Description	Code		Page
CENTRAL HEATING			
COMPENSATED CONTROLLER			
ANALOGUE COMPENSATED CONTROLLER FOR CONTROL OF MIXING VALVE OR BURNER • COMPENSATED CONTROL OF 1 CENTRAL HEATING PLANT	**RTE 98.**		**2.7**
COMPENSATED CONTROLLER WITH AUXILIARY OUTPUT • COMPENSATED CONTROL OF 1 CENTRAL HEATING PLANT • CONTROL OF 1 DHW STORAGE TANK	**RTE 643**	C◄RING	**2.8**
OPTIMISNIG COMPENSATORS			
NEW **OPTIMISING COMPENSATOR WITH AUXILIARY CONTROL OPTIONAL TELEMANAGEMENT** • OPTIMISING COMPENSATION ONE CENTRAL PLANT ROOM • CONTROL OF ONE DHW STORAGE TANK	**XTE 600**	OPTIONAL C◄BUS C◄RING	**2.9**
NEW **DUAL OPTIMISING COMPENSATOR OPTIONAL TELEMANAGEMENT** • OPTIMISING COMPENSATION OF TWO CENTRALISED PLANTS	**XTE 602**	OPTIONAL C◄BUS C◄RING	**2.10**
NEW **OPTIMISING COMPENSATOR CENTRALISED PLANT ROOM OPTIONAL TELEMANAGEMENT** • OPTIMISATION OF CENTRALISED PLANT ROOM COMPRISING: -1 BOILER - 1 HEATING ZONE – 1 AUXILIARY (e.g. DHW STORAGE)	**XTE 611**	OPTIONAL C◄BUS C◄RING	**2.11**
NEW **OPTIMISING COMPENSATOR WITH SEASON SWITCHING OPTIONAL TELEMANAGEMENT** • OPTIMISATION OF CENTRALISED PLANT ROOM COMPRISING: -1 BOILER - 1 HEATING ZONE – 1 AUXILIARY (e.g. DHW STORAGE)	**XCS 633**	OPTIONAL C◄BUS C◄RING	**2.12**
"MULTICOSTER" MULTIPLE OPTIMISING COMPENSATED SYSTEM • THE SYSTEM COMPRISES 1 "MASTER" (e.g. DCC 602 OR DTE 611) & 1 OR MORE "SLAVES" CONNCTED IN C-RING			
NEW **OPTIMISING COMPENSATOR "SLAVE" OPTIONAL TELEMANAGEMENT** • OPTIMISING COMPENSATION OF 1 CENTRALISED PLANT ROOM • CONTROL OF 1 DHW STORAGE TANK	**XSE 600**	OPTIONAL C◄BUS C◄RING	**2.13**
NEW **DUAL OPTIMISING COMPENSATOR "SLAVE" OPTIONAL TELEMANAGEMENT** • OPTIMISING COMPENSATION OF TWO CENTRALISED PLANT ROOMS	**XSE 602**	OPTIONAL C◄BUS C◄RING	**2.13**
C-RING ACCESSORIES			
C-RING TEMPERATURE INSERTOR • CONVERTS A THRESHOLD OF DESIRED FLOW TEMPERATURE AT SITES COMING FROM C-RING INTO AN SPDT RELAY CONTROL AND IN TWO OPTOISOLATED CONTROLS	**LCR 338**	C◄RING	**4.11**
C-RING AMPLIFIER • AMPLIFIES THE C-RING SIGNAL AND PERMITS INCREASING THE DISTANCE BETWEEN THE CONTROLLERS CONNECTED	**PCR 308**	C◄RING	**4.11**
VALVES & ACTUATORS			
3 -AND 4-PORT SLIPPER & BUTTERFLY VALVES PN 6 (10 ... 110 °C) • CONTROL TEMPERATURE OF CIRCULATING WATER IN HEATING PLANTS, DN 15 ... 150	**VSG/F-VFG/F**		**8.8**
ROTARY ACTUATORS FOR VSG ... - VSF ... VALVES • POWER SUPPLY 230 - 24 V~, 3-WIRE CONTROL	**CVC-CVH-CVF**		**8.10.11**
3-PORT THREADED SEAT VALVES PN 16 (2 ... 120 °C) • BRONZE BODY, DN 3/8"-1/2"	**VVZ 3..**		**8.12**
LINEAR ACTUATORS FOR VVZ 3.. VALVES • POWER SUPPLY 230 - 24 V~ , 3-WIRE CONTROL	**CLV ...**		**8.15**
3-PORT THREADED SEAT VALVES PN 16 (-10 ... 120 °C) • CAST IRON BODY, DN 1/2" ... 2"	**VRG 3..**		**8.16**
3-PORT FLANGED SEAT VALVES PN 6 (-10 ... 120 °C) • CAST IRON BODY, DN 15 ... 100	**VL 3..**		**8.17**
3-PORT FLANGED SEAT VALVES PN 16 (-10 ... 130 °C) • CAST IRON BODY, DN 15 ... 150	**VF 3..**		**8.18**
LINEAR ACTUATORS FOR VRG 3.. - VL 3.. - VF 3.. VALVES • POWER SUPPLY 230 - 24 V~, 3-WIRE CONTROL	**CLE-F-G-H**		**8.20.21**

C◄BUS = COMMUNICATION WITH TELEMANAGEMENT OPTIONAL C◄BUS = TELEMANAGEMENT WITH ACCESSORIES ACB ... C◄RING = DATA EXCHANGE BETWEEN CONTROLLERS

	Description	Code		Page
	3-PORT THREADED SEAT VALVES PN 16 (2 ... 120 °C) • VALVES FOR DHW ; BRONZE BODY; DN 3/4 ... 1"1/2	**VRS 3..**		**8.13**
	REVERSIBLE LINEAR ACTUATORS FOR VRS 3.. VALVES • POWER SUPPLY 230 - 24 V~ ; 3-WIRE CONTROL	**CLS 07.**		**8.13**
	DISTRICT HEATING • INCLUSES ALL THE COMPONENTS NECESSARY FOR A DISTRICT HEATING PLANT			
	FIXED POINT CONTROLLER FOR DISTRICT HEATING • CONTROL OF SECONDARY TEMP. IN DISTRICT SUB-STATIONS COMPRISING: - 1 HEAT EXCHANGER WITH MIXING VALVE ON PRIMARY	**DTT 318**	C◄BUS	**2.15**
NEW	**SUB-STATION CONTROLLER WITH A SINGLE HEA EXCHANGER OPTIONAL TELEMANAGEMENT** • CONTROL OF A DISTRICT HEATING SUB-STATION COMPRISING: - 1 HEAT EXCHANGER WITH VALVE & PUMP SECONDARY CIRCUIT	**XTT 618**	OPTIONAL C◄BUS C◄RING	**2.15**
NEW	**SUB-STATION CONTROLLER WITH TWO HEAT EXCHANGERS OPTIONAL TELEMANAGEMENT** • CONTROL OF DISTRICT HEATING SUB -STATION COMPRISING: - 1 HEAT EXCHANGER HEATING (MODULATING CONTROL) - 1 HEAT EXCHANGER DHW (ON-OFF OR MODULATING CONTROL)	**XTT 608**	OPTIONAL C◄BUS C◄RING	**2.16**
	VALVES & ACTUATORS			
	2-PORT BALANCED PRESSURE THREADED SEAT VALVES PN 25 (5 ... 150 °C) • BRONZE BODY, DN 15 ... 50	**VM 2..**		**8.14**
	2-PORT BALANCED PRESSURE FLANGED SEAT VALVES PN 25 (5 ... 150 °C) • CAST IRON BODY, DN 15 ... 50	**VB 2..**		**8.14**
	REVERSUIBLE LINEAR ACTUATORS FOR VM 2.. - VB 2.. VALVES WITH EMERGENCY SHUT-OFF • POWER SUPPLY 230 - 24 V~ , 3-WIRE CONTROL	**CEQ - CER**		**8.15**
	2-PORT BALANCED PRESSURE FLANGED SEAT VALVES PN16 (-10 ... 150 °C) • CAST IRON BODY, DN 80 ... 150	**VBG 2..**		**8.22**
	2-PORT BALANCED PRESSURE FLANGED SEAT VALVES PN 25 (-10 ... 230 °C) • CAST IRON BODY, DN 25 ... 65	**VBS 2..**		**8.22**
	REVERSIBLE LINEAR ACTUATORS FOR VBS 2.. - VBG 2.. VALVES WITH EMERGENCY SHUT-OFF • POWER SUPPLY 24 V~, 3-WIRE CONTROL	**MVA 064**		**8.23**
	AMPLIFIER & CONVERTORS			
	HIGH-POWER C-BUS AMPLIFIER & CONVERTOR • C-BUS AMPLIFIER (MAX. 239 DEVICES ON MAX. IN 7 Km LINE)	**NAB 628**	C◄BUS RS 232	**10.7**
	MEDIUM-POWER C-BUS AMPLIFIER & CONVERTOR • C-BUS AMPLIFIER (MAX. 130 DEVICES ON MAX.7 Km LINE)	**PCB 332**	C◄BUS RS 232	**10.7**
	VOLUMETRIC METERS WITH PULSE TRANSMITTER			
NEW	**MULTIPLE-JET VOLUMETRIC TURBINE METERS WITH PULSE TRANSMITTERS** • THREADED PN 16, DN 1/2" ... 2", QN 1,5 ... 15 m^3/h, Tmax. 120 °C	**KMS ...**		**7.8**
NEW	**WOLTMANN VOLUMETRIC METERS WITH PULSE TRANSMITERS** • FLANGED PN16, DN 50 ... 200, QN 15 ... 250 m^3/h, Tmax. 120 °C	**KWS ...**		**7.9**
	ELECTRONIC ENERGY INTEGRATORS • POWER SUPPLY 230 V~ or 24 V- + WITH LITHIUM BACKUP BATTERY, WITHOUT C-BUS INTERFACE	**IET 7..**	C◄BUS	**7.5**
NEW	**STATIC VOLUMETRIC ULTRASOUND METERS** • FOR ELECTRONIC ENERGY INTEGRATORS IET 7..	**KS ...**		**7.10**
	ACCESSORY FOR PULSE DUPLICATION • POWER SUPPLY 230 V~ , WITH C-BUS INTERFACE • DUPLICATES A PULSE SIGNAL FROM A VOLUMETRIC METER TO CONTROL BOTH THE ELECTRONIC INTEGRATOR & A DTT ... CONTROLLER	**ADI 312**		**7.10**

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Description	Code		Page
"COSTERZONE" MULTIZONE ROOM TEMPERATURE CONTROL SYSTEM • THE SISTEM, POWERED BY 24 V~, CONSIST OF UP TO 239 REMOTE ROOM TEMPERATURE CONTROLLERS CONNECTED VIA THE C-BUS INTERFACE TO A CENTRAL DISPLAY UNIT AND/OR COMPUTER			
MANAGEMENT PROGRAMM • APPLICATION SOFTWARE FOR MANAGING COMMUNICATIONS BETWEEN THE CENTRAL COMPUTER & THE REMOTE CONTROLLERS	**SWC 171**		**2.17**
CENTRAL DISPLAY UNIT FOR "COSTERZONE" CONTROL SYSTEMS • MASTER OF BUS COMMUNICATION WITH THE REMOTE UNITS	**UMT 704**	C←BUS	**2.17**
PUMPS CONTROL UNIT • CENTRAL UNIT FOR CONTROL OF PUMPS (MAX. 6) OF HEATING AND/OR COOLING CIRCUITS IN RELATION TO THERMAL DEMAND OF THE ZONE CONNECTED	**UCP 664**		**2.17**
ELECTRONIC ROOM TEMPERATURE CONTROLLERS • FOR HEATING AND/OR CONDITIONING (2 OR 4 PIPES) PLANTS • CONTROL OF MODULATING OR ON-OFF VALVES, FANS, PUMPS, ETC	**RTB ...**		**2.18**
ELECTRONIC ROOM TEMPERATURE CONTROLLERS WITH ROOM OCCUPIED SERVICE • FOR HEATING AND/OR CONDITIONING (2 OR 4 PIPES) PLANTS • CONTROL 3-SPEED FAN & ON-OFF VALVE	**RTB 044S1** **RTB 144S1**		**2.18** **2.18**
ELECTRONIC ROOM TEMPERATURE CONTROLLERS WITH TELEPHONE REMOTE CONTROL • DESIGNED FOR REMOTE CONTROLLED BY A FIXED OR CELLULAR TELEPHONE	**RTB 540**		**2.18**
ELECTRONIC ROOM TEMPERATURE CONTROLLERS • FOR CONTROL OF ROOM TEMPERATURE IN HEATING AND AIR CONDITIONING PLANTS	**RTB 645**		**2.18**
SUMMER TEMPERATURE COMPENSATOR FOR RTB 645 CONTROLLER • KEEPS CONSTANT TEMPERATURE DIFFERENCE BETWEEN ROOM AND OUTSIDE IN SUMMER PERIOD	**CTB 334**		**2.18**
VALVES & ACTUATORS			
2-3-4 PORT BALL ZONE VALVES PN 10 (5 ... 90 °C) • THREADED DN 3/8" - 1"	**HMM 2-3-4**		**8.5**
ROTARY ACTUATORS FOR HMM 2-3-4 VALVES • POWER SUPPLY 230 - 24 - 12 V~ , 3-WIRE CONTROL	**CDK 06.**		**8.5**
2-3-4 PORT FAN COIL SEAT VALVES PN 16 (2 ... 120 °C) • THREADED DN 3/8" - 1/2"	**VVZ ...**		**8.12**
LINEAR ACTUATORS FOR VVZ 2-3-4 VALVES • POWER SUPPLY 230 - 24 V~ , 3-WIRE CONTROL	**CLV ...**		**8.15**
PANEL-MOUNTING REMOTE MODEM			
PANEL-MOUNTNG REMOTE MODEM WITH DTMF FOR REMOTE CONTROL BY TELEPHONE • 1 MODEM FOR EACH APPARTMENT BLOCK OF FOR A CENTRAL DISPLAY UNIT	**MPF 612**	C←BUS RS 232	**10.6**
ROOM CONTROLLERS & CHRONOTHERMOSTATS			
ELECTROMECHANICAL ROOM THERMOSTATS	**RTT - RTS**		**2.19**
DIGITAL ROOM CHRONOTHERMOSTAT	**CMD 911**		**2.19**
ELECTRONIC THERMOSTAT FOR FAN-COIL	**TPA 905**		**2.19**
ELECTRONIC ROOM TEMPERATURE CONTROLLERS WITH SEASON SWITCHING	**RTS 14.**		**2.19**
MODULATING ANALOGUE ROOM CHRONOTHERMOSTATS FOR RADIATOR INSTALLATIONS	**RTA 72.**		**2.20**
MODULATING ANALOGUE ROOM CHRONOTHERMOSTATS FOR UNDERFLOOR PANELS	**RTP 82.**		**2.20**

C←BUS = COMMUNICATION WITH TELEMANAGEMENT

Description	Code		Page
"THERMSHARE" SYSTEM • THIS SYSTEM PERMITS INDEPENDENT HEATING AND DHW CONTROL WITH CENTRALISED SYSTEM AND METERING THE CONSUMPTION OF HEATING AND HOT AND COLD DOMESTIC WATER			
PROGRAM FOR ALLOCATING SERVICE CHARGES • APPLICATION SOFTWARE FOR ALLOCATING HEATING AND ALL OTHER SERVICE CHARGES	**SWC 501**		**7.6**
RADIATOR VALVES CONTROL UNIT • CONTROL UNIT FOR RADIATORS; 1 UNIT FOR EACH APPARTMENT	**ICS 6..**		**7.6**
HEAT METERING UNIT • 1 UNIT EVERY 14 APPARTMENTS	**UCR 668**	C◄BUS	**7.7**
CONSUMPTION METERING UNIT • 1 UNIT EVERY 16 METERING UNITS; SUITABLE FOR OTHER CONSUMER METRING	**UCA 668**	C◄BUS	**7.7**
PULSE COUNTER UNIT • 1 UNIT EVERY 2 METERING UNITS	**UCI 328**	C◄BUS	**7.7**
SINGLE-JET VOLUMETRIC METERS • FOR WATER 30 - 90 °C, THREADED PN16, DN 1/2" ... 1"1/4, QN 1.5 ... 5 m³/h	**KUF-KUC**		**7.9**
NEW **MULTIPLE-JET VOLUMETRIC TURBINE METERS WITH PULSE TRANSMITTERS** • FOR WATER 30 - 90 - 120 °C, THREADED PN 16, DN 1/2" ... 2", Qn 1.5 ... 15 m³/h	**KMP - R - S**		**7.8**
NEW **WOLTMANN VOLUMETRIC TURBINE METERS WITH PULSE TRANSMITTERS** • FOR WATER 30 - 120 °C, FLANGED PN 16, DN 50 ... 200, Qn 15 ... 250 m³/h	**KWP - S**		**7.9**
NEW **STATIC VOLUMETRIC ULTRASOUND METERS WITH PULSE TRANSMITTERS** • **KSG ...** FOR WATER 150 °C, THREADED PN 16, DN 1/2" ... 1"1/2, Qn 0.6 ... 10 m³/h • **KSF ...** FOR WATER 150 °C, FLANGED PN 25, DN 25 ... 100, Qn 3.5 ... 60 m³/h	**KSG - F**		**7.10**
VALVES & ACTUATORS			
2-PORT RADIATOR BALL VALVES PN 10 (5 ... 90 °C) • BY-PASS OR THROUGHPORT DN 3/8" ... 1"	**HGT ...**		**8.4**
ACTUATOR FOR HGT ... VALVES • POWER SUPPLY 24 V~, 3-WIRE ELECTRIC CONTROL OR 1 WIRE + EARTH	**CDR 06.**		**8.4**
ROOM CHRONOTHERMOSTATS			
ROOM DIGITAL CHRONOTHERMOSTAT • ELECTRONIC ROOM TEMPERATURE CONTROLLER • 1 FOR EACH APPARTMENT	**CMD 911**		**2.19**

C◄BUS = COMMUNICATION WITH TELEMANAGEMENT

FEATURES OF NON C-BUS COMPATIBLE COMPENSATORS

Features	Model	RTE 982	RTE 983	RTE 643	XTE 602	XTE 611	XCS 633
Electronics	analogue	**Yes**	**Yes**	–	–	–	–
	digital	–	–	**Yes**	**Yes**	**Yes**	**Yes**
Controls	modulating valve	**1**	**1**	**1**	**2**	**1**	**1**
	burner	◊ **1**	◊ **1**	◊ **1**	–	**1**	–
	heating pump	**1**	**1**	**1**	**2**	**1**	**1**
	DHW or auxiliary circuit pump	–	–	**1**	–	**1**	–
Heating control	compensated	**Yes**	**Yes**	**Yes** ◊	**Yes** ◊	**Yes** ◊	**Yes** ◊
	fixed point	–	–	**Yes**	**Yes**	**Yes**	**Yes**
Cooling control	compensated	–	–	–	–	–	**Yes** ◊
	fixed point	–	–	–	–	–	**Yes**
Boiler control	fixed point	–	–	–	–	**Yes** ◊	–
	Compensation according to thermal demand (via C-Ring)	–	–	–	–	**Yes**	–
Detectors	flow temperature	**1**	**1**	**1**	**2**	**1**	**1**
	outside temperature	**1**	**1**	**1**	**1**	**1**	**1**
	room temperature	–	–	**1**	**2**	**1**	**1**
	boiler temperature	–	–	–	–	**1**	–
	anticondensing boiler temperature	–	–	**1**	**1**	–	**1**
	room humidity (summer time dew point control)	–	–	–	–	–	**1**
	DHW or auxiliary circuit temperature	–	–	**1**	–	**1**	–
Remote controls	setpoint adjuster	**1**	**1**	–	–	–	–
	modification of programme in use	–	–	**1**	**2**	**1**	**1**
	season switching (by external contact)	–	–	–	–	–	**Yes**
Programmes	24-hour	**1**	–	**7**	**7**	**7**	**3 + 3**
	7-day	–	**1**	**2**	**2**	**2**	**1 + 1**
Periods with dates	GMT-BST	–	–	**Yes**	**Yes**	**Yes**	**Yes**
Functions	K heating curve setting	**Yes**	**Yes**	–	–	–	–
	design outside and flow temperature setting	–	–	**Yes**	**Yes**	**Yes**	**Yes**
	correction heating curve origin (t°e = 20 °C)	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**
	max & min flow temperature limits	–	–	**Yes**	**Yes**	**Yes**	**Yes**
	ambient authority over compensated control	–	–	**Yes**	**Yes**	**Yes**	**Yes**
	Eco Off	**Yes**	**Yes**	**Yes**	**Yes**		
	heating pump delay Off	–	–	**Yes**	**Yes**	**Yes**	**Yes**
	anticondensing boiler (heating Off)	–	–	**Yes**	**Yes**	**Yes**	**Yes**
	DHW priority	–	–	**Yes**	–	**Yes**	–
	antibacterial DHW	–	–	**Yes**	–**Yes**	–	
	boiler differential	–	–	–	–	**Yes**	–
	increase temp. boiler on heating and/or DHW demand	–	–	–	–	**Yes**	–
	max & min boiler temperature limits	–	–	–	–	**Yes**	–
Data communication	C-Ring for data exchange among controllers	**Yes**	**Yes**	**Yes**	**Yes**		

◊ **:Alternative**

FEATURES OF C-BUS COMPATIBLE COMPENSATORS

Features	Model	XTE 600 XSE 600	XTE 602 XSE 602	XTE 611	XCS 633
Controls	modulating valve	1 ◊ 1	2	1	1
	burner with 1st or 2nd stages or 2 burners with 1 stage		–	1	–
	heating pump	1	2	1	1
	DHW or auxiliary circuit pump	1	–	1	–
Heating control	compensated	Yes ◊ Yes	Yes ◊ Yes	Yes ◊ Yes	Yes ◊ Yes
	fixed point				
Cooling control	compensated	–	–	–	Yes ◊ Yes
	fixed point	–	–	–	
Boiler control	fixed point	–	–	Yes ◊ Yes	–
	compensation thermal demand (via C-Ring)	–	–		–
Detectors	flow temperature	1	2	1	1
	outside temperature	1	1	1	1
	room temperature	1	2	1	1
	boiler temperature	–	–	1	–
	boiler anticondensing temperature	1	1	–	1
	ambient humidity (summer time dew point control)	–	–	–	1
	DHW or auxiliary circuit temperature	1	–	1	–
	with 4 ... 20 mA output signal	1	–	1 ◊ 2 ◊ 1	1
	boiler flue gases temperature	1 ◊ 1	–		–
Remote controls	modification of programme in use		1		1
	season switching (by external switch)	–	–	–	Yes
Programmes	24-hour	7	7	7	3 + 3
	7-day	2	2	2	1 + 1
	emergency	1	1 + 1	1	–
Periods with dates	holidays	25	25	25	25
	special	1	1 + 1	1	1
	heating season	Yes	Yes	Yes	Yes
	GMT-BST	Yes	Yes	Yes	Yes
Functions	design outside and flow temperature setting	Yes	Yes	Yes	Yes
	correction heating curve origin (t°e = 20°C)	Yes	Yes	Yes	Yes
	max & min flow temperature limits	Yes	Yes	Yes	Yes
	ambient authority over compensated control	Yes	Yes	Yes	Yes
	optimised start and stop	Yes	Yes	Yes	Yes
	Eco Off	Yes	Yes	Yes	Yes
	heating pump delay off	Yes	Yes	Yes	Yes
	anticondensing boiler (heating Off)	Yes	Yes	Yes	Yes
	DHW priority	Yes	–	Yes	–
	antibacteria DHW	Yes	–	Yes	–
	boiler differential	–	–	Yes	–
	increase temperature boiler on heating and/or DHW demand	–	–	Yes	–
	max. and min. boiler temperature limits	–	Yes	–	
	summer plant exercise	Yes	Yes	Yes	–
Alarms	On-Off contacts	3 or 4	3	3 or 5	0 or 2
	functional	6	5	8	3
	short or open detector circuits	6	6	7	4
Transmission data	C-Bus for telemanagement from local and/or remote PC	Yes	Yes	Yes	Yes
	C-Ring for data exchange among controllers	Yes	Yes	Yes	Yes

◊ :Alternative

ANALOGUE COMPENSATOR FOR CONTROL OF VALVE OR BURNER

RTE 982 - 983

APPLICATION

For compensated control of 1 central heating plant.
Suitable for all climates and any type of heat emitters, including radiating panels, radiators, convectors and unit heaters. The device is designed to control mixing or switching valves driven by electric reversible actuators, or to control the boiler burner directly.
Essential detectors: 1 outside detector,1 plant flow detector.
Optional accessories: 1 remote control.

FEATURES

- Power supply: 230 V ~; Consumption: 4 VA; Case: DIN 144 x 144; Protection: IP 40.
- Voltage-free output contacts: rating: 250 V ~, 5 (1) A.
- PI control action with valve position memorisation.
- Setting of heating curve by means of K factor calculated in relation to climatic zone.
- Correction of heating curve to compensate for seasonal weather changes.
- Possibility of adjusting value of room temperature by means of remote control.
- Time switch for selecting “Normal” and “Setback” room temperature.
- Auxiliary control (plant pump) in relation to programme times.

Code		Description	Data sheet
RTE 982		Analogue compensator with 24-hour time switch.	B 217
RTE 983		Analogue compensator with 7-day time switch.	B 217

DETECTORS AND ACCESSORIES

Code		Description	Application range	Sensing element	Data sheet
SAE 001		Outside temperature detector.	–40 ... 40 °C	NTC 1 kΩ	N 120
SIH 010		Immersion temperature detector.	0 ... 99 °C	NTC 10 kΩ	N 140
SCH 010		Surface temperature detector.	0 ... 99 °C	NTC 10 kΩ	N 130
CDB 340		Temperature setpoint adjuster	–5 ... +5 °C	–	–

COMPENSATING CONTROLLER WITH AUXILIARY OUTPUT

RTE 643

C-RING

APPLICATION

Designed for compensated control of one heating zone and for On-Off control of a DHW calorifier.
C-Ring compatible.
Essential accessories: 1 outside detector, 1 heating flow detector.
Optional accessories: 1 room detector, 1 detector auxiliary plant, 1 anticondensing detector, 1 remote control.

FEATURES

- Power supply: 230 V ~; Consumption: 5 VA; DIN 105 x 115 modular enclosure; Protection: IP 40.
- Digital programming by means of four operating keys and alphanumeric display.
- Automatic changeover GMT - BST.
- Seven 24-hour programmes, two 7-day programmes.
- Compensated control of heating zone:
  - Modulating control of valve by three-wire reversible actuator or On-Off burner in two stages.
  - Control heating pump in relation to timed events and thermal demand.
  - Minimum and maximum limits flow temperature.
  - Manual correction of heating curve origin to compensate for seasonal weather changes.
  - Ambient authority.
  - Eco Off.
  - Control boiler anticondensing temperature (closure heating valve).
  - Remote control for modifying timed programme in use (as alternative to input flue gases temperature and On-Off alarm).
- On-Off control temperature of auxiliary zone (eg : production DHW) or timed On-Off control:
  - On-Off control with programme timed events independent of heating.
  - DHW priority function (closure heating valve so as to give precedence to DHW production).
  - Antibacteria function : once a week at 70 °C for 90 minutes (for production DHW in storage tank).

Code		Description	Data sheet
RTE 643		Compensating controller and DHW production controller	B 222

DETECTORS AND ACCESSORIES

Code		Description	Application range	Sensing element	Data sheet
SAE 001		Outside temperature detector.	–40 ... 40 °C	NTC 1 kΩ	N 120
SIH 010		Immersion temperature detector.	0 ... 99 °C	NTC 10 kΩ	N 140
SCH 010		Surface temperature detector.	0 ... 99 °C	NTC 10 kΩ	N 130
SAB 010		Room temperature detector.	0 ... 40 °C	NTC 10 kΩ	N 111
CDB 300		Remote control for modifying programme in use.	–	–	–

OPTIMISING COMPENSATOR
OPTIONAL TELEMANAGEMENT

XTE 600

OPTIONAL C ←BUS C ←RING

TELEMANAGEMENT C-Bus: Enabled with ACB 468 accessory.

APPLICATION

Designed for compensated control of one centralized heating plant room and for On-Off control of a calorifier for DHW production,
Exchange of data with other controllers by means of C-Ring serial connection.
Essential sensors: 1 outside sensor, 1 heating flow sensor.
Optional sensors: 1 room sensor, 1 DHW sensor, 1 flue gases sensor, one 4 ... 20 mA sensor, 1 remote control.

FEATURES

- Power supply: 230V~; Consumption: 5VA; DIN 105 x 115 modular enclosure; Protection: IP 40.
- Digital programming by means of 4 keys and alphanumeric display.
- Entering dates of heating season and automatic switching BST - GMT.
- Seven 24hour programs, two 7day programs, 25 holiday periods and one special period with dates.
- Compensated control of heating plant room:
  - Modulating control of valve with 3-wire reversible actuator or On-Off burner in two stages.
  - Control heating pump according to times and demand for heat.
  - Optimisation switching on and off times.
  - Minimum and maximum limits flow temperature.
  - Manual correction heating curve origin (compensation intermediate seasons).
  - Automatic correction of heating curve in relation to room temperature (ambient authority).
  - Eco Off function: shutdown of plant when weather mild.
  - Control boiler anticondensing temperature (closure heating valve).
  - Summer plant exercise valve and pump.
  - Remote control for changing timed program in use (as alternative to input flue gases temperature and On-Off alarm).
- Control DHW production:
  - On-Off control DHW loading pump with timed programs independent of heating.
  - “Priority DHW” function (closure heating valve).
  - “Antibacteria” function: once a week 70° for 90 minutes.
- Three On-Off alarm inputs.
- One 4 ... 20 mA measurement input.
- One configurable input: remote control or temperature flue gases Pt 1 kΩ and On-Off alarm.
- Alarms for plant faults and for open or short sensor circuit.
- Metering degree-days.

Code		Description	Data sheet
XTE 600		Optimising compensator.	B 241
ACB 468		Plug-in for communication via C-Bus.	–

DETECTORS AND ACCESSORIES

Code		Description	Application range	Sensing element	Data sheett
SAE 001		Outside temperature sensor.	–40 ... 40 °C	NTC 1 kΩ	N 120
SIH 010		Immersion temperature sensor.	0 ... 99 °C	NTC 10 kΩ	N 140
SCH 010		Surface temperature sensor.	0 ... 99 °C	NTC 10 kΩ	N 130
SAB 010		Room temperature sensor.	0 ... 40 °C	NTC 10 kΩ	N 111
STF 001		Flue gases temperature sensor.	0 ... 500 °C	Pt 1 kΩ	N 165
CDB 300		Remote control to modify program in use.	–	–	–

DUAL OPTIMISING COMPENSATOR OPTIONAL TELEMANAGEMENT

XTE 602

OPTIONAL C◄BUS C◄RING

TELEMANAGEMENT C-Bus: Enabled with ACB 468 accessory.

APPLICATION

Designed for the compensating control of two central heating sites.
Exchange of data with other controllers by means of C-Ring serial connection.
Essential sensors: 1 outside sensor, 2 heating flow sensors.
Optional sensors: 1 or 2 room sensors, 1 remote control.

FEATURES

- Power supply: 230V~; Consumption: 5VA; DIN 105 x 115 modular enclosure; Protection: IP 40.
- Digital programming by means of 4 keys and alphanumeric display.
- Entering dates of heating season and automatic switching GMT – BST.
- Seven 24hour programs, two 7day programs, 25 holiday periods and one special period with dates.
- Two compensated controls of plant rooms:
  - Modulating control of valves with 3-wire reversible actuator.
  - Control heating pumps according to times and demand for heat.
  - Optimisation switching on and off times.
  - Minimum and maximum limits flow temperature.
  - Manual correction heating curve origin (compensation intermediate seasons).
  - Automatic correction of heating curve in relation to room temperature (ambient authority).
  - Eco Off function: shutdown of site when weather mild
  - Control anticondensing temperature boiler (closure heating valve).
  - Summer plant exercise valves and pumps.
  - One remote control for adjusting from a distance the timed program in use (one for control 1 or 2 or for both).
- Three On-Off alarm inputs.
- Alarms for plant faults and for open or short sensor circuit.
- Metering degree-days.

Code		Description	Data sheet
XTE 602		Dual optimising compensator.	B 242
ACB 468		Plug-in for communicating via C-Bus.	–

DETECTORS AND ACCESSORIES

Code		Description	Application range	Sensing element	Data sheet
SAE 001		Outside temperature sensor.	–40 ... 40 °C	NTC 1 kΩ	N 120
SIH 010		Immersion temperature sensor.	0 ... 99 °C	NTC 10 kΩ	N 140
SCH 010		Surface temperature sensor.	0 ... 99 °C	NTC 10 kΩ	N 130
SAB 010		Room temperature sensor.	0 ... 40 °C	NTC 10 kΩ	N 111
CDB 300		Remote control to modify program in use.	–	–	–

OPTIMISING COMPENSATOR FOR HEATING PLANT ROOM OPTIONAL TELEMANAGEMENT

XTE 611

OPTIONAL C◄BUS C◄RING

TELEMANAGEMENT C-Bus: Enabled with ACB 468 accessory.

APPLICATION

Designed for control of small and medium-size heating plant rooms comprising:
- 1 single- or two-stage boiler, or double furnace (two single-stage burners).
- 1 centralised heating plant room.
- 1 calorifier for DHW.

Communications with other controllers via C-Ring serial connection.
Essential sensors: 1 outside sensor, 1 heating flow sensor, 1 boiler sensor.
Optional accessories: 1 room sensor, 1 DHW sensor, 1 or 2 flue gas sensors, 1 remote control.

FEATURES

- Power supply: 230V~; Consumption: 5VA; DIN 105 x 115 modular enclosure; Protection: IP 40.
- Digital programming by means of 4 keys and alphanumeric display.
- Setting dates for heating season and automatic switching between GMT – BST.
- Seven 24hour programs, two 7day programs, 25 holiday periods and one special period with dates.
- Fixed point or variable control of boiler according to max. temperature requested by heating, etc zones:
  - On-Off control of one single- or two-stage burner or 2 single-stage burners.
  - Control boiler anticondensing (closure of heating valve).
  - Theoretical metering of operating hours of the two burner stages.
- Compensated control of centralised heating plant room:
  - Modulating control of valve by 3-wire reversible actuator.
  - Control of heating pump in relation to times and demand for heat.
  - Optimisation of start and stop times.
  - Minimum and maximum limits of flow temperature.
  - Manual correction heating curve point of origin (compensation for intermediate seasons).
  - Automatic adjustment of heating curve in relation to room temperature (ambient authority).
  - Eco Off function: switching off heating zones when weather mild.
  - Remote control for changing program in use (as alternative to temperature flue gases & On-Off alarm).
- Control production of DHW:
  - On-Off control of calorifier pump by timed programs independent of heating.
  - "DHW priority" (closure heating valve).
  - Antibacteria function: once a week at 70°C for 90 minutes.
- Summer exercise function for valves and pumps.
- Three inputs On-Off alarms.
- One configurable input: remote control or flue gases temperature Pt 1kΩ and On-Off alarm.
- One configurable input: measurement 4 ... 20mA or flue gases temperature Pt 1 kΩ and On-Off alarm.
- Alarms for plant malfunctioning and for open or short sensor circuit.
- Degree-days metering.

Code		Description	Data sheet
XTE 611		Optimising compensator with N.C. relay for control boiler.	B 252
ACB 468		Plug-in for communicating via C-Bus.	–

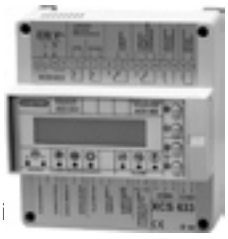
DETECTORS AND ACCESSORIES

Code		Description	Application range	Sensing element	Data sheet
SAE 001		Outside temperature sensor.	–40 ... 40 °C	NTC 1 kΩ	N 120
SIH 010		Immersion temperature sensor.	0 ... 99 °C	NTC 10 kΩ	N 140
SCH 010		Surface temperature sensor.	0 ... 99 °C	NTC 10 kΩ	N 130
SAB 010		Room temperature sensor.	0 ... 40 °C	NTC 10 kΩ	N 111
STF 001		Flue gases temperature sensor.	0 ... 500 °C	Pt 1 kΩ	N 165
CDB 300		Remote control to modify program in use.	–	–	–

COMPENSATING CONTROLLER WITH SEASON SWITCHING OPTIONAL TELEMANAGEMENT

XCS 633

OPTIONAL C←BUS C←RING



Telemanagement C-Bus: Enabled with ACB 468 accessory.

APPLICATION

For compensated or fixed point winter & summer control of flow temperature in a fan-coil or underfloor panels i
Exchange data with other Coster controllers by means of C-Ring serial connection.
Essential sensors: 1 outside sensor, 1 flow sensor.
Optional accessories: 1 room temperature or temperature & humidity sensor, 1 remote control.

FEATURES

- Power supply: 230V~; Consumption: 5VA; DIN 105 x 115 modular enclosure; Protection: IP 40.
- Digital programming by means of four keys and alphanumeric display.
- Seven 24hour programs, two 7day programs, 25 holiday periods & one special period with dates.
- Manual or automatic season switching with dates or by external switch (as alternative to two digital alarm inputs).
- Automatic switching BST - GMT.
- Compensated or fixed point control summer and winter flow temperature:
  - Modulating control of valve by 3-wire reversible actuator or On-Off control in two stages.
  - Control of heating pump in relation to times and demand for heat.
  - Minimum & maximum limits for flow temperature.
  - Manual correction of heating curve point of origin (compensation intermediate seasons).
  - Automatic correction of heating curve in relation to room temperature (Ambient Authority).
  - Control of ambient dew-point for summer cooling plants with underfloor panels.
  - Control boiler anticondensing temperature (closure heating valve).
  - Remote control for adjusting program in use.
- Relay output for centralized season switching.
- Two On-Off alarm inputs (as alternative to external switch for season switching).
- Alarms for plant faults and for open or short sensor circuit.

Code		Description	Data sheet
XCS 633 **ACB 468**		Compensating controller with season switching. Plug-in for communication via C-Bus.	B 232 –

DETECTORS AND ACCESSORIES

Code		Description	Application range	Sensing element	Data sheet
SAE 001		Outside temperature sensor.	–40 ... 40 °C	NTC 1 kΩ	N 120
SIH 010		Immersion temperature sensor.	0 ... 99 °C	NTC 10 kΩ	N 140
SAB 010		Room temperature sensor.	0 ... 40 °C	NTC 10 kΩ	N 111
SAU 914		Relative humidity	10 ... 90 %	0 ...10 V–	N 227
		& temperature sensor.	0 ... 40 °C	NTC 10 kΩ	–
CDB 333		Remote control for adjusting program in use.	–	–	–

SYSTEM FOR MULTIPLE OPTIMISING COMPENSATORS

"MULTICOSTER"

The system comprises one **"Master"** controller and one or more **"Slave"** controllers connected together via the C-Ring parallel connection.
As "Master" any controller with C-Ring which can be configured as "Primary" can be used (e.g. XCC 602, DTC 648, XTE 611, XTE 600, XTE 602, XCS 633, XTR 628).
The slave controllers (XSE 600 and XSE 602) are automatically configured only as "Secondary" and can operate only if connected to a Master controller.
Each controller carries out independently its own functions and can be connected, via the C-Bus parallel connection, to a Telemanagement system.

OPTIMISING COMPENSATOR "SLAVE" OPTIONAL TELEMANAGEMENT

XSE 600

OPTIONAL C◄BUS C◄RING

TELEMANAGEMENT C-Bus: Enabled with ACB 400 accessory.

APPLICATION

Operates only if connected via C-Ring to a "PRIMARY" controller.
Suitable for compensated control of one centralised heating plant room and for the On-Off control of a DHW calorifier.
Essential sensors: 1 outside sensor, 1 flow sensor.
Optional accessories: 1 room sensor, 1 measurement 4 ... 20 mA sensor, 1 remote control.

TECHNICAL & FUNCTIONAL FEATURES SAME AS THOSE OF XTE 600.

Code		Description	Data sheet
XSE 600 **ACB 400**		Optimising compensator. Plug-in for communicating via C-Bus.	B 267 –

DUAL OPTIMISING COMPENSATOR "SLAVE" OPTIONAL TELEMANAGEMENT

XSE 602

OPTIONAL C◄BUS C◄RING

TELEMANAGEMENT C-Bus: Enabled with ACB 400 accessory.

APPLICATION

Operates only if connected via C-Ring to a "PRIMARY" controller.
Suitable for compensated control of two central heating zones.
Essential sensors: 1 outside sensor, 2 flow sensors.
Optional accessories: 1 or 2 room sensors, 1 remote control.

TECHNICAL & FUNCTIONAL FEATURES SAME AS THOSE OF XTE 602.

Code		Description	Data sheet
XSE 602 **ACB 400**		Dual optimising compensator. Plug-in for communicating via C-Bus.	B 268 –

DETECTORS AND ACCESSORIES FOR XSE 600 AND XSE 602

Code		Description	Application range	Sensing element	Data sheet
SAE 001		Outside temperature sensor.	–40 ... 40 °C	NTC 1 kΩ	N 120
SIH 010		Immersion temperature sensor.	0 ... 99 °C	NTC 10 kΩ	N 140
SCH 010		Surface temperature sensor.	0 ... 99 °C	NTC 10 kΩ	N 130
SAB 010		Room temperature sensor.	0 ... 40 °C	NTC 10 kΩ	N 111
STF 001		Flue gases temp. sensor (XSE 600 only).	0 ... 500 °C	Pt 1 kΩ	N 165
CDB 300		Remote control to modify program in use.	–	–	–

FEATURES OF CONTROLLERSFOR DISTRICT HEATING

Features	Model	XTT 618	XTT 608
Controls	3-wire modulating control of primary heating valve	1	1
	On-Off heating pump	1	1
	3-wire modulating control or on-off primary DHW valve	-	1
	3-wire modulating control DHW distribution valve	-	◊ 1
	storage tank pump on-off control	-	1
	timed on-off DHW circulation pump	-	1
Heating control	compensated	Yes	Yes
	fixed point	◊ Yes	◊ Yes
	systems (C-Ring)	◊ Yes	◊ Yes
DHW control	fixed point	-	Yes
Detectors	primary flow temperature (reading only)	1	-
	primary return temperature	1	1
	outside temperature	1	1
	heating flow temperature	1	1
	heating return temperature	1	1
	room temperature	-	1
	DHW storage temperature	-	1
	DHW distribution temperature	-	1
Remote control	switch to different heating program	1	1
	outside contact for program switching	-	1
Programs	24-hour	-	7
	7-day	-	2
	emergency	-	1
Periods with dates	holidays (from-to)	-	25
	special	-	1
	heating season	-	Yes
	GMT / BST	-	Yes
Functions	set default outside and flow temperature	Yes	Yes
	correct heating curve origin (t°e = 20°C)	Yes	Yes
	max. & min. flow temperature limits	Yes	Yes
	ambient authority over compensated control	-	Yes
	optimization (system on and off)	-	Yes
	Eco Off based on outside temperature	-	Yes
	Frost protection	-	Yes
	heating pump off delay	Yes	Yes
	DHW priority	-	Yes
	hot water antibacterial action	-	Yes
	summer plant exercise	-	Yes
TRL functions	max. primary return temperature	Yes	Yes
	max. difference between primary and secondary return temp. (peak reduction)	Yes	Yes
	max. primary rate or power	Yes	Yes
	max. valve opening	Yes	Yes
Alarms	On-Off contacts	3	2
	functional	5	7
	short and open detector circuits	7	7
Data transmission	C-Bus for remote management from local and/or remote PC	Yes	Yes
	C-Ring for data exchange between controllers	Yes	Yes

◊ : Alternative

FIXED POINT CONTROLLER FOR DISTRICT HEATING

DTT 318

C◄BUS

APPLICATION

Designed for fixed point control of secondary temperature in district heating sub-stations comprising one heat exchanger with mixing valve on primary.
Communication with telemanagement systems via C-Bus parallel connection.
Essential detectors: 1 detector secondary flow.
Optional accessories: 1 detector promary return.

FEATURES

- Power supply: 230 V~; Consumption: 3 VA; DIN 53 x 115 modular enclosure; Protection: IP 40.
- Digital programming by means of four operating keys and 3-figure display.
- Control secondary flow temperature at fixed point.
  – Modulating control (3-wire) or On-Off in two stages or On-Off proportional in one stage.
  – Valve opening limitation for maximum limit return temperature primary return circuit.
- Season switching by external swith.

Code		Description	Data sheet
DTT 318		Fixed point controller for district heating sub-stations.	B 282

CONTROLLER FOR DISTRICT HEATING SUB-STATIONS WITH A SINGLE HEAT EXCHANGER OPTIONAL TELEMANAGEMENT

XTT 618

OPTIONAL C◄BUS C◄RING

TELEMANAGEMENT C-Bus: Enabled with ACB 400 accessory.

APPLICATION

Suitable for the control of district heating sub-stations comprising one heat exchanger with valve and secondary circuit pump.
Data communication with other controllers via C-Ring connection.
Essential sensors: 1 secondary flow sensor.
Optional accessories: 1 outside sensor, 1 primary flow sensor, 1 primary return sensor, 1 secondary return sensor.

FEATURES

- Power supply: 230V~; Consumption: 5VA; DIN 105 x 115 modular enclosure; Protection: IP 40.
- Digital programming by means of 4 keys and alphanumeric display.
- Control of secondary flow temperature: - At fixed point.
  - Compensated with correction of origin of heating curve.
  - Variable in relation to desired temp. pf heating zones (C Ring).
  – Modulating control (3-wire) of control valve of primary circuit heat exchanger.
  – Forced valve closure for: - Minimum opening limit.
  - Minimum flow or heat limit in primary circuit (from heat meter).
  – Limited valve opening for: - Maximum opening limit.
  - Maximum flow or heat limit in the primary circuit (from heat meter).
  - Maximum limit temperature return primary circuit.
  – Minimum and maximum limit of secondary flow temperature.
  – On-Off control of secondary pump in relation to demand for heat.
- Input for metering flow or energy for limits or On-Off alarm.
- Input for measuring water loss or On-Off alarm.
- Input for TeleOn or On-Off alarm.
- Alarms for plant faults and for open or short sensor circuit.
- Data recorder.

Code		Description	Data sheet
XTT 618		Controller for district heating sub-stations.	B 283
ACB 400		Plug-in for communicating via C-Bus.	–

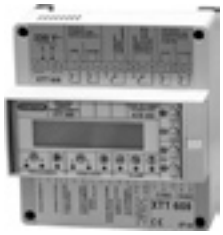
DETECTORS AND ACCESSORIES FOR DTT 318 E XTT 618

Code		Description	Application range	Sensing element	Data sheet
SAE 001		Outside temperature sensor (only for XTT 618).	–40 ... 40 °C	NTC 1 kΩ	N 120
SIH 010		Immersion temperature sensor (secondary flow, primary return).	0 ... 99 °C	NTC 10 kΩ	N 140
SAF 010		or cable-type (only for DTT 318).	0 ... 99 °C	NTC 10 kΩ	N 145
STH 001		Immersion temperature sensor(primary flow, primary return) (only for XTT 618).	0 ... 300 °C	Pt 1 kΩ	N 140
SHF 001		Cable-type temperature sensor (primary flow & return) (only for XTT 618).	0 ... 180 °C	Pt 1 kΩ	N 145
CDB 100		Set-point adjuster (only for DTT 318).	–5 ... +5 °C	–	–

COMPENSATING CONTROLLER FOR DISTRICT HEATING SUB-STATIONS WITH TWO HEAT EXCHANGERS OPTIONAL TELEMANAGEMENT

XTT 608

OPTIONAL C◄BUS C◄RING



TELEMANAGEMENT C-Bus: Enabled with ACB 460 accessory.

APPLICATION

Designed for the control of district heating substations comprising one heat exchanger Heating (modulating control) and one DHW heat exchanger (On-Off or modulating).
Data communication with other controllers via serial C-Ring connection.
Essential sensors: 1 heating flow sensor, 1 DHW storage tank sensor.
Optional accessories: 1 outside sensor, 1 room sensor, 1 primary return sensor, 1 heating return sensor, 1 DHW distribution sensor.

FEATURES

- Power supply: 230V~; Consumption: 5VA; DIN 105 x 115 modular enclosure; Protection: IP 40.
- Digital programming by means of 4 keys and alphanumeric display.
- Control of heating flow temperature: - At fixed point with desired flow temperatures Fixed Point 1-2.
  - Compensated with desired room temp. Normal 1…5, Setback 1-2, Frosprot.
  - Variable in relation to temperature requested by heating zones (C-Ring).
  - Modulating control (3-wire) of control valve of primary circuit exchanger Heating.
  - Forced closure of valve for: - minimum opening limit.
    - minimum limit primary circuit flow.
  - Valve opening limits for: - maximum opening limit.
    - maximum limit primary circuit return temperature.
    - maximum limit primary circuit flow.
    - maximum limit temperature difference between primary and secondary returns.
  - On-Off control heating pump in relation to demand for heat.
  - Timed programming with seven 24hour programs and two 7day programs.
  - Functions: - optimized start and stop; Eco off; Frosprot.
- Control of temperature DHW at fixed point (storage or distribution or storage & distribution):
  - Three-wire modulating control or On-Off valve primary circuit heat exchanger DHW.
  - Timed control DHW circulation pump.
  - Timed programming with seven 24hour programs and two 7day programs.
  - Antibacteria function.
- 25 annual periods with dates and separate programming for heating and DHW.
- Summer exercise function for valves and pumps.
- Automatic switching GMT – BST and summer/winter switching.
- Metering degree-days.
- Input for measurement flow or input for On-Off alarm
- Input for program changing switch or input for On-Off alarm.
- Alarms for plant faults and for open or short sensor circuit.
- Data recorder.

Code		Description	Data Sheet
XTT 608 **ACB 460**		Optimising compensator for district heating.. Plug-in for C-Bus communication.	B 284 –

DETECTORS AND ACCESSORIES

Code		Description	Application range	Sensing element	Data sheet
SAE 001		Outside temperature sensor.	–40 ... 40 °C	NTC 1 k	N 120
SIH 010		Immersion temperature sensor (heating flow & return, DHW storage & distribution).	0 ... 99 °C	NTC 10 kΩ	N 140
SHF 001		Immersion temperature sensor (primary return).	0 ... 180 °C	Pt 1 kΩ	N 145
SAB 010		Room temperature sensor.	0 ... 40 °C	NTC 10 kΩ	N 111
CDB 300		Remote control for changing program in use.	–	–	–

MULTIPLE HEATING ZONE ROOM TEMPERATURE CONTROL SYSTEM

"COSTERZONE"

This system, powered by 24 V~, permits connecting up to 239 remote ambient temperature controllers to a central display unit and/or to a computer, by means of the CosterBus interface. The system comprises:
- 1 or more 230/24 V ~ transformers to power the system.
- 1 room temperature controller for each zone.
- 1 central display unit

SOFTWARE PROGRAMME FOR "COSTERZONE" CONTROL SYSTEM

SWC 171

APPLICATION

Software for supervising communication between central computer and remote controllers.
Permits displaying temperature values measured by room detectors, modifying setting values and operating programmes for each single controller or groups of controllers.

FEATURES

- Suitable for IBM-compatible computer running Windows 3.1 or later version. Supplied as 3"1/2 floppy.
- Supervise up to 239 remote controllers.

Code		Description	Data sheet
SWC 171		Software programme for "Costerzone" control system.	B 501

CENTRAL DISPLAY UNIT FOR "COSTERZONE" CONTROL SYSTEMS

UMT 704

C←BUS

APPLICATION

"Costerzone" control supervisor for:
– Displaying temperature values measured by room detectors.
– Modifying settings and operating programmes for each single controller.
– Controlling the remote RTB ... units by DTMF signals from digital telephones.

FEATURES

- Power supply: 24 V~; Consumption: 10 VA; Case: DIN 144 x 144; Protection: IP 40.
- 1 CosterBus output for connection to remote controllers (max 239).
- 1 RS232 output for connection with a computer or modem.
- 1 C-Bus output for connection with a central bus or modem.
- 1 Relay output for external alarm and 2 relay outputs for On-Off controls in relation to thermal demands.

Code		Description	Data sheet
UMT 704		Central display unit for "Costerzone" control system.	B 510

ACCESSORIES

Code		Description	RS232 inputs	C-Bus inputs	Data sheet
MPF 612		Panel-mounting modem with DTMF.	1	1	T 325

PUMP CONTROL UNIT

UCP 664

APPLICATION

Central control unit for heating and/or cooling circuit pumps (max 6), in relation to thermal demand of the zones concerned.
Several units may be connected to the same C-Bus interface.

FEATURES

- Power supply: 24 V~; Consumption: 10 VA; DIN 105 x 115 modular enclosure; Protection: IP 40.
- 1 CosterBus output for connection to remote controllers.
- 6 relay outputs for control pumps.

Code		Description	Data sheet
UCP 664		Pump control unit.	B 515

ROOM TEMPERATURE CONTROLLERS

RTB ...

RTB ...

RTB 540

RTB 645

APPLICATION

Room temperature controllers for heating/cooling coils or for zone heating,supplied with an NTC 10 kΩ internal sensing element. Designed for On-Off control of fans and zone valves or for modulating control of reversible control valves with 3-wire electric control.
Individual or centralised season switching.
C-Bus compatible.
RTB 040 can be used as a time switch for 24-hour or 7-day programming.
RTB 540 is provided with a display for modifying programme in use and desired temperature.
Optional detectors: 1 room temperature detector for fan coils or air duct.

FEATURES

- Power supply: 24 V ~; Consumption: 4 VA; Protection: IP 30.
- Setting range: - From central unit: 0 ... 40 °C; - From local setpoint adjuster: ± 5 (± 15) °C.
- On-Off output: Voltage-free contacts: rating 250 V ~, 5 (3) A.
  P control action; Proportional Band: ± 1 °C (adjustable from central unit).
- Modulating outputs: Triac type 24 V ~, rating 300 mA (7W).
  PI control action; Proportional Band: ± 1 °C (adjustable from central unit).
  Control of actuators with run time: 100 seconds (adjustable from central unit).

Code		Control outputs	Setpoint adjuster	Data sheet
RTB 040		1 On-Off hot or cold (fan or 2-3 wire valve).	–	B 520
RTB 140		1 On-Off hot or cold (fan or 2-3 wire valve).	± 15 °C	B 520
RTB 540		1 On-Off hot or cold (fan or 2-3 wire valve).	± 15 °C	B 522
RTB 044		4 On-Off hot or cold (3 fan speeds plus 2-3 wire valve).	–	B 521
RTB 044S1		As RTB 044 with room occupied service (without detector control).	± 15 °C	B 521
RTB 144		4 On-Off hot or cold (3 fan speeds plus 2-3 wire valve).	± 15 °C	B 521
RTB 144S1		As RTB 144 with room occupied service (without detector control).	± 15 °C	B 521
RTB 041		1 modulating hot or cold (3-wire valve) + 1 On-Off (fan).	–	B 520
RTB 141		1 modulating hot or cold (3-wire valve) + 1 On-Off (fan).	± 15 °C	B 520
RTB 042		2 modulating hot and cold (2 3-wire valve).	–	B 520
RTB 142		2 modulating hot and cold (2 3-wire valve).	± 15 °C	B 520
RTB 045		4 simultaneous On-Off hot or cold (4 2-wire valves).	–	B 520
RTB 145		4 simultaneous On-Off hot or cold (4 2-wire valves).	± 15 °C	B 520
RTB 645		3 On-Off hot or cold (3 fan speeds).	± 15 °C	B 523
		+ 2 modulating hot and cold (2 3-wire valve).	–	–

SUMMER TEMPERATURE COMPENSATOR FOR RTB 645 CONTROLLERS

CTB 334

APPLICATION

Maintains a constant difference between room and outside temperatures in the summer period.

FEATURES

- Power suppy: 24 V~; Consumption: 3 VA; DIN 53 x 115 modular enclosure; Protection: IP 40.
- Can compensate up to maximum 30 RTB 645 controllers connected in parallel.

Code		Description	Data sheet
CTB 334		Summer tempersture compensator for RTB 645 controllers.	B 524

DETECTORS AND ACCESSORIES

Code		Description	Application range	Sensing element	Data sheet
SAB 010		Room temperature detector.	0 ... 40 °C	NTC 10 kΩ	N 111
SAB 210		Room temperature detector with +1 hour key.	0 ... 40 °C	NTC 10 kΩ	N 111
SAA 010		Industrial type temperature detector (used as outside temperature detector. Only for CTB 334)	0 ... 100 °C	NTC 10 kΩ	N 115
SCB 110		Room temperature detector with setpoint adjuster.	0 ... 40 °C –5 ... +5 °C	NTC 10 kΩ –	N 111
SCB 210		Room temperature detector with +1 hour key and setpoint adjuster.	0 ... 40 °C –5 ... +5 °C	NTC 10 kΩ –	N 111
STT 010		Temperature detector for fan coils.	0 ... 40 °C	NTC 10 kΩ	N 155
STA 010		Air duct temperature detector.	0 ... 40 °C	NTC 10 kΩ	N 150
AIC 240		Inverts status of window switch.	–	–	–

ELECTROMECHANICAL ROOM THERMOSTATS

RTT 40. - RTS 434

APPLICATION

Regulation of ambient temperature by On-Off control of : burners, gas boilers, zone valves, pumps, etc.
Contact rating: 250 V~, 10 (2.5) A.

Code		Type	Setting range	Sum - Win	Δ t°	Protection	Data sheet
RTT 404		SPDT	5 ... 30 °C	No	0.6 °C	IP 30	–
RTT 405		SPDT & 230 V warning light	5 ... 30 °C	No	0.6 °C	IP 30	–
RTT 406		SPST	5 ... 30 °C	Yes	0.6 °C	IP 30	–
RTS 434		Watertight & SPDT	0 ... 40 °C	No	2 °C	IP 53	–

DIGITAL OPTIMISING ROOM CHRONOTHERMOSTATS

CMD 911

APPLICATION

Electronic room temperature controller for On-Off proportional control of: burners, gas boilers, zone valves, pumps, etc. Internal temperature sensing element.

FEATURES

- Power supply: three 1.5 V – alkaline batteries; battery life one year; Protection: IP 30; Dimensions 90 x 175 x 32 mm.
- Voltage-free contacts: rating 250 V~, 5 (1) A.
- Setting range: 0 ... 40°C; P control action; Proportional Band: ±0.5 °C; Half-load cycle: 20 min.

Code		Description	Programmes	Data sheet
CMD 911		7-day digital room chronothermostat.	Four 24-hour & one 7-day	B 320

ELECTRONIC THERMOSTAT FOR FAN COILS

TPA 905

APPLICATION

Electronic thermostat with On-Off output for control of fan. Temperature detector provided for installation on air extract of fan coil. Fan switched on at regular intervals so as to maintain detector at room temperature.

FEATURES

- Power supply: 230 V~; Consumption: 2 VA; Protection: IP 20.
- Setting range: 5 ... 30 °C; Adjustable Δt°: 0.3 ... 1.3 °C. Voltage-free output contacts: rating: 250 V~, 5 (3) A.

Code		Description	Data sheet
TPA 905		Electronic thermostat for fan coil with Sum-Win switch and including STT 010 detector.	B 315

ELECTRONIC ROOM TEMPERATURE CONTROLLERS WITH SEASON SWITCHING

RTS 14.

APPLICATION

Room temperature controllers for heating/cooling coils or for zoned plants, supplied with internal sensing element NTC 10kΩ. Suitable for On-Off control of fans and zone valves or modulating control of reversible regulating valves with 3-wire electric control.
Single or centralised season switching.

FEATURES

- Power supply: 24 V ~; Consumption: 4 VA; Protection: IP 30.
- Setting range: 0 ... 40 °C; - By local setpoint adjuster: ±5 (±15) °C.
- On-Off proportional or pure differential (RTS 140) output: Voltage-free contacts: rating 250 V~, 5 (3) A.
- Modulating PI output (RTS 141 - RTS 142): Triac powered by 24 V ~, rating 200 mA.

Code		Type of control output	Power outputs	Setpoint adjuster	Data sheet
RTS 140		1 On-Off relay (fan or thermal valve)	24 or 230 V~, 5 (3) A	± 15 °C	B 350
RTS 141		1 triac modulating + 1 On-Off (valve + fan)	24 V~ 7 W + 230 V~	± 15 °C	B 350
RTS 142		2 triac modulating + 1 On-Off (2 valves + fan)	24 V~ 7 W	± 15 °C	B 350

MODULATING ELECTRONIC CONTROLLERS FOR RADIATORS

RTA 72.

APPLICATION

Room temperature regulation, for heating systems (single dwellings or zoned) by modulating PI control of a valve operated by a reversible actuator. Room temperature is monitored by an NTC 10 kΩ sensing element inside the controller or by a remote room detector.
Possibility of increasing stability of room temperature by a detector on flow pipe.
Detectors recommended for all models: 1 plant flow detector.
Essential detectors for /D models: 1 room detector.

FEATURES

- Power supply: 230 V~; Consumption: 4 VA; Protection: IP 20.
- Voltage-free output contacts: rating: 250 V ~, 5 (3) A.
- Control of actuators with run times: 60 ...120 seconds.
- Setting range: 5 ... 30 °C; PI control action: Proportional band: ± 1 °C.
- Possibility of limiting setting range by means of pins supplied on request.

Code		Description	Data sheet
RTA 725		Controller with 24-hour timeswitch and incorporating room detector.	B 330
RTA 726		Controller with 7-day timeswitch and incorporating room detector.	B 330
RTA 725/D		Controller with 24-hour timeswitch for remote room detector.	B 330
RTA 726/D		Controller with 7-day timeswitch for remote room detector.	B 330

MODULATING ELECTRONIC CONTROLLERS FOR UNDERFLOOR PANELS

RTP 82.

APPLICATION

Room temperature regulation for single-family or zoned heating installations by PI modulating control action of a valve operated by a reversible actuator.
The room temperature is monitored by an NTC 10 kΩ sensing element inside the controller.
Controls flow temperature in relation to shift in room temperature with a maximum limit of 45 °C.
Essential detectors for all models: 1 plant flow detector.
Essential detectors for /D models: 1 room detector.

FEATURES

- Power supply: 230 V~; Consumption: 4 VA; Protection: IP 20.
- Voltage-free output contacts: rating: 250 V ~, 5 (3) A.
- Control of actuators with run times: 60 ... 120 seconds.
- Setting range: 5 ... 30 °C; PI control action; Proportional Band: ± 1 °C.
- Possibility of limiting setting range by means of pins supplied on request.

Code		Description	Data sheet
RTP 825		Controller with 24-hour timeswitch and incorporating room detector	B 335
RTP 826		Controller with 7-day timeswitch and incorporating room detector	B 335
RTP 825/D		Controller with 24-hour timeswitch for remote room detector.	B 335
RTP 826/D		Controller with 7-day timeswitch for remote room detector.	B 335

DETECTORS AND ACCESSORIES FOR RTA 72 - RTP 82

Code		Description	Application range	Sensing element	Data sheet
		For all models:			
SIH 010		Plant flow immersion temperature detector.	0 ... 99 °C	NTC 10 kΩ	N 140
		For /D models:			
SAB 010		Room temperature detector.	0 ... 40 °C	NTC 10 kΩ	N 111
SAB 020		Room detector for large spaces (2 in parallel).	0 ... 40 °C	NTC 20 kΩ	N 111