



## Digital Clock with Second Circle

### DA Series

State of art technology digital clock • intended to be used indoors • the clock will find use in many applications, in radio or television studios or as wall clock in offices or public areas • digit height 57, 45 and 18 mm for hours and minutes, 38, 32 and 13 mm for seconds • table clock, digit height 18/13 mm • various modes of the second circle indication • high luminance LED diodes provide for excellent readability from various angles of view • six digits display • autonomous operation with internal quartz powered from mains • NTP multicast or unicast synchronization in Ethernet or WiFi network powered over PoE or mains powered • slave clock operation in wireless WTD system based on a transmitter which sends the time signal • slave clock operation controlled by self-setting MOBALine code mains powered • slave clock operation controlled by built-in RS 232, RS 485 or IRIG-B interface, mains powered • LED display in red, pure green, blue, yellow and white • single or double sided clock • clock frame made of anodized aluminium profiles • wall mounting for single sided clock • ceiling suspension or wall bracket mounting for double as well as single sided clock • table variant or flush mounting for DA.18 • IP 40 (IP 20 for table clock)

### The Clock

- display of time values (either 12 or 24 hours time cycle), six-digit format
- display of calendar date in six digit format
- display of temperature in °C or °F, up to two sensors connectable
- possibility to setting up the world time zones

### Display Features

- 7-segment LED display, circle of second marks
- digit height 57, 45 or 18 mm for hour, minute and 38, 32 or 13 mm for second
- display of seconds and year can be switched off
- readability distance up to 25, 20 or 8 m
- digits in red, white, blue, pure green, yellow colour
- manual or automatic adjustment of the luminosity of LED displays
- excellent visibility, even from extremely sharp angles of view

- alternating display of time, date and temperature, with adjustable time period for the displaying of the corresponding figures

### Stopwatch

- counting upwards from zero, up to 24 hours
- counting downwards from a specified value, with stop at zero, with automatic restart or counting into negative values
- display of intermediate time values, "freezing" of display, cumulated intermediate time
- counting in steps of 1 minute, 1 second or 1/100 seconds
- seconds are displayed on a second circle
- operation via keyboard, remote IR or radio RF control unit
- possibility to connect another display unit(s)
- possibility of parallel switching over into the time/date or temperature display mode

### Housing

- single or double sided design, wall mounting (only for single side clock design), ceiling suspension or wall bracket mounting
- clock frame made of anodized aluminium profiles in black or silver colour, any RAL colour on request
- easy installation and time saving maintenance due the back panel which is designed as a mounting plate on which the clock can be snapped on and secured with a screw
- working temperature 0 to +50°C
- protection degree IP 40 (IP 54 on request), table clock IP 20
- structural depth 39/78 mm of single/double sided design respectively
- anti-glare front side cover, made of plexi-glass, which prevents the occurrence of reflections and improves the readability

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### Operation

- setting of clock parameters, time and date by means of push buttons placed on the upper side of the clock or through operation via keyboard, remote IR or radio RF control unit
- autonomous quartz time base with the possibility of synchronization by means of the DCF 77 signal or by GPS signal
- more digital clocks can be connected to one DCF 77 radiosignal or GPS receiver in series

### Synchronization modes

- DCF
- GPS
- MOBALine
- NTP over Ethernet or WiFi (IEEE 802.11b/g)
- WTD (Wireless Time Distribution, 868 MHz, NF S87-500)
- IRIG-B
- (un)polarized 24 VDC (minute, half minute and second pulses)
- RS 232
- RS 485
- MOBATIME serial code

### For NTP, PoE and WiFi version only:

- DHCP / manual configuration of the clock parameters or setting over the telnet
- private options of DHCP string for automatic configuration of all clock parameters when connected to network
- configuration and monitoring using MOBA-NMS software or SNMP
- firmware update remotely through the network using the TFTP protocol
- powered from mains with wide input voltage range 100-240VAC, optionally from 24 VDC voltage or through PoE (IEEE 802.3af) by NTP version
- NTP and PoE version IPv6 ready

### Second Circle Display Modes

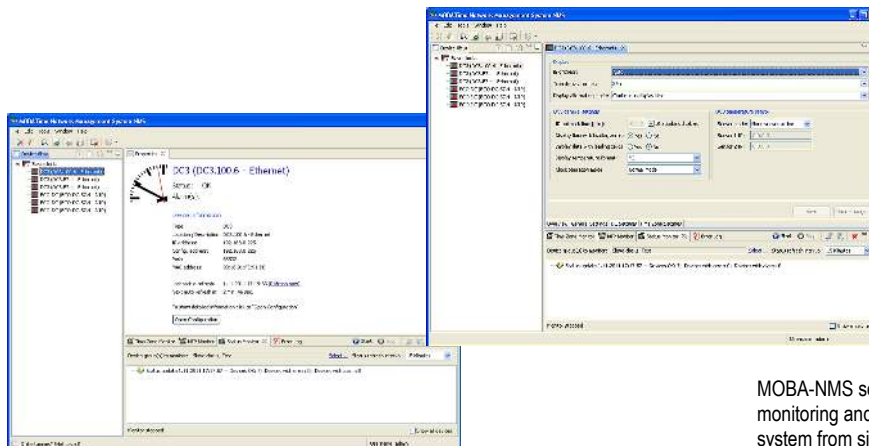
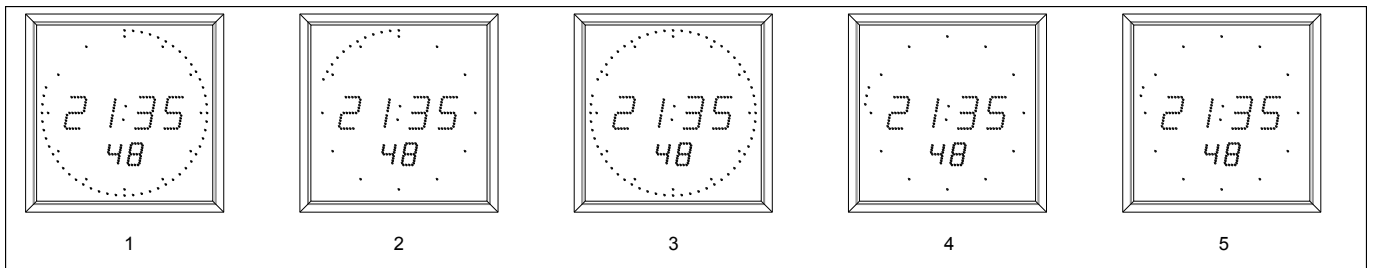
- accumulating ring of seconds markers (1)
- take actual second from full shining circle step by step (2)
- full shining circle, actual second off (3)
- three shining seconds, the first is showing actual second (4)
- two shining seconds, the first is showing actual second (5)

Specification		DA.45.6	DA.57.6	DA.18.6...T	DA.18.6...FP
Display	digit height [mm]	45 / 32	57 / 38		18 / 13
	number of digits			4 + 2	
Time display format	HH : MM		✓		
	HH : MM SS		✓		
Date display format	DD. MM.		✓		
	DD. MM. YY		✓		
Powering	100 - 240 V, 50 - 60 Hz		✓		12 VDC *
	VDC (on request)	18 - 56 VDC (18 - 40 VAC)			-
	PoE version			PoE (IEEE 802.3 af-Class 0)	
	PoEclass version			PoE (IEEE 802.3 af-Class 2) for single sided	
	PoEclass version		PoE (IEEE 802.3 af-Class 3) for double-sided		-
Power consumption	single-sided	6 VA			4,5 VA
	double-sided	11 VA			-
Reserve capacity	passive (time+date)		6 years (except PoE)		
Accuracy at 20 °C	without synchronization		±0,3 sec / day		
Accuracy of temperature measurement	range -10 ÷ +85 °C		±0,5 °C		
	range -50 ÷ +125 °C		±2,0 °C		
	temperature		0 ÷ +50 °C		
Operating environment	humidity		0 - 95%, without cond.		
	protection degree	IP 40 (IP 54 on request)		IP 20	IP 40
Weight [kg] (without mounting bracket)	single-sided	2	2,5	0,7	0,5
	double-sided	3,3	4,1	-	-
Dimensions [mm] (WxHxD)	single-sided	260 x 260 x 39	325 x 325 x 39	130 x 142 x 176	144/125x144/135 x 54/52
	double-sided	260 x 260 x 78	325 x 325 x 78	-	-

**Note:**

PoE version can't be combined with models DA.57.6 with pure green, white and blue colour display  
 \* DA.18 mains power by external power adapter, included in delivery

**Second Circle Display Modes**

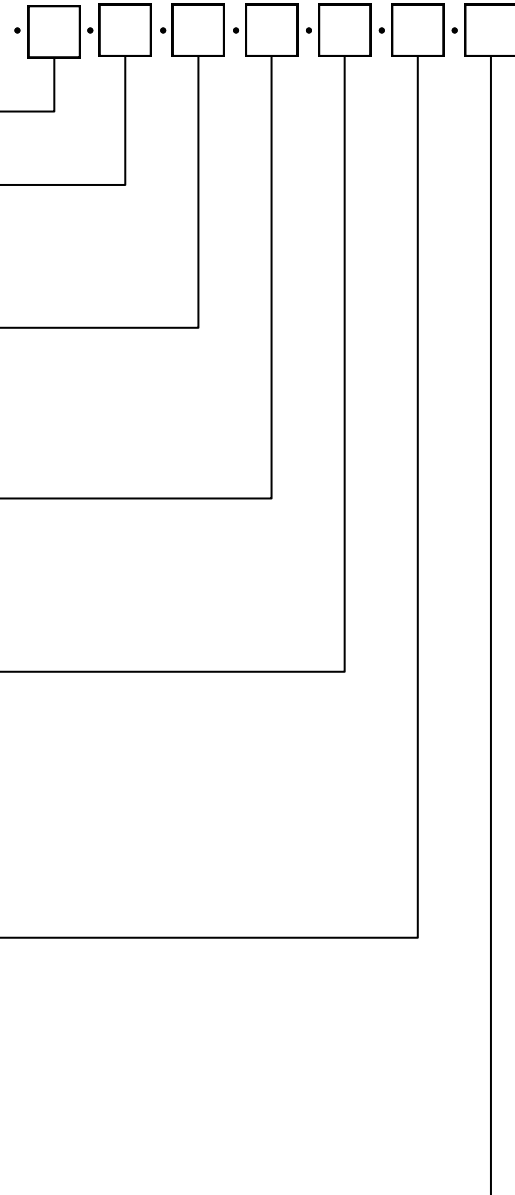


MOBA-NMS software allows configuration, monitoring and management of complete time system from single point in the network.

## Order reference DA

Height of digits	57, 45 or 18 mm for hours and minutes	57 / 45 / 18
Number of digits	6 - six digit clock	6
Display colour	red	R*
	white	W
	pure green	PG
	blue	B
	yellow	A
Version	single sided	N
	double sided	D
Mounting	wall mounting	N
	ceiling suspension (conventionally 5, 10, 30, 50 cm or on request)	S
	wall bracket	B
	table clock (DA.18)	T
	panel flush mounting (DA.18)	FP
Synchronization	standard version - autonomous / MOBALine / (un)polarized 24 VDC	STD
	standard version with built-in RS 232, RS 485 and IRIG-B interface	SI*
	Ethernet version, synchronized by NTP, powering 230 VAC	NTP
	Ethernet version, synchronized by NTP, PoE (IEEE 802.3 af-Class 0) powering	PoE
	Ethernet version, synchronized by NTP, PoE (IEEE 802.3 af-Class 2 or 3) powering	PoEclass
	WTD, wireless synchronization	WTD*
	WiFi version, synchronized by NTP	WiFi*
Frame colour	black (RAL 9005)	black
	silver (RAL 9006)	silver
	frame colour on request	RALxxx
Option	powered by 24 VDC	VDC
	powered by 12 VDC	VDC12
	internal relay	REL
Accessories:	AD 450 radiosignal receiver	AD 450
	GPS 4500 receiver	GPS 4500
	temperature sensor, IP 66, cable 3 m	TP 3m
	temperature sensor, IP 66, cable 30 m	TP 30m
	temperature sensor with RS 485 interface, power supply 12 VDC, cable between sensor and interface 3 m, for SI version only	TP RS485
	temperature sensor with Ethernet interface, power supply 5 VDC, cable between sensor and interface 3 m, for NTP, PoE and WiFi version only	TP LAN
	IR remote unit	IR
	keyboard for clock and stopwatch control, cable 5 m, handheld	SK

DA



### Example of ordering

#### DA.57.6.PG.N.N.STD.silver

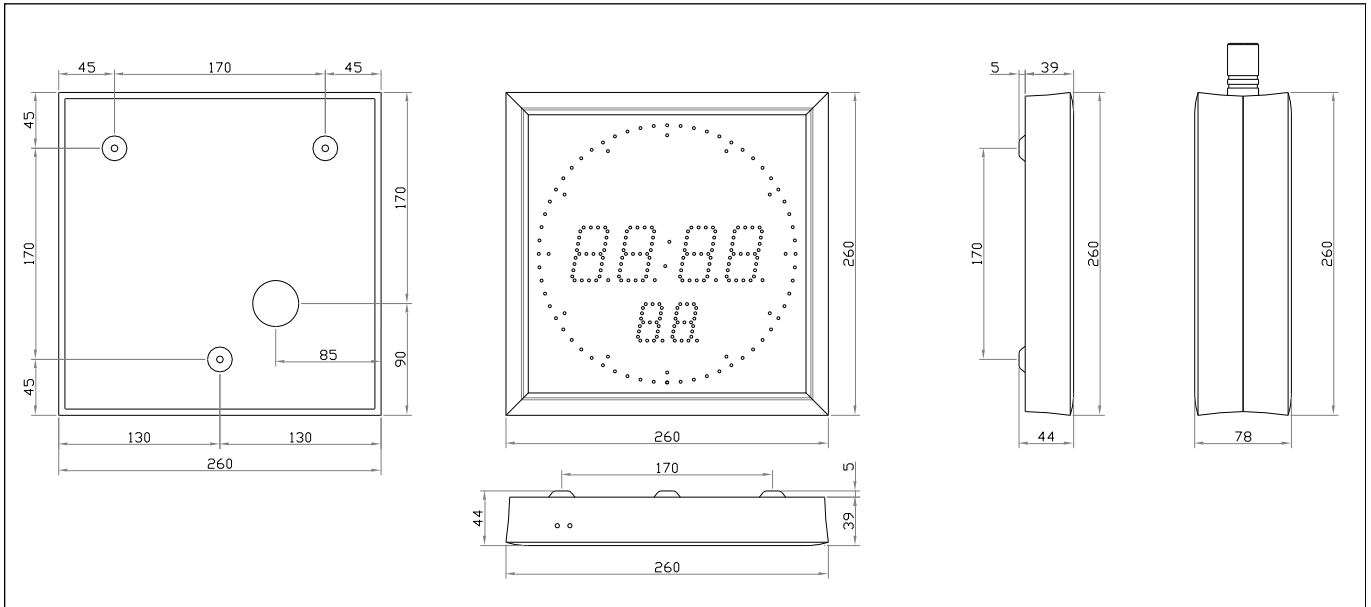
Single-sided digital clock with 57 mm / 38 digit height, pure green 7-segment display with 6 digits (HH:MM<sup>SS</sup>) showing hour, minute and second, standard version, silver housing.

### Notes for DA.18

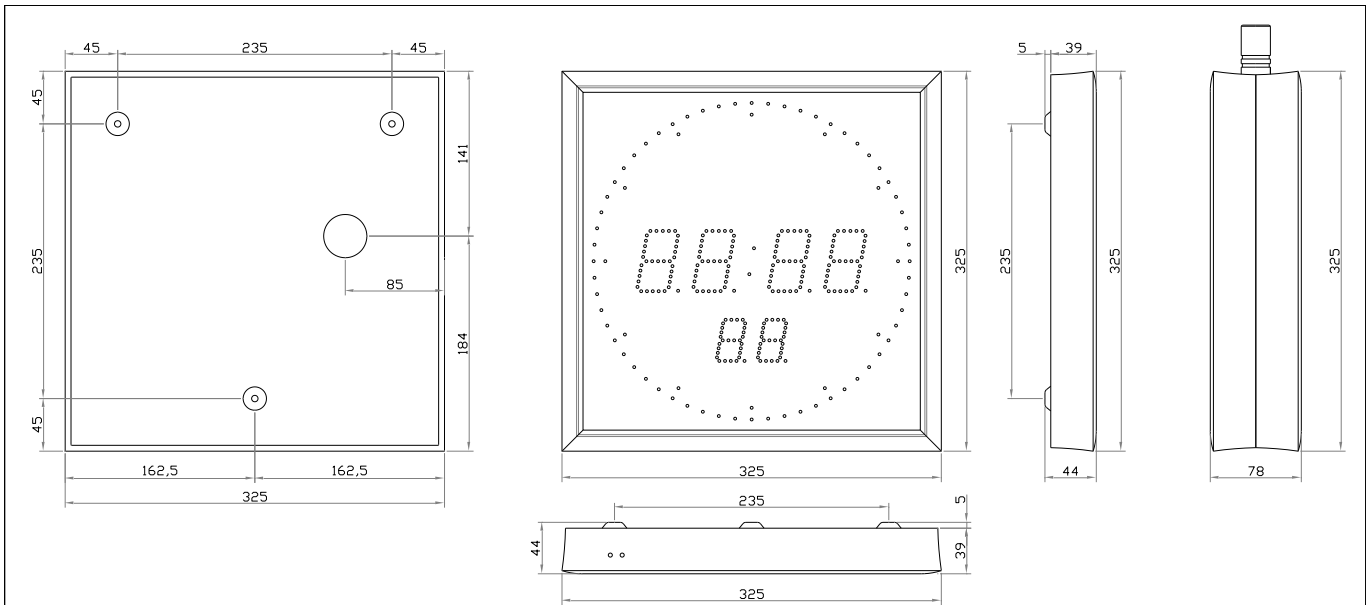
- available only with red display
- SI version is only with built-in RS 485 interface
- WiFi and WTD version not available
- VDC option not available
- power adapter 12 V included in delivery

## Dimension and mounting

### DA.45



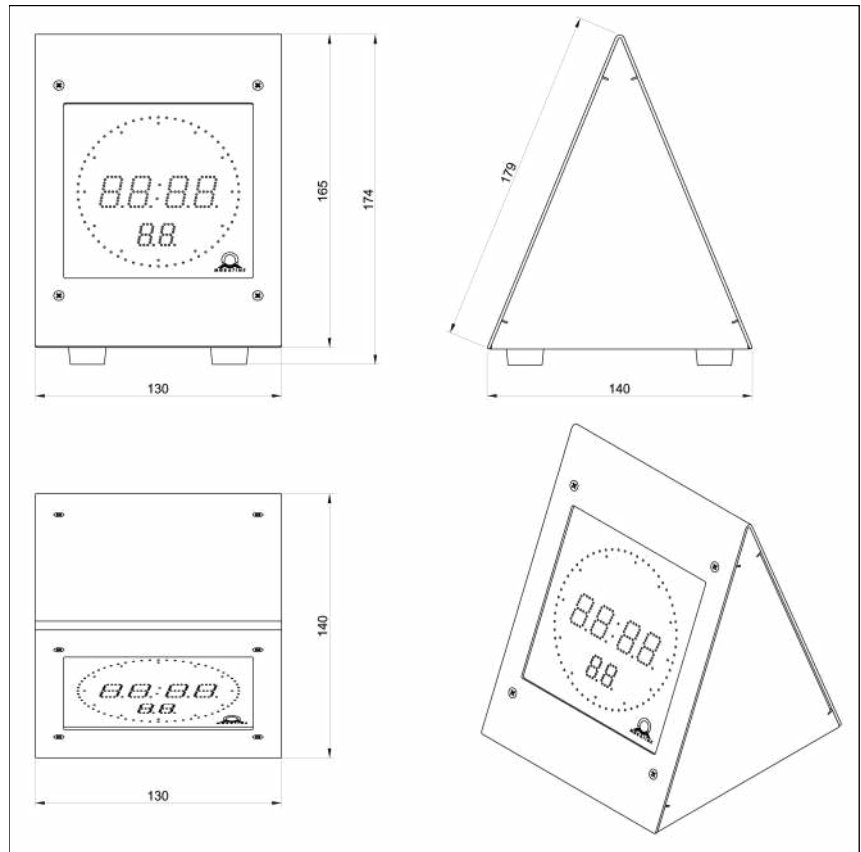
### DA.57



### DA assembly diagram

- removable rear cover, serving also as an anchor plate, the cover incorporates terminal board and provides with an easy assembly in two steps
- ceiling suspension in various lengths (5; 10; 30; 50 cm) or custom length on request
- length of suspender of wall bracket according to the clock type

DA.18, table version



DA.18, panel flush mounting version

