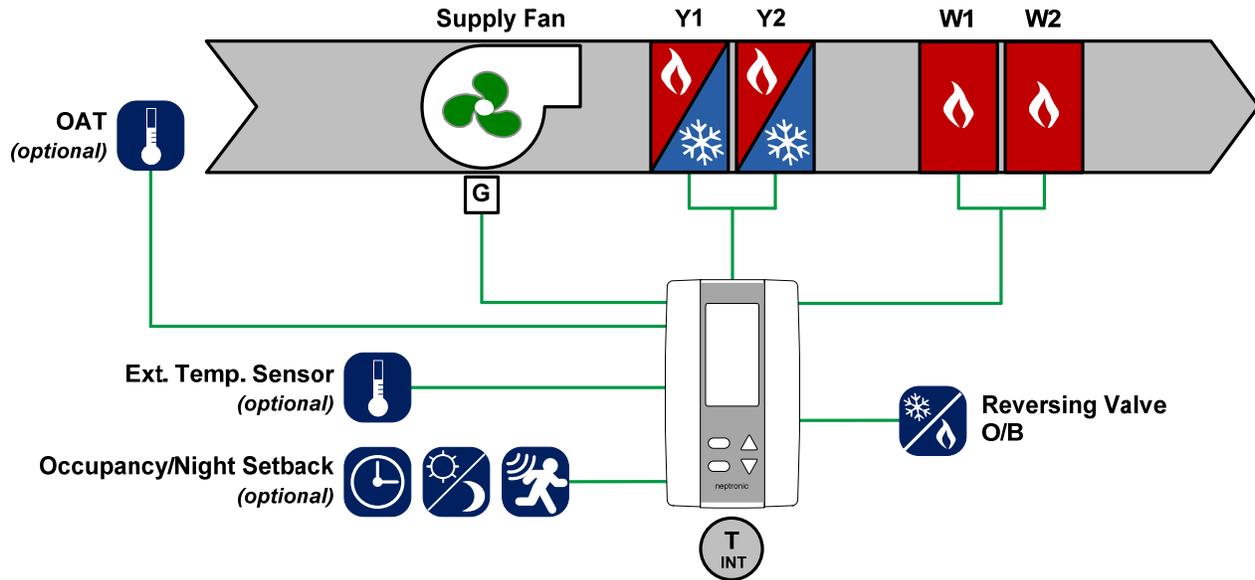# Application

Sequence of Operation

① When the zone is calling for cool, the reversing valve (O) and the fan (G) are energized. Compressor #1 (Y1) is energized to maintain zone setpoint. As temperature keeps rising, compressor #2 (Y2) is energized.

② When the zone is in the dead band mode, the heat pump is off.

③ When the zone is calling for heat, the reversing valve (O) is de-energized and fan (G) is energized. Compressor #1 (Y1) is energized to maintain zone setpoint. If temperature keeps dropping, Compressor #2 (Y2) is energized. As temperature drops further, the 1st emergency heating stage (W1) is energized to maintain zone temperature. If temperature drops further, the 2nd emergency heating stage (W2) is energized.
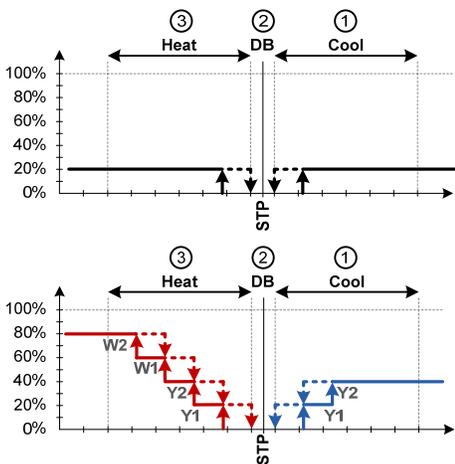

Programming

Object	Configuration Name	Default Setting	Configuration	Object	Configuration Name	Default Setting	Configuration
BV.95	Heat Pump Option	Off	On	AV.125	BO3 Close Percentage	50%	60%
BV.98	EMH Output	Disabled	Enabled	AV.126	BO3 Open Percentage	25%	40%
BV.97	EMH Auto Mode	No	Yes	AV.130	BO4 Close Percentage	20%	50%
MSV.25	Fan Speed Signal	3 Speed Fan	1 Speed	AV.131	BO4 Open Percentage	0%	20%
BV.99	Y2 Output	Disabled	Enabled	AV.133	BO5 Close Percentage	20%	80%
AV.120	BO2 Close Percentage	25%	20%	AV.134	BO5 Open Percentage	0%	60%

Notes

- For cooling only application, set "MSV.20 Temp Control Mode" to "Cool". From the thermostat press ❄🔥 to change modes.
- When the controller is set in EMH mode;
  - The compressors are disabled (Y1 & Y2).
  - Heat 1 (W1) becomes the 1st heating stage and takes the configuration settings of Y1.
  - Heat 2 (W2) configuration settings do not change.
- If reversing valve requires to be energized while in heating, set "BV.95 Reversing Valve O/B" to "B".
- For continuous fan operation, set "BV.20 Fan Auto Mode" to "No".

Wiring
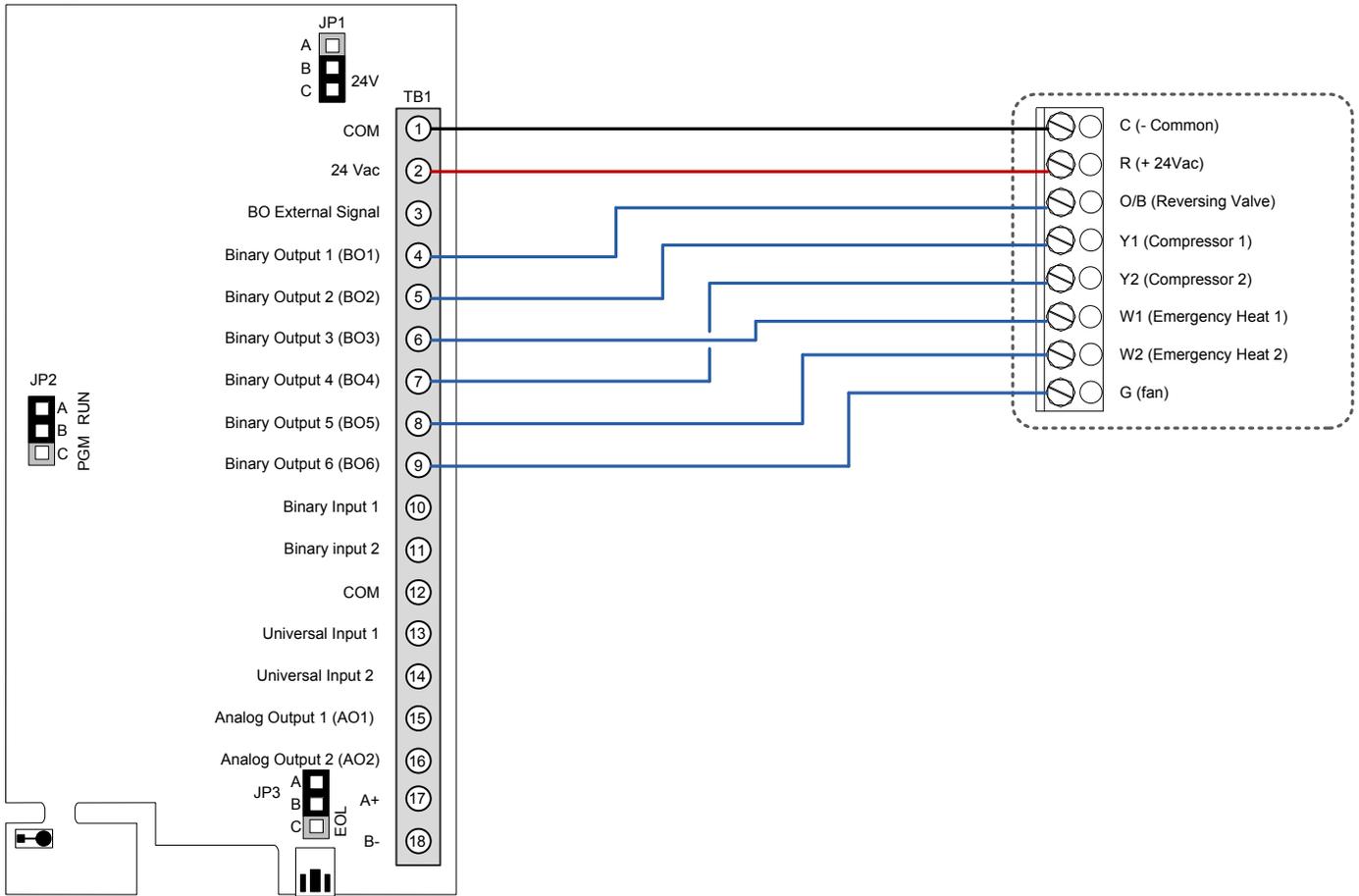
Point Configuration

Output	Configuration
Binary Output 1	Reversing Valve (O)
Binary Output 2	Compressor 1 (Y1)
Binary Output 3	Emergency Heat 1 (W1)
Binary Output 4	Compressor 2 (Y2)

Output	Configuration
Binary Output 5	Emergency Heat 2 (W2)
Binary Output 6	Fan
Analog Output 1	Off
Analog Output 2	Off

Output	Configuration
Binary Input 1	Occupancy
Binary Output 2	Night Setback
Analog Input 1	Off
Analog Input 2	Off