LDI
Технические характеристики

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Томск (3822)98-41-53
Тула (4872)74-02-29
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Panel Meters and Controllers
DC Ammeter and Voltmeter
Type LDI3 AV6

- **3-dgt µP-based indicator for DC currents or voltages**
- **Selectable input range**
- **48 x 96 mm**
- **Degree of protection (front): IP 50 (IP 65 on request)**

Product Description

3-dgt multi-range µP-based meter for DC current and voltage measurements. With 18 selectable input ranges. Ensures a degree of protection (front) of IP 50 (IP 65 on request).

Ordering Key

LDI3AV6D0XXXX

- **Model**
- **Range code**
- **Power supply**
- **Setpoints**
- **Engineering unit**
- **Option**

Type Selection

Power supply		Options	
A:	24 VAC, -15% +10%, 50/60 Hz [1]	**XX:**	None (standard)
B:	48 VAC, -15% +10%, 50/60 Hz [1]	**IX:**	Degree of protection IP 65
C:	115 VAC, -15% +10%, 50/60 Hz [1]	**XT:**	Tropicalization
D:	230 VAC, -15% +10%, 50/60 Hz (standard)		

[1] Power supply on request

Supply Specifications

AC supply	230 VAC, -15% +10%, 50/60 Hz (standard) 24 VAC, 48 VAC, 115 VAC, -15% +10%, 50/60 Hz (on request)
Power consumption	3.2 VA

Input Specifications

Rated input	1 A/60 mV/100 V/500 VDC
Overload protection	
Cont. Current:	1.2 x rated input
Voltage:	1.2 x rated input
For 1s Current:	5 x rated input
Voltage:	2 x rated input
Accuracy (@ 25°C ± 5°C, R.H. ≤ 60%)	± 0.5% f.s., ± 1 dgt
Temperature drift	± 350 ppm/°C
Display	7-segment LED, h 14.2 mm, 3 digits
Sampling rate	1 time/s
Indication	
Max.	999
Min.	-99
Over range:	EEE
Under range:	-EE
Input range selection	DIP-switch selectable
Decimal point position	DIP-switch selectable

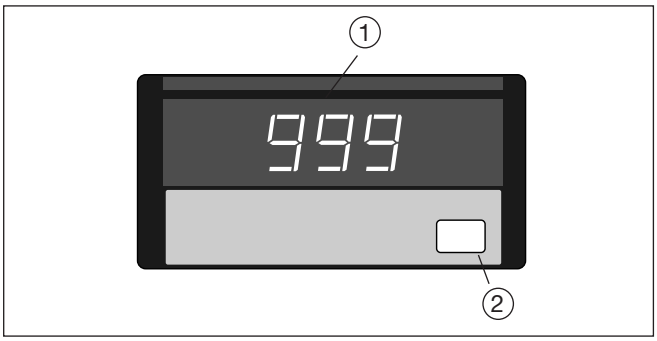
General Specifications

Operating temperature	0° to 50°C (32° to 122°F) (R.H. < 90% non-condensing)
Storage temperature	-10° to 60°C (14° to 140°F) (R.H. < 90% non-condensing)
Insulation reference voltage	300 V_{rms} to ground
Dielectric strength	4000 V_{rms} for 1 minute
Noise rejection	
NMRR	40 dB, 40 to 60 Hz
CMRR	100 dB, 40 to 60 Hz
EMC	IEC 60801-2, IEC 60801-3, IEC 60801-4 (level 2), EN 50 081-1, EN 50 082-1
Safety standards	EN 61 010-1, IEC 61010-1, VDE 0411
Connector	Screw-type
Housing	
Dimensions	1/8 DIN, 48 x 96 x 83 mm
Material	ABS, self-extinguishing: UL 94 V-0
Degree of protection	Front: IP 50 (IP 65 on request)
Weight	Approx 250 g
Approvals	CE, CSA

Range Table

Measure-ment	Connection	Dec. point position	Input impedance/ volt. drop	Resolution	Range code
100 V	Direct	99.9	1 MΩ	0.1 V	**AV6**
500 V	Direct	999	1 MΩ	1 V	**AV6**
1 A	Direct	999	1 V	1 mA	**AV6**
1.5 A	60 mV/1.5 A shunt	9.99	13 kΩ	10 mA	**AV6**
2.5 A	60 mV/2.5 A shunt	9.99	13 kΩ	10 mA	**AV6**
4 A	60 mV/4 A shunt	9.99	13 kΩ	10 mA	**AV6**
6 A	60 mV/6 A shunt	9.99	13 kΩ	10 mA	**AV6**
10 A	60 mV/10 A shunt	9.99	13 kΩ	10 mA	**AV6**
15 A	60 mV/15 A shunt	99.9	13 kΩ	100 mA	**AV6**
25 A	60 mV/25 A shunt	99.9	13 kΩ	100 mA	**AV6**
40 A	60 mV/40 A shunt	99.9	13 kΩ	100 mA	**AV6**
60 A	60 mV/60 A shunt	99.9	13 kΩ	100 mA	**AV6**
100 A	60 mV/100 A shunt	99.9	13 kΩ	100 mA	**AV6**
150 A	60 mV/150 A shunt	999	13 kΩ	1A	**AV6**
250 A	60 mV/250 A shunt	999	13 kΩ	1A	**AV6**
400 A	60 mV/400 A shunt	999	13 kΩ	1A	**AV6**
600 A	60 mV/600 A shunt	999	13 kΩ	1A	**AV6**
1000 A	60 mV/1000 A shunt	999	13 kΩ	1A	**AV6**

Front Panel Description



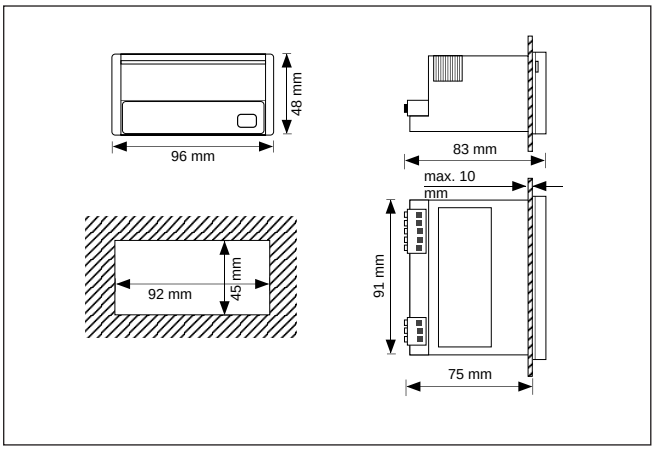
1. Display
3-dgt (maximum read-out 999).

Alphanumeric indication by means of 7-segment display for:
- Displaying of the measured value, over-range.

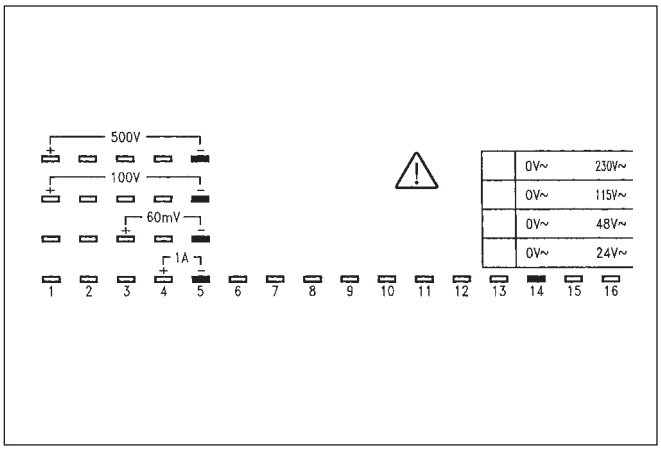
2. Engineering unit
Screen for interchangeable unit label.The symbols in the shaded areas are those available on the set of engineering unit labels supplied with the LDI3 (engineering unit label to be inserted by customer).

	W = 08	MΩ = 16	% = 24	mm HG = 32	cm = 40
mV = 01	kW = 09	Hz = 17	mbar = 25	l/min = 33	m = 41
V = 02	MW = 10	kHz = 18	bar = 26	l/h = 34	kg = 42
kV = 03	var = 11	RPM = 19	psi = 27	kg/min = 35	ppm = 43
µA = 04	kvar = 12	m/s = 20	ata = 28	ton/h = 36	kA = 44
mA = 05	Mvar = 13	m/min = 21	ate = 29	m^3/min = 37	cos ϕ = 45
A = 06	Ω = 14	°C = 22	kg/cm^2 = 30	m^3/h = 38	m^3 = 46
mW = 07	kΩ = 15	°F = 23	mm H_2O = 31	mm = 39	µs = 47

Dimensions



Terminal Board



Panel Meters and Controllers
Autoranging Frequency Meter
Type LDI3 F1K

- **3-dgt µP-based frequency indicator**
- **1.0 to 999 Hz**
- **Autoranging capability**
- **Degree of protection (front): IP 50 (IP 65 on request)**

Product Description

3-dgt µP-based meter for frequency measurements with autoranging capability. Ensures a degree of protection (front) of IP 50 (IP 65 on request).

Ordering Key

LDI3F1KD0XXXX

- **Model**
- **Range code**
- **Power supply**
- **Setpoints**
- **Engineering unit**
- **Option**

Type Selection

Power supply		Options	
A:	24 VAC, -15% +10%, 50/60 Hz [1]	**XX:**	None (standard)
B:	48 VAC, -15% +10%, 50/60 Hz [1]	**IX:**	Degree of protection IP 65
C:	115 VAC, -15% +10%, 50/60 Hz [1]	**XT:**	Tropicalization
D:	230 VAC, -15% +10%, 50/60 Hz (standard)		

[1] Power supply on request

Supply Specifications

AC supply	230 VAC, -15% +10%, 50/60 Hz (standard) 24 VAC, 48 VAC, 115 VAC, -15% +10%, 50/60 Hz (on request)
Power consumption	3.2 VA

Input Specifications

Rated input	500 VAC, 1 to 1000 Hz autoranging
Overload protection Continous For 1s	 1.2 x rated input 2 x rated input
Accuracy (@ 25°C ± 5°C, R.H. ≤ 60%)	 ± 0.1% f.s., ± 1 dgt
Temperature drift	± 100 ppm/°C
Display	7-segment LED, h 14.2 mm, 3 digits
Sampling rate	1 time/s
Indication Max: Min: Over range:	 999 0.00 EEE
Input voltage	9 to 500 VAC,
Input impedance	500 KΩ

General Specifications

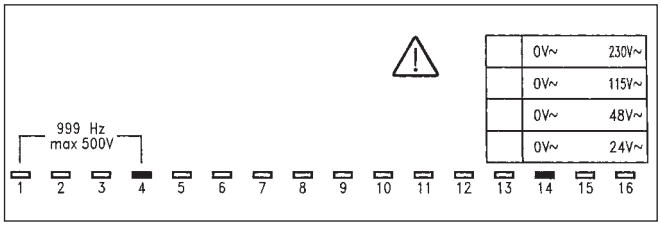
Operating temperature	0 to 50°C (32 to 122°F) (R.H. < 90% non-condensing)
Storage temperature	-10 to 60°C (14 to 140°F) (R.H. < 90% non-condensing)
Insulation reference voltage	300 V_{rms} to ground
Dielectric strength	4000 V_{rms} for 1 m inute
Noise rejection CMRR	 100 dB, 40 Hz to 60 Hz.
EMC	IEC 60801-2, IEC 60801-3, IEC 60801-4 (level 2), EN 50 081-1, EN 50 082-1
Safety standards	EN 61 010-1, IEC 61010-1, VDE 0411
Connector	Screw-type
Housing Dimensions Material	 1/8 DIN, 48 x 96 x 83 mm ABS, self-extinguishing: UL 94 V-0
Degree of protection	Front: IP 50 (standard), IP 65 (on request)
Weight	Approx 250 g
Approvals	CE, CSA

Range Table

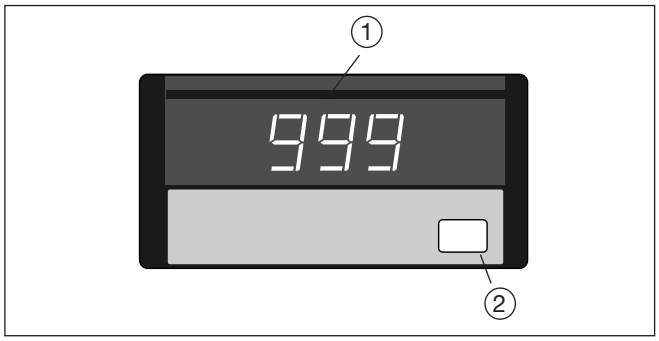
Measurement	Dec. point position	Resolution
1.00 to 9.99 Hz	9.99	0.01 Hz
10.0 to 99.9 Hz	99.9	0.1 Hz
100 to 999 Hz	999	1 Hz

(Automatic selection)

Terminal Board



Front Panel Description



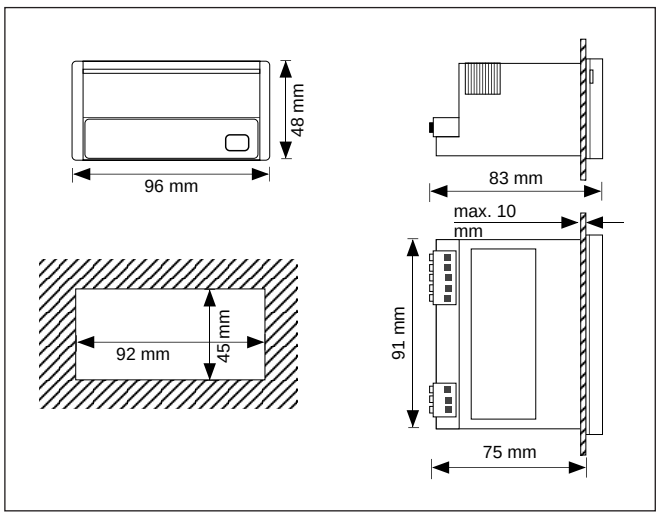
1. **Display**
   3-dgt (maximum read-out 999).

   Alphanumeric indication by means of 7-segment display for:
   - Displaying of the measured value, over-range.

2. **Engineering unit**
   Screen for interchangeable unit label.The symbols in the shaded areas are those available on the set of engineering unit labels supplied with the LDI3 (engineering unit label to be inserted by customer).

	W = 08	MΩ = 16	% = 24	mm HG = 32	cm = 40
mV = 01	kW = 09	Hz = 17	mbar = 25	l/min = 33	m = 41
V = 02	MW = 10	kHz = 18	bar = 26	l/h = 34	kg = 42
kV = 03	var = 11	RPM = 19	psi = 27	kg/min = 35	ppm = 43
µA = 04	kvar = 12	m/s = 20	ata = 28	ton/h = 36	kA = 44
mA = 05	Mvar = 13	m/min = 21	ate = 29	m^3/min = 37	cos ϕ = 45
A = 06	Ω = 14	°C = 22	kg/cm^2 = 30	m^3/h = 38	m^3 = 46
mW = 07	kΩ = 15	°F = 23	mm H_2O = 31	mm = 39	µs = 47

Dimensions



Panel Meters and Controllers
DC Current and Voltage Meter/Controller
Type LDI35 AV0

- **3 1/2-dgt meter or 3-dgt + dummy zero for DC current and voltage measurements**
- **Indicator or controller**
- **200 mV, 20 V, 200 VDC and 2 mA, 20 mADC ranges**
- **All functions selectable by key-pad**
- **Password protection of programming parameters**
- **48 x 96 mm**
- **Degree of protection: IP 50 (IP 65 on request)**

Product Description

3 1/2-dgt or 3-dgt + dummy zero multi-range µP-based meter for DC current and voltage measurements. Selectable input range. Ensures a degree of protection of IP 50 (IP 65 on request).

Ordering Key

LDI35AV0D0XXXX

Model
Range code
Power supply
Setpoints
Engineering unit
Option

Type Selection

Range code

See Range Table

Setpoints

0: 0 setpoints
1: 1 setpoint

[1] Power supply on request

Power supply

A: 24 VAC, -15% +10%, 50/60 Hz [1]
B: 48 VAC, -15% +10%, 50/60 Hz [1]
C: 115 VAC, -15% +10%, 50/60 Hz [1]
D: 230 VAC, -15% +10%, 50/60 Hz (standard)
E: 120 VAC, -15% +10%, 50/60 Hz [1]
F: 240 VAC, -15% +10%, 50/60 Hz [1]
3: 9 to 32 VDC with galvanic insulation [1]
6: 40 to 150 VDC with galvanic insulation [1]

Options

XX: None (standard)
IX: Degree of protection IP 65
AX: Excitation output
XT: Tropicalization

Input Specifications

Rated input	200 mVDC 20 VDC 200 VDC 2 mADC 20 mADC
Overload protection	
Cont. Current:	1.2 x rated input
Voltage:	1.2 x rated input
For 1s Current:	5 x rated input
Voltage:	2 x rated input
Accuracy (@ 25°C ± 5°C, R.H. ≤ 60%)	± 0.3% f.s., ± 1 dgt
Temperature drift	± 200 ppm/°C
Display	7-segment LED, h 14.2 mm, 3 1/2 digits or 3 digits + dummy zero selectable by means of the front key-pad
Sampling rate	4 times/s, dual slope, 16 bits A/D converter
Max. and. min indication	
3 1/2 dgt:	Max. 1999 Min. -1999
3 + 0 dgt:	Max. 9990 Min. -1990
Key-pad	3 keys: "S" for menu selection "UP" and "DOWN" for value programming/function selection.

CARLO GAVAZZI

Output Specifications

Excitation output voltage	
Voltage	15 VDC non-stabilized/ 40 mA max. (on request)
Insulation	100 V_{rms} output to measuring input 4000 V_{rms} output to AC supply input 500 V_{rms} output to DC supply input
Alarms	
Number of setpoints	0 (1on request)
Alarm types	Over range, up alarm, down alarm, down alarm with disabling at power-on, up alarm with latch, down alarm with latch
Setpoint adjustment	0 to 100% of the displayed range
Hysteresis	0 to 100% of the displayed range
On-time delay	0 to 255 s
Off-time delay	0 to 255 s
Relay status	Normally energized/de-energized
Output type	
Contact	1 x SPDT
Rating	5A, 250 VAC/VDC, 40 W/ 1200 VA, 130.000 cycles
Min. response time	≤ 500 ms, filter excluded, setpoint on-time delay: “0”
Insulation	2000 V_{rms} output to measuring inputs 2000 V_{rms} output to excitation output

Software Functions

Password	Numeric code of max. 3 digits; 2 protection levels of the programming data.
1st level:	Password “0”, no protection.
2nd level:	Password from 1 to 255, all data protected.
Scaling factor	
Operating mode	Electrical scale compression, compression/expansion of the displayed scale (max. 2 without digital filter, > 2 with digital filter).
Electrical scale	Programmable within the whole measuring range.
Decimal point position	Programmable within the displaying range.
Displayed scale	Programmable within the whole displaying range.
Diagnostics	The display flashes when the limits of the displayed range are exceeded, the data are updated up to the maximum read-out.
Over range:	EEE
Under range:	- EE
Filter	
Filter operating range	From 0 to 1999/9990
Filtering coefficient	From 1 to 255
Max. data hold	Automatic storage (RAM only) of the max. value measured after last reset

Supply Specifications

AC supply	230 VAC, -15% +10%, 50/60 Hz (standard) 24 VAC, 48 VAC, 115 VAC, 120 VAC, 240 VAC, -15% +10%, 50/60 Hz (on request)
Insulation	4000 V_{rms} supply input to all other inputs/outputs
DC supply	9 to 32 VDC, G.I. max. inrush current: ≤ 1.2 A/200 ms 40 to 150 VDC, G.I., max. inrush current: ≤ 0.6 A/200 ms
Insulation	500 V_{rms} supply input to all other inputs/outputs
Power consumption	6.5 VA

General Specifications

Operating temperature	0° to 50°C (32° to 122°F) (R.H. < 90% non-condensing)
Storage temperature	-10° to 60°C (14° to 140°F) (R.H. < 90% non-condensing)
Insulation reference voltage	300 V_{rms} to ground
Dielectric strength	4000 V_{rms} for 1 minute
Noise rejection	
NMRR	40 dB, 40 to 60 Hz
CMRR	100 dB, 40 to 60 Hz
EMC	IEC 60801-2, IEC 60801-3, IEC 60801-4 (level 3), EN 50 081-1, EN 50 082-1
Safety standards	EN 61 010-1, IEC 61010-1, VDE 0411
Connector	Screw-type
Housing	
Dimensions	1/8 DIN, 48 x 96 x 83 mm
Material	ABS, self-extinguishing: UL 94 V-0
Degree of protection	IP 50 (IP 65 on request)
Weight	Approx 340 g
Approvals	CE, CSA

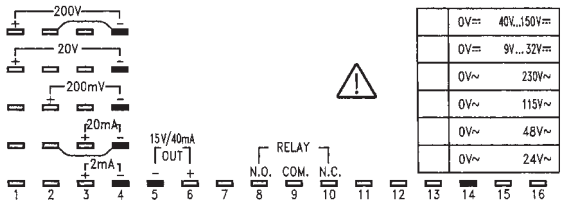
CARLO GAVAZZI

Range Table

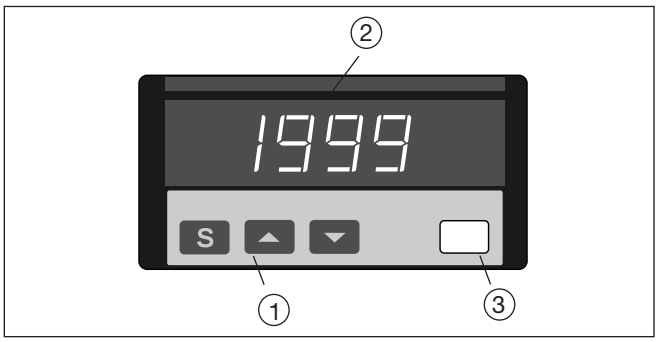
Rated inputs	Ranges (3 1/2 dgt)	Impedances
200 mVDC	-199.9 mV to 199.9 mVDC	≥ 1 kΩ
20 VDC	-19.99 V to 19.99 VDC	≥ 120 kΩ
200 VDC	-199.9 V to 199.9 VDC	≥ 120 kΩ
2 mADC	-1.999 mA to 1.999 mADC	≤ 90 Ω
20 mADC	-19.99 mA to 19.99 mADC	≤ 90 Ω

Rated inputs	Ranges (3 + 0 dgt)	Impedances
100 mVDC	-19.90 mV to 99.90 mVDC	≥ 1 kΩ
10 VDC	-1.990 V to 9.990 VDC	≥ 120 kΩ
100 VDC	-19.90 V to 99.90 VDC	≥ 120 kΩ
1 mADC	-199.0 mA to 999.0 µADC	≤ 90 Ω
10 mADC	-1.990 mA to 9.990 mADC	≤ 90 Ω

Terminal Board



Front Panel Description



1. Key-pad
Set-up and programming procedures are easily controlled by the 3 pushbuttons.

"S"
- Selection key to select programming function (instrument configuration) or measurement and alarm detection.

" ▲ " and " ▼ "
- Up and down keys for increasing or decreasing programming values.

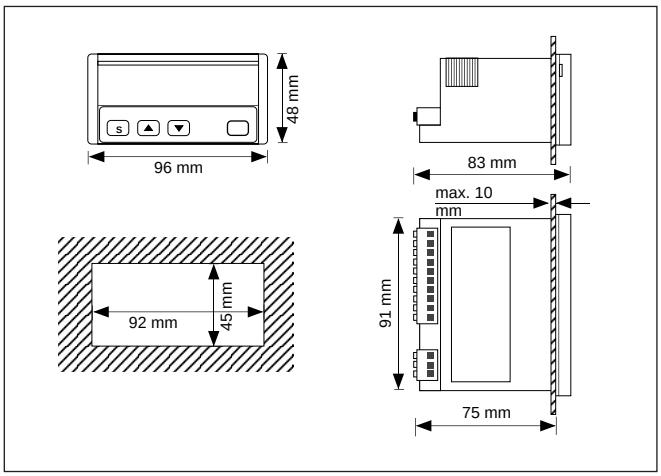
2. Display
3 1/2-dgt or 3-dgt + dummy zero (maximum read-out 1999/9999).

Alphanumeric indication by means of 7-segment display for:
- Displaying of the measured value, over-range, burn-out and programming indications.
- Indication of programming parameters.

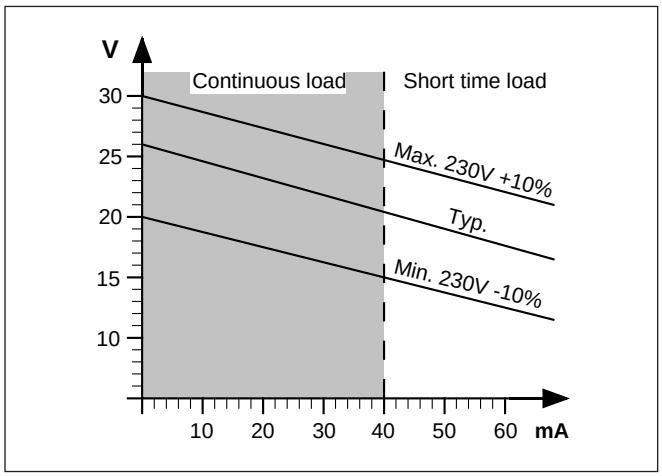
3. Engineering unit
Screen for interchangeable unit label.The symbols in the shaded areas are those available on the set of engineering unit labels supplied with the LDI35 (engineering unit label to be inserted by customer).

	W = 08	MΩ = 16	% = 24	mm HG = 32	cm = 40
mV = 01	kW = 09	Hz = 17	mbar = 25	l/min = 33	m = 41
V = 02	MW = 10	kHz = 18	bar = 26	l/h = 34	kg = 42
kV = 03	var = 11	RPM = 19	psi = 27	kg/min = 35	ppm = 43
µA = 04	kvar = 12	m/s = 20	ata = 28	ton/h = 36	kA = 44
mA = 05	Mvar = 13	m/min = 21	ate = 29	m^3/min = 37	cos ϕ = 45
A = 06	Ω = 14	°C = 22	kg/cm^2 = 30	m^3/h = 38	m^3 = 46
mW = 07	kΩ = 15	°F = 23	mm H_2O = 31	mm = 39	µs = 47

Dimensions



Excitation Output



Panel Meters and Controllers
AC/DC Current and Voltage Meter/Controller
Type LDI35 AV2

- **3 1/2-dgt meter or 3-dgt + dummy zero**
- **For AC/DC current and voltage measurements**
- **Indicator or controller**
- **200 VAC/DC, 500 VAC/DC and 2 AAC/DC, 5 AAC/DC**
- **All functions selectable by key-pad**
- **Password protection**
- **48 x 96 mm**
- **Degree of protection: IP 50 (IP 65 on request)**

Product Description

3 1/2-dgt or 3-dgt + dummy zero multi-range µP-based indicator or controller for AC and DC current and voltage measurements. Selectable input range. Ensures a degree of protection (front) of IP 50 (IP 65 on request).

Ordering Key

LDI35AV2D0XXXX

- **Model**
- **Range code**
- **Power supply**
- **Setpoints**
- **Engineering unit**
- **Option**

Type Selection

Range code

See Range Table

Setpoints

0: 0 setpoints
1: 1 setpoint [1]

Power supply

A: 24 VAC, -15% +10%, 50/60 Hz [1]
B: 48 VAC, -15% +10%, 50/60 Hz [1]
C: 115 VAC, -15% +10%, 50/60 Hz [1]
D: 230 VAC, -15% +10%, 50/60 Hz (standard)
E: 120 VAC, -15% +10%, 50/60 Hz [1]
F: 240 VAC, -15% +10%, 50/60 Hz [1]
3: 9 to 32 VDC with galvanic insulation [1]
6: 40 to 150 VDC with galvanic insulation [1]

Options

XX: None (standard)
IX: Degree of protection IP 65
AX: Excitation output
XT: Tropicalization

[1] Power supply on request

Input Specifications

Rated input	
Current:	2 AAC/DC, 5 AAC/DC, 40 to 400 Hz
Voltage:	200 VAC/DC, 500 VAC/DC, 40 to 400 Hz
Overload protection	
Continuous	1.2 x rated input
For 1s	2 x rated input
Accuracy	
DC: (@ 25°C ± 5°C, R.H. ≤ 60%)	± 0.3% f.s., ± 1 dgt
AC: (@ 25°C ± 5°C, R.H. ≤ 60%, 50/60 Hz, 5 to 100% f.s.)	± 0.5% f.s., ± 1 dgt
Temperature drift	± 200 ppm/°C
Display	7-segment LED, h 14.2 mm, 3 1/2 digits or 3 digits + dummy zero selectable by means of the front key-pad
AC Measurement	Measurement of the average value resulting from the sine half-wave rectification of the input current/voltage by rms calibration
Sampling rate	4 times/s, dual slope 16 bits A/D converter
Indication	
3 1/2 dgt:	Max. 1999 (AC/DC) Min. -1999 (DC), 0 (AC)
3 + 0 dgt:	Max. 9990 (AC/DC) Min. -1990 (DC), 0 (AC)
Key-pad 3 keys:	"S" for menu selection. "UP" and "DOWN" for value programming/function selection.

CARLO GAVAZZI

Output Specifications

Excitation output	
Voltage	15 VDC non-stabilized/ 40 mA max. (on request)
Insulation	100 V_{rms} output to measuring input 4000 V_{rms} output to AC supply input 500 V_{rms} output to DC supply input
Alarms	
Number of setpoints	0 (1 on request)
Alarm types	Over range, up alarm, down alarm, down alarm with disabling at power-on, up alarm with latch, down alarm with latch
Setpoint adjustment	0 to 100% of the displayed range
Hysteresis	0 to 100% of the displayed range
On-time delay	0 to 255 s
Off-time delay	0 to 255 s
Relay status	Normally energized/de-energized
Output type	
Contact	1 x SPDT
Rating	5A, 250 VAC/VDC 40 W/ 1200 VA, 130.000 cycles.
Min. response time	≤ 500 ms, filter excluded, setpoint on-time delay: "0"
Insulation	2000 V_{rms} output to measuring inputs 2000 V_{rms} output to excitation output

Software Functions

Password	Numeric code of max. 3 digits; 2 protection levels of the programming data
1st level	Password "0", no protection
2nd level	Password from 1 to 255, all data protected
Scaling factor	
Operating mode	Electrical scale compression, compression/expansion of the displayed scale (max. 2 without digital filter, > 2 with digital filter)
Electrical scale	Programmable within the whole measuring range
Decimal point position	Programmable within the displaying range
Displayed scale	Programmable within the whole displaying range
Diagnostics	The display flashes when the limits of the displayed range are exceeded, the data are updated up to the maximum read-out
Over range	EEE (AC/DC)
Under range	- EE (DC)
Filter	
Filter operating range	From 0 to 1999/9990
Filtering coefficient	From 1 to 255
Max. data hold	Automatic storage (RAM only) of the max. value measured after the last reset

Supply Specifications

AC supply	230 VAC, -15% +10%, 50/60 Hz (standard) 24 VAC, 48 VAC, 115 VAC, 120 VAC, 240 VAC, -15% +10%, 50/60 Hz (on request)
Insulation	4000 V_{rms} supply input to all other inputs/outputs
DC supply	9 to 32 VDC, G.I. max. inrush current: ≤ 1.2 A/200 ms 40 to 150 VDC, G.I., max. inrush current: ≤ 0.6 A/200 ms
Insulation	500 V_{rms} supply input to all other inputs/outputs
Power consumption	6.5 VA

General Specifications

Operating temperature	0° to 50°C (32° to 122°F) (R.H. < 90% non-condensing)
Storage temperature	-10° to 60°C (14° to 140°F) (R.H. < 90% non-condensing)
Insulation reference voltage	300 V_{rms} to ground
Dielectric strength	4000 V_{rms} for 1 minute
Noise rejection	
NMRR	40 dB, 40 to 60 Hz
CMRR	100 dB, 40 to 60 Hz
EMC	IEC 60801-2, IEC 60801-3, IEC 60801-4 (level 3), EN 50 081-1, EN 50 082-1
Safety standards	EN 61 010-1, IEC 61010-1, VDE 0411
Connector	Screw-type
Housing	
Dimensions	1/8 DIN, 48 x 96 x 83 mm
Material	ABS, self-extinguishing: UL 94 V-0
Degree of protection	IP 50 (IP 65 on request)
Weight	340 g approx.
Approvals	CE, CSA

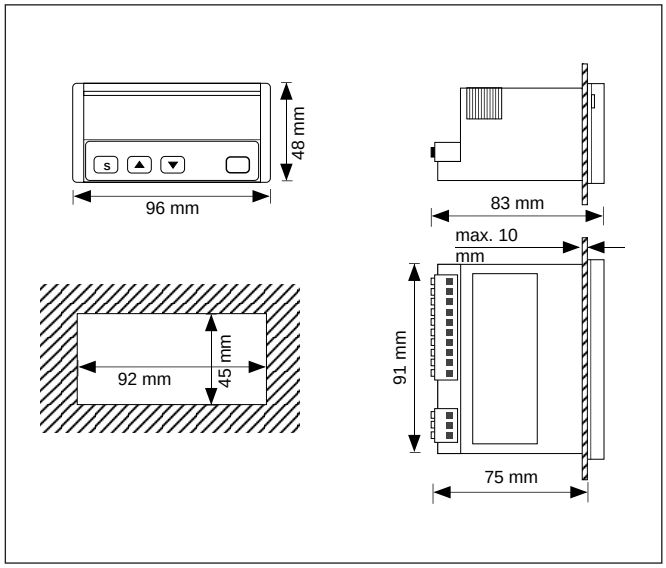
CARLO GAVAZZI

Range Table

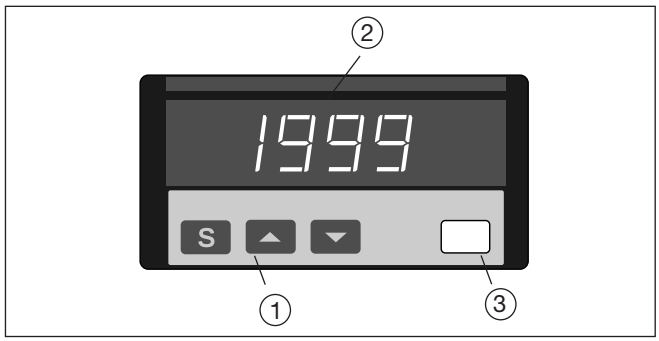
Rated inputs	Ranges (3 1/2 dgt)	Impedances
200 VDC	- 199.9 V to 199.9 VDC	≥ 1 MΩ
500 VDC	- 500 V to 500 VDC	≥ 1 MΩ
2 ADC	- 1.999 A to 1.999 ADC	≤ 0.05 Ω
5 ADC	- 5.00 A to 5.00 ADC	≤ 0.05 Ω
200 VAC	- 0 V to 199.9 VAC	≥ 1 MΩ
500 VAC	- 0 V to 500 VAC	≥ 1 MΩ
2 AAC	- 0 A to 1.999 AAC	≤ 0.05 Ω
5 AAC	- 0 A to 5.00 AAC	≤ 0.05 Ω

Rated inputs	Ranges (3 + 0 dgt)	Impedances
100 VDC	- 19.99 V to 99.90 VDC	≥ 1 MΩ
500 VDC	- 50.0 V to 500.0 VDC	≥ 1 MΩ
1 ADC	- 199.0 mA to 999.0 mA	≤ 0.05 Ω
5 ADC	- 1.99 A to 5.000 ADC	≤ 0.05 Ω
100 VAC	- 0 V to 99.90 VAC	≥ 1 MΩ
500 VAC	- 0 V to 500.0 VAC	≥ 1 MΩ
1 AAC	- 0 mA to 999.0 mAAC	≤ 0.05 Ω
5 AAC	- 0 A to 5.000 AAC	≤ 0.05 Ω

Dimensions



Front Panel Description



1. Key-pad
Set-up and programming procedures are easily controlled by the 3 pushbuttons.

"S"
- Selection key to select programming function (instrument configuration) or measurement and alarm detection.

" ▲ " and " ▼ "
- Up and down keys for increasing or decreasing programming values.

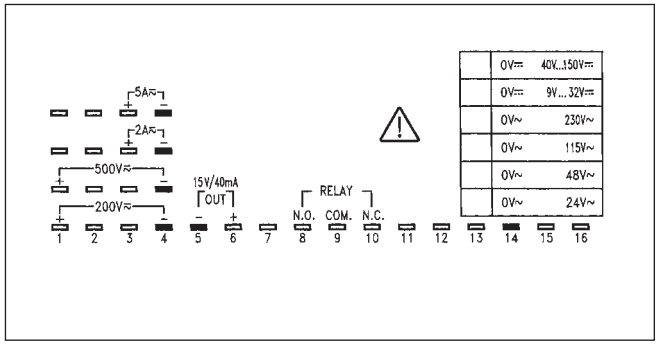
2. Display
3 1/2-digit or 3-digit + dummy zero
(maximum read-out 1999/9990).

Alphanumeric indication by means of 7-segment display for:
- Displaying of the measured value, over-range, burn-out and programming indications.
- Indication of programming parameters.

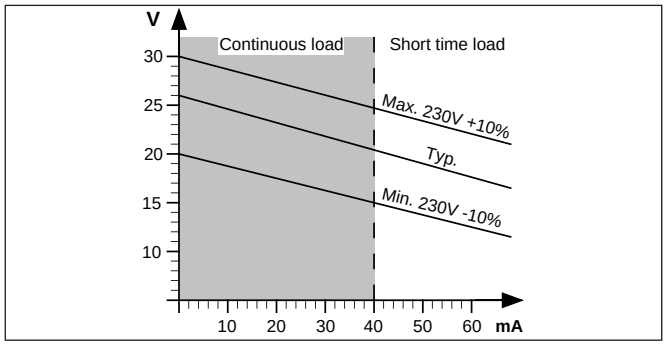
3. Engineering unit
Screen for interchangeable unit label.The symbols in the shaded areas are those available on the set of engineering unit labels supplied with the LDI35 (engineering unit label to be inserted by customer).

	W = 08	MΩ = 16	% = 24	mm HG = 32	cm = 40
mV = 01	kW = 09	Hz = 17	mbar = 25	l/min = 33	m = 41
V = 02	MW = 10	kHz = 18	bar = 26	l/h = 34	kg = 42
kV = 03	var = 11	RPM = 19	psi = 27	kg/min = 35	ppm = 43
µA = 04	kvar = 12	m/s = 20	ata = 28	ton/h = 36	kA = 44
mA = 05	Mvar = 13	m/min = 21	ate = 29	m^3/min = 37	cos ϕ = 45
A = 06	Ω = 14	°C = 22	kg/cm^2 = 30	m^3/h = 38	m^3 = 46
mW = 07	kΩ = 15	°F = 23	mm H_2O = 31	mm = 39	µs = 47

Terminal Board



Excitation Output



Panel Meters and Controllers
Temperature Meter/Controller
Type LDI35 CF

- **3 1/2-dgt meter or 3-dgt + dummy zero**
- **Temperature measurements from thermoresistance or thermocouple probes and resistance measurements**
- **Measurements in °C or °F**
- **Indicator or controller**
- **All functions selectable by key-pad**
- **Password protection**
- **48 x 96 mm**
- **Degree of protection: IP 50 (IP 65 on request)**

Product Description

3 1/2-dgt or 3-dgt + dummy zero multi-range µP-based indicator or controller for temperature measurements by means of thermocouple or thermoresistance probes. Selectable input range. Degree of protection of IP 50 (IP 65 on request).

Ordering Key

LDI35CFXD0XXXX

- **Model**
- **Range code**
- **Power supply**
- **Setpoints**
- **Engineering unit**
- **Option**

Type Selection

Range code

See Range Table

Setpoints

0:	No setpoint
1:	1 setpoint

Power supply

A:	24 VAC, -15% +10%, 50/60 Hz [1]
B:	48 VAC, -15% +10%, 50/60 Hz [1]
C:	115 VAC, -15% +10%, 50/60 Hz [1]
D:	230 VAC, -15% +10%, 50/60 Hz (standard)
E:	120 VAC, -15% +10%, 50/60 Hz [1]
F:	240 VAC, -15% +10%, 50/60 Hz [1]
3:	9 to 32 VDC with galvanic insulation [1]
6:	40 to 150 VDC with galvanic insulation [1]

Options

XX:	None (standard)
IX:	Degree of protection IP 65
AX:	Excitation output
XT:	Tropicalization

[1] Power supply on request

Input Specifications

Accuracy	
RTD	
(@ 25°C ± 5°C, R.H. ≤ 60%)	
Pt100/Pt1000	± 0.3 % f.s., ± 2 dgt
Ni100	± 0.5% f.s., ± 2 dgt
TC	
(@ 25°C ± 5°C, R.H. ≤ 60%)	
From -5°C to the limit of input range	± 0.3% f.s., ± 2 dgt
From -200°C to -50°C of the input range	± 1% f.s., ± 2 dgt
Resistance (@ 25°C ± 5°C)	± 0.3 % f.s., ± 2 dgt
Temperature drift	
RTD	±200 ppm/°C
TC	±200 ppm/°C
Resistance	±200 ppm/°C
Display	7-segment LED, h 14.2 mm, 3 1/2 digits or 3 digits + dummy zero selectable by means of the front key-pad
Sampling rate	2 times/s, dual slope 16 bits A/D converter
Max. and min. indication	
RTD/TC	Depending on range and type of the temperature probe
Resistance	Max. 200 Ω, min. 0 (2000 Ω on request)
Compensation	
RTD/Ω	For 3-wire connections, line resistance up to 10 Ω.
TC	Cold junction, within the temperature range from 0 to +50°C
Key-pad	3 keys: "S" for menu selection "UP" and "DOWN" for value programming/function selection

CARLO GAVAZZI

Output Specifications

Excitation output	
Voltage	15 VDC non-stabilized/ 40 mA max. (on request)
Insulation	100 V_{rms} output to measuring input 4000 V_{rms} output to AC supply input 500 V_{rms} output to DC supply input
Alarms	
Number of setpoints	0, (1 on request)
Alarm type	Over-range, up alarm, down alarm, down alarm with disabling at power-on, up alarm with latch, down alarm with latch
Setpoint adjustment	0 to 100% of the displayed range
Hysteresis	0 to 100% of the displayed range
On-time delay	0 to 255 s
Off-time delay	0 to 255 s
Relay status	Normally energized/de-energized
Output type	
Contact:	1 x SPDT
Rating:	5A, 250 VAC/VDC 40 W/ 1200 VA, 130.000 cycles
Min. response time	≤ 500 ms, filter excluded, setpoint on- time delay: "0"
Insulation	2000 V_{rms} output to measuring inputs 2000 V_{rms} output to excitation output

Software Functions

Password	Numeric code of max. 3 digits; 2 protection levels of the programming data
1st level:	Password "0", no protection
2nd level:	Password from 1 to 255, all data are protected
Scaling factor	
Operating mode	Electrical scale compression, compression/expansion of the displayed scale (max. 2 without digital filter, > 2 with digital filter)
Electrical scale	Programmable within the whole measuring range
Decimal point position	Programmable within the displaying range
Displayed scale	Programmable within the whole displaying range
Diagnostics	The display flashes when the limits of the displayed range are exceeded, the data are updated up to the maximum read-out
Burn-out up	
TC	Opening of the probe connection, EEE indication
RTD	Opening of the probe connection, EEE indication Probe short-circuit, -EE indication
Filter	
Filter operating range	From 0 to 1999/9990
Filtering coefficient	From 1 to 255
Max. data hold	Automatic storage (RAM only) of the max. value measured after the last reset

Supply Specifications

AC supply	230 VAC, -15% +10%, 50 /60 Hz (standard) 24 VAC, 48 VAC, 115 VAC, 120 VAC, 240 VAC, -15% +10%, 50/60 Hz (on request)
Insulation	4000 V_{rms} supply input to all other inputs/outputs
DC supply	9 to 32 VDC, G.I. max. inrush current: ≤ 1.2 A/200 ms 40 to 150 VDC, G.I., max. inrush current: ≤ 0.6 A/200 ms
Insulation	500 V_{rms} supply input to all other inputs/outputs
Power consumption	6.5 VA

General Specifications

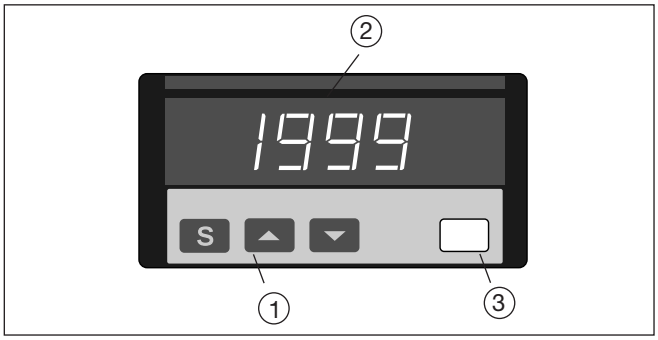
Operating temperature	0° to 50°C (32° to 122°F) (R.H. < 90% non-condensing)
Storage temperature	-10° to 60°C (14° to 140°F) (R.H. < 90% non-condensing)
Insulation reference voltage	300 V_{rms} to ground
Dielectric strength	4000 V_{rms} for 1 m inute
Noise rejection	
NMRR	40 dB, 40 to 60 Hz
CMRR	100 dB, 40 to 60 Hz
EMC	IEC 60801-2, IEC 60801-3, IEC 60801-4 (level 3), EN 50 081-1, EN 50 082-1
Safety standards	EN 61010-1, IEC 61010-1, VDE 0411
Connector	Screw-type
Housing	
Dimensions	1/8 DIN, 48 x 96 x 83 mm
Material	ABS, self-extinguishing: UL 94 V-0
Degree of protection	IP 50 (IP 65 on request)
Weight	Approx 340 g
Approval	CE, CSA

Range Table

Range code	Input	Probe	Ranges (°C) (3 1/2 dgt)	Ranges (°F) (3 1/2 dgt)	Other ranges 1)
CFX	RTD	Pt100	-200° to 850°C	-328° to 1562°F	-199.9° to +199.9°C
CFX	RTD	Ni100	-60° to 180°C	-76° to 356°F	-60.0° to +180.0°C
CFP	RTD	Pt1000	-200° to 850°C	-328° to 1562°F	-199.9° to +199.9°C
CFX/CFP	TC	J	-50° to 760°C	-58° to 1400°F	-50.0° to +760.0°C
CFX/CFP	TC	L	-50° to 760°C	-58° to 1400°F	-50.0° to +760.0°C
CFX/CFP	TC	K	-200° to 1260°C	-328° to 1999°F	-199.9° to +199.9°C
CFX/CFP	TC	S	350° to 1750°C	-	-
CFX/CFP	TC	T	-200° to 400°C	-328° to 752°F	-199.9° to +199.9°C
CFX	Ω	200.0 Ω	0 to 199.9 Ω	0° to 199.9 Ω	0° to 19.99 Ω
CFP	Ω	2000 Ω	0 to 1999 Ω	0 to 1999 Ω	0 to 199.9 Ω

1) Examples of other displayed ranges available by means of the scaling capability

Front Panel Description



1. **Key-pad**
   Set-up and programming procedures are easily controlled by the 3 pushbuttons.

   "S"
   - Selection key to select programming function (instrument configuration) or measurement and alarm detection.

   " ▲ " and " ▼ "
   - Up and down keys for increasing or decreasing programming values.

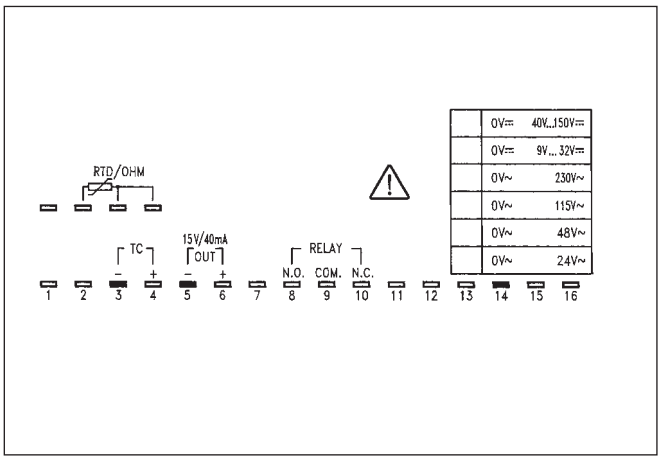
2. **Display**
   3 1/2-dgt or 3-dgt + dummy zero (maximum read-out 1999/9990).

   Alphanumeric indication by means of 7-segment display for:
   - Displaying of the measured value, over-range, burn-out and programming indications.
   - Indication of programming parameters.

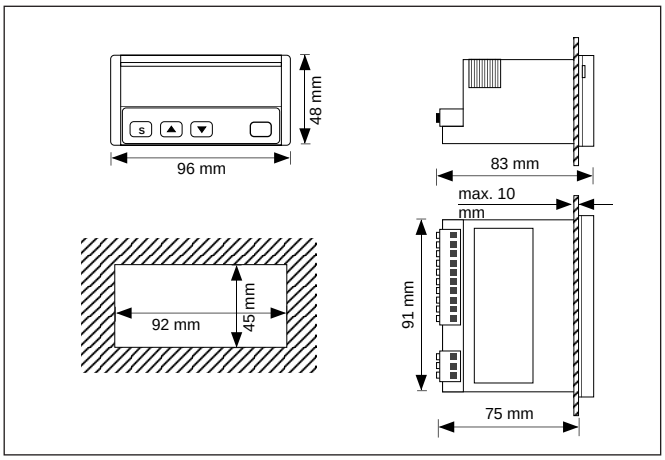
3. **Engineering unit**
   Screen for interchangeable unit label.The symbols in the shaded areas are those available on the set of engineering unit labels supplied with the LDI35 (engineering unit label to be inserted by customer).

	W = 08	MΩ = 16	% = 24	mm HG = 32	cm = 40
mV = 01	kW = 09	Hz = 17	mbar = 25	l/min = 33	m = 41
V = 02	MW = 10	kHz = 18	bar = 26	l/h = 34	kg = 42
kV = 03	var = 11	RPM = 19	psi = 27	kg/min = 35	ppm = 43
µA = 04	kvar = 12	m/s = 20	ata = 28	ton/h = 36	kA = 44
mA = 05	Mvar = 13	m/min = 21	ate = 29	m^3/min = 37	cos ϕ = 45
A = 06	Ω = 14	°C = 22	kg/cm^2 = 30	m^3/h = 38	m^3 = 46
mW = 07	kΩ = 15	°F = 23	mm H_2O = 31	mm = 39	µs = 47

Terminal Board



Dimensions



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