

0227773



BA 7864



EO 7864



EO 7864 with
front frame
ET 4048-3

- According to IEC/EN 61 812-1
- Time range up to 32 h
- Seperate setting of impulse- and space time
- For impulse- and space time 4 time ranges each
- Repeat accuracy $< \pm 0.5 \%$
- Setting on relative scale
- Dual-voltage-version
- Programmable for start with impulse or space
- LED indication for operation and contact position
- BA 7864 available with remote potentiometer contact Z1-Z2, Z3-Z4
- EO 7864 with 11-pole socket
- Available with 1 or 2 changeover contacts,
or semiconductor output (BA 7864)
- BA 7864: width 45 mm
- EO 7864: front size 35 x 48 mm

Approvals and Markings



Applications

Time dependent controls

Indicators

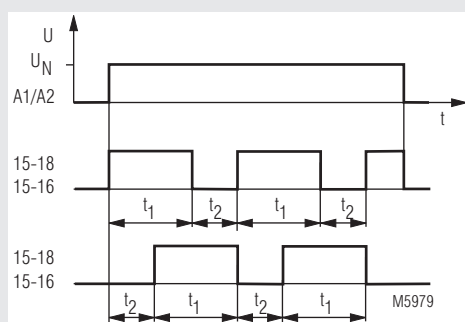
red LED:	On when operating voltage applied
green LED:	On when output relay activated

Notes

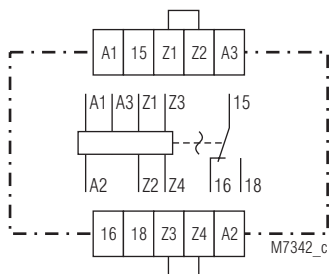
By an external bridge via terminals 6-7 of the plug-in-socket the EO 7864 can be programmed for the start with space.

The pulse control timer BA 7864.__ starts with impulse, whereas the special version of the device BA 7864.__/010 starts with space. For the variants BA 7864.81 and BA 7864.81/010 a remote setting of the impulse- or space time is possible via two external variable resistors.

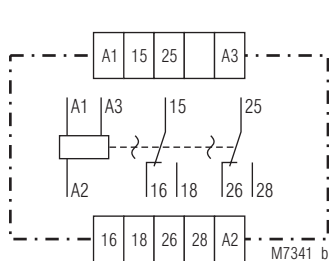
Function Diagram



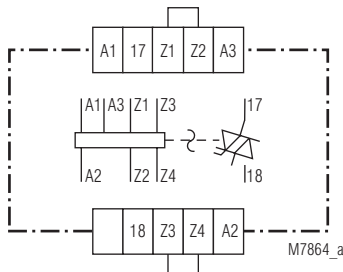
Circuit Diagrams



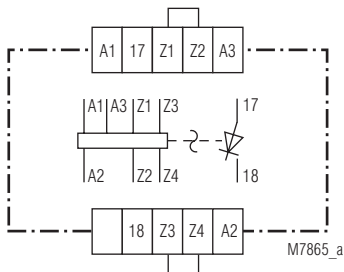
BA 7864.81



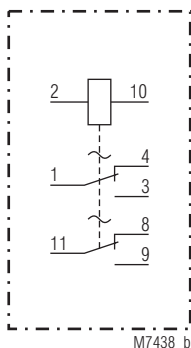
BA 7864.82



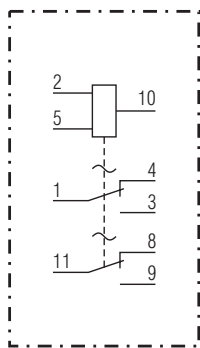
BA 7864.91



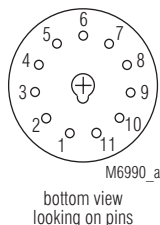
BA 7864.95



EO 7864.82
(single-voltage version)



EO 7864.82
(dual-voltage version)



Technical Data

Time circuit

Time range:

Impulse and space separately adjustable in 4 steps:

0.25 ... 2.5 s	or	0.25 ... 2.5 min	or	0.75 ... 7.5 min
1 ... 10 s		1 ... 10 min		3 ... 30 min
8 ... 80 s		8 ... 80 min		24 ... 240 min
64 ... 640 s		64 ... 640 min		3,2 ... 32 h

Other combinations of these time ranges for impulse or space, on demand.

Time setting:

For impulse and space separately
infinite on relative scale (1:10)

Recovery time:

< 30 ms

Operate time:

< 25 ms

Release time:

approx. 12 ms

Remote setting

BA 7864.81:

AD 3 1 MΩ
(2 pieces, for impulse- and space time)
< ± 0.5 % of the scale max. value
< 1 % over the whole voltage range
< 0.1 % / K

Repeat accuracy:

Voltage influence:

Temperature range:

Input

Nominal voltage U_N :

AC/DC 24, 42 V
AC/DC 24¹⁾ + AC 110 ... 127 V²⁾
AC/DC 24¹⁾ + AC 220 ... 240 V²⁾
¹⁾ to terminals A3-A2 or terminals 5-10
²⁾ to terminals A1-A2 or terminals 2-10

Voltage range

AC/DC 24 V and AC/DC 42 V: AC and DC (residual ripple ≤ 20 %)
0.8 ... 1.2 U_N
DC (residual ripple = 48 %)
0.8 ... 1.1 U_N

AC 110 ... 127 V and
AC 220 ... 240 V:

Nominal consumption:

0.8 ... 1.1 U_N	
AC 24 V	0.7 VA
AC 42 V	1.2 VA
AC 110 V	2.5 VA
AC 230 V	5 VA
DC 24 V	0.6 W
DC 42 V	1.2 W

Nominal frequency:

50 / 60 Hz

Relay Output

Contacts

BA 7864.81: 1 changeover contact
BA 7864.82: 2 changeover contacts
EO 7864.81: 1 changeover contact
EO 7864.82: 2 changeover contacts

Contact material:

AgNi + 0.2 μm Au

Measured nominal voltage:

AC 250 V

Thermal current I_{th} :

5 A

Switching capacity

to AC 15: 5 A / AC 230 V IEC/EN 60 947-5-1
IEC/EN 60 947-5-1

Electrical life

to AC 15 at 3 A, AC 230 V: 1.5 x 10⁵ switching cycles

Short circuit strength

max. fuse rating:

5 A gG/ gL IEC/EN 60 947-5-1

Mechanical life:

> 30 x 10⁶ switching cycles

Solid state output

BA 7864.91:

Triac

Switching voltage:

AC 12 ... 275 V

Switching current:

4 A

BA 7864.95:

Transistor

Switching voltage:

DC 15 ... 30 V

Switching current:

5 A

Connection Terminals

Terminal designation	Signal description
A1, A2	Auxiliary voltage AC
A3(+), A2(-)	Auxiliary voltage AC/DC
Z1, Z2	Remote potentiometer connection (see accessories)
Z3, Z4	Remote potentiometer connection (see accessories)
15, 16, 18	Changeover contacts (output relay)
25, 26, 28	Changeover contacts (2. output relay)

Technical Data		
General Data		
Operating mode:	Continuous operation	
Temperature range		
Operation:	- 25 ... + 60 °C	
Storage:	- 25 ... + 60 °C	
Relative air humidity:	93% at 40 °C	
Altitude:	< 2,000 m	
Clearance and creepage distances		
rated impulse voltage / pollution degree:	4 kV / 2	IEC 60 664-1
EMC		
Electrostatic discharge:	8 kV (air)	IEC/EN 61 000-4-2
HF irradiation		
80 MHz ... 1 GHz:	12 V / m	IEC/EN 61 000-4-3
1 GHz ... 2 GHz:	12 V / m	IEC/EN 61 000-4-3
2 GHz ... 2.7 GHz:	12 V / m	IEC/EN 61 000-4-3
Fast transients:	2 kV	IEC/EN 61 000-4-4
Surge voltages:	1 kV	IEC/EN 61 000-4-5
Interference suppression:	Limit value class B	EN 55 011
Degree of protection		
Housing:	IP 40	IEC/EN 60 529
Terminals:	IP 20	IEC/EN 60 529
Housing:	Thermoplast with V0-behaviour according to UL subject 94	
Vibration resistance:	Amplitude 0.35 mm frequency 10...55 Hz, IEC/EN 60 068-2-6 20 / 060 / 04 IEC/EN 60 068-1	
Climate resistance:		
Wire connection:		
BA 7864:	2 x 2.5 mm ² solid or 2 x 1.5 mm ² stranded wire with sleeve DIN 46 228-1/-2/-3/-4	
EO 7864:	via plug-in-socket suitable to the 11-pole socket according to IEC 67-1-18 a	
Wire fixing:	Flat terminals with self-lifting clamping piece IEC/EN 60 999-1	
Fixing torque:	0.8 Nm	
Weight		
BA 7864:	200 g	
EO 7864:	110 g	

Dimensions

Width x height x depth

BA 7864:	45 x 73 x 133 mm
EO 7864:	35 x 48 x 109 mm
Front-panel cut-out	
EO 7864:	45 ^{+0.6} x 45 ^{+0.6} mm

Standard Types

BA 7864.81 AC/DC 24 V + AC 220 ... 240 V 640 s On / 640 s Off	
Article number:	0032194
• Output:	1 changeover contact
• Nominal voltage U _N :	AC/DC 24 V + AC 220 ... 240 V
• Time setting for impulse and space:	0.25 ... 640 s
• Width:	45 mm
EO 7864.82 AC/DC 24 V + AC 220 ... 240 V 640 m On / 640 m Off	
Article number:	0032222
• Output:	2 changeover contacts
• Nominal voltage U _N :	AC/DC 24 V + AC 220 ... 240 V
• Time setting for impulse and space:	0.25 ... 640 m
• Front size:	35 x 48 mm

Variants

BA 7864. _ _ /010:	Start with space
BA 7864.81/100:	Programmable, start with space, when X3, X4 bridged

Ordering examples for variants

BA 7864 .81 / _ _ _	AC/DC24V	50/60Hz	640s/640s

Time range max. value, impulse/space
Nominal frequency
Nominal voltage
Variant, if required
Contacts
Type

BA 7864 .95 5A	AC/DC24V+AC220...240V	50/60Hz	640s/640s

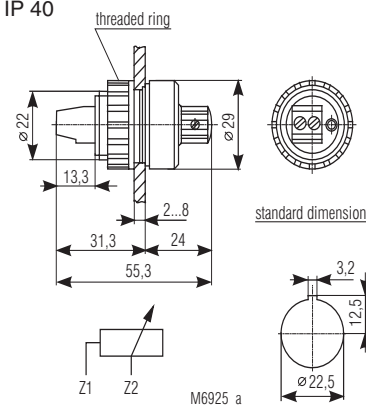
Time range max. value, impulse/space
Nominal frequency
Nominal voltage
Switching output
Contacts
Type

Accessories

For BA 7864.81:	Remote potentiometer 1 MΩ
AD 3:	Article number: 0004082

Degree of protection
Front side:

IP 40



For EO-version:
For DIN rail mounting:
ET 4048-21:

Plug-in socket without fixing clamp
Article number: 0028049

ET 4048-22:

Plug-in socket with fixing clamp
Article number: 0028050

For flush mounting:
ET 4048-13:

Plug-in adapter
Article number: 0010784

ET 4048-3:

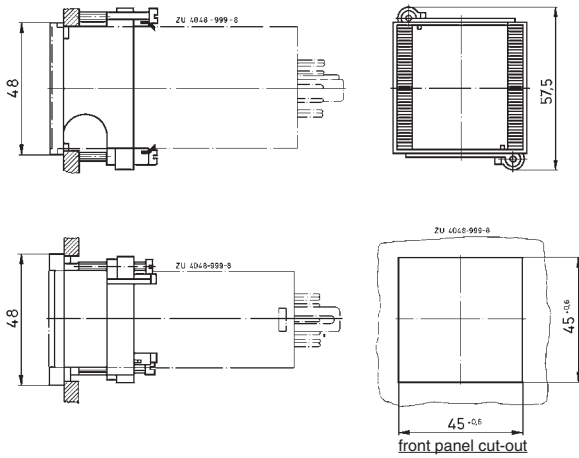
Front frame
Article number: 0004979

Accessories - Front frame ET 4048-3 -

48 x 48 mm with clamp screws.

Installation note: Insert the front frame without relay (acc. to DIN 43700) into the prepared 45 x 45^{+0.6} mm panel cut-out form the front. Insert the time relay also from up to the detend. Then tighten the clamping screws from behind.

To disassemble, first loosen the clamping screws, then unscrew the latching fields with a screwdriver and simultaneously push the relay forward.



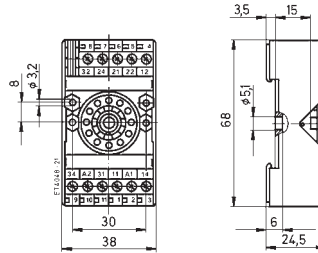
Accessories - Plug-in-sockets -

ET 4048-21:

without safety stirrup

ET 4048-22:

with safety stirrup

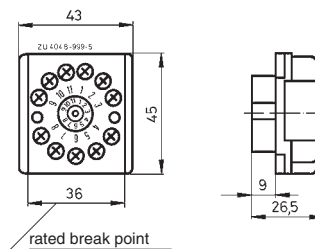


For surface mounting 11-pole acc. to IEC 67-1-18a with box terminals and captive screws suitable for connecting 2 conductors 2.5 mm² solid or 1.5 mm² stranded wire with sleeve. Large-area contact with the part is prevented in accordance with the requirements of the health and safety authorities VBG 4.

Accessories - Plug in adaptor ET 4048-13 -

11-pole, from PC

For installation into control panel. The plug-in adaptor is pushed onto the relay from the plug side and then enables wiring from the rear of the device.



Version with flat plugs on request.