

3

CONTROLLERS



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Single Phase Controllers

The single phase DIN-Rail mounting controllers are suitable for providing control of electric heating loads from an analogue signal. Applications include electric heating coils, heating cables and electric furnaces. The units utilise solid-state switching with "zero crossing technology" to provide accurate switching control. All items are provided with an alarm output for over temperature protection and LED Indication of Output ON, and are designed to mount on DIN rail.

Features

- Selectable control input
- Over temperature protection with auto reset
- No additional heat sinks or RFI filters required
- Efficient electronic switching

RE-1P Series

Current kW	Part No.
2	RE-1P-2
4	RE-1P-4N
7	RE-1P-7

Three Phase Controllers

The RE-3P range are suitable for providing control of electric heating loads from an analogue signal. Applications include electric heating coils, heating cables and electric furnaces. The units utilise solid-state switching with "zero crossing technology" to provide accurate switching control.

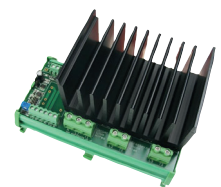
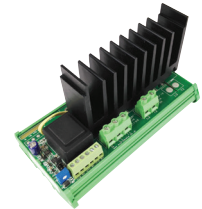
All controllers are provided with an alarm output for over temperature protection and LED Indication of Output ON. The 12 & 18kW versions are for Din-rail mounting and 27, 36, 57 & 86kW are designed to mount on the control panel back plate.

Features

- Selectable control input
- Over temperature protection with auto reset
- No additional heat sinks or RFI filters required
- Efficient electronic switching
- Small foot print

RE-3P Series

Current kW	Mounting	Part No.
12	Din-rail	RE-3P-12
18		RE-3P-18
27		RE-3P-27
36	Panel mount	RE-3P-36
54		RE-3P-57
86		RE-3P-86



Thyristor Controllers

RG Series

Phase Type	Current Rating	Description	Heat Dissipation	Part No.
Single	12A	85-265V AC, 24V AC/DC supply, 0-10V signal	10W	RGC1P23V12ED
	30A	85-265V AC, 24V AC/DC supply, 0-10V signal	30W	RGC1P23V30ED
	43A	85-265V AC, 24V AC/DC supply, 0-10V signal	40W	RGC1P23V42ED
	50A	85-265V AC, 24V AC/DC supply, 0-10V signal	53W	RGC1P23V50ED
	63A	85-265V AC, 24V AC/DC supply, 0-10V signal	80W	RGC1P23V62ED
Three (2 pole switching 1 direct)	25A	180-660V AC, 24V AC/DC supply, 0-10V, 0-5V, 1-5V signal	60W	RGC2P60V25C1DM
	40A	180-660V AC, 24V AC/DC supply, 0-10V, 0-5V, 1-5V signal	105W	RGC2P60V40C1DM
	75A	180-660V AC, 24V AC/DC supply, 0-10V, 0-5V, 1-5V signal, fan	190W	RGC2P60V75C1DFM
Three (3 pole switching)	20A	180-660V AC, 24V AC/DC supply, 0-10V, 0-5V, 1-5V signal	65W	RGC3P60V20C1DM
	30A	180-660V AC, 24V AC/DC supply, 0-10V, 0-5V, 1-5V signal	115W	RGC3P60V30C1DM
	65A	180-660V AC, 24V AC/DC supply, 0-10V, 0-5V, 1-5V signal, fan	235W	RGC3P60V65C1DFM



Electro Controls



Single & Three Phase Controllers

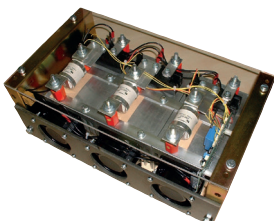
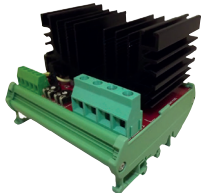
These Thyristor controls accept 0-10V DC input signals from temperature controllers to regulate the current flow to electric heaters or other resistive loads in order to achieve accurate proportional control. The unit operates on burst fire zero voltage switched principle. The FULL load is switched on & off on timed bursts and is proportional to the input signal.

EY1... & EY3... Series

Phase Type	Mounting Type	Max Heater Duty kW	Supply VAC 50/60Hz	Internal Fuse	Part No.
Single	DIN rail	1.5	230	- *	EY1-1.5
		3.5	230	15A	EY1-3
		7.0	230	30A	EY1-7
		12.5	230	55A	EY1-12
Three	DIN rail	10	415	15A/Ph	EY3-10
		20	415	30A/Ph	EY3-20
		28	415	40A/Ph	EY3-28
		36	415	55A/Ph	EY3-36
	Bracket	54	415	75A/Ph	EY3-54
		86	415	120A/Ph	EY3-86
		105	415	160A/Ph	EY3-105
		150	415	220A/Ph	EY3-150

* The EY-1.5 does not have a fitted internal fuse. A high speed semi-conductor fuse should be fitted externally.

AXIO



Power Regulators - Single Phase - DIN Rail Mount

Single Phase Power Regulators suitable for loads up to 12kW. Units use "zero point switching" technology to reduce RFI problems and extend system lifespan. DIN rail mounted to 9kW, the 12kW is panel mounted.

AX-MPR1... Series

Phase Type	Mounting Type	Max Heater Duty kW	Supply	Internal Fuse	Part No.
Single	DIN rail	2	24V AC/DC	10A	AX-MPR1-2
		4		20A	AX-MPR1-4
		6		30A	AX-MPR1-6
		9		40A	AX-MPR1-9
		12		60A	AX-MPR1-12

Power Regulators - Three Phase - DIN Rail Mount

DIN rail mount three phase power regulators suitable for loads from 6 to 18kW. Units use "zero point switching" technology to reduce RFI problems and extend system lifespan.

AX-MPR3... Series

Phase Type	Mounting Type	Max Heater Duty kW	Supply	Internal Fuse	Part No.
Three	DIN rail	6	24V AC/DC	10A	AX-MPR3-6
		12		20A	AX-MPR3-12
		18		30A	AX-MPR3-18

Power Regulators - Three Phase - Panel Mount

Three phase power regulators in rugged steel enclosures suitable for loads up to 54kW. The 54kW version uses a fan to disperse heat whereas the smaller units have unassisted cooling.

AX-PPR3... Series

Phase Type	Mounting Type	Max Heater Duty kW	Supply	Internal Fuse	Part No.
Three	Panel	27	24V AC/DC	40A	AX-PPR3-27
		36		60A	AX-PPR3-36
		54		80A	AX-PPR3-54

Power Regulators - Three Phase - Panel Mount

Three phase power regulators in a durable steel enclosure, suitable for loads up to 105kW. All heat is dissipated without the need for additional fans or heatsinks. Alarm output option.

AX-PPR3... Series

Phase Type	Mounting Type	Max Heater Duty kW	Supply	Internal Fuse	Part No.
Three	Panel	72	24V AC/DC	100A	AX-PPR3-72
		105		146A	AX-PPR3-105

Power Regulators - Three Phase - Panel Mount

Three phase power regulators in a durable enclosure, suitable for loads up to 400kW. All heat is dissipated without the need for additional fans or heatsinks. The units are built and fused according to the actual load requirements.

AX-PPR3... Series

Phase Type	Mounting Type	Max Heater Duty kW	Supply	Internal Fuse	Part No.
Three	Panel	150	380-440V AC		AX-PPR3-150

TUC03 Configurable Terminal Unit Controller

To provide direct digital control of terminal unit applications with heating and/or cooling coils, an electric heater and 3-speed or variable speed fan.

- 230V AC power supply
- 5V DC / 15V DC / 24V AC power supply for field devices, directly provided by the controller

TUC03 Series

Description	Part No.
BACnet MS/TP with Peer to Peer Communication, compatible with 10K3A1 inputs	TUC03



Intelligent Room Automation

Excellent room climate and energy efficiency - integrated, modular, open.



Stand Alone or BACnet/MSTP - Universal Terminal Unit Controller

Voltage / IO	Description and Functionality	Part No.
24V AC/DC (13 I/O)	Freely configurable BACnet room controllers (B-ASC) for fan coil unit, chilled beam, VAV, panel heating etc.. (c/w room automation functions.. i.e. window contact, demand fan control, external cooling etc..) Master/slave up to 8no. units. Parameterisation through EY-RU382 room unit, easy-set software, memory plug in or changes over network. (230V version c/w onboard 24V 6VA output)	EY-RC301F005
230V AC (16 I/O)	Room display/controls for EY-RC3's (c/w integral NTC sensor)	EY-RC302F001
Power from EY-RC3	Room display/controls for EY-RC3's (c/w integral NTC sensor)	EY-RU382F001

Universal Electronic Controller

24V AC (6 I/O)	Universal control with configurable modes for temperature, pressure, CO2, humidity, supply air cascade and heating. Operation / setting through LCD display. P/PI control. (410 version includes week time switching & PID DHW control functionality)	RDT405F201
24V AC (11 I/O)		RDT410F201
230V AC (11 I/O)		RDT410F301

Panel Heating/Cooling Electric Distributors (For power, signalling and time programmes)

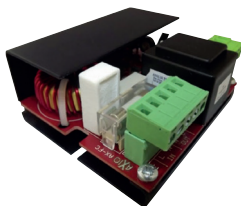
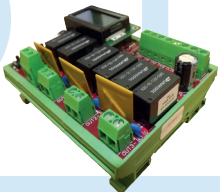
24V AC / 230V AC (6 zones)	Heating only (c/w 2 set back zones)	FXV3006F001
230V AC (10 zones)	Heating & cooling (c/w 2 set back zones) pump control, change over input, high temp/humidity input	FXV3110F001
24V AC (10 zones)		FXV3110F002
230V AC (10 zones)	Heating, Heating & Cooling. Pump control (c/w logic), change over input, high temp/humidity input, boiler output, NC/NO actuators, pump/valve protection, LED indication	FXV3210F001
24V AC (10 zones)		FXV3210F002

Heating/Cooling Electronic Room Controllers (Stand alone/integrated to FXV3 distribution centres)

230V AC dial	Heating, lowering set back input, frost protection (up to 6 actuators)	TRT317F210
24V AC dial	Heating, lowering set back input, frost protection (up to 4 actuators)	TRT317F212
230V AC dial	Heating/cooling, lowering set back input, frost protection, valve protection & cooling lock (up to 6 actuators)	TRT327F210
24V AC dial	Heating/cooling, lowering set back input, frost protection, valve protection & cooling lock (up to 4 actuators)	TRT327F212
230V AC c/w display	Heating, lowering set back input, frost protection (up to 5 actuators) Includes - operating mode selection (+ other features)	TRA410F210
24V AC c/w display	Heating, lowering set back input, frost protection (up to 5 actuators) Includes - operating mode selection (+ other features)	TRA410F212
230V AC c/w display	Heating/cooling, lowering set back input, frost protection, valve protection & cooling lock (up to 5 actuators) Includes - operating modes, time programme, pilot clock output, selection of floor/radiator/fan control, floor sensor connection (+ other features)	TRA421F210
24V AC c/w display	Heating/cooling, lowering set back input, frost protection, valve protection & cooling lock (up to 5 actuators) Includes - operating modes, time programme, pilot clock output, selection of floor/radiator/fan control, floor sensor connection (+ other features)	TRA421F212



AXIO



Temperature Controller - Proportional with Integral Feedback

The Axio AX-PI is a microprocessor based temperature controller with a two line LCD display to simplify set up. The unit controls temperature between -10°C to +110°C using configurable heating and cooling stages, with adjustable proportional and integral parameters. The set point can be adjusted locally using push buttons or remotely with a potentiometer. A setback input is provided for use with an external switch. There is also a low limit sensor input. The minimum and maximum temperatures values are stored for display via the menu. The AX-PI is provided in a DIN rail carrier and is 24V AC/DC powered.

AX-PI... Series

Description	Part No.
DIN rail PI controller	AX-PI
DIN rail PI controller 0-10V remote setpoint	AX-PI-R10V
External setpoint control	AX-POT

Window Actuator Controller - Three Channel

The AX-WAC is a three channel window controller providing timed forward/reverse outputs to open and close two wire DC window actuators. Each output can be driven from a separate 0-10V input or can be combined. Any cycle time from five to 240 seconds can be set. A "Close All" input is also provided.

AX-WAC

Description	Part No.
Window Actuator Controller	AX-WAC

Single Phase Motor Regulator - Panel Mount

Miniature Triac Motor Regulator for step-less speed regulation of controllable single phase AC motors. Loads can be controlled in both two or three wire connection mode (capacitor).

AX-FC... Series

Description	Part No.
8A Single phase AC motor regulator - DIN rail	AX-FC-8

SIEMENS



Heating Controllers

RVL Series

Description	Part No.
Compensated heating controller with optimum start for a second zone slave only - with LPB communication.	RVL479
Compensated heating controller with optimum start for zone or boiler control - with LPB communication.	RVL480
Compensated heating controller with optimum start for zone or boiler and DHW control - with LPB communication.	RVL481
Compensated heating controller with optimum start for zone, boiler and DHW control - with LPB communication.	RVL482

RVP Series

Description	Part No.
Compensated heating controller for zone or boiler control - no communication.	RVP201.0
Compensated heating controller for zone or boiler and DHW control - no communication.	RVP211.0
Compensated heating controller with optimum start for zone control - with LPB communication.	RVP340
Compensated heating controller with optimum start for zone, boiler and DHW control - with LPB communication.	RVP350
Compensated heating controller with optimum start for 2 zones, boiler and DHW control - with LPB communication.	RVP360

RWD Series

Description	Part No.
Universal controller, 24V AC, 2 modulating outputs	RWD62
Universal controller, 24V AC, 1 modulating and 1 2-point output	RWD68
Universal controller, 24V AC, with 2 relay outputs	RWD82

Temperature Sensors

QA Series

Description	Part No.
Room temperature (LG Ni1000) sensor, range 0..50°C (Not PPS2)	QAA24
Room temperature (LG Ni1000) sensor, range 0..50°C with setpoint adjuster, range 535°C	QAA25
Outside temperature (LG Ni1000) sensor	QAC22
Clamp-on temperature (LG Ni1000) sensor	QAD22
Immersion temperature (LG Ni1000) sensor with 2m cable, range -50-180°C, PN16	QAE26.90
Duct temperature (Pt1000) sensor with 0.4m probe	QAM2112.040
Cable temperature (Pt1000) sensor, 1.5m cable	QAP2012.150
Return air temperature (LG Ni1000) sensor	QAP22

Time Switches

Digital time switch.

TACTIC...Series

Description	Part No.
Single channel, 7 day & 24 hour timer 20 programme spaces	TACTIC371.1
Two Channel, 7 day & 24 hour timer 42 programme spaces	TACTIC572.1

GRÄSSLIN™
by **INTERMATIC®**



Round Pattern Time Switches

Round Pattern Switches (RPTS) are renowned for their simplicity and ease of use in Industrial and Commercial installations.

Standard RPTS

Description	Part No.
Quartz time clock with up to 2 ON/OFF operations per day, with a 3 pin base, without battery reserve	S254/2
Quartz time clock with up to 2 ON/OFF operations per day, with a 3 pin base, with battery reserve	Q554/2
Quartz time clock with up to 2 ON/OFF operations per day, with a 4 pin base, without battery reserve	S255/2
Quartz time clock with up to 2 ON/OFF operations per day, with a 4 pin base, with battery reserve	Q555/2

Accessories

Description	Part No.
Conduit Entry Box, used with all RPTS Products	FD930

Time Switches

Primarily used with Electric Immersion heaters, they can also be used for panel heater control, Security lighting Boilers.

Multi Application Switch

Description	Part No.
Powersaver Boost	PSB
Powersaver 24/7 - Compliant with Part L and Part P in Scotland of new building regs.	PS 24/7

DIN Mounting

Description	Part No.	
Single module wide	7 day digital time clock, single channel	20722
Five module wide	7 day digital time clock, Four channels	27403

Panel/Surface Mounting

Description	Part No.	
72x72 case	7 day analogue time clock, single channel	16921
	7 day digital time clock, single channel	23671

SANGAMO

