Central Chilled Water Plant.Chilled Water System-? (Typical of 1)

Point		Sensor			Features									Notes
					Alarms				Samples[1]	Trending					
					Limit		Warning			Commissioning[5]			Operating[5]		
Name (Note 6)	Description and Service	Type	Reference Spec Paragraph	Accuracy	Hi	Lo	Hi	Lo		Time[2]	Local[3]	Archive	Time[2]	Local[3]	Archive
Analog Inputs															
CHWPmp-06.Cur	Chilled Water Pump-06 Current	Current Transformer	25 35 00	+/-2% full scale	N/A	N/A	Note 8		60	1 min	X	X	1 min	X	X	Note 7
Digital Outputs (All digital outputs to include local override capability and status indication at the controller)															
CHWPmp-06.StrStp	Chilled Water Pump-06 Start/Stop Command	Relay Output	25 35 13	N/A	N/A	N/A	Note 9		10	COV	X	X	COV	X	X	Note 9
Safety Interlocks (Hardwired to shut down or otherwise manipulate the system. Safeties shall function no matter what position the equipment's Hand-Off-Auto, Inverter-Bypass, or other selector switches are in)															
CHWPmp-06.MtrOL	Chilled Water Pump-06 Motor Overload	Hard Wired	25 35 00	N/A	N/A	N/A	N/A	N/A	0	N/A	N/A	N/A	N/A	N/A	N/A	
Virtual Points															
CHWPmp-06.PRF	Chilled Water Pump-06 Proof of Operation	N/A	25 35 00	N/A	N/A	N/A	N/A	N/A	10	COV	X	X	COV	X	X	Note 7, 8
CHWPmp-06.HrsTotal	Chilled Water Pump-06 Hours Totalizer	N/A	25 35 00	N/A	N/A	N/A	N/A	N/A	24	1 hr	X	X	1 hr	X	X	Note 11
kW.AvgVlt	Electrical System Average Voltage	N/A	25 35 00	N/A	N/A	N/A	N/A	N/A	0	N/A	N/A	N/A	N/A	N/A	N/A	Note 12
kW.AvgPhAng	Electrical System Average Phase Angle	N/A	25 35 00	N/A	N/A	N/A	N/A	N/A	0	N/A	N/A	N/A	N/A	N/A	N/A	Note 7
CHWPmp-06.kW	Chilled Water Pump-06 kW	N/A	25 35 00	N/A	N/A	N/A	N/A	N/A	60	1 min	kW	X	15 min	X	X	Note 7
CHWPmp-06.kWhTotal	Chilled Water Pump-06 kWh Totalizer	N/A	25 35 00	N/A	N/A	N/A	N/A	N/A	24	1 hr	X	X	1 hr	X	X	Note 7

Notes:

1. Samples indicates the minimum number of data samples that must be held in the local controller if it is trending the point.
2. Time indicates the required sampling time for the trending function. COV indicates a sample should be taken on a Change Of Value.
3. A check in the local column indicates that the trending only needs to be running in the local controller and the most recent value can write over the last value when the trend buffer fills up.
4. A check in the archive column indicates that the trend data must be archived to the system hard disc when trend buffer fills up so that a continuous trend record is maintained.
5. Commissioning trending requirements only need to be implemented during the start-up and warranty year. After the start-up and warranty process, the control contractor should set the trending parameters to the operating requirements listed if they differ from the commissioning requirements.
6. Point numbers are based on the Owner's point naming convention which is included in the specification. Point names will be verified during the submittal process in the control system integration and coordination meeting.
7. Monitor amps to provide a proof of operation in put and create a virtual meter to track energy use using voltage and power factor constants determined during commissioning. Accumulate and display current demand level, kWh for the day, and kWh for the previous day, calendar month, and calendar year. Archive data to the data to the dedicated archival data storage drive in the Hotel's Data Center.
8. Provide a warning alarm when the motor current reaches the service factor rating or motor starter overload rating, which ever is lower; coordinate the setting in the field with the electrician.
9. Issue an alarm if the pump is commanded on and there is no proof of operation with-in 10 seconds. Issue and alarm if the pump is commanded off and the proof of operation point still is active after 1 minute (adjustable).
10. This point is furnished by the electrician in their starter and is only listed here to provide a complete list of the points that could affect the operation of CHWP-5.
11. Create a virtual meter to accumuluate hours of operation. Accumulate and display hours for for the day, and hours for the previous day, calendar month, and calendar year. Archive data to the data to the dedicated archival data storage drive in the Hotel's Data Center.