690V 60Hz 3Ph, & E SUPPLY

FS1 63A FUSED SWITCH FITTED WITH 2X 20A FUSES

L1 L2 L3 EARTH

4.0mm (Earth Conductor From Isolator to Protective Earth Bolt/Bar)

See Earth Cable Sizing Table For Conductor Sizes

5kVA 230V 0V 250VA | 240V 0V 4.75kVA | 240V

690V 0V

MCB C1 2A 'D'

200 N1

1.0mm

L E N 24v DC PSU + −

201 0V

ATUV-1010

Gnd 0V 24V POWER 24V DC

Gnd 0V 24V POWER 24V DC

1 2 MASTER OUT-OUT V.F.C

INTERNAL Comm's MODBUS MASTER

EXTERNAL Comm's MODBUS SLAVE

TOUCH SCREEN

ETHERNET

AT-678 EARTH LEAKAGE RELAY

WARN A L | RELAY1 N/C Com N/O | RELAY2 N/C Com N/O

ATUV-1020

ANALOGUE INPUTS

U.V.T. 4–20mA

FLOWMETER 4–20mA

Pt 100 TEMP SENSOR

0V 24V Gnd

ANALOGUE OUTPUTS

AO1 4–20mA

AO2 4–20mA

LAMP CONTROL 4–20mA

DIGITAL INPUTS

CONTROL TEMPERATURE HEALTHY

GROUND FAULT HEALTHY

WIPER ALARM

BOOST

DI3 24V DC SOURCE

70°C THERMOSTAT

DIGITAL INPUTS

EXTERNAL CONTROL RUN/STOP

HALF/FULL POWER CONTROL

PROCESS INTERLOCK RUN/STOP

VALVE CLOSED FEEDBACK

VALVE OPENED FEEDBACK

TO ZDK2.5 TERMINALS

DIGITAL OUTPUTS

NON-CRITICAL ALARM HEALTHY

CRITICAL ALARM HEALTHY

SYSYEM RUNNING

OUTLET VALVE OPEN

U.V. DOSE HEALTHY

DIGITAL OUTPUTS

Fan Run V.F.C

DO1 V.F.C

DO2 V.F.C

DO3 V.F.C

DO4 V.F.C

COOLING FAN L E N 204 N1

L1 E L2 24vdc PSU 120W + − 222 223 1mm2 CSA

WIPER MODULE AT-1040

SCREEN 0V EMMITTER DETECTOR MOTOR + MOTOR − LINK LINK DIGITAL I/P DIGITAL I/P DIGITAL O/P DIGITAL O/P 0V 24V Gnd

3 x 0.5mm SCR

1.0mm

3.15A I.E.2

PANEL MOUNT WIPER OPTICAL AREA DETECT

QUARTZ WIPER MOTOR

2 x 0.5mm SCR

Rd Bu SELECTABLE 4–20mA OUTPUT I.E.1

Rd Bu Gn I.E.1 I.E.2 TEMPERATURE PROBE

TO ATUV-1020 TERMINALS — ZDK2.5 DOUBLE LEVEL TERMINALS (WA371321)

97 96 CONTROL EXTERNAL START / STOP

99 98 HALF / FULL POWER CONTROL

101 100 CRITICAL ALARM HEALTHY

103 102 SYSTEM RUNNING

105 104 DIGITAL OUTPUT SELECTABLE

151 150 FLOWMETER 4–20mA

153 152 BOOST

155 154 PROCESS INTERLOCK RUN/STOP

157 156 NON-CRITICAL ALARM HEALTHY

143 142 U.V. DOSE HEALTHY

INTERNAL INSTRUMENT EARTH BAR — I.E.1 — 4mm2 CSA CABLE

FIELD INSTRUMENT EARTH BAR — I.E.2 — 4mm2 CSA CABLE — PROTECTIVE EARTH P.E.

MODULE No.1 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

203 312 309 Bu 308 Rd 311 Bu 310 Rd

0V 24V Gnd 0V 201

K1 A2 A1 312

MODULE No.2 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

203 412 411 Bu 410 Rd

0V 24V Gnd 0V 201

K2 A2 A1 412

1.0kW LAMP	1off	20µF
1.3kW LAMP	1off	20µF
1.5kW LAMP	2off	20µF
2.0kW LAMP	2off	20µF
2.5kW LAMP	3off	20µF
3.0kW LAMP	3off	20µF

MCB L1 16A 'D' — LAMP No.1 — THYRISTOR CONTROLLER — SEE TABLE FOR CAPACITOR QUANTITIES

MCB L2 16A 'D' — LAMP No.2 — THYRISTOR CONTROLLER — SEE TABLE FOR CAPACITOR QUANTITIES

TEST LOOP (3 TURNS THROUGH CT) — CHOKE 307 306 — CHOKE 407 406

92 Rd 93 Bu CT

310 Rd 311 Bu CT — IGNITION UNIT L2/N LA — 307 D — LAMP No.1 — 301 300

410 Rd 411 Bu CT — IGNITION UNIT L2/N LA — 407 D — LAMP No.2 — 401 400

E Chamber Earth 6mm Chamber Earth

UV INTENSITY SENSOR No.1 — 309 Bu 308 Rd — I.E.2 I.E.1 — 2 x 0.5mm SCR

Earth Cable Sizing Table	CSA mm2
Enclosure Metal Parts to Protective Earth Block	6
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

NOTES:

1. INSTRUMENT EARTH BAR TO BE BONDED TO PROTECTIVE EARTH INSIDE PANEL.
2. MAINTAIN SHORT TAIL CUTBACK LENGTHS.
3. USE PLASTIC PILLERS FOR INSTRUMENT EARTH BARS.

REV	DATE	DESCRIPTION	DRN.	CHK.	APP
7	08/03/2018	Chamber Earth Cable CSA Updated	M.S	J.E	M.M
8	17/07/2018	Wiper Module Updated to AT-1040	M.S	J.E	M.M
9	16/08/2018	Wire Number 199 Updated to N1	M.S	J.E	M.M
10	13/03/2019	Wiper Motor Conductors 73 & 74 Swapped	M.S	J.E	M.M
5	06/04/2017	Analogue Terminals Updated to Single Level Type	M.S	J.W	M.M
6	02/05/2017	Schematic Typical Layout Updates	M.S	J.W	M.M

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CLIENT

TITLE: UV DISINFECTION UNIT CONTROL PANEL ELECTRICAL SCHEMATIC

DRAWING No: ES_2x1500_903233_46B2_1

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