G1 G2 6mm
PUSH ON CONNECTIONS

LED1
VR1

44mm

WEIGHT APPROX 130 GRAMMES

92mm

80mm

62mm

G2

LINE VOLTS
440V AC MAX
PATENT NO.
2197997

F1
5 X 20mm

UNITED AUTOMATION LTD

MULTI MODE TRIGGER MODULE

TYPE   RATIO   SOFT START   1-30 SEC.

STOM2

5mm DIAM.
FIXING HOLES

G1
WARNING
LIVE TERMINALS

10-12VAC MAX INPUT FROM THE
MAINS TRANSFORMER MUST BE
IN PHASE WITH THE LINE
AND LOAD SUPPLY

12VAC

1 2

3 0V
4 SIG.
5 SIG. +VE
6 5V
7 4-20mA
8 A B

MANUAL CONTROL
POTENTIOMETER
5K NOMINAL

CW

BURST FIRE

PHASE ANGLE

DUAL THYRISTOR PACK
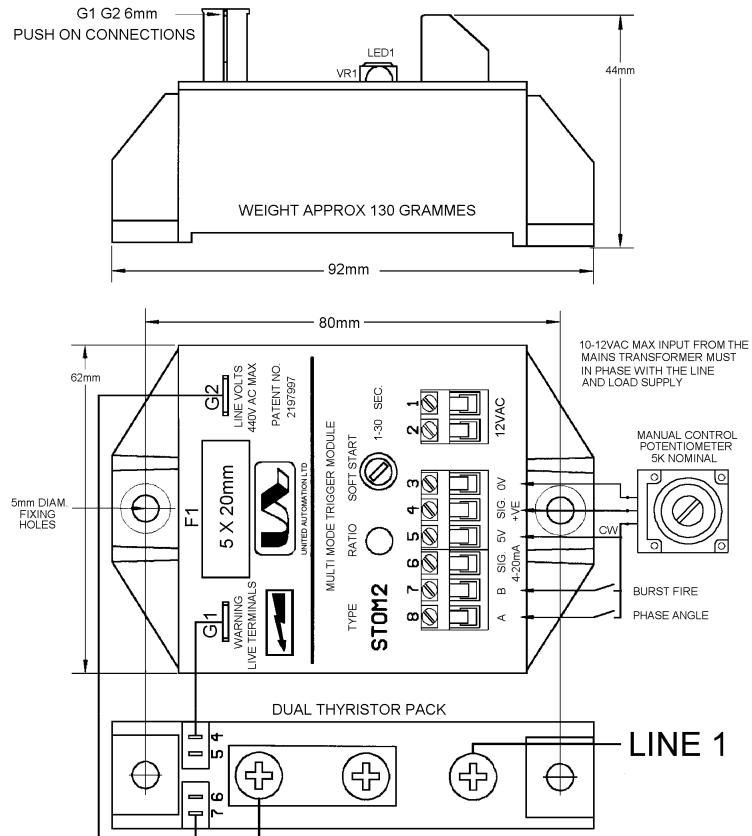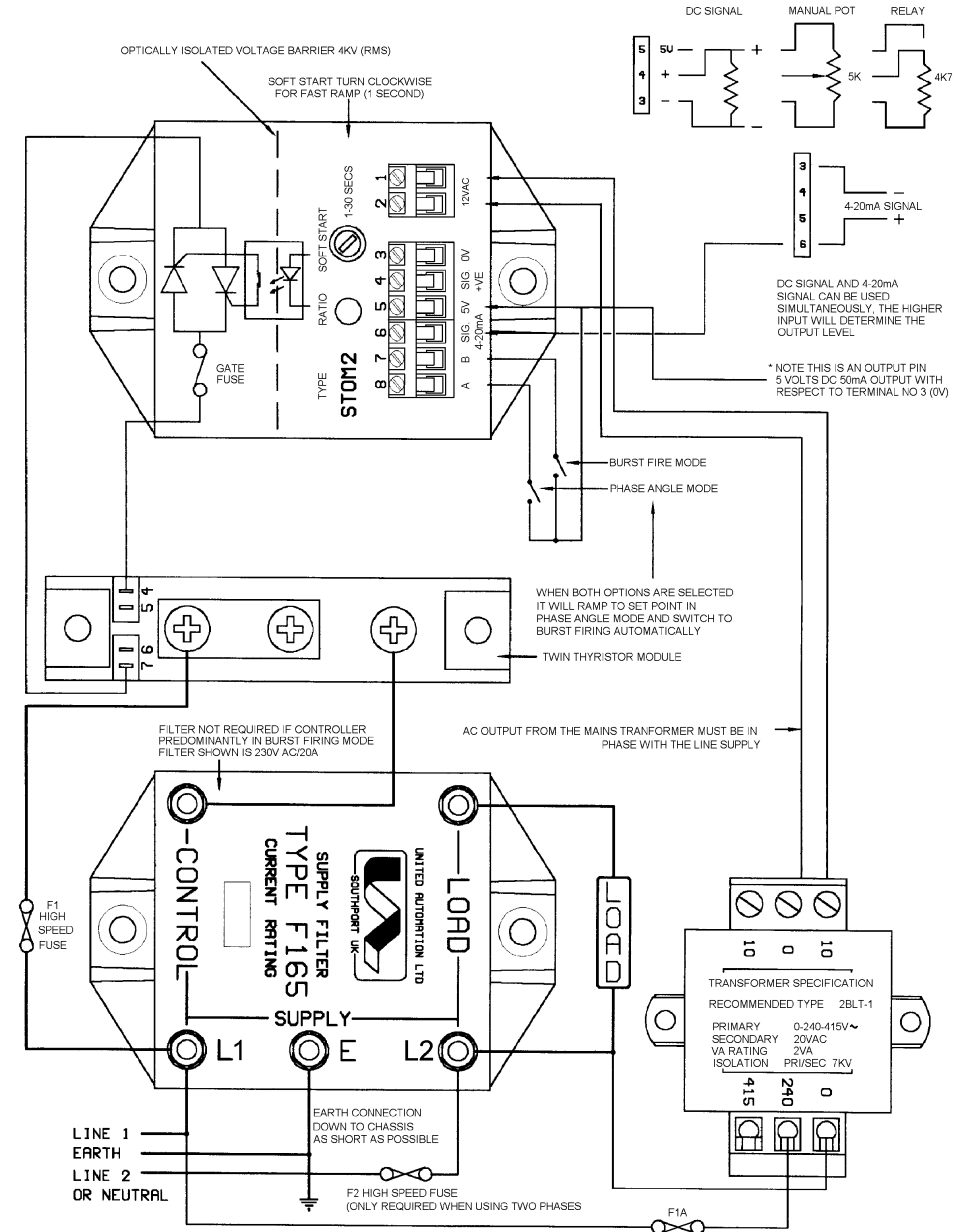
LINE 1

CONTROL OPTIONS
DC INPUT
VOLTAGE CONTROL
TERMINALS 3,4 AND 5
☐ 3 = 0V
☐ 4 = 0 TO 5V
☐ 5 = 5V OUTPUT
☐ 5K INPUT

CURRENT CONTROL
TERMINALS 3 AND 6
☐ 3 = 0V
☐ 6 = 4-20mA
☐ 240R INPUT

MODE A PHASE ANGLE
TERMINAL A AND 5
☐ A = 5V
☐ 5 = 5V

MODE B BURST FIRE
TERMINALS B AND 5
☐ B = 5V
☐ 5 = 5V

MODE A AND B START IN
PHASE ANGLE SWITCHING
TO BURST FIRE
TERMINAL A,B AND 5
☐ A = 5V
☐ B = 5V
☐ 5 = 5V

PHASE REFERENCE AND
SUPPLY TERMINALS 1 AND 2
☐ 10V TO 18V AC AT 75 mA

OUTPUT CONNECTIONS G1, G2
☐ **UP TO 440V ac MAX**
☐ **50 TO 60 Hz +/- 5**
☐ **GATE CURRENT 1A MAX**

WARNING
SWITCH OFF SUPPLY BEFORE COMMENCING
ANY SERVICE WORK

DC SIGNAL   MANUAL POT   RELAY

5 5V
4 +
3 -   5K   4K7

OPTICALLY ISOLATED VOLTAGE BARRIER 4KV (RMS)

SOFT START TURN CLOCKWISE
FOR FAST RAMP (1 SECOND)

1-30 SECS

SOFT START

RATIO

TYPE   STOM2

GATE
FUSE

12VAC

3 0V
4 SIG
5 SIG +VE
6 5V
7 4-20mA
8 A B

3
4
5
6
4-20mA SIGNAL
+

DC SIGNAL AND 4-20mA
SIGNAL CAN BE USED
SIMULTANEOUSLY, THE HIGHER
INPUT WILL DETERMINE THE
OUTPUT LEVEL

* NOTE THIS IS AN OUTPUT PIN
5 VOLTS DC 50mA OUTPUT WITH
RESPECT TO TERMINAL NO 3 (0V)

BURST FIRE MODE

PHASE ANGLE MODE

WHEN BOTH OPTIONS ARE SELECTED
IT WILL RAMP TO SET POINT IN
PHASE ANGLE MODE AND SWITCH TO
BURST FIRING AUTOMATICALLY

TWIN THYRISTOR MODULE

FILTER NOT REQUIRED IF CONTROLLER
PREDOMINANTLY IN BURST FIRING MODE
FILTER SHOWN IS 230V AC/20A

AC OUTPUT FROM THE MAINS TRANFORMER MUST BE IN
PHASE WITH THE LINE SUPPLY

F1
HIGH
SPEED
FUSE

CONTROL

LOAD

LOAD

SUPPLY FILTER
TYPE F165
CURRENT RATING

UNITED AUTOMATION LTD
SOUTHPORT UK

SUPPLY

L1   E   L2

10 0 10

TRANSFORMER SPECIFICATION
RECOMMENDED TYPE   2BLT-1
PRIMARY   0-240-415V~
SECONDARY   20VAC
VA RATING   2VA
ISOLATION   PRI/SEC 7KV

415 240 0

LINE 1
EARTH
LINE 2
OR NEUTRAL

EARTH CONNECTION
DOWN TO CHASSIS
AS SHORT AS POSSIBLE

F2 HIGH SPEED FUSE
(ONLY REQUIRED WHEN USING TWO PHASES)

F1A

MATCH MAINS SUPPLY FILTER TO THE SUPPLY VOLTAGE AND MAX. LOAD CURRENT
IN ORDER TO COMPLY WITH BSEN 550081-2 WHEN USED IN PHASE ANGLE MODE

SPECIFICATIONS

Min. line voltage	5V ac	Trigger output rating	1A
Max. line voltage	440V ac	Power consumption	1.2W
Operating frequency	50 to 60 Hz +/- 5%	Mono-link fuse	F100mA (HRC)
Max. electrical isolation	4kV ac	Soft-start	1-30 sec
ac input supply	10 - 18V ac @ 75mA	Auxiliary output	5V dc
Storage temp. range	0 to 85°C	Control signals	0-5V dc & 4-20mA
Max operating temp.	0 to 65°C	Gate terminals	6.3mm x 0.8mm

FUSING

It is recommended to use semiconductor fast acting type fuses or circuit breakers (Semiconductor-MCB) for unit/device protection. On initial 'switch on' some loads may need an increased Factor of Safety (F of S) for unit and/or device protection.
See the SRA datasheet for further information.

CE MARKING

This product family carries a "CE marking". These phase angle controllers need a suitable remote filter. For information see recommendation section and contact our sales desk.
See the Declaration of Conformity.

RECOMMENDATION

Other documents available on request, which may be appropriate for your applications.

CODE	IDENTITY	DESCRIPTION
X10229	RFI	Filtering recommendation - addressing EMC directive.
X10213	ITA	Interaction, uses for phase angle and for burst fire control.
X10255	SRA	Safety requirements - addressing the Low Voltage Directive (LVD) including :-Thermal data/cooling ; "Live" parts warning & Earth requirements; Fusing recommendations.
X10378	ILR	Inductive loads remedy sheet for use with Phase angle controllers
P01.1	COS	UAL Conditions of sale

NOTE: It is recommended that installation and maintenance of this equipment should be done with reference to the current edition of the I.E.T. (formally I.E.E.) regulations (BS7671) by suitably qualified/trained personnel. The regulations contain important requirements regarding installation and safety of electrical equipment. Specific installers should refer to local and national regulations.

ORDER CODE:

State part number: **STOM2**
Optional extras include: Potentiometer, supply transformer, thyristor module, filter.

MICROPROCESSOR BASED 10V TO 440V DUAL MODE TRIGGER MODULE

STOM2

X10245

UNITED AUTOMATION

DESCRIPTION

The STOM2 is a microprocessor based trigger module capable of driving most power thyristors. The STOM2 has two modes of triggering control, phase-angle and burst-firing either can be selected separately. The module can also be used for soft-starting in phase-angle mode and it will automatically switch to burst-fire mode when the control signal has reached a preset level. The STOM2 has a soft-start from power up which can be set from 0-30 seconds. The signal inputs are fully isolated operating from either 0-5V dc or 4-20mA - accepting signals from temperature controllers, manual potentiometers, microprocessors etc.

APPLICATIONS

Suitable for most resistive and inductive loads including ovens, moulders, and dryers Ideal for unusual heating loads which have very low resistance when cold.

FEATURES

Energy saving	Soft start-facility	Phase-angle or burst-firing
Simple wiring	Standard 80mm fixing	Solid-state reliability
Isolated inputs	Rugged and compact	Load status indicator

INSTALLATION

RoHS Compliant