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CONTROL EQUIPMENT

Regardless of the temperature control equipment standard; have specific tools to regulate and control the infrared emitters.

TQD TEMPERATURE CONTROLLER



Din format 96x96 mm depth 78 mm.
Digital display..
Each type of controller include a Thermocouple Input (NiCrNi Type K) and Thermocouple break detection..
Voltage 230V + 10% - 15% 48-62 Hz . 3,5 VA

Model	Output
TQD 110 A	PID Control Strategy 1 closer 250 V AC max. 5 A
TQD 120 A	PID Control Strategy 12V biestable ouput max 20 mA
TQD 290 A	PID Control Strategy 0-10V DC continuos Output max 20 mA

TC 303 TEMPERATURE CONTROLLER



Din format 96x96 mm depth 78 mm..
Universal Microprocessor controller
Programmable Input as Pt 100 Thermocouple (J,K,S) 0...20 mA, 4...20 mA. 0...10Vcc
Range: depending on the input signal.
Up to 3 output relays and voltage outputs for SSR or thyristor (0 .. 10V)
RS 485 communication Chance
Voltage 230V + 10% - 15% 48-62 Hz . 3,5 VA

Model	Description
TC 303	Universal Microprocessor controller

TRD 1 ELSTEIN TEMPERATURE CONTROLLER



Type: two point controller with PID performance
No. of switching units: max. 6 TSE per controller
Temperature sensor: NiCr-Ni + 16 further types
Control range: up to 1100 °C
Setpoint setting: in 1 °C steps, 4 setpoint values, distant access
Outputs: 2 x 0/12 V DC bi-stable load max. 30 mA and 2 relay outputs
Supply voltage: 95 V - 263 V, 48/63 Hz
Measuring circ. monit.: outputs are switched off in case of break of sensor
Perm. ambient temp.: 0 - 55 °C
Perm. air humidity: < 90%
Setpoint value display: LCD 14.0 mm, green
Actual value display: LCD 19.7 mm, red
Degree of protection: front side IP 65, rear side IP 20
Connections: screwed terminals
Installed position: any
Dimensions: DIN format 96 x 96 mm

Model	Description
TRD 1	Universal Microprocessor controller

SQER PULSE GENERATOR



Din format 48x48 mm depth 120 mm...
Pulse Generator with the following features:.
Output Relay 250 V AC max. 2 A + Output 18 V DC max. 40 mA 2 Hz
Range 0-99 %
Led indicator
Terms of 0 ... 50 ° C / 75% humidity non-condensing
Voltage 24V ac/cc +6% -15% 48 / 62 Hz
Reverse polarity protection
Noryl SE1 GFN2 box self-extinguishing, black
rotection against vibrations 40.046 DIN IEC 68-2-29

Model	Description
SQER 1	Pulse Generator

HW 17 ELECTRONIC TEMPERATURE LIMITER



TECHNICAL DATA	
Device type	Limit controller / monitor
Input	Selectable, Pt100, TCK, TCJ, TCS, 4...20 mA, 0...10V
Limit range	-200 / 1760 °C dependent on sensor type
Limit value adjustment	3 indicatig dials for screwdrivers
Output	Relay 250V 3A (change over contact)
Protection category	IP 20
Dimensions	22,5 x 75 x 105 mm
Mounting	On 35mm mounting rails

Model	Voltage
HW 17 230	230 Vca / 115 Vca
HW 17 24	24 Vcc

HCC-05 CURRENT MONITORING MODUL



Auxiliary voltage	24 Vcc ± 25% (polarity reversal protection installed) 18 Vca ± 20%
Current consumption	25 mA (without alarm load)
Line frequency	50 / 60Hz
Current range	1 a 50A elctrically isolated from the auxiliary voltage
Monitoring set-point value	Comp.. set-point value elctrically isolated from the auxiliary
Monitoring window	±2% of the current setting
Compensation	1% of the current setting
Operating range	Current monitor: 4 a 100% Heating-circuit monitor 5 a 95%
Cycle time	1 s
Biestable control input	elctrically isolated from the auxiliary voltage switch-on level 4 – 35Vcc max. 4,7 mA switch-off level 1Vcc (polarity reversal protection installed)
Alarm output 1	Auxiliary voltaje typically 20Vcc max. 100 mA
Alarm output 2	Diode decoupled
Indicator elements	3 leds, gren, yellow, red
Line compensation	230V ca
Storage temperature	-20 a 80 °C
Operating temperature	0 a 60 °C
Degree of protection	DIN 40050 - IP 20
Interference immunity	Complies with DIN – VDU 0843
Dimensions	70 x 50 x 103 mm
Caja	ABS
Weigth	130 g
Installation	2 holes according DIN 46121, or snap-on standard rail according to DIN 46277

PT1 POTENTIAL SEPARATOR MODULE

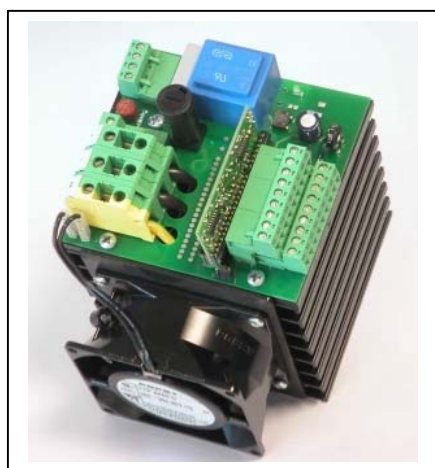


Device for decoupling of thermocouples and controllers in heating arrays with multiple heating zones

Dimensions 100 X 50 X 60 mm Mounting, on 35mm mounting rails
Input / output voltage 0 – 10 Vdc

Modelo	
PT 1	Potential separator module

PCU THYRISTOR CONTROL UNIT FOR OHMIC LOAD



Control electronic: An insert card in SMD-technique consists of all necessary components

Unplugged, before changing cards

All connections apart from load circuit have double plug-type connections to make wiring within the cabinet easy.

Maximum ambient temperature 45 ° C

DIN rail. (The cooling fins should be vertical.)

Use super- agile fuses

Line Voltage	42 - 480 V
Max. continuous Current	50A o 35A as model
Impulse groups	at 1 ó 5 Hz
Inputs	0...10V Potentiometer
	2 Control Inputs 24 V DC (On/Off)
Dimensions	151 x 132 x 140 mm

Model	Current maximum
PCU 50	50A
PCU 25	35A

SOLIDSTATE RELAY



Model TSE

Application resistive loads

Zero crossing switching

Control voltage 4 a 32 Vcc

Mounting on 35mm mounting rails

Integrated Heatsink

Use super- agile fuses

Model	Current maximum	Load voltage maximum	Dimensions
TSE 20 A	20A	265V	23x80x100 mm
TSE 40 A	40A	660V	45x80x100 mm



Model RME

Application resistive loads

Analogic connection (phase angle control)

Current control 4...20 mA

Led indicator variable depending on the input current

Dimensions: 58,2X44,8X26,8 mm

Requires a heatsink according to the power consumed.

Accesories

Heatsinks anchoring DIN rail mounting

Model	Current maximum	Voltage
RM1E23AA25	25A	90 a 280 V
RM1E48AA50	50A	90 a 550 V
RM1E48AA100	100A	90 a 550 V

HLD POWER UNIT FOR HIGH SWITCHING CURRENTS



Power Control Unit. Does not include regulator.
3 models are manufactured for different powers.

TECHNICAL DATA

Model	HLD 20	HLD 35	HLD 50
Switching power	10 / 12 kW	17 / 22 kW	30 / 35 kW
Safety Class	II	II	II
Protection category	IP 65	IP 65	IP 65
Diameter of terminals	2,5 + 4 mm ²	2,5 + 10 mm ²	2,5 + 16 mm ²
Case dimensions	150 x 200 100 mm	150 x 200 x 100 mm	160 x 240 x 120 mm
Material case	ABS / Polycarbonate	ABS / Polycarbonate	ABS / Polycarbonate

CONTROL CABINETS



REGULATING EQUIPMENT MANUAL

Manual Control of electric power through a potentiometer.
The power team is made up of solid state relays analogic input control.
Incorporates elements of safety and security.

Standard Models 25 A 1 zone
 4 x 25 A 1 to 4 zones
 6 x 25 A 1 to 6 zones

EQUIPMENT TEMPERATURE REGULATION

Temperature control via a controller and probe
The equipment is made up of power solid state relays.
Incorporates elements of safety and security

Standard Models
 25 A Single phase 230 V 1 regulation stage
 3 x 25 A Single phase 230 V 2 regulation stages (1 probe)
 Three-phase 380 V 1 regulation stage
 6 x 25 A Single phase 230 V
 Three-phase 380 V 1 or 2 stages of regulation (1 probe)

REGULAON EQUIPMENT TEMPERATURE LIMITATION ON THE MANUAL WITH MAXIMUM POWER

Temperature control via a controller and probe
The power team is made up of solid state relays analogic input control..
Using a potentiometer can be adjusted for maximum power solid state relays.
Incorporates elements of safety and security.

Standard Models
 25 A Single phase 230 V 1 regulation stage
 3 x 25 A Single phase 230 V 2 regulation stages (1 probe)
 Three-phase 380 V 1 regulation stage
 6 x 25 A Single phase 230 V
 Three-phase 380 V 1 or 2 stages of regulation (1 probe)

SPECIAL REGULATION EQUIPMENT.

They designed and built control equipment for high powers equipped with thyristors.