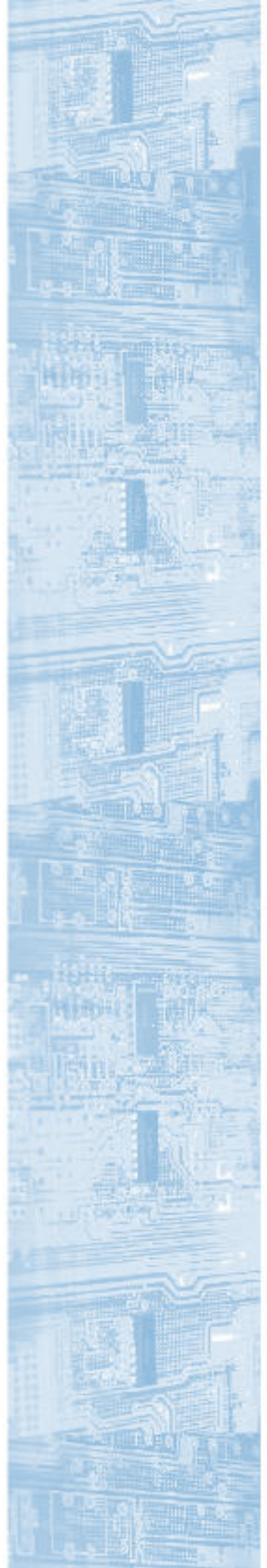


united automation

first in power electronics



Power Control from United Automation Ltd

UAL is one of the UK's leading manufacturers of power control products. This position was achieved as a result of our technical strengths and dedication to our customer's needs.

The company was formed in 1964 and since then, the business has expanded continuously, relocating to a new purpose-built facility in 1999.

The company's markets are international. Products are sold into a wide variety of industry sectors and market segments including; end users, distributors, contractors and Own Equipment Manufacturers.

Our standard product range covers the majority of power control applications, however, where the customer has a requirement which cannot be met by a standard product, we provide specific design solutions.

This is a key differentiating factor for UAL as the size of the company and the expertise in our design team means that we can react quickly to provide high quality design solutions, which leave our competitors standing.



Our production team employ leading edge business techniques to ensure a continuous improvement both in customer service levels and cost reduction. All business processes are underpinned by the ISO9001 quality standard for which we achieved accreditation in 1995.

We now have a very secure base from which to develop the company and have recently set out a very challenging strategy for sales growth, which will be achieved through a focus on five key areas:

- Understanding and delivering exceptional value for our customers
- Developing our employees
- Expanding our market coverage
- Introducing new products
- Implementing e-business practices.

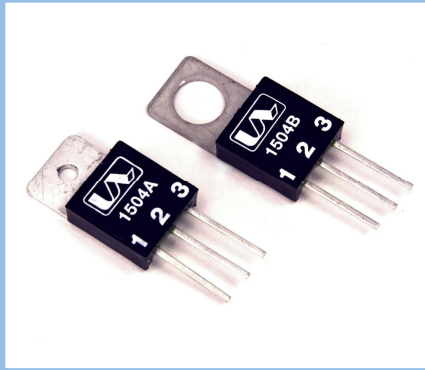
With these initiatives we believe that our customers will experience even greater benefits from working with **United Automation Ltd** as a key supplier.



CONTENTS

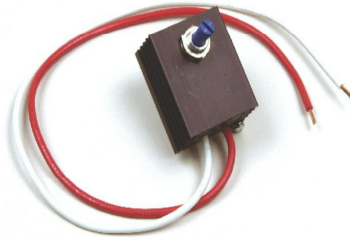
Application Table	3
COMPACT PHASE ANGLE REGULATORS	
CSR Chips	5
CSR B and E .	5
PSR-25	5
TPSR-25	5
PHASE ANGLE REGULATORS	
QLC/RFI-TB	6
QVR & QVR/S	6
QLC	6
QVR/RFI-TB & QVR/S-RFI-TB	6
AVR-25	7
BURST FIRING REGULATORS	
ZVS-16DV	7
ZVT-1, ZVT-2	7
BVR-25	7
ZVT-25	8
E Sensor 10K3A1	8
PHASE ANGLE FIRING CIRCUITS & POWER MODULES	
AFM-11	8
FC11AL	8
FC11AL/2	9
PAC2	9
MAT	9
BURST FIRING CIRCUITS & POWER MODULES	
BMT3A	9
BM-1, BM-2, BM-3	10
FC11BL	10
FC11BL2	10
DUAL MODE FIRING CIRCUITS & POWER MODULES	
STOM-1	10
STOM-2	11
FC36M	11
CM-FC36(M/MV)	11
FC36MV .	11
SPECIALISED POWER PRODUCTS	
RMS-DC-FB	12
VAC2-2E	12
SSR-LN	12
PCE	12
SSC 25	13
DCM - 24	13
EVR	13
DCR- Rectifier Assembly	13
SINGLE & THREE-PHASE POWER CONTROL ASSEMBLIES	
Assembly Application Circuit Chart	14
LAC	15
SAC	15
HAC	15
PR1-DIN-F	16
PR1-E	16
PR3-E	16
SPARES	
Semiconductor Fuses / M.C.B (Z Type)	17
Diode Modules / Thyristor Modules	17
Triacs / Single-phase Filters	18
Three-phase Filters / DIN Rail Heat Sinks	18
Specialised Requirements	19

Application	Page Number								
	5	6-7	7-8	8-9	9-10	10-11	15-16	12-13	17-18
HEATING									
Air Conditioning		✓	✓	✓	✓	✓	✓		✓
Air Curtains		✓	✓	✓	✓	✓	✓		✓
Annealing			✓	✓	✓		✓		✓
Boilers			✓	✓	✓		✓		✓
Dryers	✓	✓	✓	✓	✓	✓	✓		✓
Extruders				✓	✓		✓		✓
Heaters	✓	✓	✓			✓	✓		✓
Heater Mats	✓	✓	✓						✓
Heating Tape	✓	✓	✓						✓
Hot Plates	✓	✓	✓						✓
Hot Wires	✓	✓	✓						✓
Immersion Heaters	✓	✓	✓						✓
Induction Heaters				✓			✓		✓
Industrial Furnaces				✓	✓		✓		✓
Infra-Red Heaters	✓	✓		✓			✓		✓
Ovens	✓	✓	✓	✓	✓	✓	✓		✓
Smelting				✓	✓		✓		✓
Soldering Pots	✓	✓	✓						✓
Space Heating			✓	✓	✓	✓	✓		✓
Stress Relieving				✓	✓	✓	✓		✓
Trace Heating	✓	✓	✓	✓	✓	✓	✓		✓
Ultraviolet Heaters				✓			✓		✓
Under floor Heaters			✓	✓	✓		✓		✓
Heating & Ventilation	✓	✓	✓	✓	✓		✓		✓
LIGHTING									
Energy Saving	✓	✓		✓	✓	✓	✓	✓	✓
Halogen Lamps	✓	✓		✓			✓		✓
Industrial Dimmers	✓	✓		✓			✓		✓
Quartz Lamps	✓	✓							✓
Runway Lighting				✓			✓		✓
Tungsten lamps	✓	✓							✓
ELECTROCHEMICAL									
Cathodic Protection				✓			✓		✓
Chlorine Production				✓			✓		✓
DC Reclamation				✓			✓		✓
Electro plating				✓			✓		✓
Water Purification				✓			✓		✓
Battery Chargers				✓			✓		✓
Hydrogen Production				✓			✓		✓
VIBRATORS / SHAKERS									
Bowl Feeders		✓							✓
Industrial Vibrators				✓			✓		✓
Magnetic coil									✓
Shakers (food)		✓		✓			✓		✓
Electromagnets									✓
Transformers	✓	✓		✓			✓		✓
MOTORS									
Clean Room Extract	✓	✓						✓	✓
Exciters	✓	✓		✓			✓	✓	✓
Fan Motors (H & V	✓	✓						✓	✓
Industrial Vacuum									✓



X10203

Photograph shows CSR2-15E



(Adhesive dial & hairline knobs are available as optional extras.)

X10282

CSR Chips

The CSR chip is a combined thick film triac and phase angle firing circuit built into one package with an isolated tab heatsink. The two types available (A & B) are different sizes for mounting purposes.

CSR B & E

The CSR power regulator is a CSR chip with combined control potentiometer, available in two types (B & E).

- B type is open type construction.
- E type includes a heatsink & enclosure

Name	Current (A)	Voltage	Code
CSR604A	6A	110/230V	A01106
CSR1004A	10A	110/230V	A01110
CSR1504A	15A	110/230V	A01115
CSR604B	6A	110/230V	A01206
CSR1004B	10A	110/230V	A01210
CSR1504B	15A	110/230V	A01215

Name	Current (A)	Voltage	Code
CSR2-6B	6A	110/230V	A01306
CSR2-10B	10A	110/230V	A01310
CSR2-15B	15A	110/230V	A10315
CSR1-6E	6A	110V	A01496
CSR1-10E	10A	110V	A01490
CSR1-15E	15A	110V	A01495
CSR2-6E	6A	230V	A01406
CSR2-10E	10A	230V	A01410
CSR2-15E	15A	230V	A01415



X10205



X10284

PSR-25

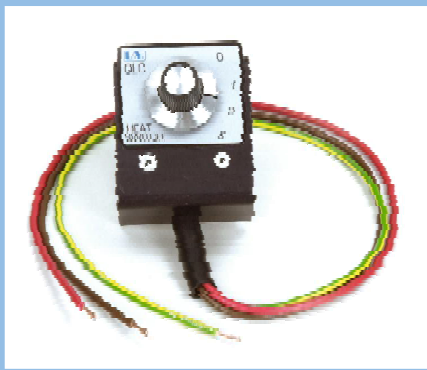
The PSR is a full wave AC power control module with in built triac, snubber network and firing circuit.

TPSR-25

The TPSR is a full wave AC power control module, capable of giving proportional control from a thermistor.

Name	Current (A)	Voltage	Code
PSR-25	25A	110/230V	A01725

Name	Current (A)	Voltage	Code
TPSR-25	25A	110/230V	A01825
Thermistor: UOT 1090B			A84018

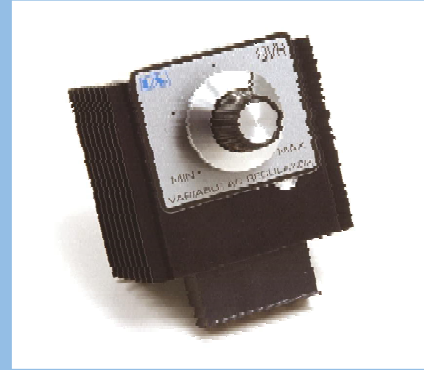


X10206

QLC

This power regulator is pre-set to give three positions of control (low, medium, and high) and an off position. The QLC is designed to withstand four times full load current on switch on.

Name	Current (A)	Voltage	Code
QLC-110V	15A	110V	A11114
QLC-230V	15A	230V	A11203

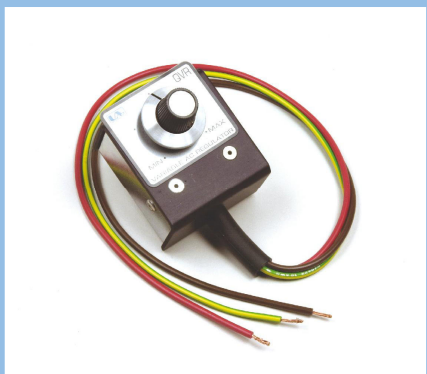


X10250

QVR/TB-RFI & QVRS/TB-RFI

These mains controlled variable regulators are QVR's with a built in RFI suppression network, and have a plug in line and load terminal connection block.

Name	Current (A)	Voltage	Code
QVR-TB-RFI 110V	15A	110V	A14118
QVR-TB-RFI 230V	15A	230V	A14231
QVR/S-TB-RFI 110V	15A	110V	A14117
QVR/S-TB-RFI 230V	15A	230V	A14232

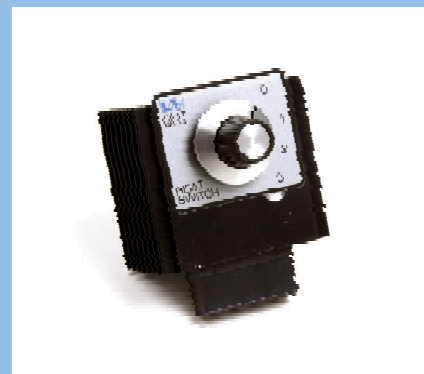


X10207

QVR & QVR/S

These fully adjustable, mains controlled variable regulators are designed to withstand four times full load current on switch on

Name	Current (A)	Voltage	Code
QVR-110V	15A	110V	A12112
QVR-230V	15A	230V	A12201
QVR/S-110V	15A	110V	A13113
QVR/S-230V	15A	230V	A13202

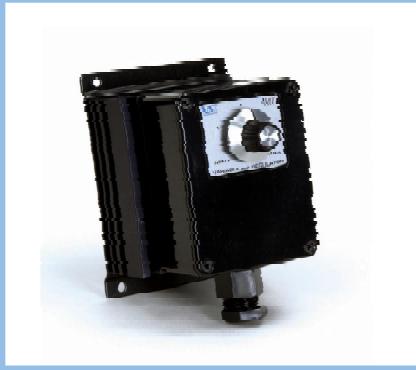


X10251

QLC/TB-RFI

This power regulator is a QLC with a built in RFI suppression network and plug in line and load terminal connection block.

Name	Current (A)	Voltage	Code
QLC-TB-RFI 110V	15A	110V	A14118
QLC-TB-RFI 230V	15A	230V	A14231

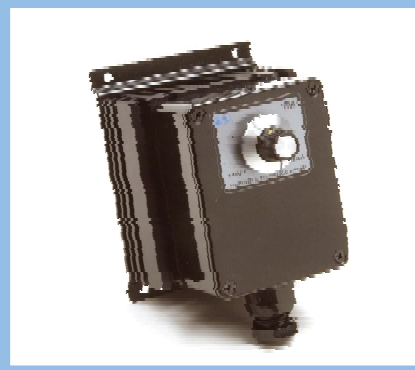


X10208

AVR-25

These are manually controlled variable AC power regulators with integral heatsink and internal semiconductor fusing.

Name	Current (A)	Voltage	Code
AVR 110V	25A	110V	A15101
AVR 230V	25A	230V	A15201



X10212

BVR-25

These are manually controlled variable AC power regulators suitable for most resistive heater loads, with integral heatsink and internal semiconductor fusing.

Name	Current (A)	Voltage	Code
BVR 110V	25A	110V	A28111
BVR 230V	25A	230V	A28211

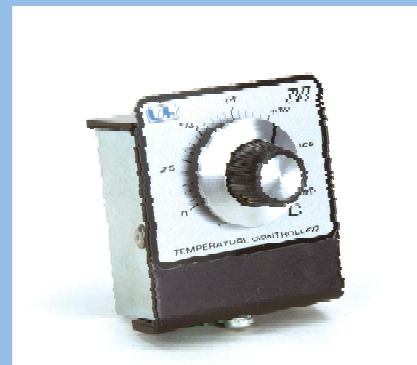


X10249

ZVS-16DV

This is a dual voltage manual controlled AC regulator for proportional control of resistive loads.

Name	Current (A)	Voltage	Code
ZVS-16 DV	16A	110/230V	A23212

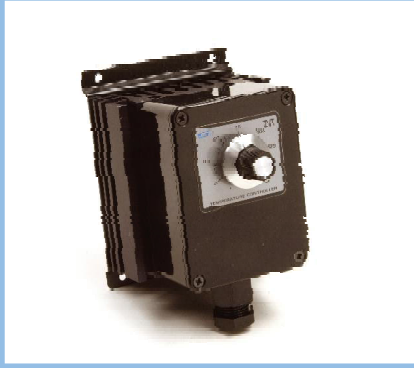


X10211

ZVT-16

This manually controlled, energy saving temperature controller combines linear sensing with a power output.

Name	Current (A)	Voltage	Code
ZVT1-16(O-150°C)	16A	110V	A26227
ZVT2-16(O-150°C)	16A	230V	A26228
ZVT1-16(O-40°C)	16A	110V	A26230
ZVT2-16(O-40°C)	16A	230V	A26231



X10542

ZVT-25

This is a high power version of the ZVT temperature controller complete with an integral heatsink and semiconductor fusing.

Name	Current (A)	Voltage	Code
ZVT1-25(0-150°C)	25A	110V	A26117
ZVT2-25(0-150°C)	25A	230V	A26223
ZVT1-25(0-40°C)	25A	110V	A26118
ZVT2-25(0-40°C)	25A	230V	A26254



X10612

E Sensor 10K3A1

This NTC sensor operates linearly over a 0 to 150°C temperature range. It is sealed in a robust stainless steel probe and has high temperature PTFE leads. The device is designed to compliment the ZVT range of temperature controllers.

Name	Code
E SENSOR 10K3A1	A26036

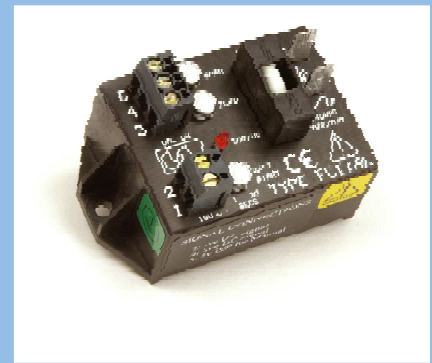


X10221

AFM-11

This universal firing module is designed to accept a wide range of common voltage or current control signals. It provides a powerful pulse-train output, which is ideal for driving semiconductor devices in both single-phase, and phase to phase applications. The module is not restricted to 230v or 400v applications as the auxiliary transformer can be selected to suit any line voltage up to 480v.

Name	Code
AFM11	A31411

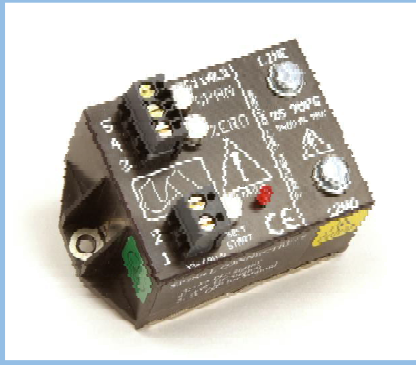


X10222

FC11AL

This universal firing module is designed to accept a wide range of common voltage or current control signals, suitable for driving most semiconductor devices in both single and phase to phase applications. The module is not restricted to 230v or 400v applications as the auxiliary transformer can be selected to suit any line voltage up to 440v.

Name	Code
FC11AL	A31214



X10260

FC11AL/2

This power module features an integral triac to enable control of resistive and inductive loads up to 25A, when fixed to a suitable heatsink. The module can be used on line voltages from 25v to 230v, simply by selecting the type of auxiliary transformer used.

Name	Current (A)	Code
FC11AL/2	25A	A31217



X10461

PAC2

This compact power module is capable of controlling mains driven loads up to 25A, when mounted on a suitable heatsink. Wiring is simplified by the use of only two power terminals, two auxiliary AC input terminals and a 3 way connection to a manual potentiometer or voltage signal input.

Name	Current (A)	Code
PAC 2	25A	A72210



X10224

MAT

This compact manual driver is designed to trigger triacs in 110v to 230v applications. The firing circuit is easily wired to a remote triac via a three way terminal block. The unit also has an integral cermet adjuster to set a minimum offset voltage level.

Name	Current (A)	Code
MAT	25A	A31414



X10638 / 39 / 42

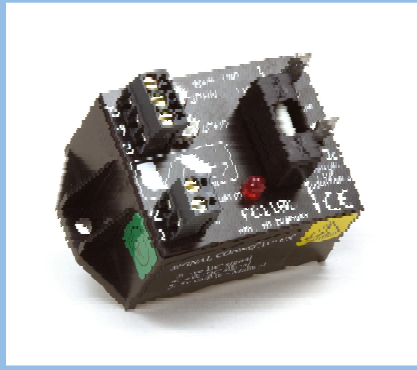
BM-1/2/3

The BM trigger modules are used in thyristor power assemblies for virtually all resistive heater loads.

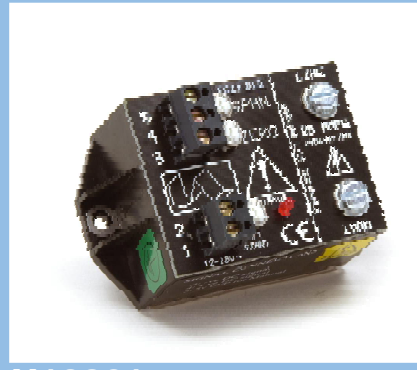
- BM1 - Single or phase to phase applications.
- BM2 - 2/3 control of three phase applications.
- BM3 - Fully controlled three phase applications.

The firing circuit is designed to give a variable on/off output ratio, proportional to a wide range of common voltage or current control signals. The module is not restricted for just 230v or 400v applications as the auxiliary transformer can be selected to suit any line voltage up to 440v.

Name	Code
BM-1	A32411
BM-2	A32413
BM-3	A32414



X10248



X10261

FC11BL

This trigger module provides control of thyristors in virtually all single-phase or phase to phase resistive load applications. The firing circuit is designed to give a variable on/off output ratio, proportional to a wide range of common voltage or current control signals. The module is not restricted for just 230v or 400v applications as the auxiliary transformer can be selected to suit any line voltage up to 440v.

Name	Code
FC11BL	A32410

FC11BL2

This power module features an integral triac to enable control of resistive loads up to 25A, when fitted to a suitable heatsink. The controller is designed to give a variable on/off output ratio, proportional to a wide range of common voltage or current control signals. The module can be used on line voltages from 110v to 230v simply by selecting the type of auxiliary transformer used.

Name	Current (A)	Code
FC11BL2	25A	A32419



X10298



X10223

BMT3A

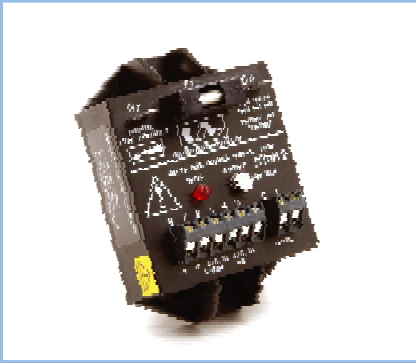
This microprocessor based temperature control module incorporates most of the characteristics of a three-phase firing circuit with the additional features of closed-loop temperature control. With three output stages, the module is suitable for driving thyristor pairs in singlephase, phase to phase, or 3-phase applications (2/3rds or full control). The temperature, at which the system will regulate, is normally set with a 5kΩ manual potentiometer and graduated panel dial, although the module can also accept voltage, or current control signals. The module is not restricted for just 230v or 400v applications as the auxiliary transformer can be selected to suit any line voltage up to 440v.

Name	Code
BMT3A	A33413

STOM-1

This microprocessor based power controller with integral power device, is capable of controlling loads up to 25A when fitted to a suitable heatsink. A wide range of common voltage or current control signals is accepted by the module plus manual control via a potentiometer. An LED indicates the output status of the controller. This module will operate in either phase-angle or burst-fire mode. It can be set up to soft-start in phase-angle mode, then switch over to burst-fire mode once the set point level is reached. The unit is not restricted to 230v or 400v applications as the auxiliary transformer can be selected to suit any line voltage up to 440v.

Name	Current (A)	Code
STOM-1	25A	A34511

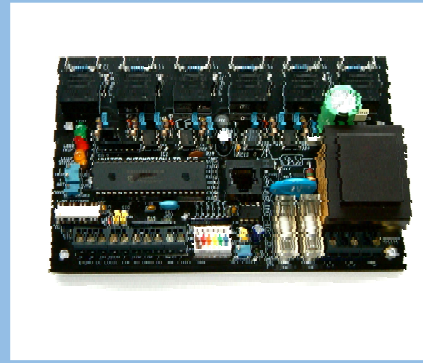


X10245

STOM-2

This microprocessor based trigger module is capable of driving most power thyristors and thyristor pairs. A wide range of common voltage or current control signals is accepted by the module plus manual control via a potentiometer. The module will operate in either phase-angle or burst-fire mode. It can be set up to soft-start in phase-angle mode, then switch over to burst-fire mode once a pre-set output level is reached. The unit is not restricted to 230v or 400v applications as the auxiliary transformer can be selected to suit any line voltage up to 440v.

Name	Code
STOM-2	A34512



X10248

FC36M

This microprocessor based, three-phase firing circuit can operate in both phase-angle and burst-fire modes. The firing circuit is designed to drive a wide range of thyristor types in different configurations but is commonly used to trigger three thyristor pairs in 3-phase thyristor control assembly applications. Each thyristor is individually driven by high-frequency voltage pulses, capable of driving high current devices.

Name	Voltage	Code
FC36M	110V	A34424
FC36M	230V	A34416
FC36M	400V	A34411



X10622

FC36MV

This microprocessor based, three-phase firing circuit is a higher specification version of the FC36M. It has various enhanced capabilities and integral features, which give improved performance in a wider range of applications.

Features

- High gate current drive
- Auto-phase correction
- Phase-loss detection
- Tracking of supply frequency from 47 to 63 Hz
- Compatible with remote programming display module

Name	Voltage	Code
FC36MV	230V	A34433
FC36MV	400V	A34428



X10652

CM-FC36(M/MV)

The CM-FC36(M/MV) Commander Module, (CM), is a "Human Machine Interface", (HMI), programming and display module. It can be used to interface with the FC36M or FC36MV firing circuits for programming or viewing of relevant parameters. Unit also incorporates additional display and alarm functions

Applications

Used in conjunction with the FC36M & FC36MV three phase firing circuits it can be used as a programmer or output display for parameters & set-points etc...

Name	Code
CM-FC36(M/MV)	A402131



X10559

RMS/DC-FB

The RMS to DC converter board is a microprocessor based closed loop controller which can be used with any phase angle controller having a 0-5v input signal. Its uses therefore extend to many voltage and current limiting applications incorporating current transformers or shunts.

Features

- Constant voltage or current regulation
- Variable gain control
- High speed feedback response
- Selectable average or true RMS readings
- Supports FC36M and other firing circuits
- Optional DIN rail mounting enclosure

Product Name	Code
RMS/DC-FB	A402072



X10522

VAC-2-2E

The compact VAC control module is designed for control of fan speed in a wide range of heating and ventilation applications. Installation is simplified, with just two connections for in-line wiring to the mains supply. The fan speed is set by an integral adjustable cermet. An internal RC snubber network makes the unit ideal for inductive fan loads up to 2 Amps

Features

- Compact
- Solid-State reliability
- Adjustable speed output
- Simple wiring
- Internal RFI filter

Product Name	Current (A)	Code
VAC-2-2E		A72110

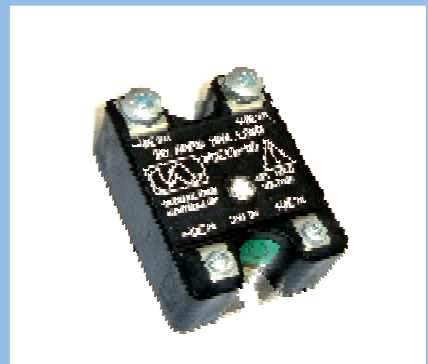


X10689/90

VAC 15E Range

These variable phase angle regulators are robust, compact and enclosed units for 230V or 110V up to 15A single phase mains driven inductive loads, such as induction motors, fans & pumps. They give fully adjustable voltage outputs from zero to maximum. The controller has an integral RC Snubber network for control of inductive loads and a Minimum Set Speed adjuster to allow the designer/installer to fix a minimum output voltage level to prevent a motor being driven too slowly. The large triac enables the unit to handle high inrush currents with ample safety margin on industrial installations.

Product Name	Current (A)	Voltage	Code
VAC2-15E	15A	230V	A72225
VAC1-15E	15A	110V	A72150
VAC2/S-15E	15A	230V	A72226
VAC1/S-15E	15A	110V	A72160



X10428

PCE

This range of pulsed coil energisers will accept a wide range of supply voltages, with AC or DC inputs. They provide a high initial output voltage and an adjustable or pre-set DC holding voltage, which ensures that the coil is fully energised at switch on and operates at a lower temperature for the remaining on period

Product Name	Code
PCE 240 - 97V	A84100
PCE 24V/20A 6-15	A84101
PCE 110 / 10-24	A84102
PCE12/20 - 1-5	A84103



X10336

SSC-25

This compact module is ideal for soft starting resistive and inductive loads up to 25 Amps, when fitted on a suitable heatsink.

Features

- Adjustable ramp time
- Adjustable pedestal voltage
- Available with fixed options



X10335

DCM-24

The DCM operates over a wide voltage range, up to 24V DC and a maximum current of 40 Amps, when fitted to a suitable heatsink.

Features

There are three main modes of control:

- Motor control - achieved by using the high-frequency setting.
- Lighting or Heating control - achieved by using the low frequency setting
- Temperature control, over the 5 to 130°C range, achieved by connecting a thermistor.
- Output status LED

Name	Current (A)	Code
SSC-25	25A	A403036

Name	Current (A)	Code
DCM-24	40A	A75204



X10532

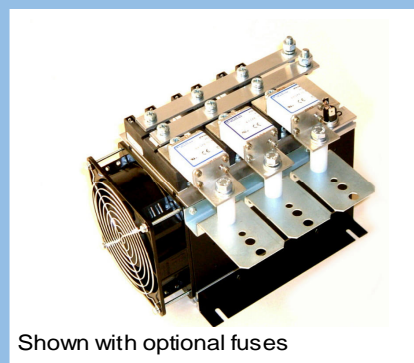
EVR

These compact triac control assemblies are capable of driving mains driven loads, up to 6kW, without the need for an additional heatsink.

Features

- Single cable entry
- Available as burst fire or phase angle control
- Integral semiconductor high speed fusing
- Manual (potentiometer) and signal control options
- Totally enclosed with integral heatsink
- Adjustable soft-start facility
- Output status led indicator

Name	Current (A)	Voltage	Code
EVR-25 Phase Angle	25A	230V	A407222A
EVR-25 Burst Fire	25A	230V	A407222B



Shown with optional fuses

X10242

RECTIFIER ASSEMBLIES - DCR

United Automation manufacture a range of controlled or uncontrolled single and three phase DC rectifier assemblies.

The standard ranges are from 15 to 300A per phase. All assemblies are built on integral earthed heatsink, and assemblies above 100A are forced air cooled, with thermal trip fitted.

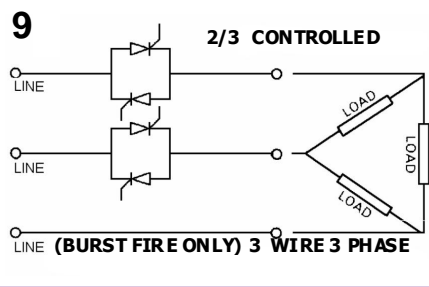
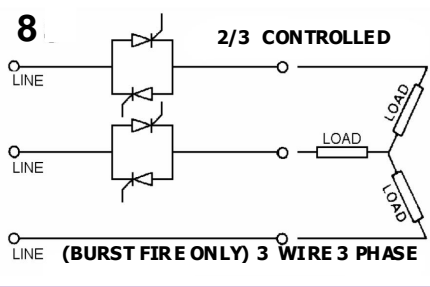
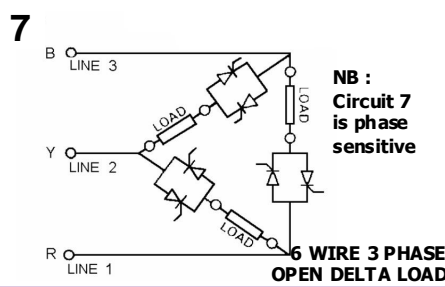
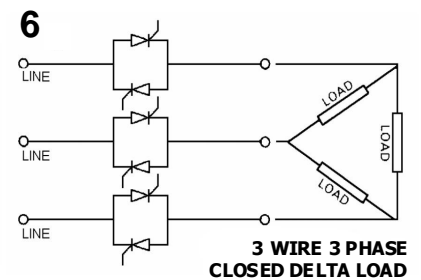
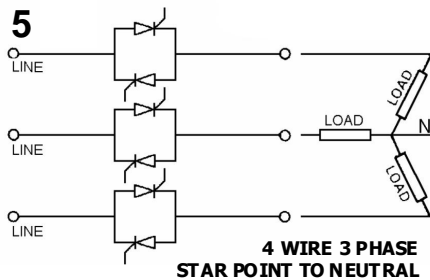
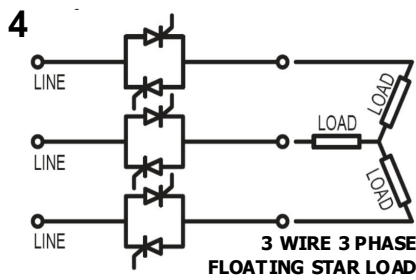
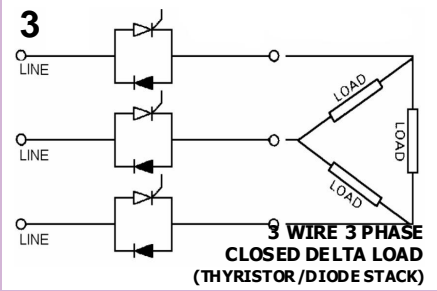
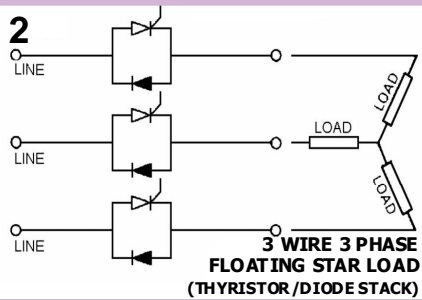
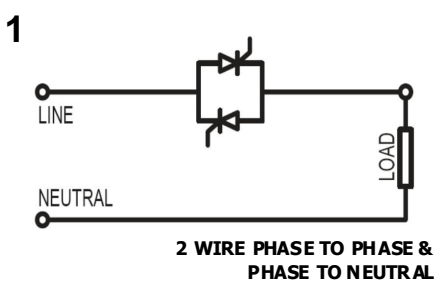
Features

- 15 – 300A single and three phase.
- Isolated modules on standard range.
- Fan cooled over 100A.
- Other ratings available.

Single & Three Phase Control Assembly Application Chart

SINGLE & THREE PHASE CONTROL ASSEMBLY APPLICATION CHART

Application Circuit	Max Current (A)	Max 230V Load (kW)	Max 400V Load (kW)	Burst Fire	Phase Angle	Dual	Logic	Model
1	Resistive	15 - 100	23	40	✓	✓	✓	PR1/EVR/LAC
		100 - 250	58	100	✓	✓	✓	HAC
1	Inductive	15 - 100	23	40		✓		LAC
		100 - 250	58	100		✓		HAC
4	Resistive	15 - 100	40	69	✓	✓	✓	SAC
		100 - 250	100	173	✓	✓	✓	HAC
4	Inductive	15 - 100	40	69		✓		SAC
		100 - 250	100	173		✓		HAC
5	Resistive	15 - 100	40	69	✓	✓	✓	SAC
		100 - 250	100	173	✓	✓	✓	HAC
5	Inductive	15 - 100	40	69		✓		SAC
		100 - 250	100	173		✓		HAC
6	Resistive	15 - 100	40	69	✓	✓	✓	SAC
		100 - 250	100	173	✓	✓	✓	HAC
6	Inductive	15 - 100	40	69		✓		SAC
		100 - 250	100	173		✓		HAC
7	Resistive	15 - 100	40	69	✓	✓	✓	SAC
		100 - 250	100	173	✓	✓	✓	HAC
7	Inductive	15 - 100	40	69		✓		SAC
		100 - 250	100	173		✓		HAC
8	Resistive	15 - 100	40	69	✓			SAC
9	Resistive	100 - 250	100	173	✓			HAC





Photograph shows 400V version

X10217

LAC

- Control option *(see LAC power control assembly order code chart)*
- 4kW – 24kW single phase.
- 15 to 100A single phase or phase to phase.
- Supply voltage range (RMS) 110 - 480V AC.
- Phase angle, burst firing logic control or dual control.
- Semiconductor fuses fitted.
- Naturally cooled.
- Dimensions: 240mm(W) x 150mm(H) x 100mm(D)

Please contact us to select your LAC



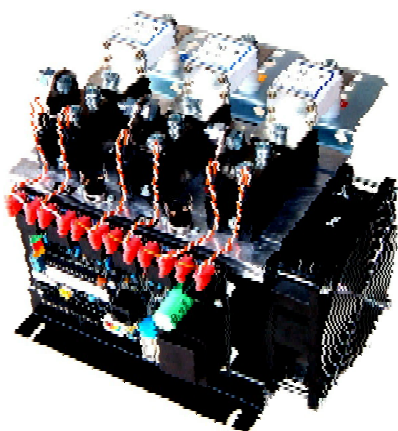
Photograph shows 100A version

X10215

SAC

- Control option *(see SAC power control assembly order code chart)*
- 11kW – 72kW three phase.
- 15 to 100A, 3 phase or two thirds controlled.
- Supply voltage range (RMS) 220 – 480V AC
- Phase angle, burst firing logic control or dual control.
- Semiconductor fuses fitted.
- Naturally cooled.
- Dimensions: 340mm(W) x 230mm(H) x 120mm(D)

Please contact us to select your SAC



Photograph shows optional fuses

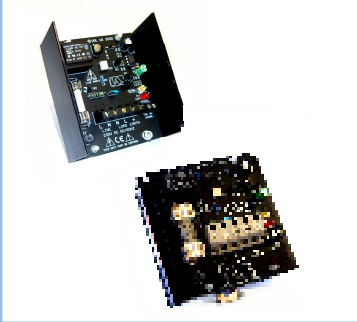
X10252

HAC

- Control option *(see HAC power control assembly order code chart)*
- 108kW – 180kW three phase.
- 150 to 250A, single, 3 phase or two thirds controlled.
- Supply voltage range (RMS) 220 – 480V AC
- Phase angle, burst firing logic control or dual control.
- Fan cooled.
- Thermal cut-out.
- Dimensions: 180mm(W) x 240mm(H) x 180mm(D)

Please contact us to select your HAC

PR1 Units



X10631

PR3-E Units



X10592 / 93 / 94

PR1-E Units



X10591

PR1-DIN-F

This range of single phase compact triac control assemblies are capable of controlling mains driven resistive loads, rated up to 5Kw

Features

- Available in 1.5kW, 3kW & 5kW models
- Simple DIN rail mounting
- Solid-state control
- Output status LED indicator
- Over-temperature protection - auto-shutdown/reset
- AC or DC auxiliary power source input
- Proportional control DC signal
- Optional remote transformer (T30201 not supplied)

PR1E

A range of single phase power controllers which can provide full, seamless control, of resistive loads from 1.5kW to 24Kw

Features

- Single Phase
- Available in 1.5Kw to 24kW models
- 0-5 / 0+ 10V signal options
- Integral Fusing
- Integral Power Supply
- Failsafe alarms
- Over Temp Protection

PR3E

A range of three phase power controllers which can provide full, seamless control, of resistive loads from 12kW to 105Kw

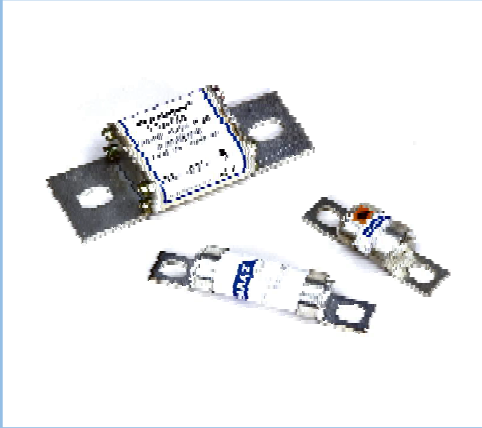
Features

- Three Phase
- Available in 12kW to 105kW models
- 0-5 / 0+ 10V signal options
- Integral Fusing
- Integral Power Supply
- Failsafe alarms
- Over Temp Protection

Name	Current (A)	Voltage	Code
PR1-1.5	6A	230V	A407249-HV
PR1-3	12A	230V	A407250-HV
PR1-5	20A	230V	A407251-HV

Name	Current (A)	Voltage	Code
PR1-E-1.5	6A	230V	A407549-HV
PR1-E-3	12A	230V	A407550-HV
PR1-E-6	25A	230V	A407552-HV
PR1-E-9	40A	230V	A412222-HV
PR1-E-12	50A	230V	A412232-HV
PR1-E-18	75A	230V	A412242-HV
PR1-E-27	100A	230V	A412252-HV

Name	Current (A)	Voltage	Code
PR3-E-12	16.5A	415V	A437407-HV
PR3-E-18	25A	415V	A437408-HV
PR3-E-27	37.5A	415V	A437409-HV
PR3-E-36	50A	415V	A437432-HV
PR3-E-54	75A	415V	A437442-HV
PR3-E-86	119A	415V	A447412-HV
PR3-E-105	145A	415V	A447432-HV



SEMICONDUCTOR FUSES

- High rupturing capacity (HRC) fuse links with bolted connections for use in industrial and commercial installations.
- Ultra fast acting fuse links are designed to provide short circuit protection of semiconductors.

Available in 6A–720A, 250V–660V ratings (RMS).



DIODE MODULES (DD Type)

- Diode modules comprising a pair of series connected diodes featuring an isolated metal base to permit direct mounting to either a metal chassis or a heat sink.
- The modules can be used with encapsulated thyristor modules to construct half-controlled bridge configurations.

Available in 25A–250A, 1200V ratings (RMS).



MINIATURE CIRCUIT BREAKERS (Z Type)

- These items can replace conventional semiconductor fuses and are available as single and double pole models.
- They offer all the protection of a fuse but have the added advantages of being re-settable. They provide protection against earth faults and dangerous body currents in the case of high touch voltage due to installation faults.
- High short-circuit switching capacity.

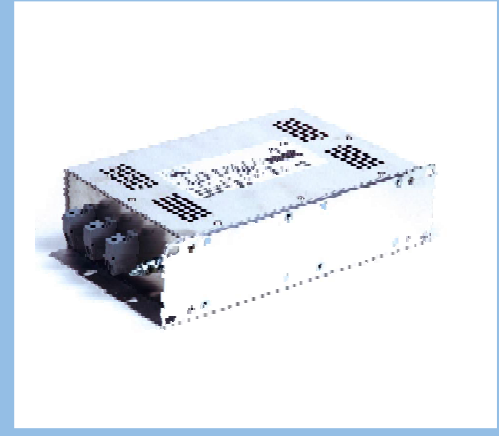
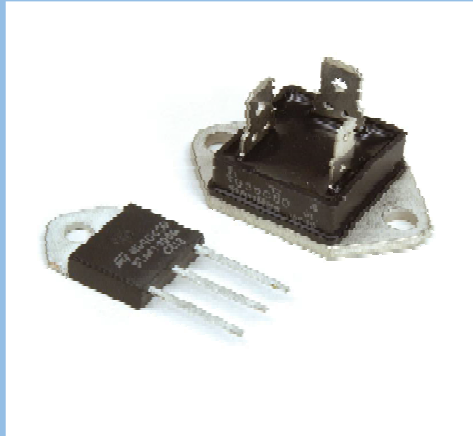
Available in 6A – 25A current ratings (RMS).



THYRISTOR MODULES (TT Type)

- Thyristor modules comprising of a pair of inverse parallel connected thyristors. Featuring an isolated metal base to permit direct mounting to a heat sink.
- The modules can be used with the encapsulated diode modules to construct half-controlled single-phase and three phase bridges.

Available in 25A–250A, 1200V ratings (RMS).



TRIACS (Bi-directional Semiconductors)

- Available in various electrically isolated packages.
- Voltage capacity – up to 800V
- Surge capacity – up to 400A

Available in 1-40A current ratings (RMS).

THREE-PHASE FILTERS (S Series)

- Designed to compliment the UAL phase-angle 3Ø thyristor control assemblies
- Universal mounting for simple installation
- Naturally cooled, light-weight construction
- Robust, high-current terminal block connections, for simple wiring
- Helps meet emission standard BS EN 55022 Class A

Available in 10, 25, 50, 100, 180A current ratings (RMS)



X10229



SINGLE-PHASE FILTERS (F Type)

- Designed to compliment the UAL mains phase-angle power controller range
- Simple two hole mounting lugs for simple installation
- Fully encapsulated & naturally cooled
- Simple push-on terminals for models up to 10A
- Robust threaded stud terminals on models above 10A
- To EMC emission standard BS EN 55022 Class A

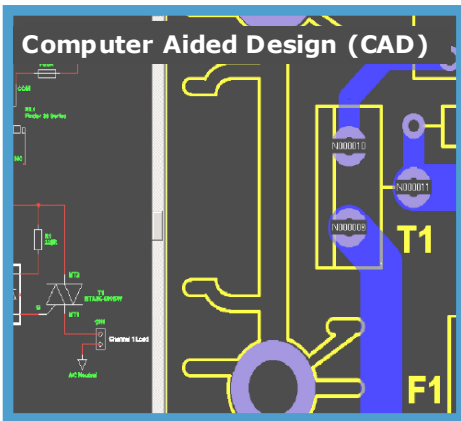
Available in 3, 6, 10, 15 & 25A current ratings (RMS).

DIN RAIL HEATSINKS

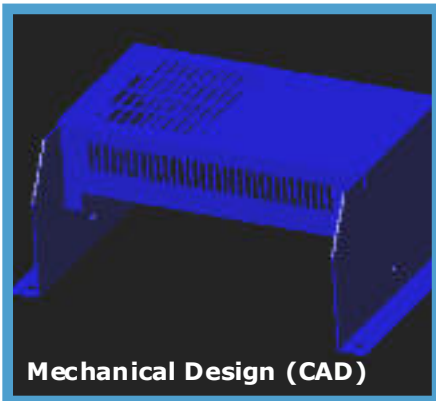
- A wide range of heatsinks to compliment many of the UAL power controller range and other applications
- Ready for mounting on standard DIN rails
- Suitable for many single-phase applications for loads of up to 40 Amps

Available in various sizes (please contact our technical sales) +

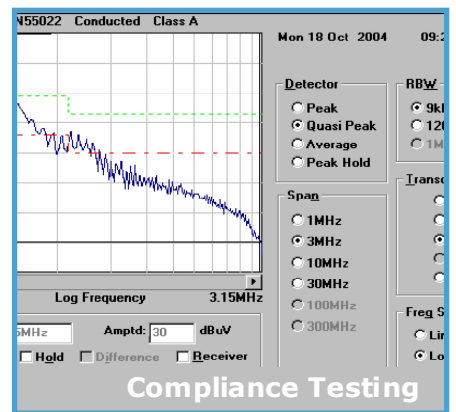
Specialised Requirement?



If you have a specialised requirement that cannot be met by a standard product, then UAL can help. We have an in depth knowledge and expertise in the design, development and production of electronic control products.



One phone call will put you in touch with our experienced team of design and development engineers who will help to take your concept to market. Our expertise includes PCB design in 3D, mechanical design using Autocad, manufacturing, value engineering assembly and testing. We provide full documentation and approvals to support your product. The after sales service, available from our technical support team, offers all the help and advice you may need.



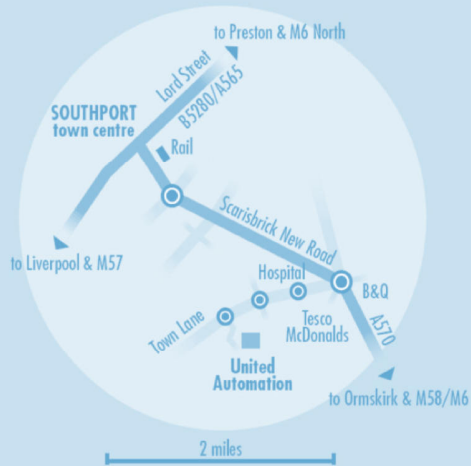
With details of your particular application, operating environment and commercial demands, we will endeavour to offer a custom design solution that meets your exact requirements.

Please contact us:

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