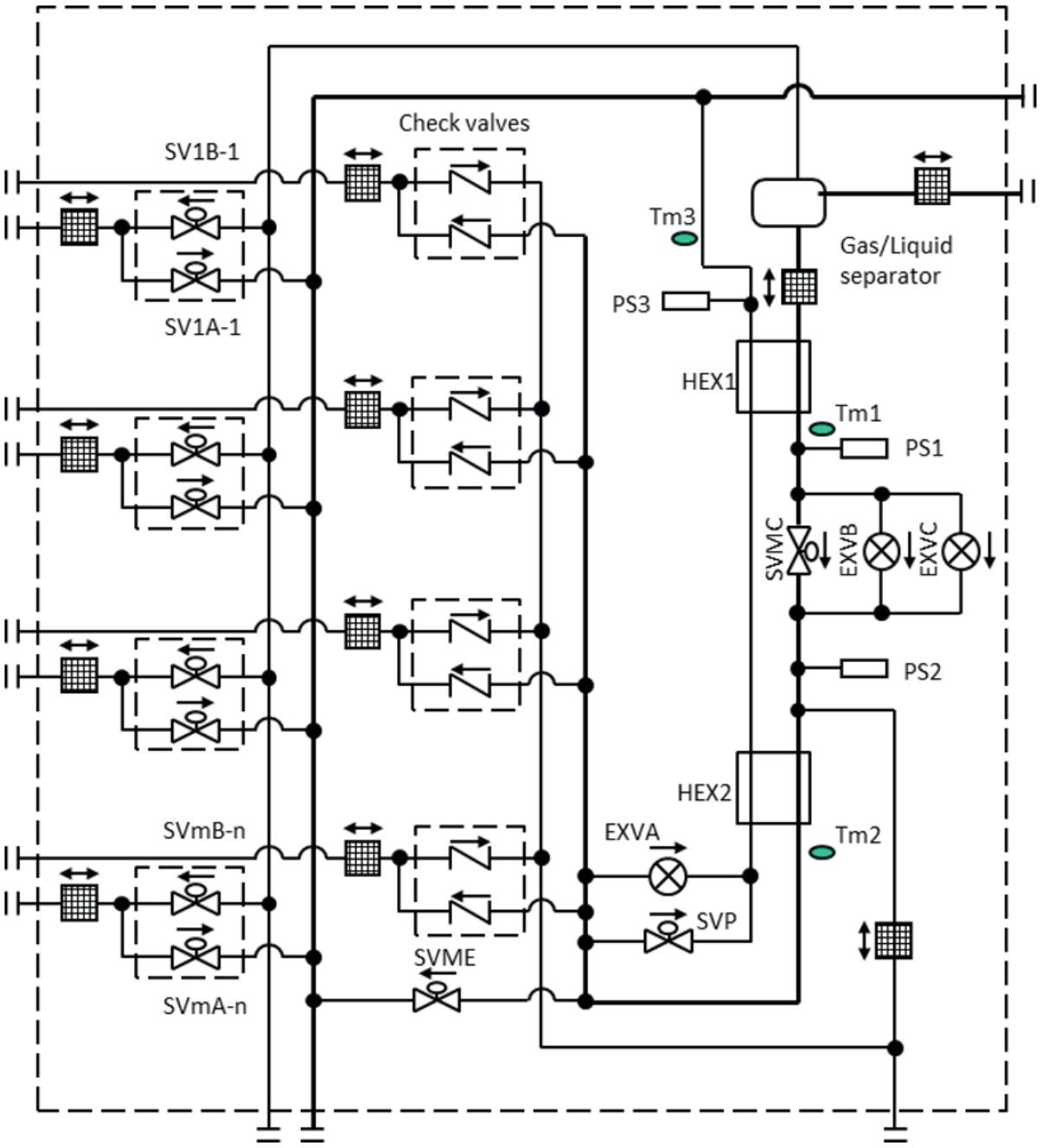


Fig. 13 —40VMD016ML-3 (Main Type)

SVmA-n: Cooling solenoid valve
SVmB-n: Heating solenoid valve

LEGEND:
m is the intel processor No. of MDC board
n is the port No. of MDC unit

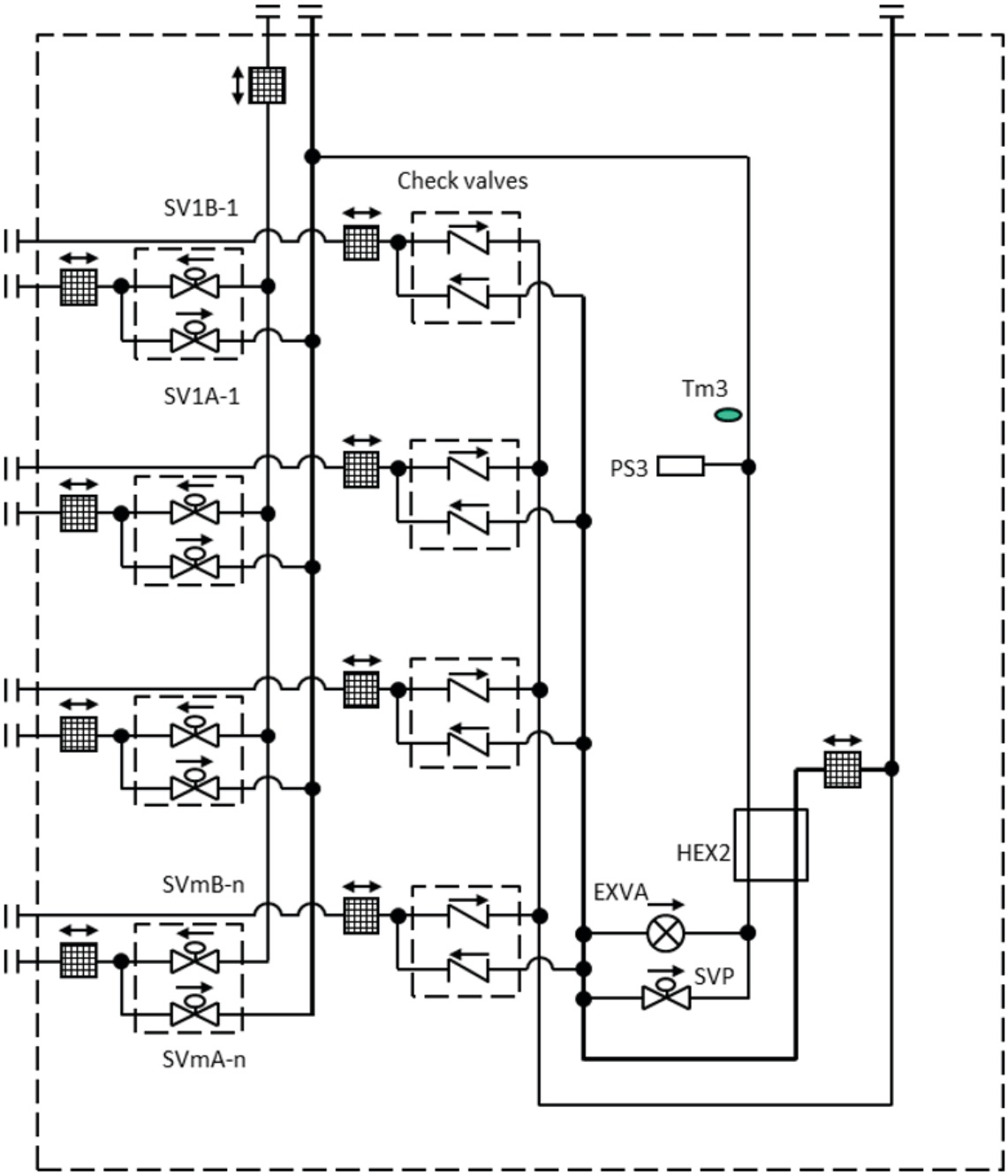
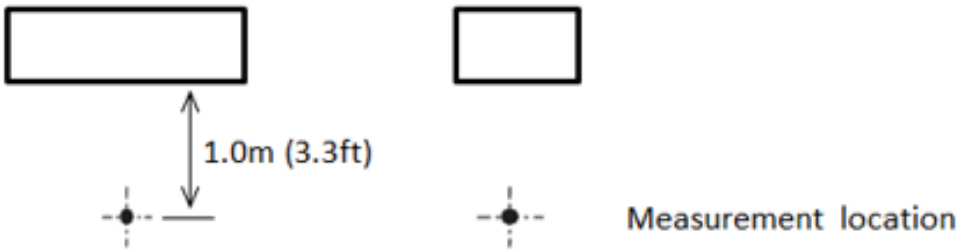


Fig. 14 —40VMD006, 008, 010, 016S—3 (Sub Type)

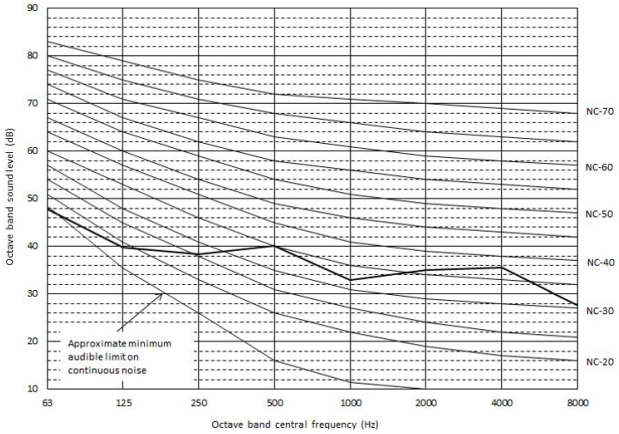
SVmA-n: Cooling solenoid valve
SVmB-n: Heating solenoid valve

LEGEND:
m is the intel processor No. of MDC board
n is the port No. of MDC unit

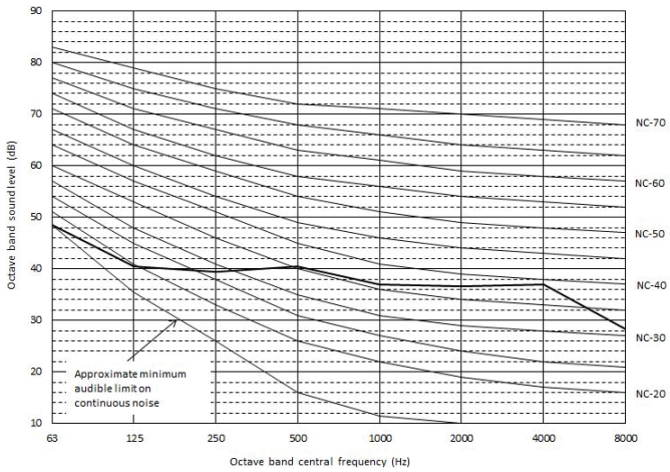
SOUND PRESSURE LEVELS



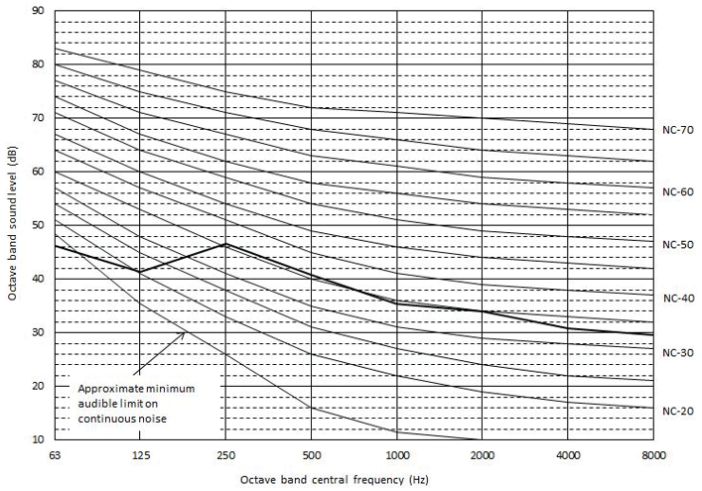
Main MDC



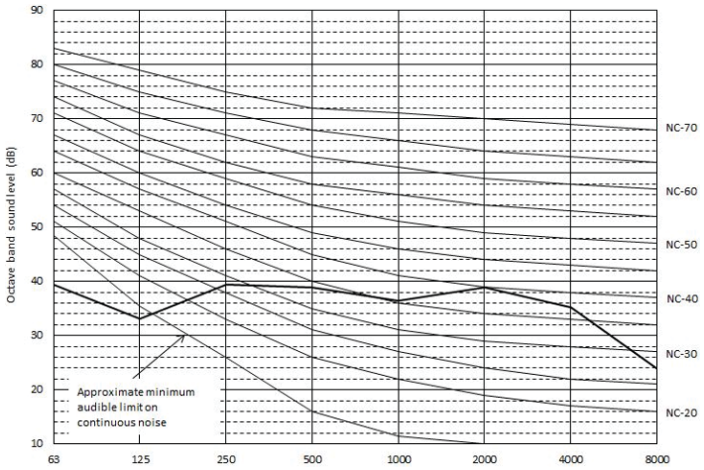
40VMD006M--3	63	125	250	500	1000	2000	4000	8000	dB(A)
Standard (60Hz)	47.9	39.8	38.3	40.2	32.9	35.0	35.5	27.7	42.0



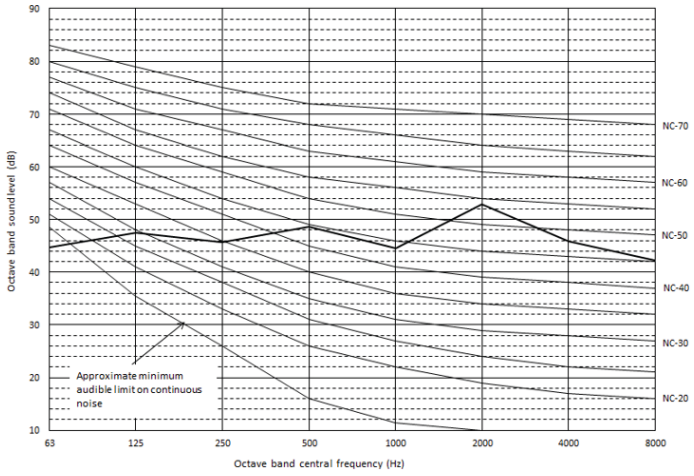
40VMD008M--3	63	125	250	500	1000	2000	4000	8000	dB(A)
Standard (60Hz)	48.6	40.4	39.4	40.4	37.0	36.6	37.0	28.4	42.1



40VMD010M--3	63	125	250	500	1000	2000	4000	8000	dB(A)
Standard (60Hz)	46.2	41.3	46.5	40.8	35.4	33.9	30.8	29.6	43.3

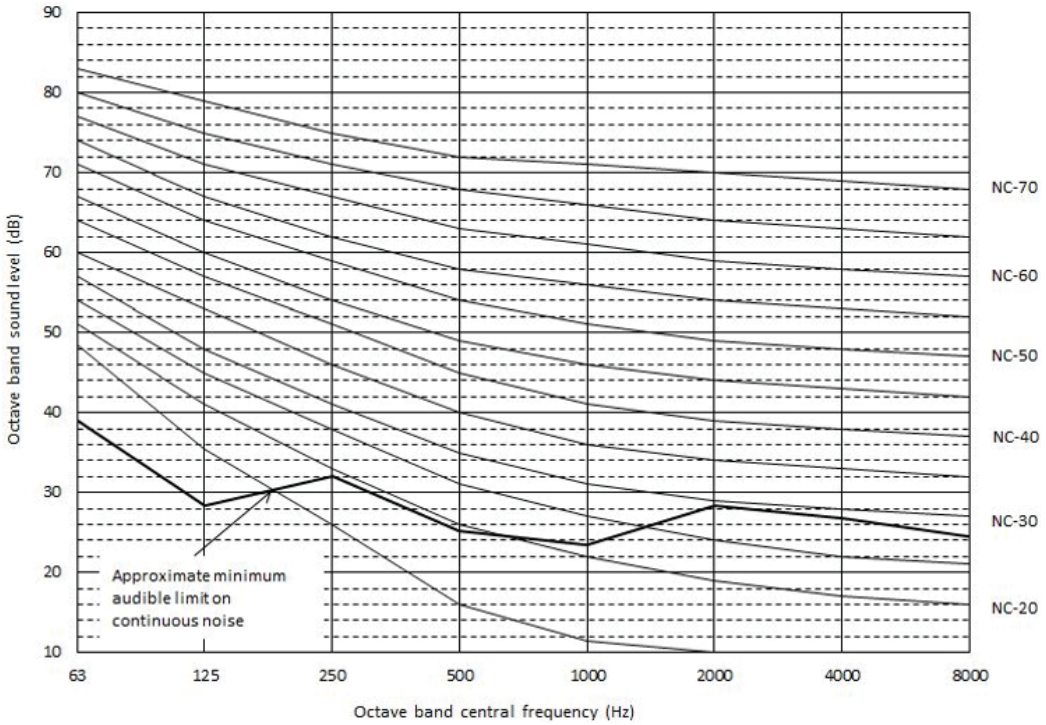


40VMD016M--3	63	125	250	500	1000	2000	4000	8000	dB(A)
Standard (60Hz)	39.4	33.2	39.4	38.9	36.5	39.0	35.1	24.0	43.1

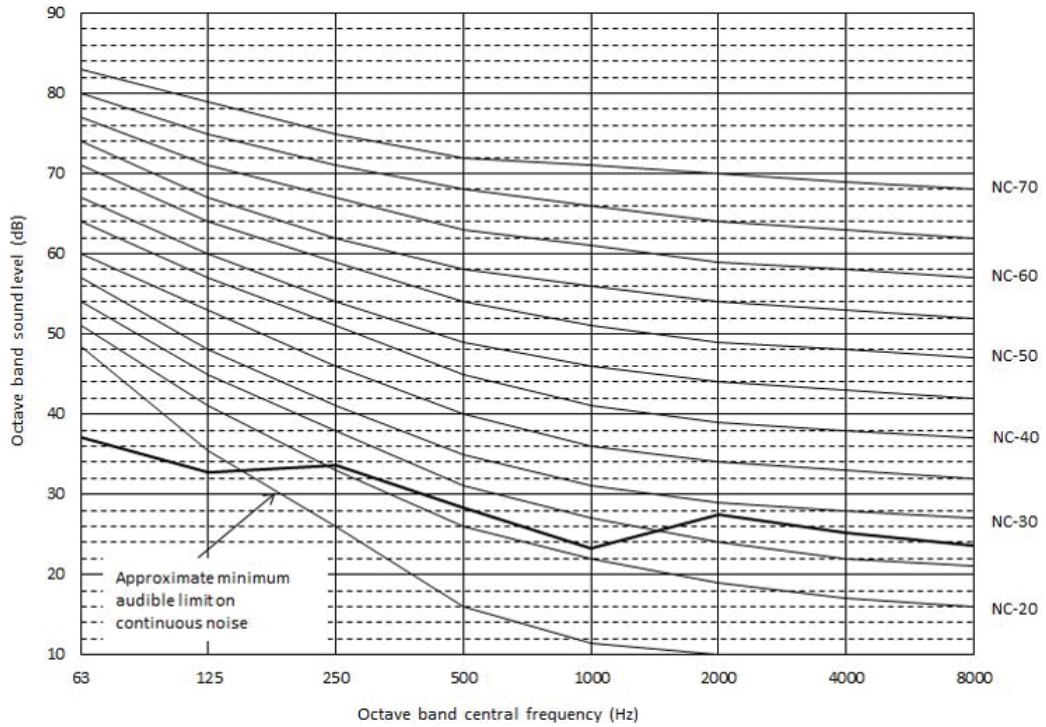


40VMD016ML-3	63	125	250	500	1000	2000	4000	8000	dB(A)
Standard (60Hz)	44.7	47.4	45.8	48.6	44.6	52.8	45.8	42.3	55.8

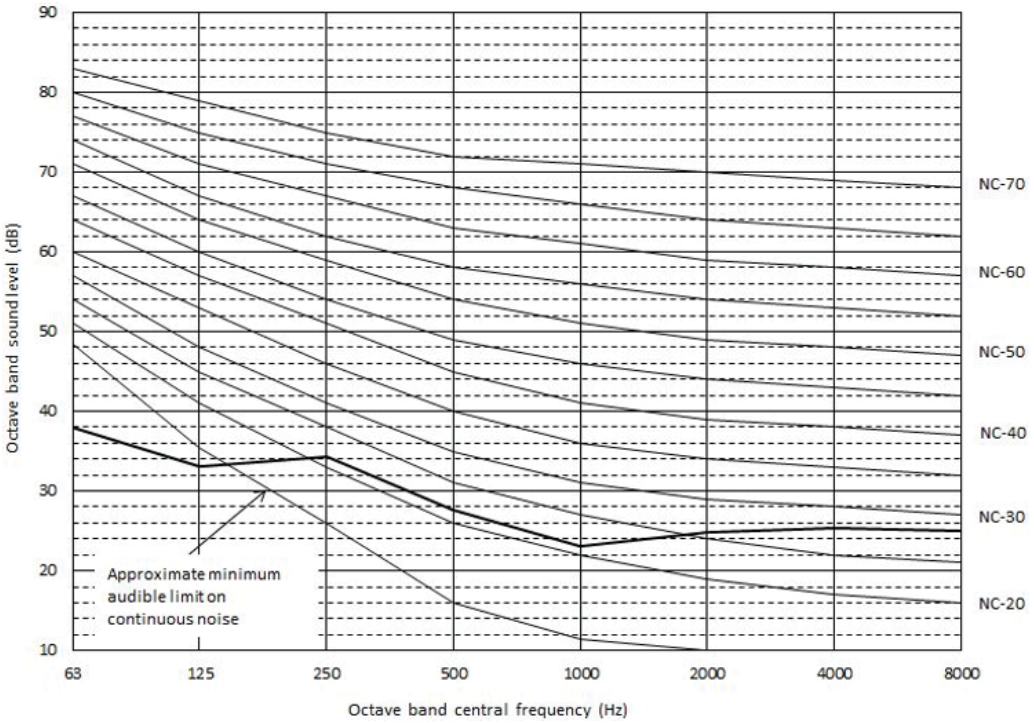
Sub MDC



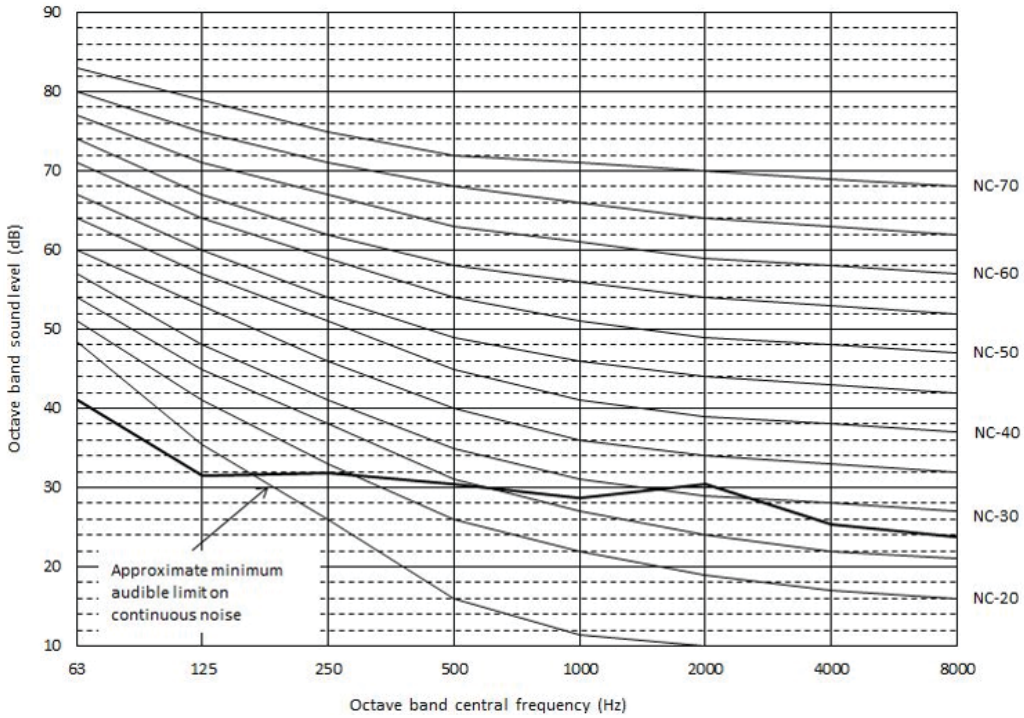
40VMD006S--3	63	125	250	500	1000	2000	4000	8000	dB(A)
Standard (60Hz)	39.0	28.3	32.0	25.3	23.5	28.4	26.8	24.6	34.0



40VMD008S--3	63	125	250	500	1000	2000	4000	8000	dB(A)
Standard (60Hz)	37.1	32.8	33.6	28.4	23.3	27.5	25.3	23.6	33.4



40VMD010S--3	63	125	250	500	1000	2000	4000	8000	dB(A)
Standard (60Hz)	38.0	33.1	34.3	27.6	23.0	24.8	25.4	25.1	32.7



40VMD016S--3	63	125	250	500	1000	2000	4000	8000	dB(A)
Standard (60Hz)	41.1	31.4	31.8	30.5	28.6	30.5	25.3	23.8	35.4

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