	EB1-2	EB3-4	EB5-8	EB9
W3	16mm2	25mm2	35mm2	35mm2
W4	10mm2	16mm2	16mm2	25mm2

THIS PANEL TO BE ASSEMBLED AND CABLED IN ACCORDANCE TO WIMES SPECIFICATIONS 3.01 & 3.04
SEE INSULATION COLOUR TABLE AND NOTES BELOW FOR WIMES SPECIFIC REQUIREMENTS
THIS SCHEMATIC SHOULD BE READ OFF COLOUR PRINT-OUT ONLY

380V
400V
415V
50Hz
3Ph, N & E
SUPPLY

FS1: 250A
3X FUSES: 250A
DOOR-INTERLOCKED FUSE SWITCH (FS1)
DISTRIBUTION BLOCKS
SEE WIRE TABLE "W3"
SEE WIRE TABLE "W4"
EARTH
SEE WIRE TABLE "W3"
SEE TABLE E1
TO BALLAST 10-18 MAINS INCOMER

	EB1-3	EB4-6	EB7-9
MCB1	2A	4A	6A

	EB1/EB2-3	EB4-6	EB7-9
PSU1	120W/240W	480W	960W

	EB1-3	EB4-6	EB7-9
W1	1.5mm2	2.5mm2	4mm2

	EB1-3	EB4-6	EB7-9
MCB3	NR	16A	25A

	EB1-3	EB4-6	EB7-9
W2	NR	2.5mm2	4mm2

MCB1 (SEE TABLE)
MCB4 4A
MCB5 2A
MCB2 2A
MCB3 (SEE TABLE)
24Vdc PSU1 3PHASE 340-500VAC
110VAC
TO BALLAST 10-18 BALLAST 24Vac
R4
SEE WIRE TABLE "W1"
CONTROLS FANS
IMPORTANT PLACE IN CONTROLS TOP CUTOUT **UNBOLT THIS FAN ONLY AND MOUNT IN REVERSE**
PUSHING COOLING FAN
IMPORTANT PLACE IN CONTROLS BOTTOM CUTOUT
PULLING COOLING FAN
**HARD AS7 CONNECTION ONLY AVAILABLE
10sec
PANEL MOUNT RJ45 PORT
SEE WIRE TABLE "W2"

2 RESISTOR JUMPERS TO BE FITTED
ATUV-1010
POWER 24V DC
TOUCH SCREEN
MASTER CUT-OUT V.F.C
ETHERNET
INTERNAL Comm's MODBUS MASTER
EXTERNAL Comm's MODBUS SLAVE
LAMP CONTROL 4-20mA

3 JUMPERS BAUD 123 ALL REMOVED
ATUV-1020
ANALOGUE INPUTS: U.V.T. 4-20mA; FLOWMETER 4-20mA; PT 100 TEMP SENSOR
ANALOGUE OUTPUTS: AO1 4-20mA; AO2 4-20mA
DIGITAL INPUTS: CONTROL TEMPERATURE; GROUND FAULT HEALTHY; WIPER ALARM; BOOST; WATER LEVEL; 20°C THERMOSTAT
DIGITAL INPUTS: EXTERNAL CONTROL RUN/STOP; HALF/FULL POWER CONTROL; PROCESS INTERLOCK RUN/STOP; VALVE CLOSED FEEDBACK; VALVE OPENED FEEDBACK
DIGITAL OUTPUTS: NON-CRITICAL ALARM HEALTHY; CRITICAL ALARM HEALTHY; SYSYEM RUNNING; OUTLET VALVE OPEN; U.V. DOSE HEALTHY
DIGITAL OUTPUTS: DO6 FAN RUN; DO7 V.F.C; DO8 V.F.C; DO9 V.F.C; DO10 V.F.C
TO TERMINALS
TO ZDAC2.5 TERMINALS

INTERNAL INSTRUMENT EARTH BAR
FIELD INSTRUMENT EARTH BAR
PROTECTIVE EARTH BAR
4mm2 CSA CABLE
4mm2 CSA CABLE

ANTI-CONDENSATION HEATER
N/C THERMOSTAT
MCB6 1A
24Vdc PSU 120W

WIPER MODULE AT-1040
SCREEN
0V
EMMITER
DETECTOR
MOTOR +
MOTOR -
LINK
LINK
DIGITAL I/P
DIGITAL I/P
DIGITAL O/P
DIGITAL O/P
3 x 0.5mm SQR
1mm2 CSA
1mm2 CSA
QUARTZ OPTICAL OFFSET DETECTOR
QUARTZ WIPER MOTOR

MODULE No.1 … MODULE No.9
ATUV-1031
COMMON
STEP 3
STEP 2
STEP1/50%
LAMP ON
P.S.U. TEMPERATURE HEALTHY
U.V. INTENSITY 4-20mA
LAMP CURRENT 0-20mA
0V 24V Gnd +12

UV INTENSITY SENSOR No.1
UV INTENSITY SENSOR No.2
UV INTENSITY SENSOR No.3
UV INTENSITY SENSOR No.4
UV INTENSITY SENSOR No.5
UV INTENSITY SENSOR No.6
UV INTENSITY SENSOR No.7
UV INTENSITY SENSOR No.8
UV INTENSITY SENSOR No.9

I/O & Analogue Terminals to be ZTR2.5 Hinge Link type W6371314

AO1 OUTPUT 4-20mA (IF RECD)
U.V.T 4-20mA (IF RECD)
FLOWMETER 4-20mA (IF RECD)
TEMPERATURE PROBE

TO ATUV-1020 TERMINALS
CONTROL EXTERNAL START / STOP
PROCESS INTERLOCK RUN/STOP
NON-CRITICAL ALARM HEALTHY
CRITICAL ALARM HEALTHY
SYSTEM RUNNING
U.V. DOSE HEALTHY
DIGITAL OUTPUT 1 SELECTABLE

LAMP 1
LAMP 2
LAMP 3
LAMP 4
LAMP 5
LAMP 6
LAMP 7
LAMP 8
LAMP 9

100A BUSBAR SECTION
MCB EB1 25A 'C' … MCB EB9 25A 'C'
4.0mm² CSA CABLE
XB ELECTRONIC BALLAST
MCB EBH-3 10A
MCB EB4-6 10A
MCB EB7-9 10A
1.0mm² CSA CABLE
R1 C NO 218
R2 C NO 219
R3 C NO 220

(RISER SHIELD 0.6/1kv LSHF Screened Control Cable)
BALLAST 10-18 COMMS
Refer to Chamber Earth CSA Table for Cable Size
Chamber Earth

Earth Cable Sizing Table	
Enclosure Metal Parts to Protective Earth Block	CSA mm2
Enclosure Body to PE	6
Removable Side Panels to PE	6
Backplate to PE	6
Gland Plates to PE	6
Fuse Switch Bracket to PE	6
Removable Door to PE	6
Electrical Components to Protective Earth Block	**CSA mm2**
Spectra Components (ATUV-1010, 1020, 1031)	1
Enclosure and Door Mounted Fans	1
Anti-Condensation Heater	1
PSU	1
Wiper Board	1

PE Conducton Size Table: E1	
L1 Conductor size	Required Earth Conductor size
L1≤16mm2	L1 mm2
16mm2<L1s=35mm2	16mm2
L1>35mm2	L1/2 mm2
Note: L1 = Largest L1 mm2 size specified on drawing	

Chamber Earth CSA Table	
Lamp Qty & Power	Earth C.S.A, mm2
1x5000w	6
1x7300w	6
4x3500w	6
2x7300w	6
6x3500w	6
3x7300w	6
6x4000w	6
8x3500w	10
4x7300w	10
6x5000w	10
6x6000w	16
8x5000w	16
12x3500w	16
6x7300w	16
10x6000w	16
12x5000w	16
18x5000w	16
12x8000w	25
18x7300w	35

TERMINALS SHALL BE GROUPED AND SEGREGATED ACCORING TO VOLTAGE AND FUNCTION

NOTES:
1. SCREEN TO BALLAST CHASSIS
2. RESISTOR JUMPERS TO BE FITTED
3. JUMPERS BAUD 123 ALL REMOVED
4. MAINTAIN SHORT TAIL CUTBACK LENGTHS
5. ENSURE SEPERATE EARTH CABLES ARE RAN TO EARTH FROM X8 BALLAST
6. ALL CAT-5e DATA CABLES TO BE SHIELDED TYPE
7. INSTRUMENT EARTH BONDED TO PROTECTIVE EARTH INSIDE PANEL
8. WIRES WITH CSA GREATER THAN 6MM2 SHALL BE TERMINATED IN BOLTED TERMINALS.
9. SPARE CORES SHALL BE TERMINATED AT BOTH ENDS OR TIED BACK, NOT CUT SHORT.
10. MAINTAIN 30MM MINIMUM DISTANCE BETWEEN EXIT POINT OF TERMINAL WIRING AND TRUNKING.
11. TERMINALS SHALL BE GROUPED TOGETHER AND SEGRATED ACCORDING TO OPERATING VOLTAGE AND FUNCTION.
12. USE PLASTICS PILLERS FOR INSTRUMENT EARTH BARS
13. USE METAL PILLERS FOR PROTECTIVE EARTH BARS.

WIMES insulation colour table	
Protective Conductor	Green & Yellow
Phase L1 (3 Phase)	Brown
Phase L2 (3 Phase)	Black
Phase L3 (3 Phase)	Grey
Phase (1 Phase Only)	Brown
Neutral Conductor	Blue
110V AC	Red (L), Blue (N)
24V AC or DC	Yellow(+), Blue(-)
Screens	ATG Standard
Unknown	Red

REV	DATE	DESCRIPTION	DRN.	CHK.	APP
7	19/03/2019	Wiper Motor Conductors 73 & 74 Swapped	M.S	J.E	M.M
8	04/02/2020	Table W3-W4 Cable CSA Updated (ER1391)	M.S	J.E	M.M
3	10/11/2016	Earthing Details Standardised	M.S	J.W	M.M
4	08/03/2018	Chamber Earth Cable CSA Updated	M.S	J.E	M.M
5	17/07/2018	Wiper Module Updated to AT-1040	M.S	J.E	M.M
6	16/11/2018	PE Conductor Size Table: E1 Added	M.S	J.E	M.M

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CLIENT

TITLE: UV DISINFECTION UNIT CONTROL PANEL ELECTRICAL SCHEMATIC

DRAWING No: ES_18X7300_903233_60E18_9(SHT1)

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