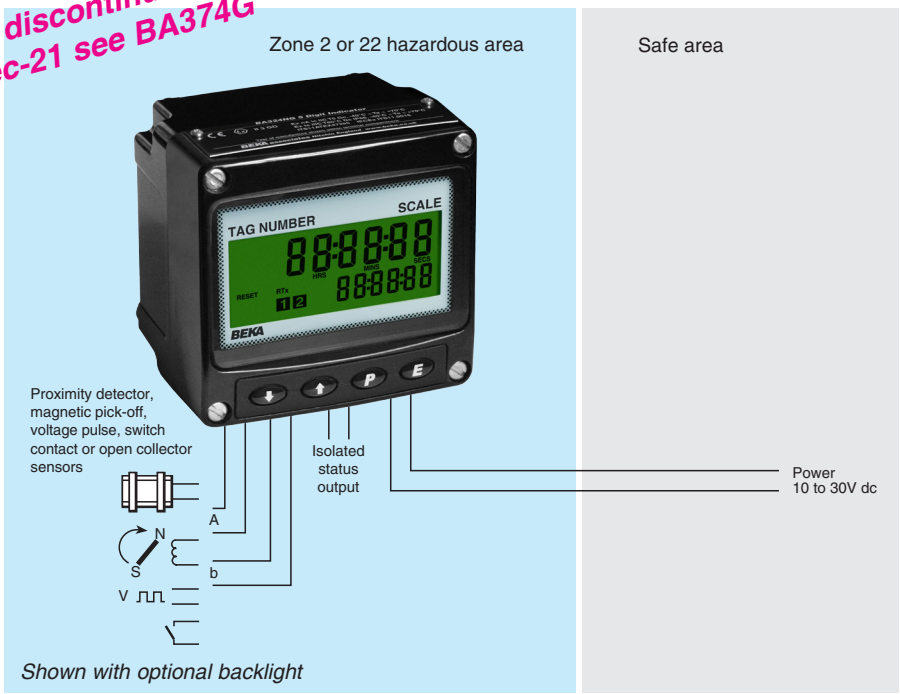
To be discontinued by 31-Dec-21 see BA374G



Shown with optional backlight

BA374NG

Ex nA two input timer or clock

Can be installed in Zone 2 or 22 without Zener barriers or galvanic isolators

- **Configurable input: magnetic pick-off, switch contact, proximity detector, open collector or voltage pulse.**
- **Separate primary and secondary displays.**
- **Ex nA & Ex tc certified**
- **IP66 GRP enclosure**
- **Isolated status output**
- **Simple on-site scale card installation.**
- **Optional: Backlight Dual outputs**
- **3 year guarantee**

www.beka.co.uk/ba374ng

The BA374NG is a two input, field mounting instrument that can be configured as a Timer or as a Clock. As a Timer it is able to measure the elapsed time between external events, or control external events via the status and optional control outputs. When configured as a Clock the instrument can display time in a variety of formats. The BA374NG is controlled by two inputs which may be independently configured on-site to operate with a magnetic pick-off, switch contact, proximity detector or a voltage output sensor. International Ex nA and Ex tc certification permits worldwide installation in Zones 2 or 22 without Zener barriers or galvanic isolators which significantly reduces the installation cost.

Configuration may be performed on-site via the front panel push buttons using the easy to use and well documented menus. The Timer employs a state and event structure to simplify configuration. The BA374NG can be supplied configured to customers requirements including a customer defined printed scalecard for no additional charge.

Applications as a Timer include displaying the time interval between two events detected by one or two sensors in Zone 2 or 22. The Timer can also control an external event using the isolated open collector status output. If more than one circuit is to be controlled, dual isolated control outputs are available as a factory fitted option. The Timer is able to perform many common industrial timing application, such as those associated with dosing or sampling requiring a valve to be regularly opened for a defined time. A powerful cycle function is included which can be configured to repeat the timing function up to 99 times or continuously, with up to 100 hours delay between timed periods.

When configured as a Clock the BA374NG can display local time in various twelve or twenty four hour formats, and may be synchronised to a pre-set time via the external reset input. The isolated open collector status output can be configured to switch on and off twice at pre-set times during each twenty four hour period and may be used for repetitive timing functions. If more than one circuit is to be controlled, optional factory fitted isolated dual control outputs are available. Each output may be independantly configured to switch on and off twice at pre-set times during each twenty four hour period.

The display has high contrast and a wide viewing angle, enabling the instrument to be read in most lighting conditions over a wide temperature range.

Display backlighting which is internally powered from the timer or clock, is available as a factory fitted option. It provides green background illumination enhancing daylight viewing and allowing the display to be easily read at night or when installed in a poorly illuminated area.

IP66 protection is provided by the robust GRP enclosure which has stainless steel fittings, a silicone gasket and an 8mm thick armoured glass window. Ingress and impact protection have been independently assessed by Intertek.

International Ex nA and Ex tc certification allows the BA374NG timer or clock to be installed in Zones 2 and 22 gas and dust hazardous areas worldwide. BEKA Application Guide AG310 contains Ex nA installation recommendations.

Other timers or clocks in the range include the panel mounting BA377NE and an extensive range of field and panel mounting intrinsically safe and general purpose models.

BEKA associates

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Tel. (01462) 438301 Fax (01462) 453971
e-mail sales@beka.co.uk www.beka.co.uk

SPECIFICATION

Power supply

Voltage	10 to 30V
Current	16mA max plus 16mA for optional backlight

Input

	Lower	Upper switching thresholds
Switch contact	100Ω	1kΩ
Proximity detector (NAMUR)	1.2mA	2.1mA
Open collector	2kΩ	10kΩ
Magnetic pick-off	0	+40mV
Voltage pulse (low)	1V	3V 30V max
Voltage pulse (high)	3V	10V 30V max

Display

Type	Liquid crystal
Primary	18mm high
Secondary	12mm high
Format	hh:mm:ss ; hh:mm ; mm:ss or s

Timer reset or Clock sync — Contact closure with resistance less than 10kΩ

Status output — Isolated, open collector

Ron	51Ω + 3V max
Roff	1MΩ min
Ui	30V dc
I max	10mA

Timer

Maximum duration	99h 59m and 59s or equivalent in any display format.
Maximum delay between cycles	99h 59m and 59s or equivalent in any display format
Grand total run-time	5 x 10^8h maximum

Clock

Accuracy	Less than ±0.43s error per day over operating temperature range.

Certification — **Note: Ex ic codes refer to instrument push button contacts which are nonincendive.**

Europe ATEX

Code	Group II Category 3G Ex nA ic IIC T5 Gc Group II Category 3D Ex ic tc IIIC T80°C Dc -40 ≤ Ta ≤ 60°C
Cert. No.	ITS16ATEX48409X

International IECEx

Code	Ex nA ic IIC T5 Gc Ex ic tc IIIC T80°C Dc -40 ≤ Ta ≤ 60°C
Cert. No	IECEx ITS 16.0005X

ETL & cETL

Code	Class I Zone 2 AEx nA ic IIC T5 Gc Zone 22 AEx ic tc IIIC T80°C Dc	USA
	Ex nA ic IIC T5 Gc Ex n IIC T5 Gc Ex ic tc IIIC T80°C Dc Class III Div 2, Class II Div 2, Gp F, G -40°C ≤ Ta ≤ 60°C	Canada
ETL Control No.	4008610	

Environmental

Operating temp	-40 to +70°C display -20 to +70°C
Certification temp	-40 to +60°C
Storage temp	-40 to +85°C
Humidity	to 95% at 40°C non condensing
Vibration	Report available
Enclosure	
Material	GRP
Ingress	IP66
EMC	Complies with 2014/30/EU

Mechanical

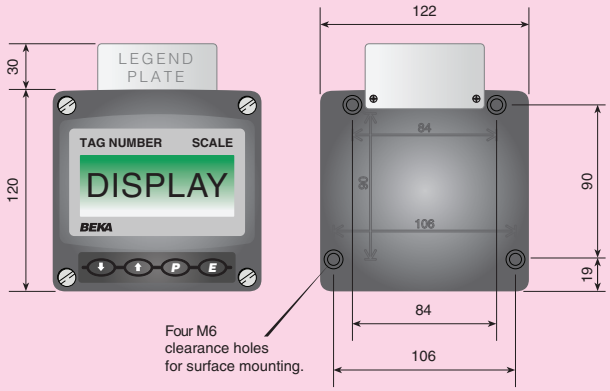
Terminals	Screw clamp for 0.5 to 1.5mm²
Weight	1.1kg

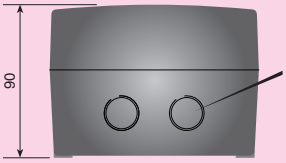
Accessories

Backlight	Green LED internally powered
Control outputs	Two outputs each of which may be independently configured as a NO or NC output.
Outputs	Isolated single pole, voltage free solid state switch
Ron	5Ω + 0.7V max
Roff	IMΩ min
Ui	30V dc
I max	10mA
Scale card	Blank card fitted to all instruments. Can be supplied printed with specified units of measurement and tag information for no additional charge at time of purchase. #
Legend plate	316 stainless steel plate laser engraved with tag number or application information attached to rear of the instrument, visible from the front. #
Pipe mounting kit	BA393G 316 stainless steel #
Panel mounting kits	BA394G 316 stainless steel not sealing #

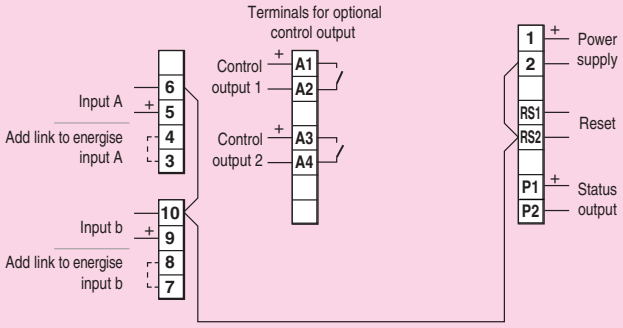
 # See accessory datasheet for details

DIMENSIONS (mm)





TERMINAL CONNECTIONS



HOW TO ORDER

	Please specify for each input
Model number	BA374NG
Function	Timer or Clock
Input	Type *

Accessories	Please specify if required
Display backlight	Backlight
Control outputs	Control outputs
Scale card marking	
Units	Legend required
Tag	Legend required *No charge if ordered with instrument*
Stainless legend plate	Legend required
Pipe mounting kit	BA393G
Panel mounting kit	BA394G

** BA374NG can be supplied configured as required for no additional charge, see instruction manual, which can be downloaded from* **www.beka.co.uk/ba374ng** *for details. If configuration information is not supplied, instrument will be configured as a Timer with open collector inputs. Can easily be reconfigured on-site.*