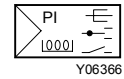


RDT 100: Electronic controller for ventilation and air-conditioning

For universal, autonomous use in ventilation and air-conditioning systems or similar; with measurement, control and time functions for controlling temperature, humidity, pressure and flow. DDC compact controller with PI, two- or three-point control and command, sequence and limitation functions. Thirty-five configurations of control models available. All parameters are pre-set and enable commissioning to be executed quickly. Plug-in memory available as an option, for documenting and for copying the setting parameters.

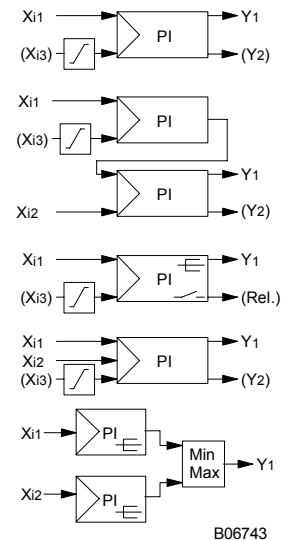
Front plate with LCD panel, keys and sealable, 3-position sliding switch (manual, automatic, service); snap-shut flap for covering the service keys and for safeguarding the abridged operating instructions. Housing 144 × 96 mm (DIN 43700) of flame-resistant, pure-white thermoplastic (RAL 9010); for mounting onto walls, into control panels or onto top-hat rails as per EN 50022.

Baseplate with screw terminals for electric cable of up to 2 × 2.5 mm²; cable inlet from behind, above or below.



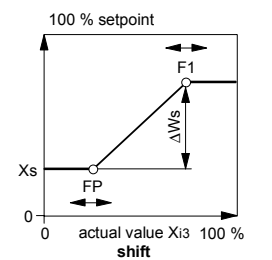
Type ¹⁾	Range [°C]	Control modes	Voltage	Weight [kg]
RDT 100 F001	-30...150	P, PI, 2pt, 3pt	230 V~	0.67
RDT 100 F002	-30...150	P, PI, 2pt, 3pt	24 V~	0.54

Models						
Structure of controller	1 output continuous	Sequence contin.-contin	Sequence contin.-2pt	1 output 2pt	1 output PI (3pt)	
1 fixed-value controller:	0	1	15	20	30	
with command	2	3	16	22	31	
2 fixed-value controller:	12	-	-	21	-	
with common actual value	13	-	-	27	-	
with y = min/max selection	14	-	-	-	-	
1 controller with command	-	-	-	23	-	
with common command	-	-	-	24	-	
common actual value; once with command	-	-	-	25	-	
common actual value; common command	-	-	-	28	-	
1 cascade controller:	4	5	17	-	32	
with command	6	7	18	-	33	
1 differential controller:	8	9	-	29	34	
with command	10	11	-	26	35	



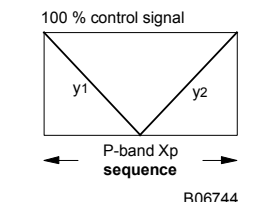
Ranges (depends on transmitter)	Temperature [°C or K]	Percentage [%]	Rel. humidity [%rh]	Abs. humidity [g/kg]	Enthalpy [kJ/kg]	no units
Setpoint X _s	-30...150 °C	0...100	0...100	0.0...20	0...100	-4999...4999
P-band	0.1...250 K	0.1...1000	0.1...100	0.1...100	0.1...100	10...4999

4 universal inputs ²⁾		1 binary input ²⁾	Threshold -6 V
Temperature	Ni1000 (DIN 43760)		
Voltage	0(2)...10 V; R _i = 100 kΩ	Outputs	
Current	0...1 V, R _i = 500 kΩ	2 continuous	0(2)...10 V, load > 5 kΩ
Potentiometer	0(4)...20 mA, R _i = 50 Ω	1 continuous	0...10 V, load > 5 kΩ
	2 kΩ (min. 1 kΩ)	2 relays	5(2) A, 250 V~



Power supply	230 V~ +10/-15%; 50...60Hz	Degree of protection	IP 40 (EN 60529)
	24 V~ ± 20%; 50...60 Hz	Protection class F001	230V II (IEC 60730)
		F002	24V III (IEC 60730)

Power consumption	2.5 VA	Wiring diagram	A06368
P-band X _p	0.1...250 K	Dimension drawing	M368900
Integral action time T _n	0...9990 s	Fitting instructions	MV 505379
Switching difference X _{Sd}	0.1...180 K	Operating instructions	7000835 (Part 1)
Cycle	1 s	Commissioning	7000836 (Part 2)
Permissible ambient temp.	0...45 °C	Abridged oper. instructions	BA 505380
Ambient humidity	5...95 %rh		



Accessories

- 0369739** . . . Operating instructions (Part 1, Part 2 and Abridged operating instructions)
German 001, French 002, English 003, Italian 004
- 0369746 001** Cover plate for the whole front; of transparent thermoplastic; sealable
- 0226187 002*** Plug-in dummy for memory slot
- 0226187 003*** Plug-in memory for Flexotron

^{*)} Dimension drawing or wiring diagram are available under the same number

1) Operating instructions; since several languages are available, please order as an accessory.
2) Protected against short-circuiting and over-voltage up to 24 V ac. Current input max 70 mA.

Operation

The RDT 100 controller has software modules with fixed configurations and captive standard parameters. When selecting the control model, the software modules are linked to (for instance) a cascade controller with sequence output and shift. There are also modules for min./max. limitation, selection and 'external setpoint'. All user parameters can be stored in the optional memory for documentation purposes or for copying when installations are similar. All parameters are captive. The sliding switch (Hand/Automatic/Service) controls the operating modes.

Service

In this mode, the controller is matched to the control task by selecting the appropriate control model, and the inputs and outputs and the additional functions are configured.

Automatic

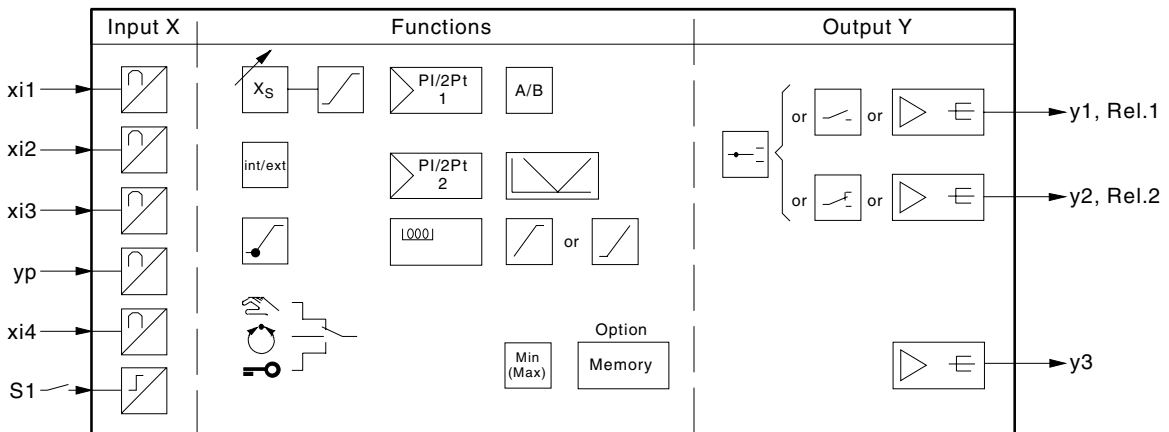
Control mode with setpoint Xs1 internal or external; Xs 2 internal only.

On entering this mode, the prevailing positioning signals are adopted. They can be set manually between 0 and 100%.

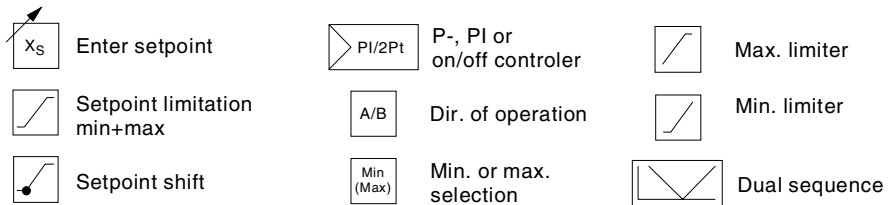
Any adjustments to the control parameters are made in the 'Hand' mode.

Additional technical data

Radio suppression EMC	EN 55014 and 55022 EN 50082 -1	Storage and transport temp. Conformity	-25...+65 °C EN 12098 and CE
RDT 100 F001 Complies with:- Directive 73/23/EEC EMC directive 89/336/EEC		RDT 100 F002 Complies with:- EMC directive 89/336/EEC	
	EN 60730-1/ EN 60730-2-9 EN 61000-6-1/ EN 61000-6-2 EN 61000-6-3/ EN 61000-6-4		EN 61000-6-1/ EN 61000-6-2 EN 61000-6-3/ EN 61000-6-4

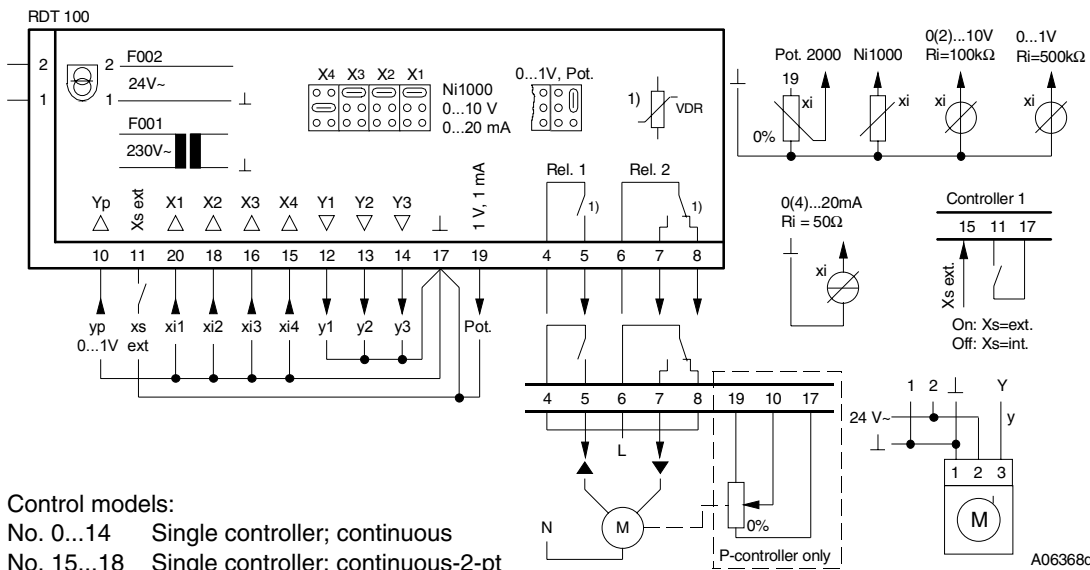


B06964



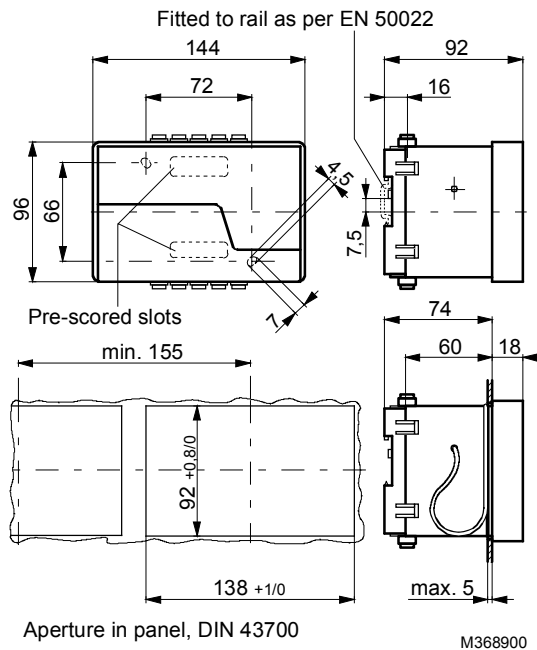
B06745

Wiring diagram

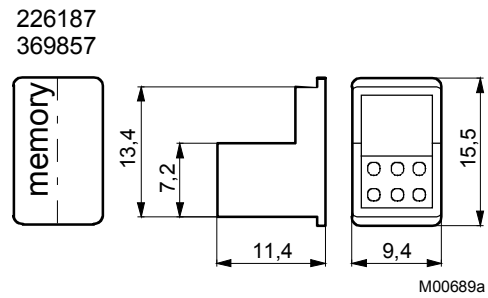


- Control models:
 No. 0...14 Single controller; continuous
 No. 15...18 Single controller; continuous-2-pt
 No. 20...29 Single controller; 2-pt
 No. 30...39 Single controller; PI (3-pt)

Dimension drawing

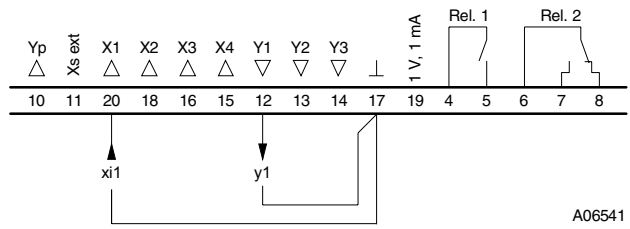
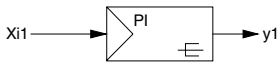


Accessories



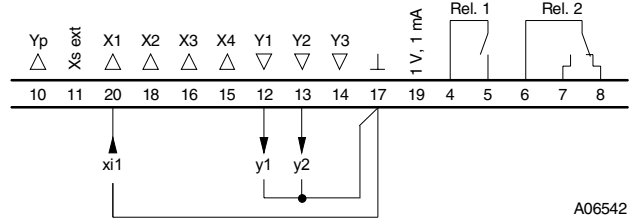
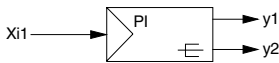
Nos. 0...14: Output: continuous

Model 0



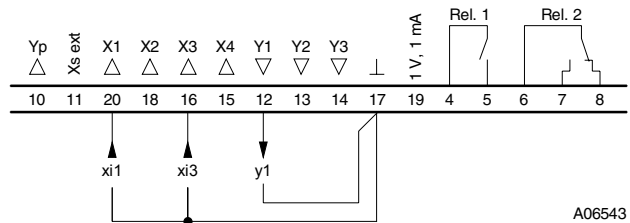
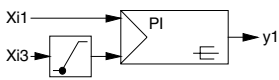
A06541

Model 1



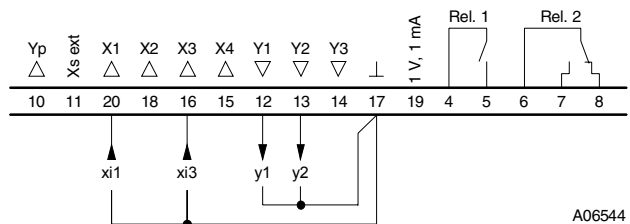
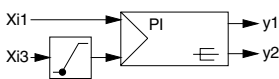
A06542

Model 2



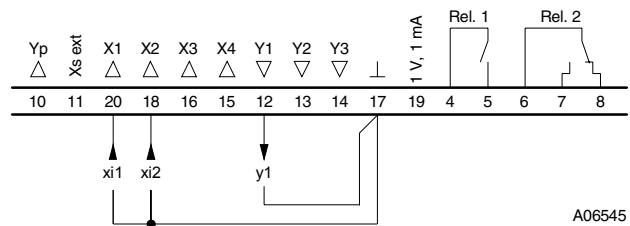
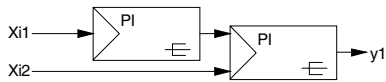
A06543

Model 3



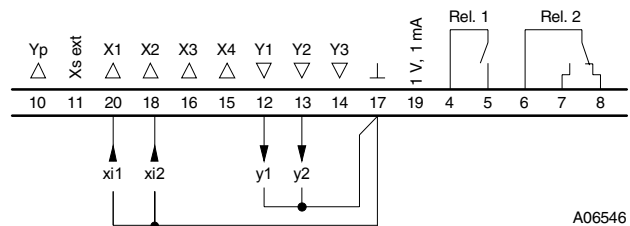
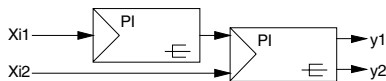
A06544

Model 4



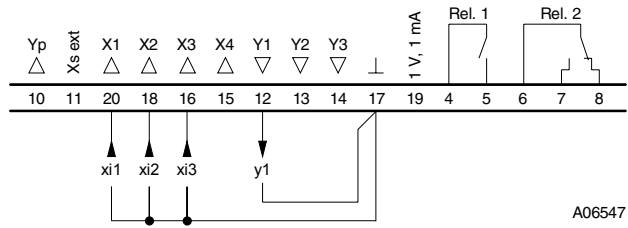
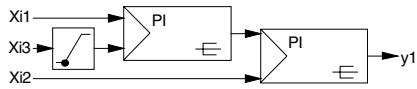
A06545

Model 5



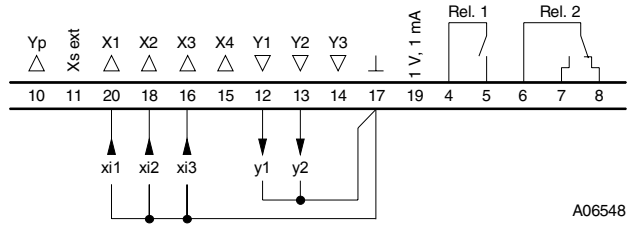
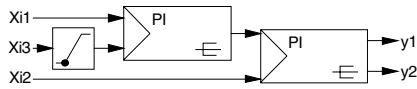
A06546

Model 6



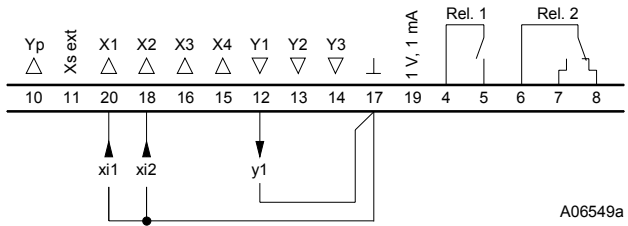
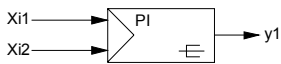
A06547

Model 7



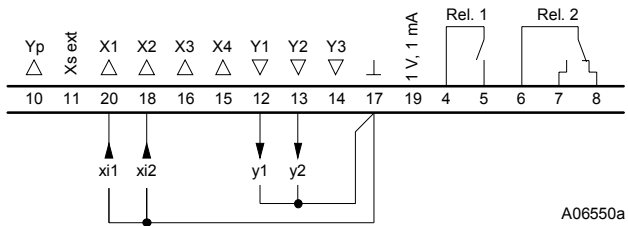
A06548

Model: 8 (Differential controller)



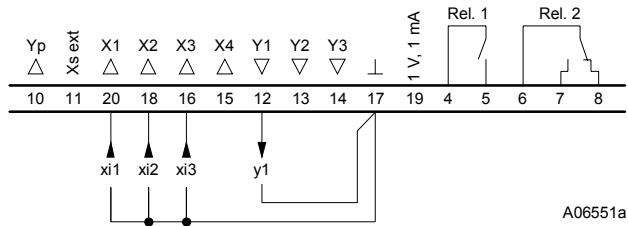
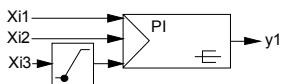
A06549a

Model: 9 (Differential controller)



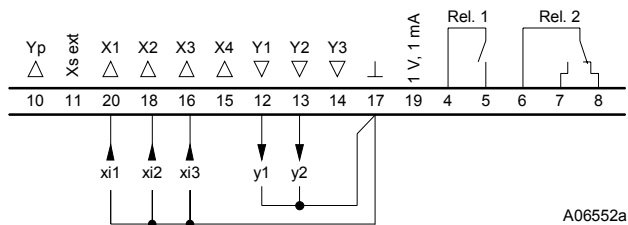
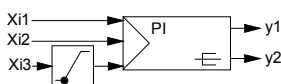
A06550a

Model: 10 (Differential controller)



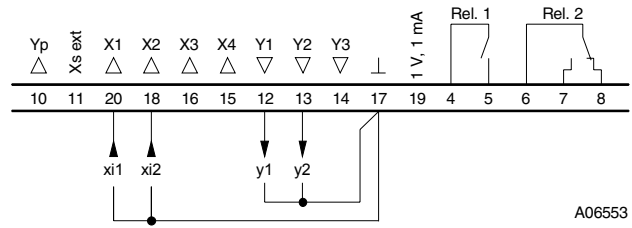
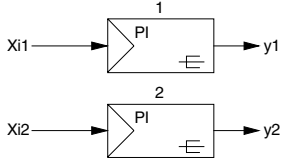
A06551a

Model: 11 (Differential controller)



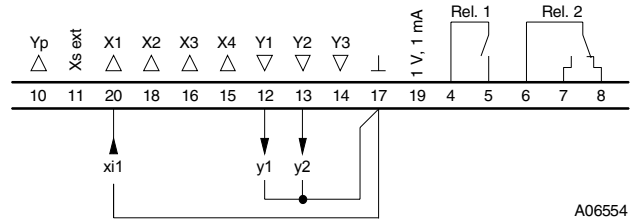
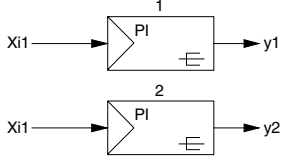
A06552a

Model 12



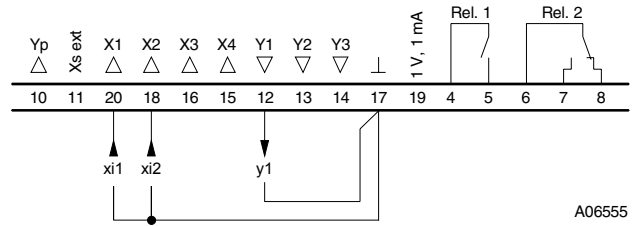
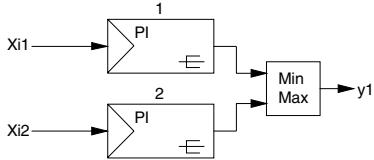
A06553

Model 13



A06554

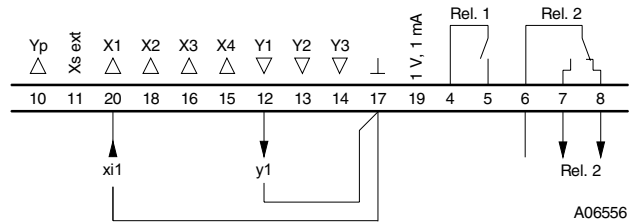
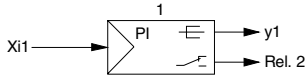
Model 14



A06555

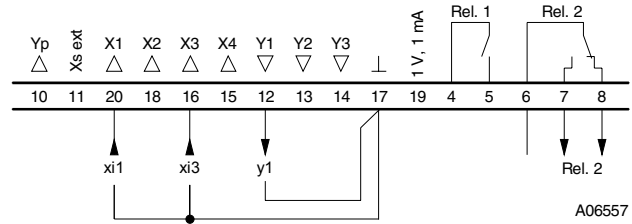
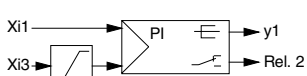
No. 15...18: Output: continuous-2-point

Model 15



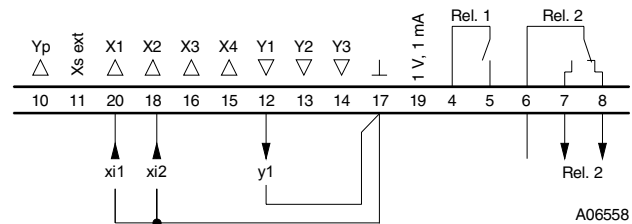
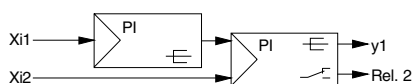
A06556

Model 16



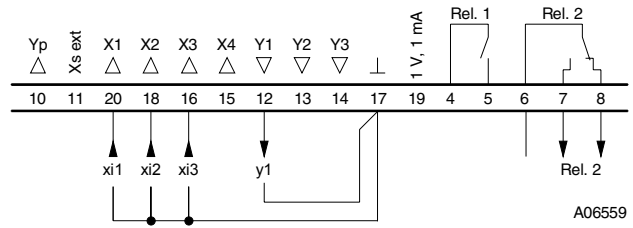
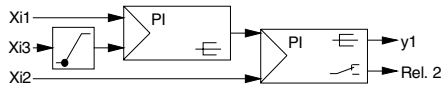
A06557

Model 17



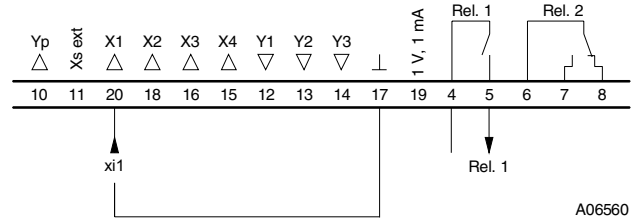
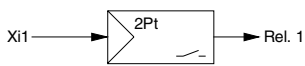
A06558

Model 18

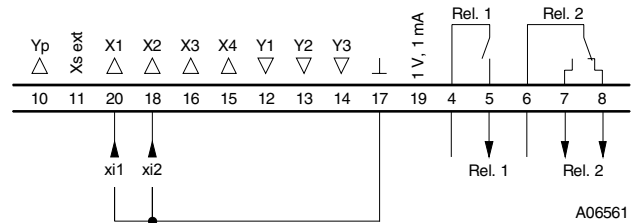
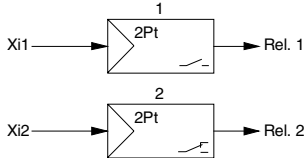


No. 20...29: Output: 2-point

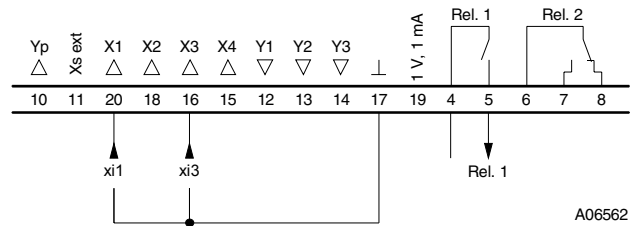
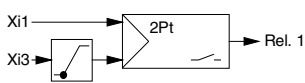
Model 20



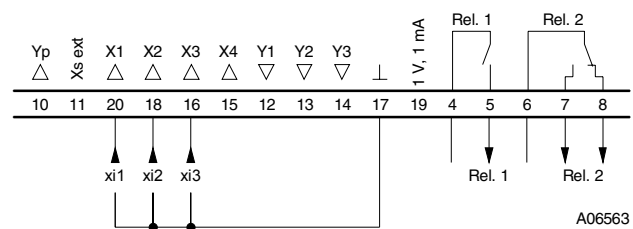
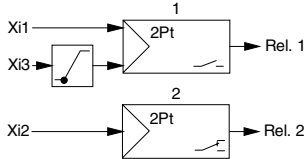
Model 21



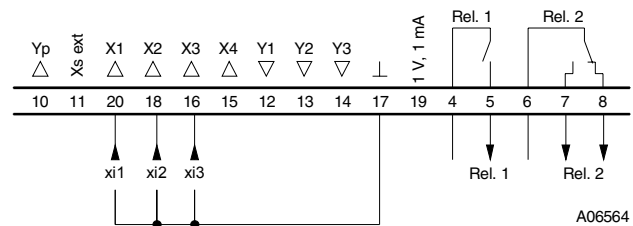
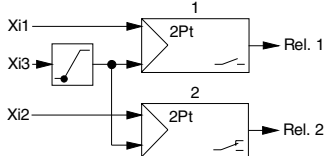
Model 22



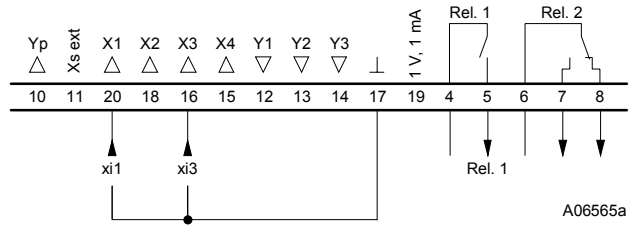
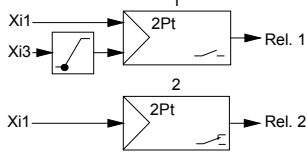
Model 23



Model 24

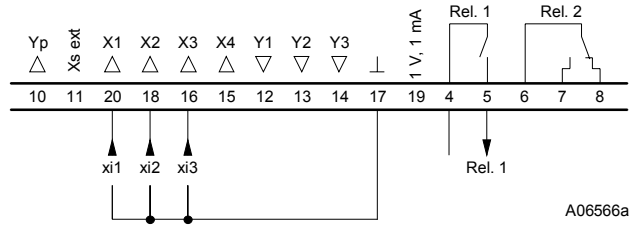
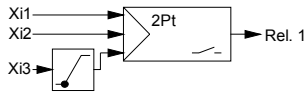


Model: 25



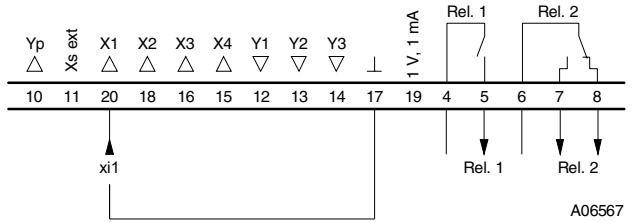
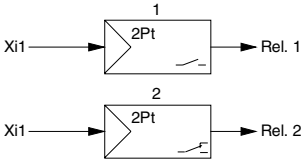
A06565a

Model: 26 (Differential controller)



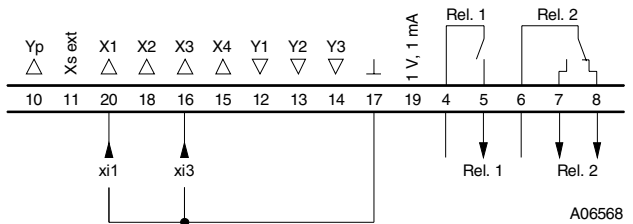
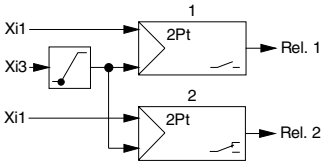
A06566a

Model 27



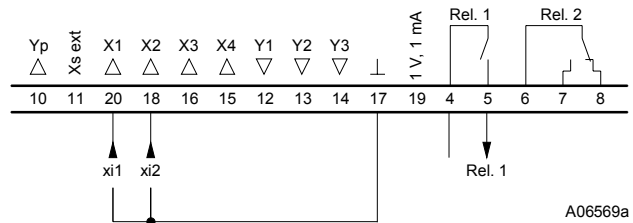
A06567

Model 28



A06568

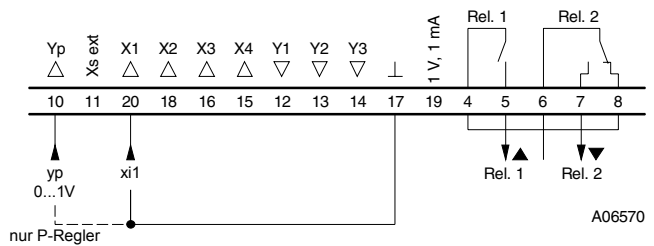
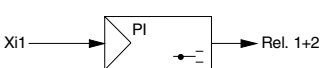
Model: 29 (Differential controller)



A06569a

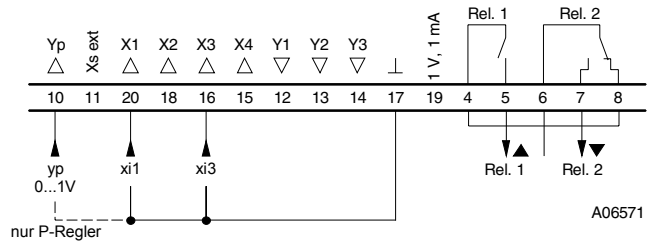
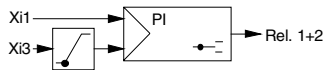
Nos. 30...35: Output: PI (3-point)

Model 30



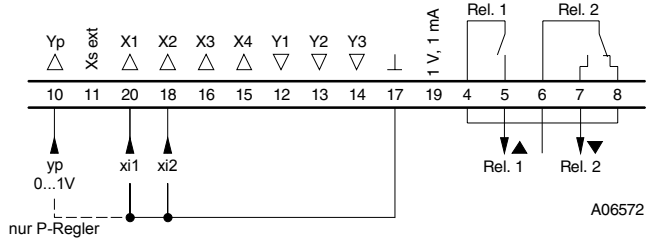
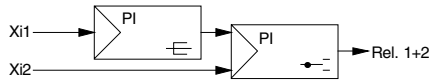
A06570

Model 31



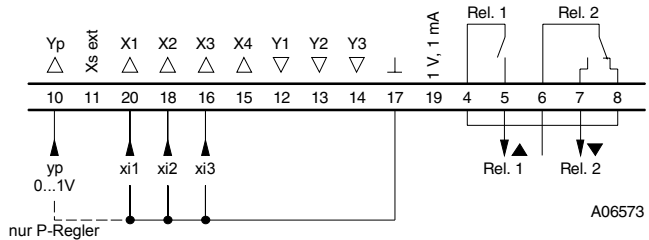
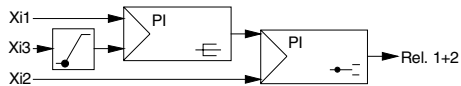
A06571

Model 32



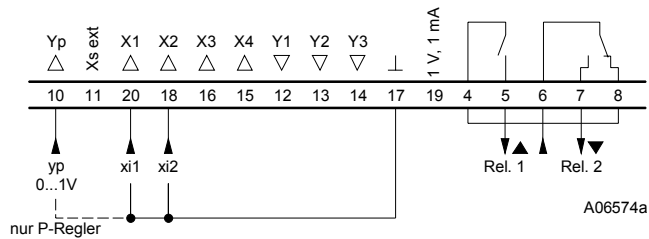
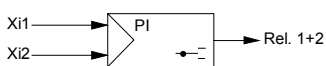
A06572

Model 33



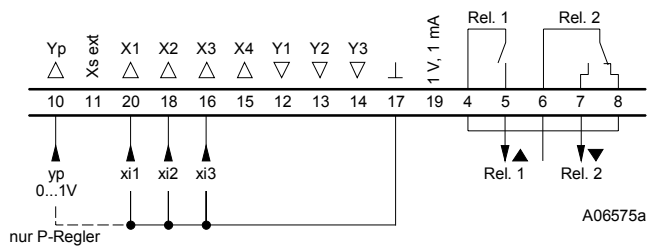
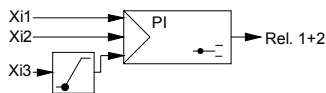
A06573

Model: 34 (Differential controller)



A06574a

Model: 35 (Differential controller)



A06575a