

Single Line Diagram

Alarm 1

- High refrigerant or VENT switch pull. 0
- Turn ON Exhaust Fan, Horn/Strobe, 0
- Interlock supply air SF or dampers into MR 0
- Silence horn & reset Alarm 1 from MSA panel 0

Alarm 2

- Very High refrigerant or EPO switch pull. 0
- Disable Chiller, turn off pumps, close refrigerant 0 valves, alarm to FACP (24 hour monitored location).
- Alarm 1 remains active. 0
- Silence horn & reset Alarm 2 from DDC Panel 0
 - \cap Menu item or added switch

Alarms to Facilities Group

- Alarm 1, Alarm 2, Vent or EPO switch pull. 0
- MSA Trouble. 0
- MSA Calibration reminder 0

Typical Setpoints

- See 2016 CMC, Paragraph 1106.4 & 1108.3, Table 0 1102.2.
 - R134a: Alarm 1 = 500 PPM 0
 - R123: Alarm 1= 50 PPM 0
 - R513a: Alarm 1 = 570 PPM 0
 - R514a: Alarm 1 = 320 PPM 0
 - Alarm 2 = 1,000 PPM 0 ALL:
- Contact Bayside with Refrigerant # for other 0 setpoints.

Alarms & Interlocks

<u>Description</u>	DI	<u>D0</u>
Refrigerant Monitor MSA Alarm Input MSA Horn Relay MSA Trouble	2 1 1	
Exhaust Fan (points / fan or speed) Fan Start/Stop Fan Status (from panel)	1	1
Break Glass Switches Emergency Ventilation Emergency Power Off	1 1	
Notification Appliances Horn Circuit (24 VDC) Strobe Circuit (24 VDC)		1 1
Total Hardware Points	7	3

Total Hardware Points Plus equipment interlocks in software

3

Points List

	Refrigerant Alarm System Per CMC 2016			
Bayside	REV	BY	FILENAME	
Bayside HVAC Products LLC	1	DS		Ref Alrm w DDC 3-19.vsd
415-333-5099	DATE		SCALE	Page 1 of 2
dan@baysidehvac.com	3/12	/2019	NTS	



Chillgard 5000 Dimensions

See Installation Outline for more details

Sensing line notes

- ➤ ¼" OD tubing from MSA panel to sensing points.
 - 1/chiller or any low points (sumps)
 - For best performance limit run to 400', max 1,200'.
- Terminate in a 4 square box (double gang or similar)
 - \blacktriangleright 6-12" AFF with bottom $\frac{1}{2}$ " KO removed.
 - Cap line with filter, MSA P/N 711561.
 - Filter inlet protrudes from 4 square box to sample free air.
 - > Install so access for filter change is convenient.
- Installation materials (tubing, JB, etc.) by others.



Typical Sensing Line Termination

	Refrigerant Alarm System Per CMC 2016			
Bayside	REV	BY	FILENAM	E
Bayside HVAC Products LLC	1	DS		Ref Alrm w DDC 3-19.vsd
415-333-5099	DATE		SCALE	Page 2 of 2
dan@baysidehvac.com	3/12	/2019	NTS	