

tico 735



FEATURES

Process Indicator with Dual-Colour Display in DIN size 48 x 96 mm

COUNTING - MEASURING - INDICATING - MONITORING - TRANSMITTING

Because of the unlimited number of measurements it can handle, the **tico 735** device family is equally well suited to applications in the world of impulse and time counting as to those in the processing area.

If you are looking for display clarity and high levels of accuracy, then the **tico 735** is the right choice for you. The dual-colour display is unique, highlighting an alarm situation or an excess value at a single glance. You can program your own choice of display colour to indicate normal or alarm conditions.

- Brilliant 18.5 mm high dual-colour red/green LED display with programmable colour settings
- As standard, all models have limit or preset values
- Scaling available as standard
- Universal Power Supply 90...264 V AC or 20...50 V AC/DC
- Simple structured operation with switchable help function

- External Program Lockout
- DIN housing 48 x 96 mm, mounting depth < 100 mm
- Conveniently sized Screw Terminals
- Large keys offer safety and ease of operation

- NPN and Relay Outputs
- High measurement rate
- Analogue versions can be user-calibrated according to BS 4937, IEC 584 R ISO 9001
- Option: Linear output 0/4-20 mA, 0/1-5 V, 0/2-10 V, 10 bit resolution
- Option: RS 485 ASCII protocol serial interface for all versions. "Remote Display" version receives process values over RS 485
- Option: Control input for Tara function or program disable

Version Overview

tico 735

Process Indicators



Five digit display – Flexible Configuration – High Accuracy

Practically all analogue measurement tasks, particularly reliable process monitoring, can be solved with just 5 basic versions. Alarm and output functions can be programmed to meet your requirements, enabling band alarm or limit values, with or without storage feature.

With the optional linear output, you can integrate the tico 735 into process visualisation or control systems as it can then function as a transmitter.

DC PROZESS

Evaluation, Features	Value Ranges
High Accuracy	0.01 %
Input Ranges programmable	0/4-20 mA, 10-50 mA, 0/2-10 V, 0/1-5 V, ± 100 mV, ± 1 V, ± 10 V
Non-Linear Scaling up to 10 points	-19999...99999
Process Offset Value	-19999...99999
Elapsed time of Alarm1 (Seconds)	0...99999
Totalising of Process Values by interval	seconds, minutes, hours
Option: Tare function -> Process Offset	-19999...99999

TEMPERATURE

High Accuracy	0.1 %
Input Ranges programmable	J, T, K, N, B, R, S, PT100
Sensor break detection	2 seconds max
Input Range can be trimmed	Range min to Range max
Elapsed time of Alarm 1 (Seconds)	0...99999

DC VOLT/AMPS

High Accuracy	0.1%
DC Volt range	100 mV...600 V
DC Amps range	1 mA ...1 A, 2 A with shunt
Process Offset	-19999...99999
Elapsed time of Alarm1 (Seconds)	0...99999

AC VOLT/AMS (RMS)

AC Volt range	1 V...600 V
AC Amps range	1 mA ...1 A
Process Offset	-19999...99999
Elapsed time of Alarm1 (Seconds)	0...99999

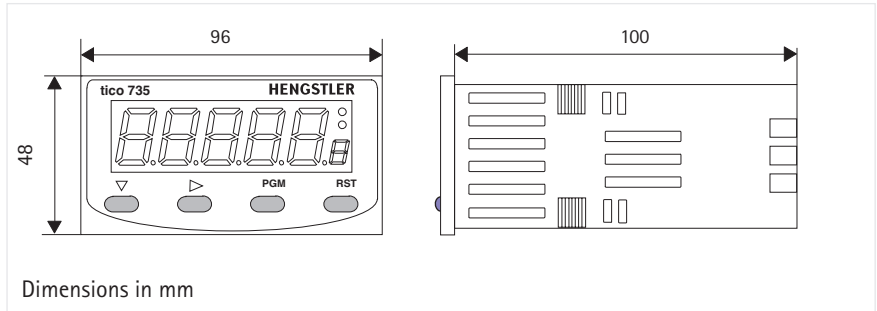
REMOTE DISPLAY

Process value via serial interface	via RS 485 (ASCII)
Alarm 1 and 2 monitored autonomously	-19999...99999
Min/Max stored automatically	-19999...99999

tico 735

Technical data

DIMENSIONS



DISPLAY AND KEYBOARD

Primary Display	Red/Green, 7 segment LED, 5 digits, height 18.5 mm
Secondary Display	single digit 7 segment LED, height 7 mm, red/green
Output Indicators	2 red LEDs for OUT 1 and OUT 2 status
Keyboard	4 rubber keys for programming and manual reset

PHYSICAL

Front Dimensions	DIN 48 mm x 96 mm, 110 mm total depth
Mounting	Front panel mounting (mounting bracket supplied)
Panel Cutout	45 ^{+0.3} mm x 92 ^{+0.3} mm, panel thickness max 12 mm
Construction	Front carrier with PCBs can be pulled out
Terminals	Screw Type (combination head)

OPERATING CONDITIONS

Power Supply	90 - 264 V AC 50/60 Hz (electrically separated from all inputs and outputs) or 20...50 V AC / 22...55 V DC
Temperature	Operation: 0 °C to +55 °C (32 °F to 131 °F) Storage: -20 °C to +60 °C (-4 °F to 176 °F)
Relative Humidity	0 to 90 %, non-condensing

APPROVALS

Protection class	Frontpanel IP 66
CE	EN 50082-1/92-95; EN 50081-1/92, -2/94
Safety	DIN EN 61010 part 1; protection according to class II
General	UL, CUL, Overvoltage cat. II, Contamination level 2

OPTION RS 485

Type	RS 485, serial asynchronous, Open ASCII, Master-Slave, up to 99 zones
Parameters	9600...1200 Bd, 1 start, 7 data, 1 stop, even parity

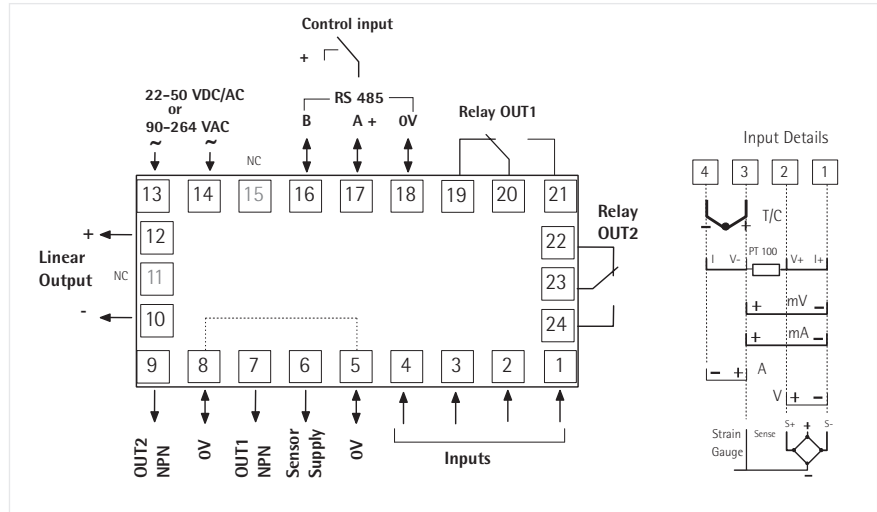
OPTION LINEAR OUTPUT

Insulation	optically isolated, 250 V AC or 400 V DC from all inputs and outputs
Output Ranges	0-20 mA, 4-20 mA, 0-10 V, 2-10 V, 0-5 V, 1-5 V
Accuracy	± 0.25 % (mA on 250 Ohms, V at 2 kOhm); Deviation ± 0.5 %
Resolution	8 bits after 250 ms (10 bits after 1000 ms typically)
Updates	approx. 4 per second
Load	mA: max 500 Ohm, V: min. 500 Ohm

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TERMINALS



SIGNAL INPUTS

General	Common mode rejection > 120 dB at 50/60 Hz; Line voltage rejection > 140 dB Series mode rejection up to 500 % of span Temperature coefficient: ± 25 ppm / °C
Calibration	according to BS 4937, NBS 125 and IEC 584 (all units are factory calibrated)

OUTPUTS

OUT1 NPN	Open Collector; max 30 V DC; max 100 mA
OUT2 NPN	response time < 75 µs
Relay 1, Relays 2 (opt.)	Changeover (Form C); 240 V AC / 3A or 110 V AC / 5 A; pull-in time 8 ms
Auxiliary Power	24 V DC, 30 mA max for strain gauge: 5 V DC or 10 V DC, 60 mA max

OPTION CONTROL INPUT (not with Option RS 485)

NPN	High ≥ 3.0 V or open, Low < 2.0 V; 4.7 kOhm to V+ reponse time 25 ms
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SPECIAL FEATURES

- Programmable display colour for normal and alarm operation
- Alarm programmable as high or low; can be deactivated or blocked
- Output signals programmable; can be inverted and/or stored
- Process offset
- Display filter programmable up to 100 sec.
- Tare function and non-linear scaling with 0735 A2 and 0735 A6
- Optional Linear Output
- Optional Tara function or program disable

ORDERUNG DATA

Type 0735 A	Output Relay 2 0 none 1 with Relay 2	Interface 0 none 5 with RS 485 6 Digital Input
0 7 3 5 A		
Function 1 Temperature 2 DC Process 3 AC Volt/Ampere 5 DC Volt/Ampere 7 Remote Display	Linear Output 0 none 3 with 4-20 mA	Power Supply 0 90...264 V AC 2 20...50 V AC or 22...55 V DC
	Option module Relay 2 Linear output RS 485 interface Digital input	Ordering code 1 901 001 1 901 003 1 901 004 1 901 005

Indicators