

PRODUCT DATA SHEET

Standing: 2022-04-27

LAUDA Integral IN 1830 TW Process thermostat
 400 V; 3/PE; 50 Hz & 460 V; 3/PE; 60 Hz
 Part Number: L002670

Features

- Process thermostat with integrated cooling system for dynamic temperature control within external circuits
- Coloured TFT display for simultaneous indication of actual & set values and graphic illustration of the temperature profile
- Clear text menu navigation, six selectable languages DE, EN, FR, ES, IT, RU
- Management of heat transfer liquids with stored properties
- Easy input via cursor and soft keys. Additional Tmax key for overtemperature protection
- SelfCheck Assistant for system diagnosis
- Fully electronic continuous controller with PID action for internal & external control
- Self adapt function for determination of control parameters
- PowerAdapt system for the use of the maximum possible amount of heat permitted by the power supply system
- Low-level and adjustable over-temperature protection with acoustic alarm for use with flammable and non-flammable liquids
- Extremely powerful pressure pump
- Additional pump for internal circulation
- USB and Ethernet interface equipped as standard
- Port for external Pt100 integrated, second external Pt100 feasible via interface module
- Remote fault indication through floating contact
- Option for upgrading up to 2 additional interfaces (RS 232/485, Profibus, analogue, contact or EtherCAT module)
- Adjustable bypass for pressure limiting
- Digital display of pump pressure
- Programmer with 150 temperature/time segments that can be separated into 5 programs
- Integrated web server for browser based operation in local area networks via PC, tablet or smart phone, secure data transfer due to authentication procedure and encryption



Reserve technical changes

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Geschäftsführer:
 Dr. Gunther Wobser (Vors.), Dr. Mario Englert,
 Dr. Ralf Hermann, Dr. Marc Stricker
 Beirat: Dr. Gerhard Wobser

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Features

- SmartCool system for energy-saving digital cooling management including compressor on-off control
- Condenser cooling Water
- Utilises traditional refrigerants (HFCs) in accordance with European legislation to control F-gases (EU) 517/2014



Working temperature min.
-30 °C



Working temperature max.
150 °C

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Technical Features (according to DIN 12876)

| | |
|---|---|
| Working temperature range | -30 ... 150 °C |
| Ambient temperature range | 5 ... 40 °C |
| Temperature stability | 0.1 ± K |
| Heater power max. | 16 kW |
| Power consumption max. | 18 kW |
| Current max. | 25 A |
| Pump Pressure max. | 5.5 bar (50 Hz); 7.0 bar (60 Hz) |
| Pump flow rate pressure max. | 60 L/min (50 Hz); 70 L/min (60 Hz) |
| In / Outlet connection thread (outside) | M38 x 1,5 |
| Inlet/outlet hose size | 1" |
| Filling volume min. | 9.7 L |
| Filling volume max. | 25.5 L |
| Water cooling connection thread (outside) | 3/4 " |
| Recommended cooling water temperature | 15 °C |
| Cooling water flow rate | 29 L/min |
| Recommended pressure difference cooling water | 3 bar |
| Pressure difference cooling water min. | 0.8 bar |
| Max. pressure difference cooling water | 10 bar |
| Maximal pressure cooling water | 10 bar |
| Overall dimensions (WxDxH) | 760 x 650 x 1605 mm |
| Weight | 244 kg |
| Noise level | 67 dB(A) |
| Refrigerant stage 1 | R-449A (GWP 1397); 2.200 kg; 3.1 t CO ₂ -eq |
| Power supply | 400 V; 3/PE; 50 Hz & 460 V; 3/PE; 60 Hz |
| Power plug | Power cord with plug (IEC 60309, 5-pol, CEE, red, 32 A) |

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| Temperature | Heat transfer liquid | Cooling Capacity 50 Hz | Cooling Capacity 60 Hz |
|-------------|----------------------|------------------------|------------------------|
| 150 °C | Thermal oil | 19 kW | 19 kW |
| 100 °C | Thermal oil | 19 kW | 19 kW |
| 20 °C | Ethanol | 19 kW | 19 kW |
| 10 °C | Ethanol | 15 kW | 15 kW |
| 0 °C | Ethanol | 11.5 kW | 11.5 kW |
| -10 °C | Ethanol | 7.5 kW | 7.5 kW |
| -20 °C | Ethanol | 5 kW | 5 kW |
| -30 °C | Ethanol | 2.7 kW | 2.7 kW |

Standard accessories

- 2 nipples 1" with screw cap M38 x 1,5 for pump connectors
- 2 nipples 1/2" with screw cap G3/4 for cooling water

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