



CONTROLLERS

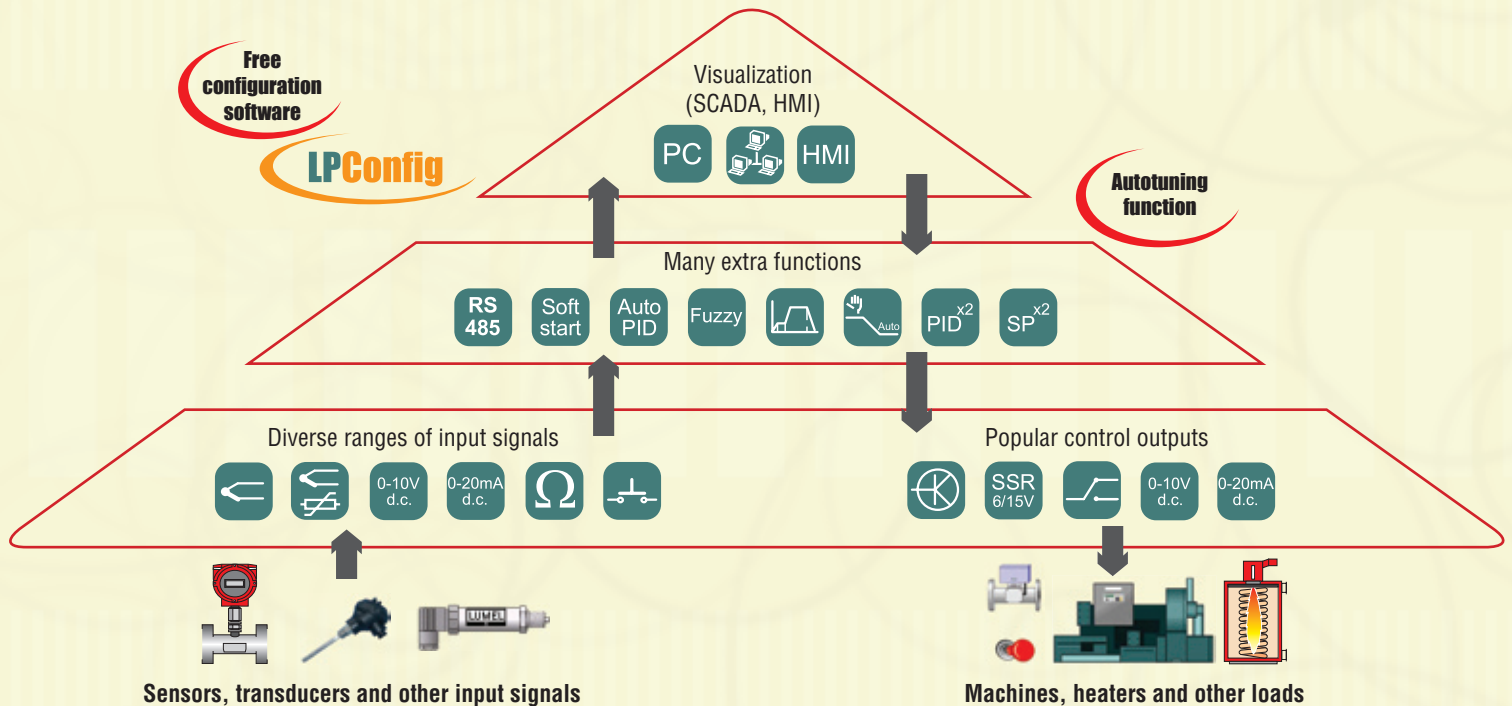


Application:

- plastics processing industry (injection moulding machines)
- food industry
- bakery ovens
- drying chambers
- industrial ovens (blast furnaces, kilns, etc.)
- packaging appliances
- to control other measuring quantities converted into standard signals

Functionality:

- universal/programmable measuring inputs allow implementing in diverse applications
- easy installation thanks to the function of automatic selecting of PID parameters
- smaller overshoot thanks to the setpoint soft start function
- program following control option useful for instance in drying chambers, hardening furnaces and kilns
- bumpless transfer between manual and automatic control
- an installation is protected through the function of switching off the control output in case of measuring sensor damage
- remote control using RS485 Modbus digital interface





























- thermocouple input
- thermocouple and thermoresistance input
- logic input
- analog input/output (0-10V, 0/4-20mA)
- CO (change-over) relay output

- NO (normally-open) relay output
- voltage-free transistor output (OC)
- voltage output for SSR (voltage depends on controller's type)
- 24V d.c. supplying output for object transducers
- 2 sets of PID parameters














- 4 sets of PID parameters
- 2 setpoints
- 4 setpoints
- autotuning of PID parameters
- setpoint soft start

- bumpless transfer from manual to automatic control
- alarm hold function
- program following control
- RS485 Modbus digital interface

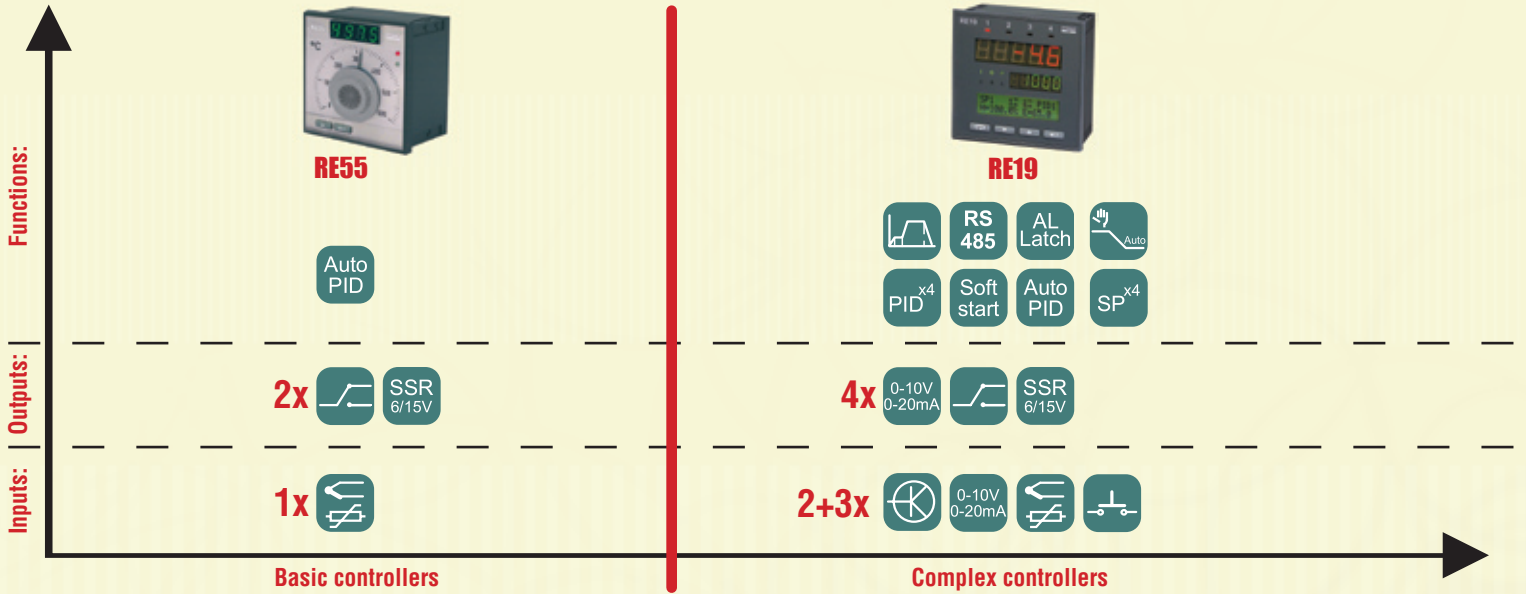
Industrial controllers – 48x48mm

	Basic controllers				Universal controllers		Complex controllers
Functions:	NEW!  RE71 IP65 Smart PID Auto PID	NEW!  RE72 IP65 Smart PID Auto PID U	 RE22 IP65 Auto Soft start Auto PID	 RE26 IP65 Fuzzy Soft start Auto PID	LPConfig  RE20 IP65 Auto RS 485 PID x2 Soft start AL Latch SP x2 Auto PID		 RE23 IP65 Auto Soft start Auto PID
Outputs:	1x  SSR 0/6V	3x  SSR 6/15V 0-10V 0-20mA	1x  SSR 6/15V	2x  SSR 6/15V 	2x  0-10V 0-20mA  SSR 6/15V		1x  SSR 6/15V
Inputs:	1x  1+1x 	1x  0-10V 0-20mA 	1x  0-10V 0-20mA 	1x  0-10V 0-20mA 	1+1x  0-10V 0-20mA 		1x  0-10V 0-20mA 

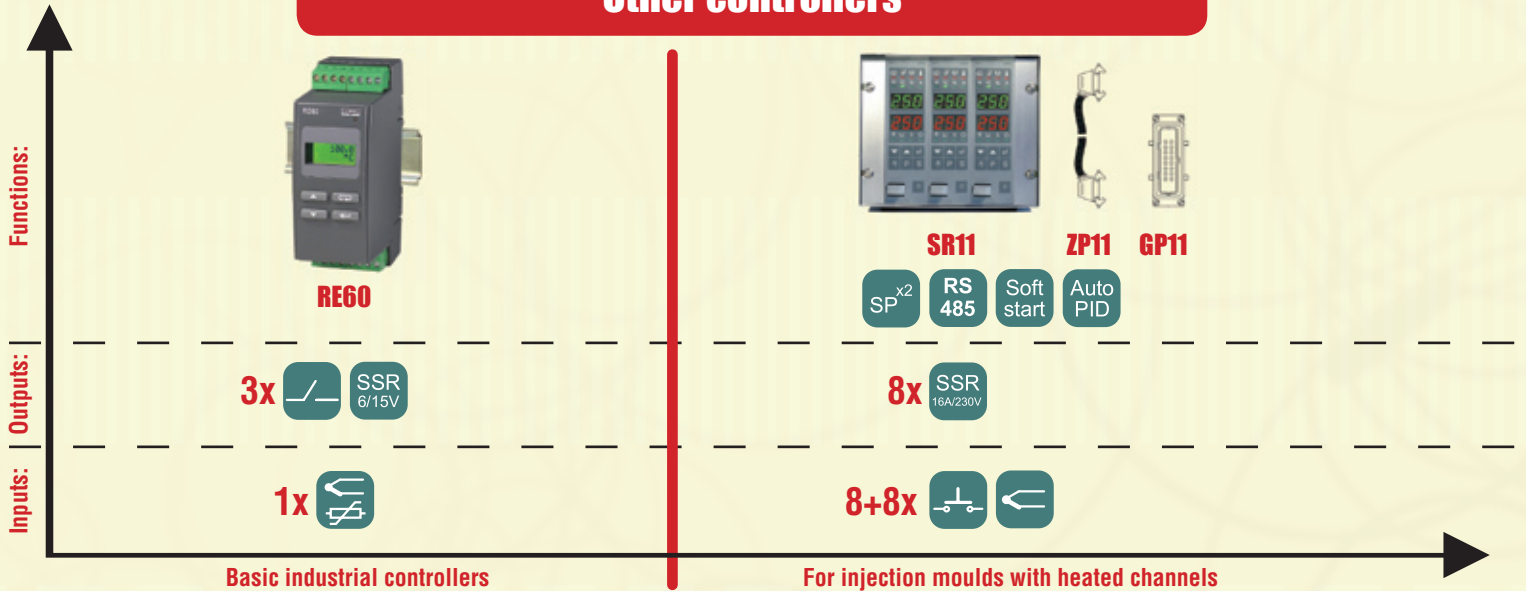
Industrial controllers – 48x96mm

	Basic controllers	Complex controllers	
Functions:	NEW! LPConfig  RE81 IP65 LPConfig PD14 Programator Smart PID Auto PID	 RE18 IP65 AL Latch PID x2 U Soft start AL Latch Auto PID	LPConfig  RE15 IP65 Auto RS 485 PID x2 Soft start AL Latch Auto PID
Outputs:	1x  SSR 0/6V	2x 	4x  0-10V 0-20mA  SSR 6/15V
Inputs:	1x  	1x 0/4...20 mA  	1+1x  0-10V 0-20mA 

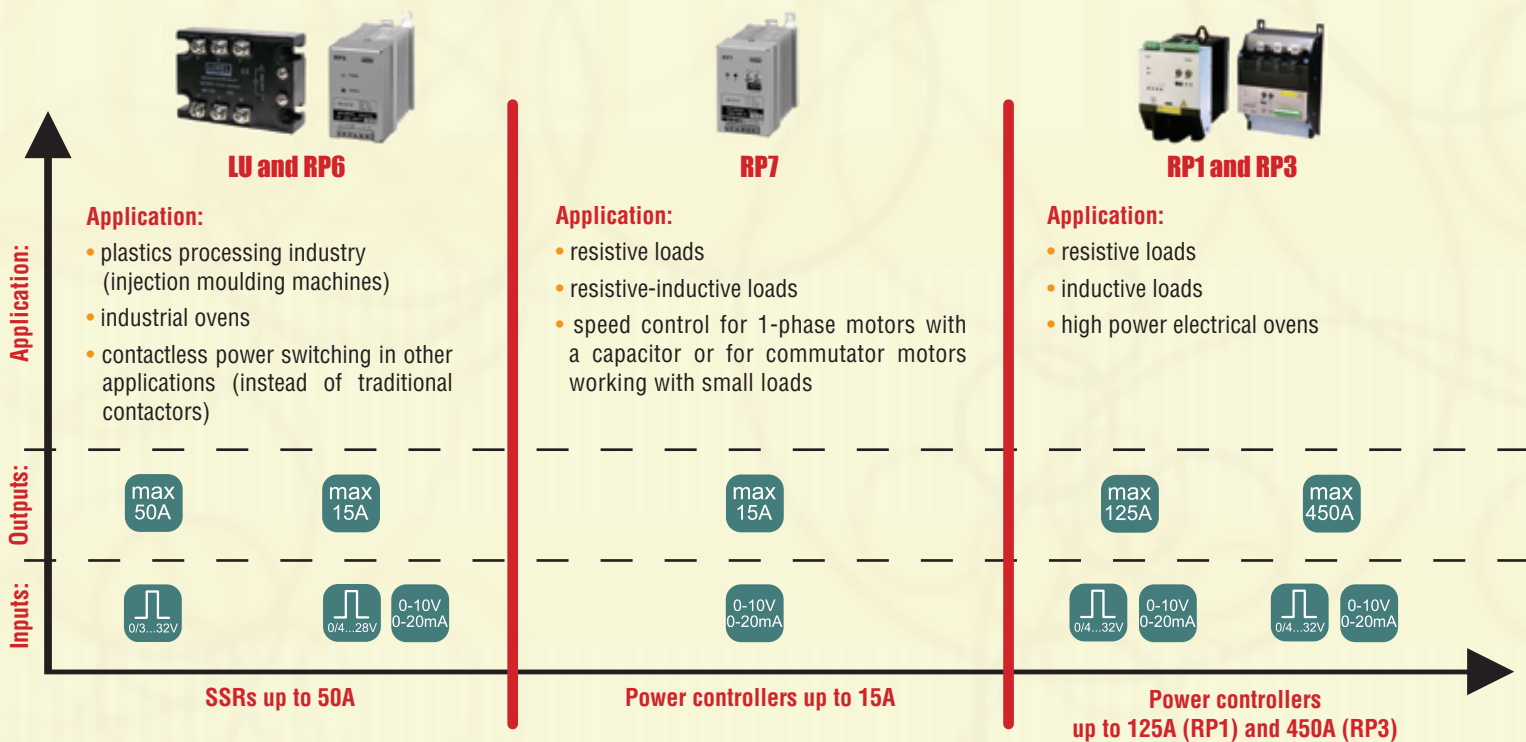
Industrial controllers – 96x96mm



Other controllers

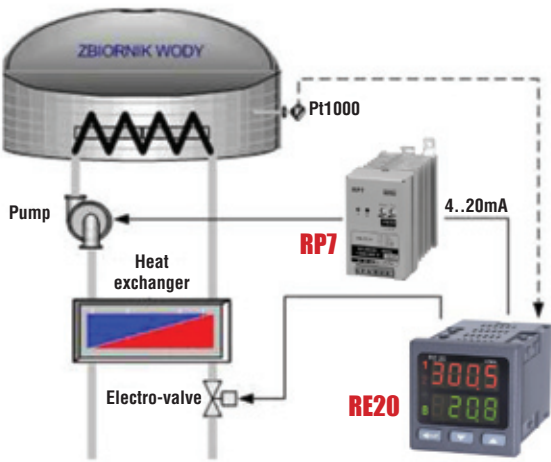


Power controllers and SSRs

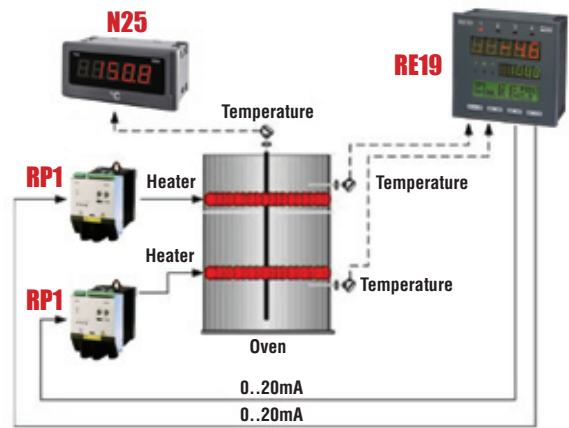


APPLICATIONS

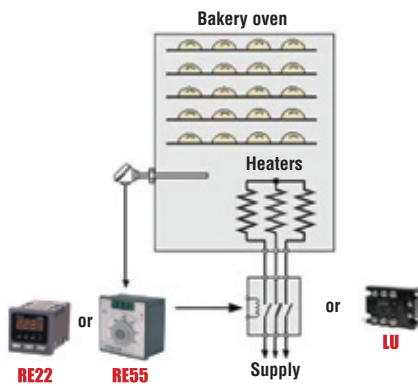
Temperature measurement and control in a water tank



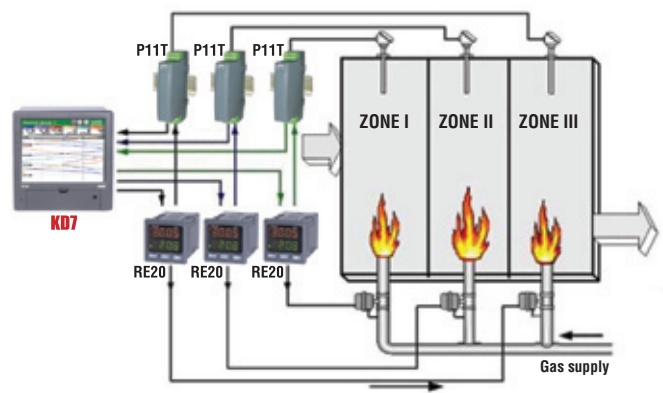
Batch temperature measurement with a smooth heater power control in a hardening furnace



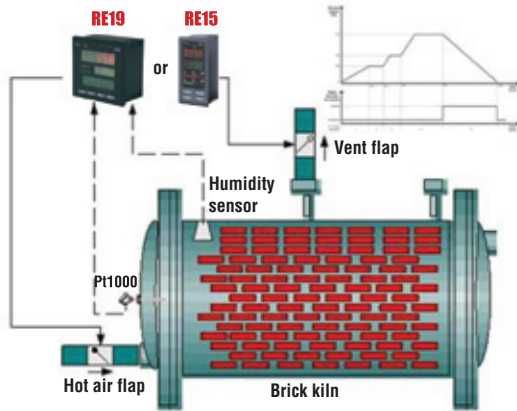
Bakery oven control



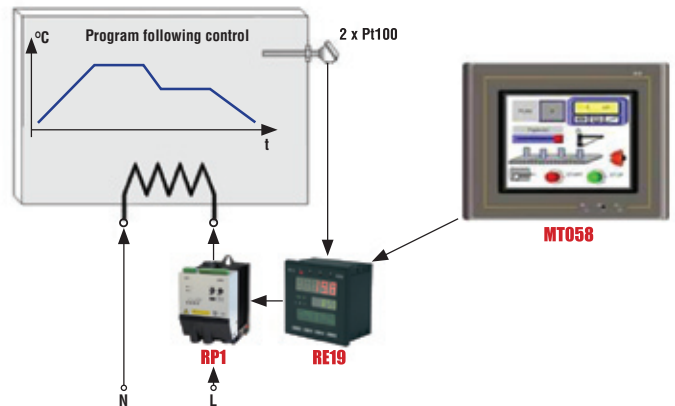
Multi-zone blast furnace control



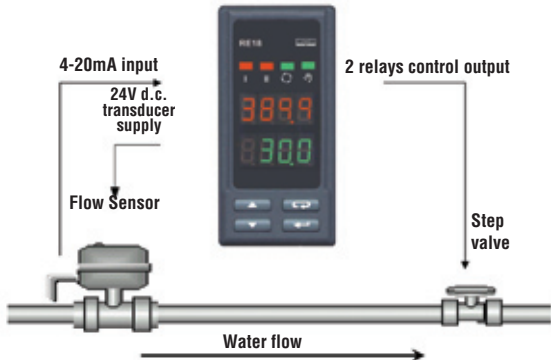
Program following temperature control in a brick burning process



Program following temperature control in a high power oven with electrical heaters



Water flow measurement and 3-stage valve control



Temperature control in an injection mould



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INDUSTRIAL CONTROLLERS - 48x48 MM

TABLE 1. RE71 ORDERING CODES:

RE71 -	XX	X	X	X	X
Input:					
Pt100 (-50..100 °C)	01				
Pt100 (0..250 °C)	02				
Pt100 (0..600 °C)	03				
Thermocouple J (Fe-CuNi)(0...250°C)	04				
Thermocouple J (Fe-CuNi)(0...600°C)	05				
Thermocouple J (Fe-CuNi)(0...900°C)	06				
Thermocouple K (NiCr-NiAl)(0...600°C)	07				
Thermocouple K (NiCr-NiAl)(0...900°C)	08				
Thermocouple K (NiCr-NiAl)(0...1300°C)	09				
Thermocouple S (PtRh10-Pt)(0...1600°C)	10				
Output:					
relay	1				
logic 0/6 V for SSR control	2				
Version:					
standard		00			
custom-made*			XX		
Language:					
Polish				P	
English					E
other*					X
Acceptance tests:					
without extra requirements					0
with an extra quality inspection certificate					1
acc. to customer's request*					X

TABLE 2. RE20 ORDERING CODES:

RE20 -	X	X	X	X	X	XX	X
Input:							
resistance thermometers	1						
thermocouples	2						
current 0/4..20 mA and voltage 0..5/10 V	3						
Main output:							
relay	1						
logic, voltage 0/15 V	2						
current 0/4..20 mA	3						
voltage 0..5 V	4						
voltage 0..10 V	5						
Auxiliary output:							
without output		0					
relay		1					
logic, voltage 0/15 V		2					
continous, current 0/4..20 mA		3					
continous, voltage 0..5 V		4					
continous, voltage 0..10 V		5					
Interface:							
without interface						0	
RS-485 with MODBUS protocol							1
Supply:							
85..253 V a.c./d.c.							1
20..40 V a.c./d.c.							2
Version:							
standard							00
custom-made*							XX
Acceptance tests:							
without extra requirements							8
with an extra quality inspection certificate							7
acc. to customer's request*							X

TABLE 3. RE26 ORDERING CODES:

RE26 -	X	X	X	X	X
Input:					
universal for thermocouples and resistance thermometers	1				
universal: - current: 0/4..20 mA - voltage: 0..5/10V	2				
Main output:					
relay output	1				
transistor OC output	2				
triac output	3				
Auxiliary output:					
without output		0			
relay output		1			
transistor OC output		2			
Supply:					
85..253 V a.c./d.c.					1
20..40 V a.c./d.c.					2
Acceptance tests:					
without extra requirements					8
with an extra quality inspection certificate					7
acc. to customer's request*					X

TABLE 4. RE23 ORDERING CODES:

RE23 -	X	X	X	X
Input:				
universal for thermocouples and resistance thermometers	1			
universal: - current: 0/4..20 mA - voltage: 0..5/10V	2			
Output:				
relay	1			
logic 0/5 V for SSR control	2			
Supply:				
230 V 50/60 Hz				1
110 V 50/60 Hz				2
24 V 50/60 Hz				3
Acceptance tests:				
without extra requirements				8
with an extra quality inspection certificate				7
acc. to customer's request*				X

* - After agreeing with manufacturer

INDUSTRIAL CONTROLLERS - 48x96 MM

TABLE 5. RE81 ORDERING CODES:

RE81 -	XX	X	X	X	X
Input:					
Pt100 (-50..100 °C)	01				
Pt100 (0..250 °C)	02				
Pt100 (0..600 °C)	03				
Thermocouple J (Fe-CuNi)(0...250°C)	04				
Thermocouple J (Fe-CuNi)(0...600°C)	05				
Thermocouple J (Fe-CuNi)(0...900°C)	06				
Thermocouple K (NiCr-NiAl)(0...600°C)	07				
Thermocouple K (NiCr-NiAl)(0...900°C)	08				
Thermocouple K (NiCr-NiAl)(0...1300°C)	09				
Thermocouple S (PtRh10-Pt)(0...1600°C)	10				
Output:					
relay	1				
logic 0/6 V for SSR control	2				
Version:					
standard					00
custom-made*					XX
Language:					
Polish					P
English					E
other*					X
Acceptance tests:					
without extra requirements					0
with an extra quality inspection certificate					1
acc. to customer's request*					X

TABLE 6. RE15 ORDERING CODES:

RE15 -	X	X	X	X	X	XX	X
Input:							
universal input	1						
Auxiliary input:							
without input		0					
current 0/4..20 mA		1					
voltage 0..5/10V		2					
potentiometric transmitter: 0..100		3					
potentiometric transmitter: 0..1000		4					
Outputs:							
4 relays, change-over relays		1					
4 OC transistor		2					
1 logic 0/19 V + 3 relays		3					
1 analog output + 3 relays		4					
1 analog output + 3 OC transistors		5					
2 analog outputs + 2 relays		6					
2 analog outputs + 2 OC transistors		7					
Interface:							
without interface						0	
RS-485 with MODBUS protocol							1
Supply:							
90..254 V a.c./d.c.							1
20..40 V a.c./d.c.							2
Version:							
standard							00
custom-made*							99
Acceptance tests:							
without extra requirements							8
with an extra quality inspection certificate							7
acc. to customer's request*							X

* - After agreeing with manufacturer

POWER CONTOLLERS

TABLE 7. RP6 ORDERING CODES:

RP6 -	X	X	XX	X
Maximal output current:				
5 A	1			
10 A	2			
15 A	3			
Output signal and kind of control				
impulse, on-off control without switching on at zero	1			
impulse, on-off control with switching on at zero	2			
continuous, impulse with variable impulse frequency	3			
Version:				
standard				00
custom-made*				XX
Acceptance tests:				
without extra requirements				8
with an extra quality inspection certificate				7
acc. to customer's request*				X

TABLE 8. RP1 ORDERING CODES:

RP1 -	X	X	X
Maximal output current:			
25 A	1		
40 A	2		
70 A	3		
125 A	4		
Gate triggering system (GTS):			
supply voltage 85..115..135 V a.c.	1		
supply voltage 195..230..253 V a.c.	2		
Acceptance tests:			
without extra requirements			8
with an extra quality inspection certificate			7
acc. to customer's request*			X

TABLE 9. RP7 ORDERING CODES:

RP7 -	X	X	X
Maximal output current:			
5 A	1		
10 A	2		
15 A	3		
Version:			
standard			0
Acceptance tests:			
without extra requirements			8
with an extra quality inspection certificate			7

TABLE 10. RP3 ORDERING CODES:

RP3 -	X	X
Maximal output current:		
40 A	1	
70 A	2	
125 A	3	
200 A	4	
300 A	5	
450 A	6	
Acceptance tests:		
without extra requirements		8
with an extra quality inspection certificate		7
acc. to customer's request*		X

* - After agreeing with manufacturer

INDUSTRIAL CONTROLLERS - 96x96 MM

TABLE 11. RE55 ORDERING CODES:

RE55 -	XX	X	X	XX	X
Input:					
Pt100 (-50..100 °C)	01				
Pt100 (0..100 °C)	02				
Pt100 (0..150 °C)	03				
Pt100 (0..250 °C)	04				
Pt100 (0..400 °C)	05				
Pt100 (0..600 °C)	06				
Thermocouple J - Fe-CuNi (0..250 °C)	07				
Thermocouple J - Fe-CuNi (0..400 °C)	08				
Thermocouple J - Fe-CuNi (0..600 °C)	09				
Thermocouple J - Fe-CuNi (0..900 °C)	10				
Thermocouple K - NiCr-NiAl (0..600 °C)	12				
Thermocouple K - NiCr-NiAl (0..900 °C)	13				
Thermocouple K - NiCr-NiAl (0..1300 °C)	14				
Thermocouple S - PtRh10-Pr (0..1600 °C)	15				
Kind of controller version:					
on-off controller		1			
PID controller		2			
PID controller configurable by buttons and with alarm output		3			
Control output:					
relay		1			
logic, voltage 0/5 V		2			
Version:					
standard				00	
custom-made*				99	
Acceptance tests:					
without extra requirements					8
with an extra quality inspection certificate					7
acc. to customer's request*					X

TABLE 12. RE19 ORDERING CODES:

RE19 -	X	X	X	X	X	X
Option:						
for valve control		V				
for standard control or with setpoint programmer		P				
Auxiliary input:						
without input				0		
current: 0/4..20 mA				1		
voltage: 0..10 V, 0..5 V, 1..5 V						
potentiometric transmitter: 100 Ω				2		
potentiometric transmitter: 1000 Ω						
Outputs:						
4 relays					1	
4 OC transistors					2	
1 transistor 0/15 V + 3 relays					3	
2 transistors 0/15 V + 2 relays					4	
1 analog output + 3 relays					5	
1 analog output + 3 OC transistors					6	
2 analog outputs + 2 relays					7	
2 analog outputs + 2 OC transistors					8	
Interface:						
without interface						0
RS-485 with MODBUS protocol						1
Supply:						
85..253 V a.c./d.c.						1
18..30 V d.c.						2
Acceptance tests:						
without extra requirements						8
with an extra quality inspection certificate						7
acc. to customer's request*						X

* - After agreeing with manufacturer

RE60 RAIL MOUNTED CONTROLLER, SR11 CONTROLLER WITH CONNECTION AND SOCKETS SETS

TABLE 13. RE60 ORDERING CODES:

RE60 -	XX	X	X	X	X
Input:					
Pt100 (-50..100 °C)	01				
Pt100 (0..250 °C)	02				
Pt100 (0..600 °C)	03				
Thermocouple J - Fe-CuNi (0..250 °C)	04				
Thermocouple J - Fe-CuNi (0..600 °C)	05				
Thermocouple J - Fe-CuNi (0..900 °C)	06				
Thermocouple K - NiCr-NiAl (0..600 °C)	07				
Thermocouple K - NiCr-NiAl (0..900 °C)	08				
Thermocouple K - NiCr-NiAl (0..1300 °C)	09				
Thermocouple S - PtRh10-Pr (0..1600 °C)	10				
Main output:					
relay		1			
logic 0/5 V for SSR control		2			
Alarm outputs:					
without outputs				0	
1 relay				1	
2 relays				2	
Supply:					
230 V a.c. 50/60 Hz					1
110 V a.c. 50/60 Hz					2
24 V a.c. 50/60 Hz					3
18..27 V d.c.					4
Acceptance tests:					
without extra requirements					8
with an extra quality inspection certificate					7
acc. to customer's request*					X

TABLE 14. SR11 ORDERING CODES:

SR11 -	X	X	X	X	X
Housing dimensions:					
housing width: 77.5 mm		1			
number of controllers: 1					
housing width: 215 mm		3			
number of controllers: 2 or 3					
housing width: 365 mm		6			
number of controllers: 4, 5 or 6					
housing width: 465 mm		8			
number of controllers: 7 or 8					
Number of controllers:					
1 controller		1			
2 controllers		2			
3 controllers		3			
4 controllers		4			
5 controllers		5			
6 controllers		6			
7 controllers		7			
8 controllers		8			
Interface:					
without interface				0	
RS-485 with MODBUS protocol				1	
Mould connectors:					
Common connectors for thermocouples and heaters					1
Separate connectors for thermocouples and heaters					2
Acceptance tests:					
without extra requirements					8
with an extra quality inspection certificate					7
acc. to customer's request*					X

TABLE 15. ZP11 ORDERING CODES:

ZP11 -	X	X	X
Kind of system:			
SR11 with 1 controller.			
1 common cable for thermocouples and heaters		1	
SR11 with 2, 3, 4, 5, 6 or 7 controllers			
1 common cable for thermocouples and heaters		2	
SR11 with 4, 5 or 6 controllers			
1 cable for thermocouples		3	
SR11 with 4, 5 or 6 controllers			
1 cable for heaters		4	
SR11 with 7 or 8 controllers			
1 cable for thermocouples		5	
SR11 with 7 or 8 controllers			
1 cable for heaters		6	
Cable length:			
3 m			1
6 m			2
Acceptance tests:			
without extra requirements			8
with an extra quality inspection certificate			7
acc. to customer's request*			X

TABLE 16. GP11 ORDERING CODES:

GP11 -	X
Kind of socket:	
1 male socket for the mould, for the ZP11 - 1XX connection set	1
1 male socket for the mould, for the ZP11-2XX, ZP11-4XX and ZP11-6XX connection set	2
1 female socket for the mould for the ZP11-3XX and ZP11-5XX connection set	3

* - After agreeing with manufacturer

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or contact with our Export Department - contact details can be found at the end of this leaflet.