

Digital Indicator for Panel Mounting Model DI35

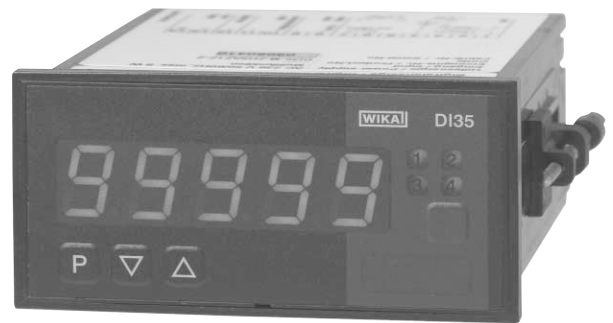
WIKA Data Sheet AC 80.03

Applications

- Plant construction
- Machine tools
- Test benches
- Level measurement
- General industrial applications

Special Features

- Multi-function input (29 calibrated input configurations) or double input (0 ... 10 V, 0/4 ... 20 mA) with calculation function
- Accuracy between $\pm 0.01\%$ and 0.1% FS ± 1 digit
- Linearisation with up to 30 points possible
- Min. / max. value storage
- Up to 4 fully programmable alarm outputs (optional)



Digital Indicator Model DI35

Description

The digital indicator DI35 is a multi-function and highly accurate digital indicator for a wide variety of measuring tasks. Two basic versions are available.

Version DI35-M with multi-function input has 29 different calibrated input configurations, which can be selected via the terminal configuration and by the selection of the input signal in the instrument configuration.

Version DI35-D features two inputs for standard signals 0/4 ... 20 mA and 0 ... 10 V, which can be combined as required. One of the two input signals, or a value calculated as a function of the two input signals, can be displayed. The four basic arithmetic operators (+ - * /) and an additional constant multiplier are available for calculations on the input signals.

In addition both versions offer the possibility of sensor calibration and linearisation with up to 30 points, thus enabling a further adaptation to many different sensor signals and specific application requirements.

The standard features are completed by the adjustable sampling rate and display time as well as the input offset for the correction of zero offsets or sensor drifts. Brightness adjustment is also included. Unauthorised changes of the set instrument parameters can be prevented by a user-definable code on different user levels.

As an option up to 4 fully programmable alarm outputs, an analogue output signal, a serial interface and a transmitter power supply are available.

All the configuring and programming can be done using the front control keys.

Specifications	Model DI35-M	Model DI35-D
Display		
- Design	7-segment red LED, 5-digit, brightness adjustable in 10 grades	
- Height of digits	14 mm	
- Range	-9999 ... 99999	
Input		
- Number and type	1 multi-function input	2 inputs for current and voltage signal
- Input configuration	Selectable via terminal configuration and menu-driven programming	
{Switch points}		
- Number and type	2 or 4 change-over contacts (relays), fully programmable	
- Load	AC 230 V, 5 A or DC 30 V, 2 A (ohmic load)	
{Analogue output}		
- Output signal	4 ... 20 mA (12-bit), load \leq 500 Ω or 0 ... 20 mA (12-bit), load \leq 500 Ω or 0 ... 10 V (12-bit), load \geq 1 k Ω	
- Error	0.1% in the range 20 °C \leq T _u \leq 40 °C, beyond this value temperature error 50 ppm/K	
- Internal resistance	100 Ω	
{Interface}	RS 232, selectable with or without galvanic isolation or RS 485 (only for point-to-point connection), selectable with or without galvanic isolation	
{Transmitter supply}	DC 24 V, 50 mA	
Power supply	AC 230 V, 50 / 60 Hz, \pm 10 % or {AC 115 V, 50 / 60 Hz, \pm 10 %} or {AC 115 / 230 V, 50 / 60 Hz, \pm 10 % switchable} or {DC 24 V, \pm 10%}	
Power consumption	max. 8 VA	
Electrical connection		
- Max. conductor cross section	2.5 mm ²	
- Input	Terminals 1 - 7	Terminals 2 - 7
- {Analogue output}	Terminals 8 - 9	Terminals 8 - 9
- {Transmitter supply}	Terminals 10 - 11	Terminals 10 - 11
- Power supply	Terminals 13 - 14 (fixed 14-fold screw terminal)	Terminals 13 - 14 (detachable 14-fold screw terminal)
- {Switch points}	Terminals 21 - 32 (detachable 12-fold screw terminal)	
- {Serial interface}	Terminals 41 - 43 (detachable 3-fold screw terminal)	
Ambient conditions		
- Working temperature	0 °C ... 60 °C	
- Storage temperature	-20 °C ... +80 °C	
- Humidity	Average annual relative humidity \leq 75 % non-condensing	
- Temperature error	50 ppm/K, at ambient temperature T _u < 20 °C or > 40 °C	
CE-conformity	Conformity in accordance with 89/336/EWG Interference emission and interference compatibility see EN 61326	
Case		
- Material	PC, ABS-Blend, black, UL 94V-0	
- Ingress protection	Front: IP 54, {IP 65}; Back: IP 00 (per IEC 60529 / EN 60529)	
- Weight	Approx. 450 g	
- Mounting	Snap-fit screw elements for a wall thickness of up to 50 mm	

{ } Items in curved brackets are optional extras for additional price.

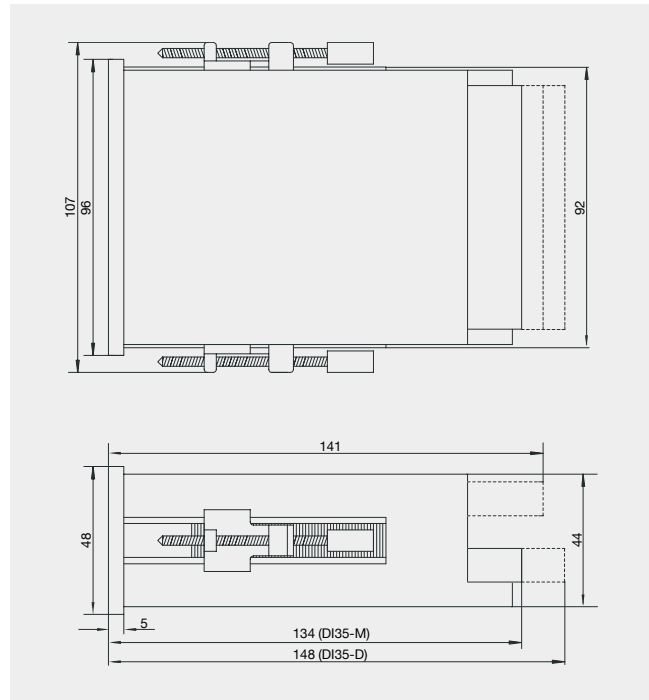
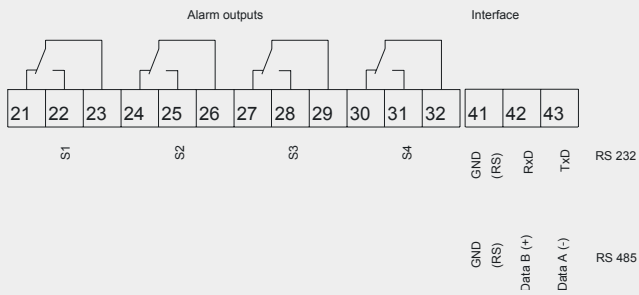
Inputs with factory calibration	Span	Measuring error in [%] of the span (meas. time 1 s)	Minimum measuring time		
			DI35-M	DI35-D	
		20 °C ≤ T _u ≤ 40 °C		One-channel	Two-channel
Current signals	0 ... 20 mA	0.02 ± 1 Digit	0.02 s	0.1 s	0.2 s
	4 ... 20 mA	0.02 ± 1 Digit	0.02 s	0.1 s	0.2 s
Voltage signals	0 ... 10 V	0.01 ± 1 Digit	0.02 s	0.1 s	0.2 s
	0 ... 5 V	0.02 ± 1 Digit	0.02 s	-	-
	0 ... 2500 mV	0.03 ± 1 Digit	0.02 s	-	-
	0 ... 1250 mV	0.03 ± 1 Digit	0.02 s	-	-
	0 ... 600 mV	0.03 ± 1 Digit	0.02 s	-	-
	0 ... 300 mV	0.03 ± 1 Digit	0.02 s	-	-
	0 ... 150 mV	0.03 ± 1 Digit	0.02 s	-	-
	0 ... 75 mV	0.04 ± 1 Digit	0.02 s	-	-
	0 ... 35 mV	0.06 ± 1 Digit	0.02 s	-	-
	0 ... 18 mV	0.06 ± 1 Digit	0.02 s	-	-
Thermocouples					
Type B	100 °C ... 1810 °C	0.10 ± 1 K	0.04 s	-	-
Type E	-260 °C ... +1000 °C	0.06 ± 1 K	0.04 s	-	-
Type J	-210 °C ... +1200 °C	0.05 ± 1 K	0.04 s	-	-
Type K	-250 °C ... +1271 °C	0.05 ± 1 K	0.04 s	-	-
Type L	-200 °C ... +900 °C	0.06 ± 1 K	0.04 s	-	-
Type N	-250 °C ... +1300 °C	0.06 ± 1 K	0.04 s	-	-
Type R	0 °C ... 1767 °C	0.07 ± 1 K	0.04 s	-	-
Type S	0 °C ... 1767 °C	0.06 ± 1 K	0.04 s	-	-
Type T	-240 °C ... +400 °C	0.07 ± 1 K	0.04 s	-	-
Resistance thermometers					
PT100 (2/4-wire)	-200 °C ... +850 °C	0.04 ± 1 Digit	0.04 s	-	-
PT100 (3-wire)	-200 °C ... +850 °C	0.04 ± 1 Digit	0.06 s	-	-
PT200 (2/4-wire)	-200 °C ... +850 °C	0.04 ± 1 Digit	0.04 s	-	-
PT200 (3-wire)	-200 °C ... +850 °C	0.04 ± 1 Digit	0.06 s	-	-
PT500 (2/4-wire)	-200 °C ... +850 °C	0.04 ± 1 Digit	0.04 s	-	-
PT500 (3-wire)	-200 °C ... +850 °C	0.04 ± 1 Digit	0.06 s	-	-
PT1000 (2/4-wire)	-200 °C ... +850 °C	0.04 ± 1 Digit	0.04 s	-	-
PT1000 (3-wire)	-200 °C ... +850 °C	0.04 ± 1 Digit	0.06 s	-	-

Inputs for sensor calibration	Span	Measuring error in [%] of the span (meas. time 1 s)	Minimum measuring time		
			DI35-M	DI35-D	
		20 °C ≤ T _u ≤ 40 °C		One-channel	Two-channel
Current signals	0/4 ... 20 mA	0.02 ± 1 Digit	0.02 s	0.1 s	0.2 s
	0 ... 5 mA	0.02 ± 1 Digit	0.02 s	-	-
	0 ... 2 mA	0.02 ± 1 Digit	0.02 s	-	-
Voltage signals	-1 ... +10 V	0.01 ± 1 Digit	0.02 s	0.1 s	0.2 s
	-1 ... +5 V	0.02 ± 1 Digit	0.02 s	-	-
	-500 ... +2500 mV	0.03 ± 1 Digit	0.02 s	-	-
	-500 ... +1250 mV	0.03 ± 1 Digit	0.02 s	-	-
	-500 ... + 600 mV	0.03 ± 1 Digit	0.02 s	-	-
	± 300 mV	0.03 ± 1 Digit	0.02 s	-	-
	± 150 mV	0.03 ± 1 Digit	0.02 s	-	-
	± 75 mV	0.04 ± 1 Digit	0.02 s	-	-
	± 35 mV	0.06 ± 1 Digit	0.02 s	-	-
	± 18 mV	0.06 ± 1 Digit	0.02 s	-	-
Resistance					
≤ 100 Ω (2/4-wire)	0 Ω ... 100 Ω	0.04 ± 1 Digit	0.04 s	-	-
≤ 1 kΩ (2/4-wire)	0 Ω ... 1 kΩ	0.04 ± 1 Digit	0.04 s	-	-
≤ 10 kΩ (2/4-wire)	0 Ω ... 10 kΩ	0.04 ± 1 Digit	0.04 s	-	-

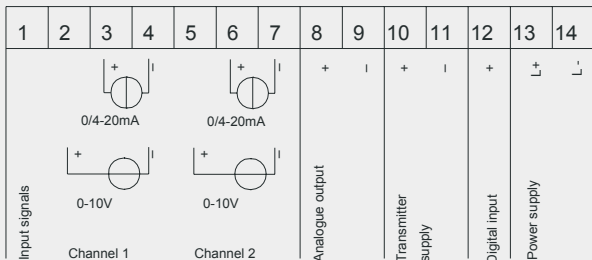
Designation of terminal connectors

Dimensions in mm

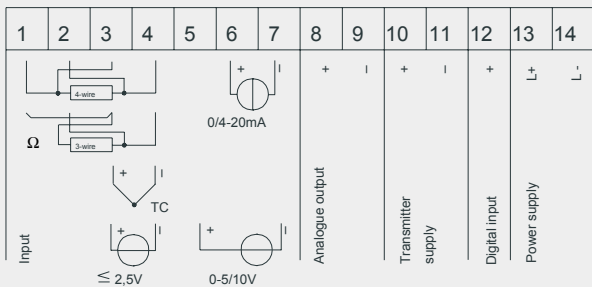
Top terminal strip



Bottom terminal strip for DI35-D



Bottom terminal strip for DI35-M



Modifications may take place and materials specified may be replaced by others without prior notice.
Specifications and dimensions given in this leaflet represent the state of engineering at the time of printing.

