



## LED Digital Clocks

# DC Series

The DC series covers elegant and very slim digital clocks in 7 segment LED technique for displaying time and date. They differ by character height of 57, 100 or 180 mm and by four or six-digit time and date display. As a standard function, the stopwatch is included in all models. A lot of various synchronization modes are available:

- "Stand-alone" operation with internal quartz or with external DCF time code receiver, mains powered
- NTP multicast or unicast (IP based) in Ethernet network, PoE or mains powered
- Slave clock operation in a wireless WTD system with a transmitter, which sends the time signal, mains powered
- Slave clock operation, controlled by self-setting MOBALine code, mains powered

Numerous executions and options make it possible to fulfill individual requests:

- LED display in red, green, blue or yellow
- Single- or double-sided clocks
- Aluminum housings, black- or silver-anodized or in any RAL color
- Wall mounting, ceiling suspension or wall bracket mounting

Options:

- Outdoor sensor for temperature display
- Interface for RS 232, RS 485, IRIG-B
- External buttons for stopwatch
- Infrared remote control for easy access to all functions, for the configuration as well as for the stopwatch function

## DC Series – individual variants

### Display Features

- Time display in four (HH:MM) or six digits (HH:MM<sup>SS</sup>) or (HH:MM:SS), either 12 or 24 hours format
- Date display in four (DD.MM) or six digits (MM.DD<sup>YY</sup>) or (DD.MM.YY)
- Alternating display of time, date and temperature, with adjustable time period for the different figures in the range of 0 – 60 sec
- Temperature display in °C or °F in combination with an external temperature sensor
- Digits of 57, 100 or 180 mm height, which corresponds to readability distance of up to 25, 40 or 70 m respectively
- Display available in red, green, pure green, blue or yellow
- Sensor controlled automatic or manual adjustment of the display brightness
- Possibility to set up MOBALine world time zones

### Mechanics

- Anti-reflection front cover made of plexiglass including a filter layer for best readability over a wide viewing angle
- Elegant and very slim clock frame, made of black or silver anodized aluminum profiles. Any RAL color available on request
- Single- or double-sided execution for wall mounting, ceiling suspension or wall bracket mounting



- Easy installation and time-saving maintenance due to the back panel which is designed as a mounting plate, on which the clock can be snapped-on and secured with a screw



### Synchronization

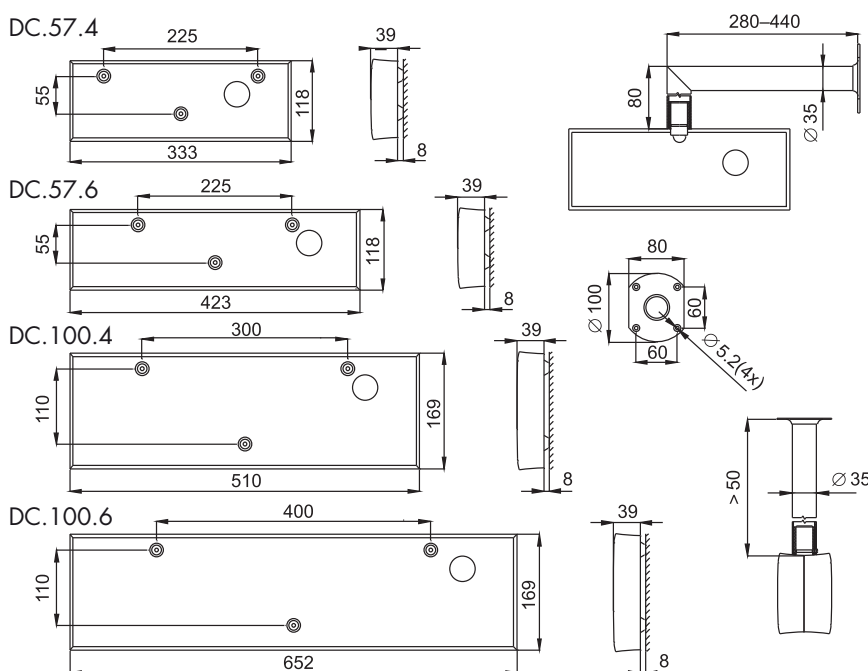
- Autonomous operation with internal quartz time base with programmable, automatic seasonal time change or with external DCF or GPS time signal receiver
- Slave clock operation: MOBALine (self-setting), NTP over Ethernet, WTD (Wireless Time Distribution, 868 MHz, NFS87-500)  
Option: IRIG-B, RS 232 / RS 485

### Stopwatch

- Counting upwards from zero up to 24 hours
- Counting downwards from a specific value either with stop or with automatic restart at zero or counting into negative values
- Display of time intervals, freezing of display, cumulating of time intervals.
- Counting steps of 1 minute, 1 second or 1/100 seconds
- Operation via external buttons or IR remote control unit

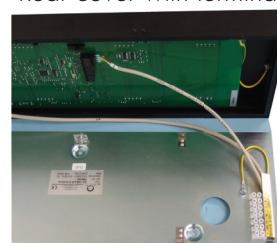
### Configuration

Setting of the clock parameters by means of two push buttons on top of the clock frame or via IR remote control unit. For NTP version Telnet (DHCP/manual) or configuration via MOBA-NMS is possible. Remote firmware update through the LAN via TFTP.

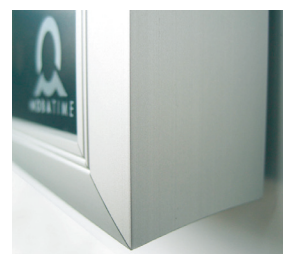


All dimensions are in millimeters.  
Additional 6 mm distance elements shipped with DC.

Rear cover with terminal board



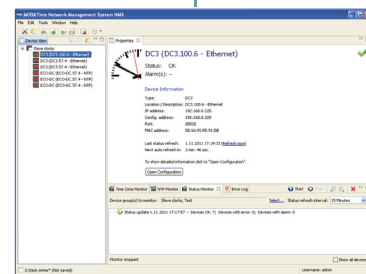
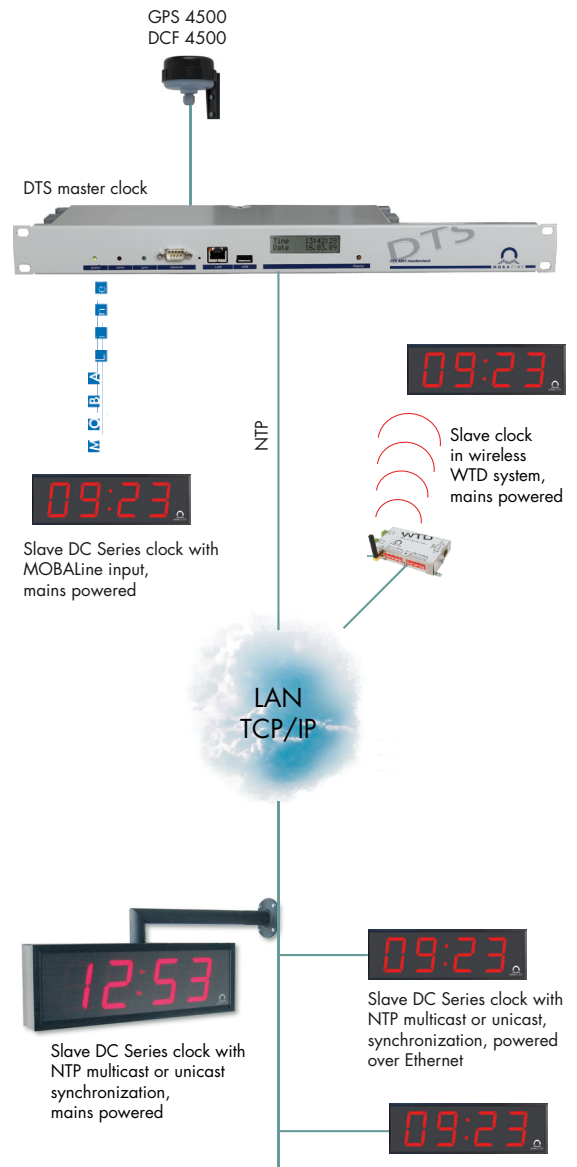
Frame detail



## Order reference:

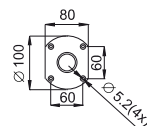
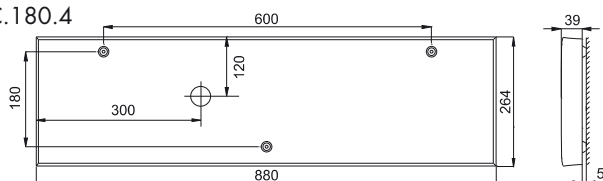
DC . 1 . 2 . 3 . 4 . 5 . 6 . 7 . 8

<b>Digit height</b>	<b>1</b>
57 mm (height of first 4 digits)	57
100 mm (height of first 4 digits)	100
100 mm (height of all 6 digits)	100x
180 mm (height of first 4 digits)	180
180 mm (height of all 6 digits)	180x
<b>Number of digits</b>	<b>2</b>
four digits (HH:MM)	4
six digits (HH:MM:SS)	6
<b>Display color</b>	<b>3</b>
red	R
pure green	PG
blue	B
yellow (amber)	A
green	G
<b>Clock design</b>	<b>4</b>
single-sided	N
double-sided	D
<b>Mode of assembly</b>	<b>5</b>
wall mounting (for single clock only)	N
ceiling suspension (conventionally 5, 10, 30, 50 cm)	S
wall bracket	B
<b>Version</b>	<b>6</b>
standard version - autonomous /MOBALine / (un)polarized pulses 24 VDC	STD
STD with built-in RS 232, RS 485 and IRIG-B interface, mains powered	SI
Ethernet version synchronized by NTP, mains powered	NTP
Ethernet version synchronized by NTP and PoE powered	PoE
WTD wireless synchronization, mains powered	WTD
<b>Frame color</b>	<b>7</b>
black	black
silver	silver
frame color, on request	RALxxxx
<b>Options</b>	<b>8</b>
powered by 24 VDC	VDC
internal relay	REL
<b>Accessories</b>	
GPS receiver	GPS 4500
DCF 77 radio signal receiver	DCF 4500
remote IR controller	IR
keyboard for stopwatch control, cable 5 m	SK
temperature sensor	TP
two temperature sensors	TP 2

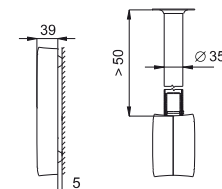
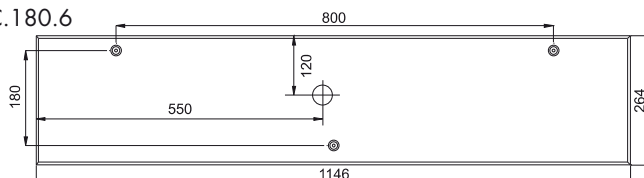


MOBA-NMS  
(Network Management System)

DC.180.4



DC.180.6



## LED Digital Clocks DC Series

Technical Data		DC.57.4	DC.57.6	DC.100.4	DC.100.6	DC.100x.6	DC.180.4	DC.180.6	DC.180x.6	
Display	Digit height (mm)	57	57 / 38	100	100 / 57	100	180	180 / 100	180	
	Number of digits	4	4 + 2	4	4 + 2	6	4	4 + 2	6	
Time display (12 or 24 hours)	HH:MM	✓		✓			✓			
	HH:MM <sup>SS</sup>		✓		✓			✓		
	HH:MM:SS					✓			✓	
Date display	DD.MM	✓		✓			✓			
	DD.MM <sup>YY</sup>		✓		✓			✓		
	DD.MM.YY					✓			✓	
Powering	100 – 240 VAC 50 – 60 Hz	✓	✓	✓	✓	✓	✓	✓	✓	
	24 VDC ±20 %	✓	✓	✓	✓	✓	✓	✓	✓	
	PoE /IEEE 802.3af-Class 0)	✓	✓	✓	✓	-	-	-	-	
Power consumption (red, green and yellow color display)	single-sided	8 VA	10 VA	8 VA	10 VA	11 VA	30 VA	38 VA	45 VA	
	double-sided	15 VA	18 VA	15 VA	18 VA	21 VA	60 VA	75 VA	90 VA	
	single-sided PoE	7 VA	9 VA	7 VA	9 VA	-	-	-	-	
	double-sided PoE	14 VA	15 VA	14 VA	15 VA	-	-	-	-	
Power consumption (blue and pure green)	single-sided	8 VA	11 VA	10 VA	13 VA	14 VA	42 VA	50 VA	63 VA	
	double-sided	15 VA	19 VA	18 VA	23 VA	26 VA	84 VA	100 VA	126 VA	
Quartz accuracy at 20 °C	without synchronization	±0.3 seconds / day (measured over 24 h, after synchronization of at least 24 h)								
Temperature accuracy	-25 to +80 °C	±1.0 °C								
Operating conditions		0 to +50 °C 0 to 95% relative humidity non condensing								
Protection degree		IP 40, optionally IP 54								
Weight (kg)	single-sided	1.4	1.8	2.4	3.1	3.5	6.3	9.3	10.4	
	double-sided	2.6	3.0	4.4	5.6	6.0	10.2	15.3	17.6	
Dimensions L: Length H: Height T: Thickness in mm	single-sided	L	333	423	510	652	728	880	1149	1267
		H	118	118	169	169	169	264	264	264
		T	39	39	39	39	39	39	39	39
	double-sided	L	333	423	510	652	728	880	1149	1267
		H	118	118	169	169	169	264	264	264
		T	78	78	78	78	78	78	78	78
<b>Accessories</b>										
DCF 4500 radio receiver		✓	✓	✓	✓	✓	✓	✓	✓	
GPS 4500 receiver		✓	✓	✓	✓	✓	✓	✓	✓	
External temperature sensor with IP 66 protection		✓	✓	✓	✓	✓	✓	✓	✓	
External keyboard for stopwatch control, cable 5m		✓	✓	✓	✓	✓	✓	✓	✓	
IR remote control unit		✓	✓	✓	✓	✓	✓	✓	✓	