

The **BA369** is an intrinsically safe, battery powered, panel mounting digital clock that will accurately display local time in a hazardous area.

The clock incorporates a temperature compensated crystal oscillator that ensures less than one minute error per year at ambient temperatures between 0 and 40°C. For most industrial applications this accuracy is adequate, but if greater precision is required, or the display must be traceable, the BA369 may be synchronised with an external time standard.

The 25mm high wide-angle display is easy to read and allows installation of the clock in almost any panel or cubicle. Hours and minutes are continuously displayed separated by a flashing colon to show that the clock is functioning correctly. Operating a front panel push-button will change the display to seconds or to the date. When the button is released the original display will return.

ATEX intrinsic safety certification permits permanent installation in Zones 0, 1 or 2. When used as a stand-alone clock no wiring is required. The clock is powered by an internal BEKA MA491 intrinsically safe battery that may be replaced within the hazardous area.

Programming and adjustment are performed via the front panel push-buttons which, to prevent unauthorised adjustment, may be protected by a user selectable four digit security code. All

settings and adjustable parameters are contained in a simple, easy to use menu. In addition to entering the local time and date, this menu allows a twelve or twenty four hour format and automatic daylight saving to be selected. If used, the type of synchronisation can also be defined.

Three different synchronisations are selectable from within the programme menu. Connecting synchronising terminals 1 and 2 together will stop the clock at the current displayed time. When the terminals are disconnected the clock will restart from the nearest minute, the nearest hour or from a preset time entered via the programme menu. The two synchronising terminals have intrinsic safety output parameters that allow up to ten clocks to be connected in parallel. All the clocks may be synchronised by a single hazardous area switch, or connected to a common Zener barrier or galvanic isolator and synchronised from the safe area.

Elapsed time may also be displayed by the BA369 clock when the synchronising preset time is set to 00:00. Disconnecting the two synchronising terminals will reset the display to 00:00 and start the clock running. When the terminals are reconnected the clock will stop and display the elapsed time.

The front panel of the BA369 has IP65 protection and a neoprene gasket seals the joint between the clock and the panel making it suitable for use in areas that will be hosed.

BA369

Battery powered clock

Intrinsically safe for use in all hazardous areas

- *Intrinsically safe ATEX certification*
- *25.4mm high display*
- *±1 minute accuracy per year*
- *Replaceable battery 3 years typical life*
- *IP65 front panel*
- *Local or remote synchronisation*
- *3 year guarantee*



BEKA
associates

ABLE
Instruments & Controls

SPECIFICATION

Display

Type	4 digit liquid crystal
Height	25.4mm
Format	12:00 or 24:00 hour
Annunciator	Indicates PM when 12 hour format is selected.

Push-buttons

Operating ▼	Display shows date
Operating ▲	Display shows seconds

Accuracy

0 to 40°C	Without external synchronisation ±1 minute / year
-20 to 50°C	±4 minutes / year

Automatic daylight saving

Selectable function which on internationally agreed days advances display one hour in March and retards it in October.

Synchronisation

Function	Connecting terminals 1 & 2 together stops the clock. When the terminals are disconnected the clock will restart from the nearest minute, the nearest hour, or from a pre-set time depending upon how the clock has been programmed.
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Input	Terminals 1 & 2 must be connected together via a resistance of less than 500Ω for at least 1 second.
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Battery

Type	BA491 Battery Unit
Cert. No.	ITS Ex01E2021U
Life	3 years typical continuous operation at 20°C.

Intrinsic safety

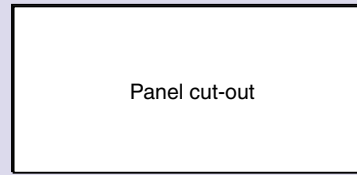
Europe ATEX Standard Code	EN50020:1994 Group II Category 1G EEx ia IIC T5
Cert. No.	ITS02ATEX2017 Ex02E2018 Barrier system Ex02E2019 Isolator system
Location	Zone 0, 1 or 2

Synchronising terminals 1 & 2	The synchronising terminals of up to ten BA369 clocks may be connected in parallel within the hazardous area. The clock(s) may be synchronised by any mechanically operated switch complying with the requirements for simple apparatus. Alternatively, the clock(s) may be synchronised by any safe area switch connected via a certified Zener barrier or galvanic isolator whose output parameters do not exceed; U_o 10V dc I_o 200mA P_o 0.7W
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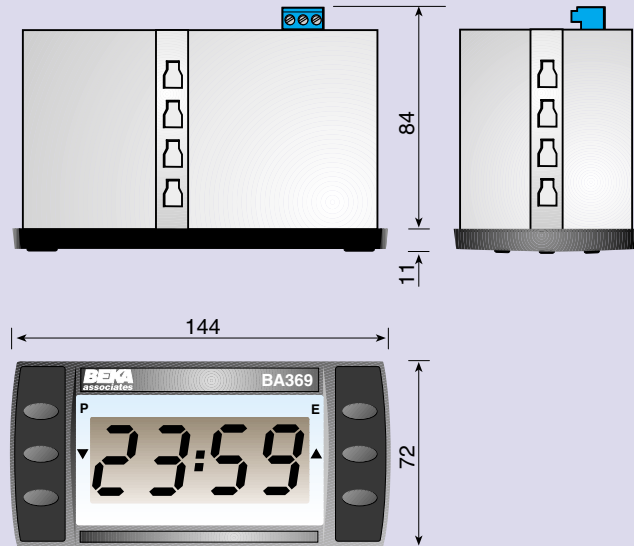
Environmental

Operating temp	-20 to +50°C (certified for use at -40°C)
Humidity	To 95% @ 40°C
Enclosure	Front IP65, rear IP20
EMC	In accordance with EU Directive 89/336/EEC, full report available.
Immunity	No error for 10V/m field strength between 27MHz and 1GHz.
Emissions	Undetectable above background noise. Class B equipment

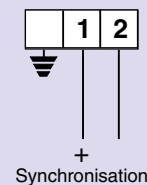
DIMENSIONS (mm)



Recommended panel cut-out
 DIN 43 700
 138.0 +1.0/-0.0 x 68.0 +0.7/-0.0
 To achieve an IP65 seal between the instrument and the panel 136.0 +0.5/-0.0 x 66.2 +0.5/-0.0
 Four panel mounting clips must be used



TERMINAL CONNECTIONS



Mechanical

Terminals	Removable with screw clamp for 0.5 to 1.5mm ² cable.
Weight	0.4kg

Accessories

Tag strip	Thermally printed tag strip secured by screws.
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HOW TO ORDER

Model number	Please specify BA369
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Accessories Tag strip Replacement battery	Please specify if required Legend BA491 battery
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Note: At 20°C stored batteries lose 1% of their charge per year. Replacements may therefore be stocked on-site.