

## Digital clocks

# Calendar Clock DK

The DK series calendar clocks display simultaneously information about time and date. The date information can be displayed in more than 20 languages.

One single display unit can be programmed to alternate between three different languages.

A lot of synchronization modes and features are available:

- autonomous operation with internal quartz, powered by mains
- NTP multicast or unicast synchronization in Ethernet network, powered over PoE or mains
- self-setting slave clock operation controlled by MOBALine code mains powered
- mains powered slave clock operation in wireless WTD system, based on a transmitter which sends the time signal
- slave clock operation controlled by built-in RS 232, RS 485 or IRIG-B interface, mains powered
- single- or double-sided clocks

## The Clock

- display of time values (either 12 or 24 hours time cycle), four-digit (HH:MM) or six-digit (HH:MM<sup>SS</sup>) format
- display of weekday 3 characters, display of month 8 characters
- temperature indication (if a temperature sensor is connected) in °C or °F
- possibility of displaying one or two temperatures (two temperature sensors) and description
- possibility of alternating display between date and temperature, with adjustable period of displaying
- possibility of setting up the time zone, the display can cycle between up to five different places and display actual time and city name

## Display Features

- digits of 57 mm height, which corresponds to readability distance of 25 m
- the letters 30 mm high (36 mm with special characters)
- digits in red or green
- digits in blue or yellow (amber) on request
- manual or automatic adjustment of the luminosity of LED

## Mechanic

- Single or double-sided design, wall mounting (only for single-sided clocks), ceiling suspension or wall bracket mounting
- clock frame made of anodized aluminum profiles in black or silver, any RAL color on request

- 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
- structural depth 39/78 mm of single-/double-sided design respectively
- anti-glare front side cover, made of plexiglass, which prevents the occurrence of reflections and improves the readability

## 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
- operation via external keyboard or remote control
- possibility to connect other display units

## Operation

- setting the clock parameters and time - date setting by means of push buttons, placed on the upper side of the clock frame, or through IR remote control
- autonomous quartz time base with the possibility of synchronization by means of the DCF 77 radio signal
- by cascading, several digital clocks can be synchronized from one DCF or GPS receiver

## For NTP and PoE version only

- DHCP / manual configuration of the clock parameter or setting over telnet
- DHCP options 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 by mains with wide input voltage range 100 - 240 VAC, optionally from 24 VDC voltage or through PoE (IEEE 802.3af) with NTP version
- NTP and PoE version IPv6 ready

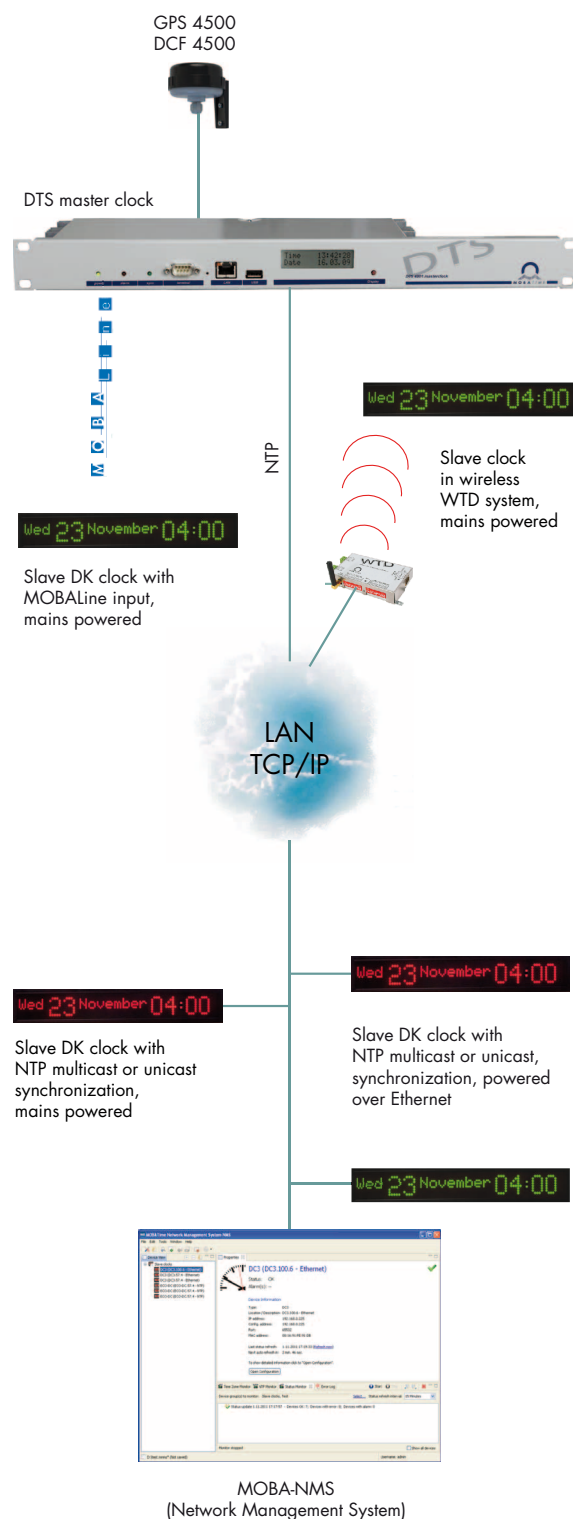
## Synchronization types

- DCF 77
- GPS (DCF, UTC)
- MOBALine
- NTP (multicast or unicast) over Ethernet
- WTD (Wireless Time Distribution, 868 MHz, NF S87-500)
- IRIG-B (SI option)
- (un)polarized 24 VDC (minute, half minute and second pulses)
- RS 232 (SI option)
- RS 485 (SI option)

## Order reference - DK clocks

DK • 1 • 2 • 3 • 4 • 5 • 6 • 7

<b>Height of digits</b>	<b>1</b>
57 mm	57
<b>Number of digits</b>	<b>2</b>
4-digit for time display	4
6-digit for time display	6
<b>Display color</b>	<b>3</b>
red	R
green	G
<b>Version</b>	<b>4</b>
single-sided	N
double-sided	D
<b>Mounting</b>	<b>5</b>
wall mounting	N
ceiling suspension (conventionally 5, 10, 30 and 50 cm, other lengths on request)	S
wall bracket	B
<b>Synchronization</b>	<b>6</b>
standard version - autonomous / MOBAline / (un)polarized 24 VDC impulses	STD
standard version with built-in RS 232, RS 485, IRIG-B interface	SI
Ethernet version, synchronized by NTP, powering 230 VAC	NTP
Ethernet version, synchronized by NTP, powering PoE	PoE
WTD, wireless synchronization	WTD
<b>Frame color</b>	<b>7</b>
black (RAL 9005)	black
silver (RAL 9006)	silver
frame color on request	RALxxxx
<b>Option</b>	
powered by 24 VDC	VDC
internal relay	REL
<b>Accessories</b>	
DCF 77 radio signal receiver	DCF 4500
GPS receiver	GPS 4500
temperature sensor, IP 66, cable 3 m	TP 3 m
temperature sensor, IP 66, cable 30 m	TP 30 m
temperature sensor with RS 485 interface power supply 12 VDC cable between sensor and interface 3 m, for SI version only	TP RS485.M
temperature sensor with Ethernet interface power supply 5 VDC, cable between sensor and interface 3 m, for NTP and PoE version only	TP LAN
IR remote control	IR
external keyboard for stopwatch control, cable 5 m	SK



## DK-Series - Technical details

Technical Data		DK.57.4	DK.57.6
Display	height of the digits [mm]	57	57 / 36
	height of the letters [mm]	30	30
Time display format	HH:MM	✓	
	HH:MM <sup>SS</sup>		✓
Date display format	weekday	3 characters	
	date	day + 8 characters name of month	
Powering	100 - 240 VAC, 50 - 60 Hz	✓	✓
	24 VDC ± 20% (on request)	✓	✓
	PoE (IEEE 802.3af)	✓	✓
Power consumption red, green	single-sided, mains powered	11 VA	11 VA
	double-sided, mains powered	18 VA	18 VA
	single-sided, PoE	11 VA	11 VA
	double-sided, PoE	15 VA	15 VA
Crystal base	passive running reserve (time and date)	6 years (except PoE)	
	accuracy without synchronization	± 0,3 sec / day (measurement over 24 h, after synchronization of at least 24 h)	
Accuracy of temperature measurement	range -10 to +85 °C	± 0,5 °C	
	range -50 to +125 °C	± 2,0 °C	
Operating environment	temperature	0 to +50 °C	
	humidity	0 - 95 %, without condensation	
	protection degree	IP 40	
Weight [kg] (without mounting bracket)	single-sided	2,4	2,8
	double-sided	4,4	5,1
Dimensions [mm] (length x height x depth)	single-sided	735 x 118 x 39	800 x 118 x 39
	double-sided	735 x 118 x 78	800 x 118 x 78
Accessories			
External temperature sensor of IP66 protection degree	TP	✓	✓
Remote control	IR	✓	✓
Internal relay	REL	✓	✓
DCF 77 radio signal receiver	DCF 4500	✓	✓
GPS receiver	GPS 4500	✓	✓
External keyboard for stopwatch control	SK	✓	✓

