

Hungarydisplay

LCD STANDARD PANEL

DE 113 - SERIES
7-Szegmenses

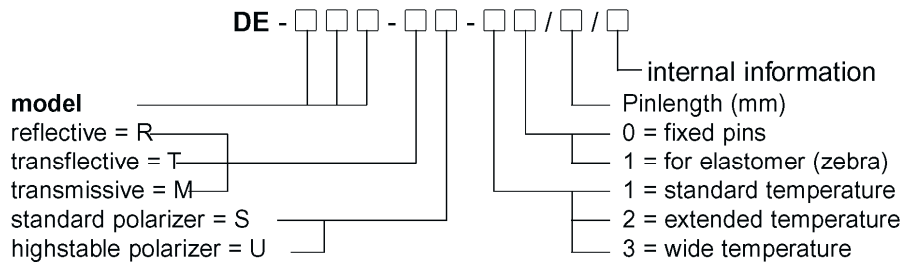
2020.03.17

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1. GENERAL FEATURES

- There is a wide range of standard lcd-panels. Most of them are available from stock.
- Most of our standard panels operate within the extended temperature range (-20°C to $+70^{\circ}\text{C}$).
- For the static types the Vlcd is ready for 3 Volt, like shown in the following table. For most of our multiplexed standard panels we offer a 3Volt and a 5Volt model.
- Most panels are available in reflective and transfective version.
- In general we offer a standard pinlength from stock. Pls ask us in case you want a different pinlength. For the LCD-panels without pins we also offer elastomeric connectors (zebras).
- For outdoor applications we offer suitable LCD-displays with extreme wide temperature range and UV-stability etc...

2. ORDERING INFORMATION



Example:

DE-113-RS-10/7,5
 LCD 3½ digits
 Digit height 12.7 mm
 Reflective
 Standard polarizer
 Standard temperature
 Fixed pins
 Pinlength 7.5 mm

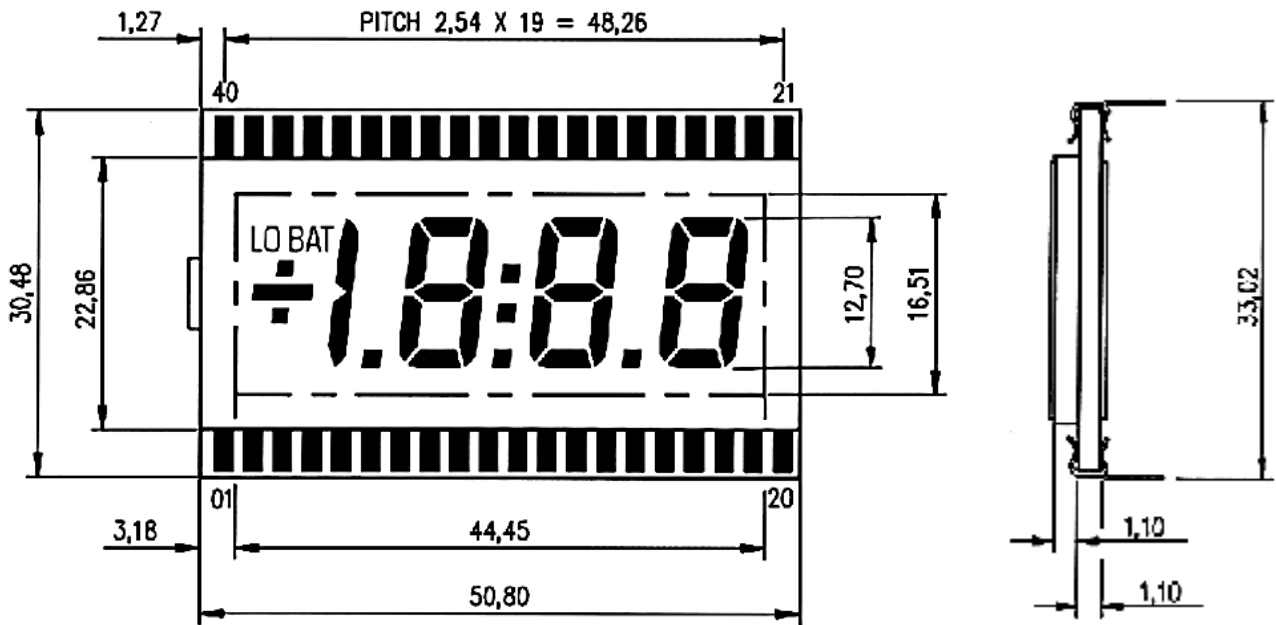
3. MODEL TYPES

Our actual model types are:

MODEL NAME	POLARIZER MODE	POLARIZER TYPE	OPERATING TEMPERATURE	PIN LENGTH	VIEWING DIRECTION	OPERATING VOLTAGE	VOLTAGE MODE
DE 113-MS-20/7,5	transmissive	standard	$-20^{\circ}\text{C} \dots +70^{\circ}\text{C}$	7,5	6° clock	3-5 Volt	static
DE 113-RS-20/6,35	reflective	standard	$-20^{\circ}\text{C} \dots +70^{\circ}\text{C}$	6,35	6° clock	3-5 Volt	static
DE 113-RS-20/7,5	reflective	standard	$-20^{\circ}\text{C} \dots +70^{\circ}\text{C}$	7,5	6° clock	3-5 Volt	static
DE 113-RS-20/8,4	reflective	standard	$-20^{\circ}\text{C} \dots +70^{\circ}\text{C}$	8,4	6° clock	3-5 Volt	static
DE 113-RS-20/12,2	reflective	standard	$-20^{\circ}\text{C} \dots +70^{\circ}\text{C}$	12,2	6° clock	3-5 Volt	static
DE 113-RU-30/7,5	reflective	high stable	$-40^{\circ}\text{C} \dots +90^{\circ}\text{C}$	7,5	6° clock	3-5 Volt	static
DE 113-TS-20/7,5	transfective	standard	$-20^{\circ}\text{C} \dots +70^{\circ}\text{C}$	7,5	6° clock	3-5 Volt	static
DE 113-TU-30/8,4	transfective	high stabile	$-40^{\circ}\text{C} \dots +90^{\circ}\text{C}$	8,4	6° clock	3-5 Volt	static

4. MECHANICAL SPECIFICATIONS

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5. PIN ASSIGNMENT

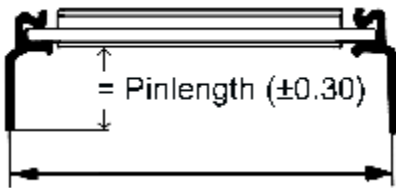
SEG.	3A	3F	3G	2B	2A	2F	2G	COL	1B	1A	1F	1G	NC	NC	NC	NC	NC	LOW BAT	:	BP
PIN#	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
SEG.	BP	-	K	NC	NC	NC	NC	DP1	1E	1D	1C	DP2	2E	2D	2C	DP3	3E	3D	3C	3B
PIN#	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20

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6. ELECTRICAL AND PHYSICAL PROPERTIES

At an ambient temperature of 25°C	Standard temperature			Extended temperature			Wide temperature			Unit
	min.	typ.	max.	min.	typ.	max.	min.	typ.	max.	
Operating voltage		3			3			5		V
Driving frequency	30	32	100	30	32	100	30	32	100	Hz
Current consumption		1,0	2,0		1,0	2,0		1,0	2,0	μA/cm ²
DC-voltage allowance			50			50			50	mV
Response time (t _{on} + t _{off})		440			440				450	ms
Operating temperature	-10		60	-20		70	-40		90	°C
Storage temperature	-20		65	-40		90	-40		90	°C
Lifetime	100 000									h

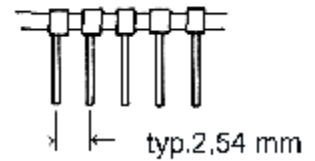
7. APPLICATION NOTE



Distance of pinrow to pinrow
= glass-size + 2.54 mm

DIL-Pins

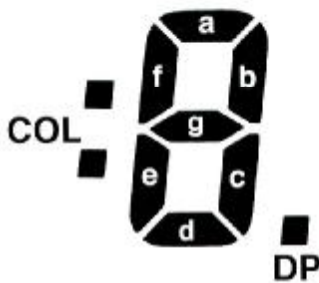
Pinlength = Distance between rear side of LCD to end of pin



Ø hole in PCB typ. 1,0 mm

8. SEGMENT DEFINITION

7 SEGMENT



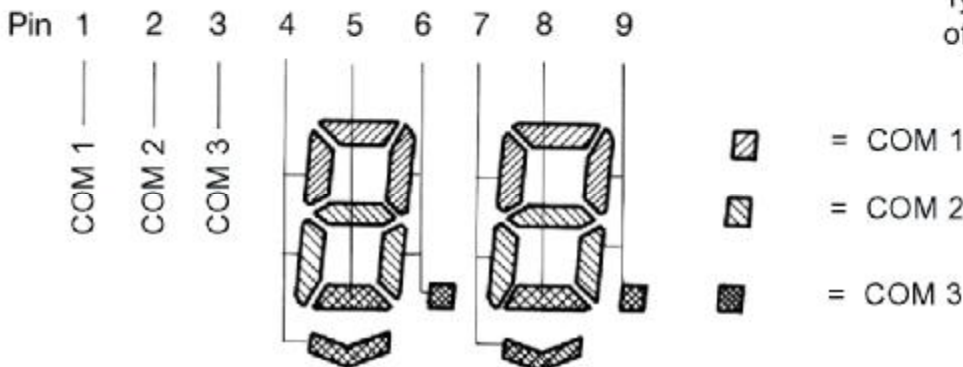
14 SEGMENT



16 SEGMENT



MUX-LCDs
Typical organisation of triplex driving



Digits to be counted from left to right.