ARGUS CONTROLS — A CONVIRON COMPANY

ZONE / EQUIPMENT/outputs	Control Point Type	Viro GH (6.85 x 6.65) G073	Viro GH (3.35 x 6.65) G074	Viro GH (3.35 x 6.65) G075	Viro GH (3.35 x 6.65) G076	Viro GH (3.35 x 6.65) G077	Viro GH (6.85 x 6.65) G078	Viro GH (3.35 x 6.65) G079	Viro GH (3.35 x 6.65) G080	Viro GH (3.35 x 6.65) G081	Viro GH (3.35 x 6.65) G082	Viro Growth Chamber G55	Insect GH(3.35 x 6.65) G022	Insect GH(3.35 x 6.65) G023	Insect GH(3.35 x 6.65) G024	Insect GH(3.35 x 6.65) G025	Insect GH(3.35 x 6.65) G026	Insect GH(3.35 x 6.65) G027	Insect GH(3.35 x 6.65) G028	Insect GH(3.35 x 6.65) G029	Insect Growth Chamber G013	Global	Total Outputs	Output Type	Notes
Vents and Curtains																										
Roof Vents	Open/Close	1	1	1	1	1	1	1	1	1	1		1	1	1	1	1	1	1	1			18	P1T	
	Qty of Equip																								
Sidewall Vent	Open/Close	1	1	1	1	1	1	1	1	1	1		1	1	1	1	1	1	1	1			18	P1T	
	Qty of Equip																								
Shade Curtain Horiz.	Open/Close	1	1	1	1	1	1	1	1	1	1		1	1	1	1	1	1	1	1			18	P1T	
	Qty of Equip																								
Outside Shade Horiz. G022 to G029	Open/Close																					1	1	P1T	
	Qty of Equip																								
Outside Shade Horiz. G073 to G082	Open/Close																					1	1	P1T	
	Qty of Equip																								
Lights																										
Lights	On/Off	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1			19	D4	
	Qty of Equip																								
Irrigation/Fertigation																										
Irrigation Solenoid	On/Off	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1			19	D4	
	Qty of Equip																								
AHU / BMS																										
VRF MVD-1 Dampers	0-10v/4-20mA	1	1	1	1	1	1	1	1	1	1		1	1	1	1	1	1	1	1			18	P1A	
	Qty of Equip																								
VRF MVD-2 Dampers	0-10v/4-20mA	1	1	1	1	1	1	1	1	1	1		1	1	1	1	1	1	1	1			18	P1A	
	Qty of Equip																								
VRF enable via Modbus COMM.	Modbus	1	1	1	1	1	1	1	1	1	1		1	1	1	1	1	1	1	1			18	Modbus	**Modbus address list for heating and cooling function.**
	Qty of Equip																								
Misc																										
Controlled Outlets	On/Off	1	1	1	1	1	1	1	1	1	1		1	1	1	1	1	1	1	1			18	D4	
	Qty of Equip																								
Red Light Alarm Outputs	On/Off	1	1	1	1	1	1	1	1	1	1		1	1	1	1	1	1	1	1			18	D4	*4x Global located in Access Point Panel*
Total Outputs		10	10	10	10	10	10	10	10	10	10	2	10	10	10	10	10	10	10	10		2	184	184	
D1S	Hi/Lo																							D1S	
D2	On/Off																							D2	
D2C	Pwr On/Pwr Off																							D2C	
D4	On/Off	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1			19	D4	
D8	On/Off																							Modbus	
P1T	On/Cl.	3	3	3	3	3	3	3	3	3	3		3	3	3	3	3	3	3	3		2	56	P1T	
P1A	0-10v/4-20mA	2	2	2	2	2	2	2	2	2	2		2	2	2	2	2	2	2	2			36	P1A	
Argus Modules workup **Total Output modules**		6	6	6	6	6	6	6	6	6	6	1	6	6	6	6	6	6	6	6		2	111	**Total Output modules**	
Argus Modules workup **Suggested I-O Modules required**		2	2	2	2	2	2	2	2	2	2		2	2	2	2	2	2	2	2			36	**Suggested I-O Modules required**	
Argus Modules workup **Estimated Titan Controllers Required**		0.25	0.25	0.25	0.25		0.25	0.25	0.25	0.25			0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25			4	**Controllers**	*Total includes access point in Global*

SENSORS/inputs / ZONE		Viro GH (6.85 x 6.65) G073	Viro GH (3.35 x 6.65) G074	Viro GH (3.35 x 6.65) G075	Viro GH (3.35 x 6.65) G076	Viro GH (3.35 x 6.65) G077	Viro GH (6.85 x 6.65) G078	Viro GH (3.35 x 6.65) G079	Viro GH (3.35 x 6.65) G080	Viro GH (3.35 x 6.65) G081	Viro GH (3.35 x 6.65) G082	Viro Growth Chamber G55	Insect GH(3.35 x 6.65) G022	Insect GH(3.35 x 6.65) G023	Insect GH(3.35 x 6.65) G024	Insect GH(3.35 x 6.65) G025	Insect GH(3.35 x 6.65) G026	Insect GH(3.35 x 6.65) G027	Insect GH(3.35 x 6.65) G028	Insect GH(3.35 x 6.65) G029	Insect Growth Chamber G013	Global	Total Inputs	Total Units	Notes
Omni Modules																									
Aspirated Dual Temp Module *(comes with free RH sensor*)*	SEN-OSM-4.0/RHT	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1			36	18	*Dual temps (no charge RH incl) - incl. 15' of Omni Cable*
Asp. Dual Temps + RH Module	(OSM/RHT)																								*Dual temps/solid state RH - incl. 15' of Omni Cable*
Asp. Dual Temps + RH + Light Confirm w/LCD	(OMNI/C)																								*Dual temps/solid state RH/Integrated Light Confirm and LCD display - incl. 15' of Omni Cable*
Asp. Dual Temps + RH + Light Confirm + CO2 w/LCD	(OMNI/CO2)																								*Dual temps/solid state RH/Integrated Light Confirm & CO2 and LCD display - incl. 15' of Omni Cable*
T/RH (non-aspirated)																									
Non-Aspirated Temp/RH 4-20mA	(SEN-RHT)																								*temp/RH module w/4-20mA output signals*
Temperature																									
Backup Air Temperature Sensor	(TN21)											1									2		3	3	*Backup Air Temp Sensor - non-aspirated - 21ft. Leads*
Temperature Sensor	(TN21)																								*Strap-on dry-bulb temp sensor w/21ft leads*
Temperature Sensor Solar-Shielded	(TN21/S)	1	1	1	1	1	1	1	1	1	1		1	1	1	1	1	1	1	1			18	18	*Non-aspirated, Solar-shielded temp sensor*
Soil Temp Sensor	(TN21/HM2)																								*for high moisture applications*
Chilled Water Temp & Dry Well	(TN2/DW/C)																								*Dry Well Temp. Sensor w/Junction Box*
Hot Water Temp. & Dry Well	(TN2/DW/C)																								*Dry Well Temp. Sensor w/Junction Box*
CO2																									
CO2 Monitoring	(CO2SE-2.1/C)																								*Stand-alone Module 0-2000ppm - 4-20mA signal*
Light																									
Global Light Sensor Pyranometer	(Apogee SP110)																								*Single point light sensor with level mount*
PAR Quantum Light Sensor	(Apogee SQ110)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1			18	18	*Single point light sensor with level mount*
Pressure																									
Pad/Fan Box Pressure Monitoring	SEN-PT-SS																								*Pressure Sensor - 4-20mA signal -*
Diff Pressure in Zone Monitoring	SEN-PTD																								*Differential Pressure Sensor - 4-20mA signal*
Irrigation\Fertigation																									
Dual EC, Dual pH, Irrig Temp, Flow & Line press Monitoring	(NUT-SYS-RM)																								*Argus RM Nutrient injection rack mounted system*
Inline EC/pH/Temp of Irrig Water	(ECTIN)																								*Inline EC/Temp probe assy' with pH Probe well and pH Sensor*
Tank Level Monitoring	(PT-10PSI/SUB)																								*Submersible water pressure sensor - 4-20mA signal*
Tank level Monitoring - Float Switch	(LEVEL-FLT/S)																								*Tank level Float Switch(es)*
Misc Inputs																									
VRF MVD-1 Dampers Position (4-20mA)	by others	4	2	2	2	2	4	2	2	2	2		2	2	2	2	2	2	2	2			40	40	*input from sensors supplied by others - damper positon feedback*
VRF MVD-1 Dampers Position (4-20mA)	by others	2	1	1	1	1	2	1	1	1	1		1	1	1	1	1	1	1	1			20	20	*input from sensors supplied by others - damper positon feedback*
Generator Active input	by others																								*input from Generator system to denote in emergency power mode*
Outdoor																									
Outdoor Temp/RH	(SEN-RHT)																					1	2	1	*Non-Aspirated Outdoor temp/RH module w/4-20mA output signals*
SEN-RGTB-100-2																						1			*Tipping Bucket Rain Gauge (1/100") v2.0*
Weather Station - Complete *Global light, wind speed & dir., rain detection, air temp*	(WS-3.1/C)																					1	5	1	*Global light, wind speed & dir., rain detection, air temp., w/sensors interface, lightning protection, and Titan Mast Head w/ male 1"NPT*
Total Inputs		9	6	6	6	6	9	6	6	6	6	3	6	6	6	6	6	6	6	6	2	3	142		