

## MINITIMER

Timer, Release Delay

AA 7666, EC 7666, EF 7666, EH 7666



- According to IEC/EN 61 812-1
- Delay up to 60 h
- 6 time ranges on one unit, adjustable at front side
- Repeat accuracy  $\leq \pm 0.5\%$   
( $\leq \pm 1\%$  for the range 3 and 6 s)
- Time lapse display
- Switching position display (except for EH 7666)
- With instantaneous contact
- No voltage safe
- EF 7666: front side protected against beam water, IP 65
- AA 7666: width 45 mm
- EC 7666: front size 48 x 72 mm
- EF 7666: front size 72 x 72 mm
- EH 7666: front size 96 x 96 mm

### Approvals and Marking



### Application

Time dependent controls

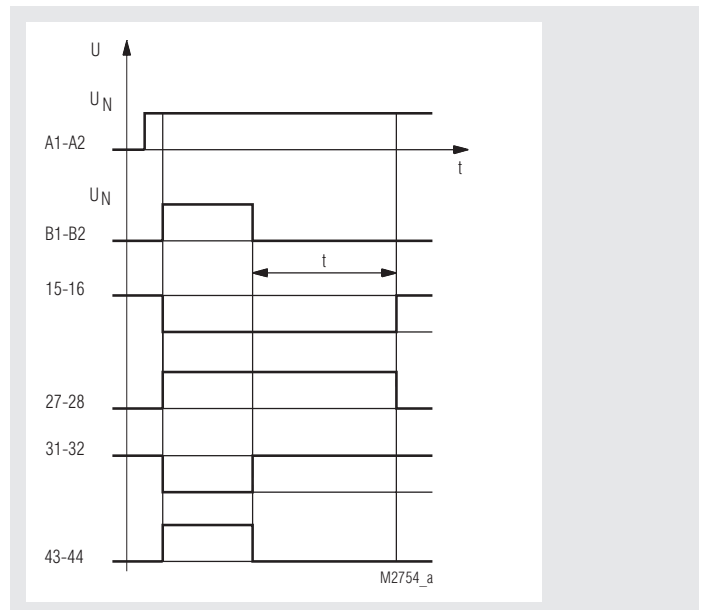
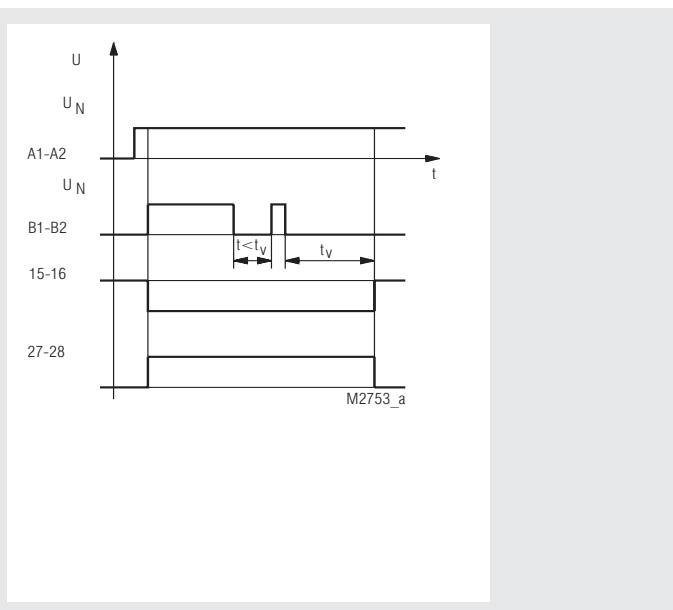
### Indication

Time display: via red pointer at scale of the device  
 Switching position: red sign when NO contacts are closed (not for EH 76669)  
 Time range display: final scale value in a window

### Notes

The frequency changing switch 50 / 60 Hz is located on the bottom side of the unit.

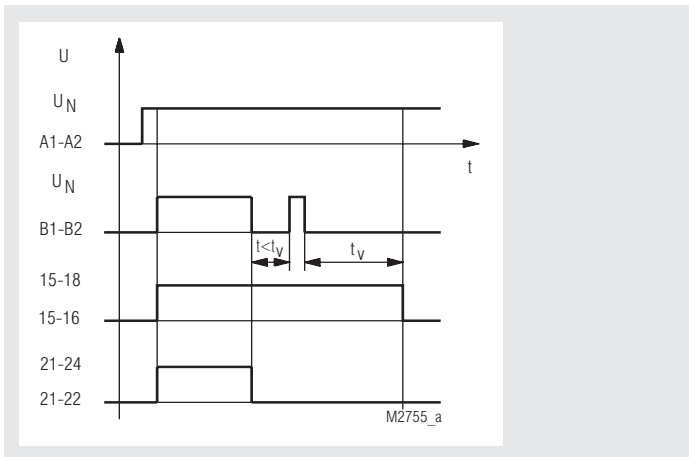
### Function Diagrams



AA 7666.21, EC 7666.21, EH 7666.21

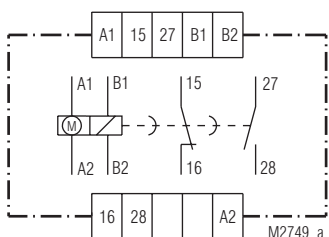
EF 7666.24

## Function Diagrams

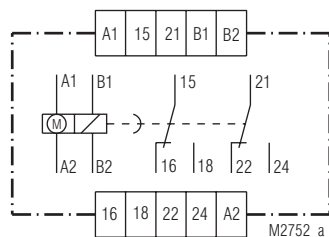


AA 7666.32, EF 7666.32

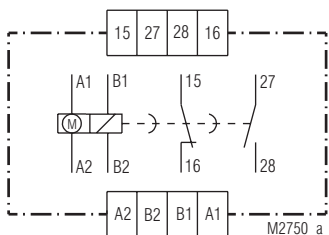
## Circuit Diagrams



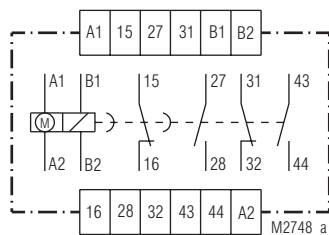
AA 7666.21



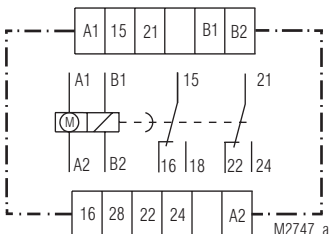
AA 7666.32



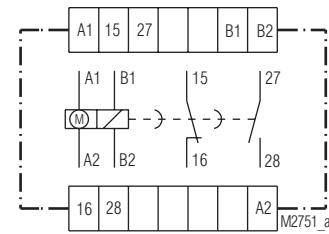
EC 7666.21



EF 7666.24



EF 7666.32



EH 7666.21

## Technical Data

### Time circuit

#### Time ranges:

6-range models  
 0.15 ... 3 s 1.5 ... 30 s 15 ... 300 s  
 0.4 ... 10 s 4 ... 100 s 40 ... 1000 s  
 or  
 0.15 ... 3 s 0.15 ... 3 min 0.15 ... 3 h  
 1.5 ... 30 s 1.5 ... 30 min 1.5 ... 30 h  
 or  
 0.2 ... 6 s 0.2 ... 6 min 0.2 ... 6 h  
 2 ... 60 s 2 ... 60 min 2 ... 60 h  
 infinite with black (white) setting pointer  
 on absolute scale

#### Time setting:

#### Recovery time:

<math>\leq \pm 0.5\%</math> of max. scale value

#### Repeat accuracy:

(at 3 and 6 s  $\leq \pm 1\%$ )

EH 7666, DC-version:

$\leq \pm 3\%$  of the max. scale value

## Technical Data

### Input

**Nominal voltage  $U_N$ :**

AC 24, 42, 110, 127, 230, 240 V

**Special voltages**

AA 7666:

AC 12, 400, 415 V

EH 7666:

DC 12, 24, 48, 60\*, 110\*, 230\* V

\* with external series resistance

**Voltage range:**

0.8 ... 1.1  $U_N$

**Nominal consumption:**

AC 7 VA

DC 12 V 5 W

DC 24 V 5 W

DC 48 V 7 W

DC 60 V 10 W

DC 110 V 13 W

DC 230 V 18 W

**Nominal frequency:**

50 / 60 Hz to e selected

**Frequency range:**

$\pm 5\%$   $f_N$

**Frequency influence:**

reverse proportional

### Output

#### Contacts

AA 7666.21,

EC 7666.21,

EF 7666.21,

EH 7666.21:

1 NC contact, delayed

1 NO contact, delayed

1 NO contact, instantaneous

1 NC contact, instantaneous

1 NC contact, delayed

1 NO contact, delayed

EF 7666.24:

1 changeover contact, delayed

1 changeover contact, instantaneous

<math>< 35</math> ms

<math>< 60</math> ms

4 A

EF 7666.32:

**Operate time of contacts:**

**Release time:**

**Thermal current  $I_{th}$ :**

**Switching capacity**

to AC 15:

3 A / AC 230 V

IEC/EN 60 947-5-1

**Electrical life**

to AC 15 at 3 A, AC 230 V:

1 x  $10^5$  switching cycles

to AC 15 at 1 A, AC 230 V:

5 x  $10^5$  switching cycles

**Permissible switching frequency:**

3 000 switching cycles / h

**Short circuit strength**

**max. fuse rating:**

10 A gL

IEC/EN 60 947-5-1

**Mechanical life:**

> 30 x  $10^6$  switching cycles or

> 15 000 h

### General Data

**Operating mode:**

Continuous operation

**Temperature range:**

- 20 ... + 55 °C

**Clearance and creepage distances**

rated impuls voltage /

pollution degree

inputs:

4 kV / 2

IEC 60 664-1

in-/output:

4 kV / 2

IEC 60 664-1

### EMC

Electrostatic discharge:

8 kV (air)

IEC/EN 61 000-4-2

HF irradiation:

10 V/m

IEC/EN 61 000-4-3

Fast transients:

4 kV

IEC/EN 61 000-4-4

Surge voltages

between

wires for power supply:

2 kV

IEC/EN 61 000-4-5

between wire and ground:

4 kV

IEC/EN 61 000-4-5

HF-wire guided:

10 V

IEC/EN 61 000-4-6

Interference suppression:

Limit value class B

EN 55 011

**Degree of protection:**

IEC/EN 60 529

AA 7666:

Housing: IP 40

Terminals: IP 20

EC 7666, EH 7666:

Housing-front: IP 40

Housing: IP 30

Terminals: IP 10

EF 7666:

Housing-front: IP 65

**Housing:**

Thermoplast with V0 behaviour

according to UL subject 94

**Vibration resistance:**

Amplitude 0.35 mm

frequency 10...55Hz, IEC/EN 60 068-2-6

## Technical Data

<b>Climate resistance:</b>	20 / 055 / 04; A/B/C	IEC/EN 60 068-1
<b>Terminal arrangement:</b>	DIN 46 199-5	
<b>Terminal designation:</b>	EN 50 005	
<b>Wire connection:</b>	2 x 2.5 mm <sup>2</sup> solid or 2 x 1.5 mm <sup>2</sup> stranded wire with sleeve	
	DIN 46 228-1/-2/-3/-4	
<b>Wire fixing:</b>	Flat terminals with self-lifting clamping piece	IEC/EN 60 999-1
<b>Mounting</b>		
AA 7666:	DIN rail	IEC/EN 60 715
EC 7666, EF 7666, EH 7666:	flush mounting	
<b>Weight</b>		
AA 7666:	320 g	
EC 7666:	320 g	
EF 7666:	400 g	
EH 7666:	450 g	

## Dimensions

### Width x height x depth

AA 7666:	45 x 77 x 127 mm
EC 7666:	48 x 72 x 120 mm
EF 7666:	72 x 72 x 128 mm
EH 7666:	96 x 96 x 138 mm

### Front panel cut-out

EC 7666:	44 x 67 mm
EF 7666:	67 x 67 mm
EH 7666:	ø 91 <sup>+1</sup> mm

### Front surface

EC 7666:	48 x 72 mm
EH 7666:	72 x 72 mm
EH 7666:	96 x 96 mm

## Standard Type

AA 7666.32 AC 230 V 50/60 Hz 0.15 s ... 30 h	
Article number:	0025127 stock item
• Time range:	0.15 s ... 30 h
• Nominal voltage U <sub>N</sub> :	AC 230 V
• Output:	1 changeover contact, delayed 1 changeover contact, instantaneous
• Width:	45 mm

## Ordering Example

AA 7666 .32 AC 230 V 50 / 60 Hz 30 h	
AA 7666	Type
.32	Contact
AC 230 V	Nominal voltage
50 / 60 Hz	Nominal frequency
30 h	Time-range max. value

## Accessories

### for EC 7666:

ZS 700.06:	Lockable cover Article number: 0004057
ET 7001.407.034:	Plug-in-socket for EC 7666.21 Article number: 0004072

### for EF 7666:

ZS 700.07:	Lockable cover Article number: 0004058
ET 7616-0-22:	Sealing ring for sealing at the front side Article number: 0045909

