

Automatic

- demand switch for automatic monitoring in narrow version, usually for one circuit/room
- touch sensor for easy operation
- unbalanced DC test voltage for more accurate detection of the loads - 100 volts DC
- convenient teach-in function for load detection of individual loads
- switches critical loads such as small LED lamps
- with PE connection, also suitable for TT networks e.g. Norway
- very robust device with 2 years warranty
- incl. mini indicator lamp KO-L-NA (Euro flat plug) for function monitoring directly in the switched circuit/room.
- Since the invention of the „field disconnecter“ by Biologa in 1976, Biologa Danell „mains disconnectors“ have stood for a long tradition, know-how and high quality. Therefore, we are pleased to present you the new Biologa Danell „Demand switches“ generation.
- The NA 16-2P mains decoupler (standard) finds its place in almost every distribution board due to its slim design of 17mm.
- The device switches 2-pole. I.e. phase (L1) and neutral (N). Each with a time delay. This prevents any coupling into the neutral conductor.
- The operating and display elements (touch sensor, dual-colour display), make the new Biologa Danell mains decoupler generation very easy to operate and are particularly user-friendly and prevent dust from entering the housing.
- The convenient function test by means of the supplied mini indicator lamp directly in the switched room ensures all-round safe decoupling.
- Preferably for one circuit/room. Simultaneous decoupling of several circuits is also possible under consideration of the max. rated power.

**Order-No.: 301092**

Short-Desc.: NA 16-2P Standard

## Demand switch

### NA 16-2P (Standard)

#### Technical data

length x width x height:	90 x 17 (1TE) x 60 mm
height on DIN rail:	55 mm
colour / weight:	lichtgrau / ca. 100 g
energy consumption:	< 1,6 Watt
mech. lifetime (relay):	ca. 10.000.000 switching cycles
electr. life (relay):	approx. 100,000 switching cycles (with max. resistive load - 16 A)
operating voltage:	230 VAC
load: rated power:	16 A continuous load (3680 VA resistive load max.)
switch off:	2- pole
test DC voltage:	100 VDC (unbalanced)
ripple:	ca. 0,1 Volt
sensitivity:	devices from 1.5 Watt / 6 mA
switch-off delay:	ca. 5 sec.
switch-on delay:	ca. 0,1 sec.
indicator lamps (LED):	RGB-LED (red, green)
guarantee:	2 years
test according to:	EN 55011 EN61000-4-2 EN 60335-1:2012-10 EN61000-4-3 EN61000-4-4 EN61000-4-5 EN61000-4-6 EN61000-4-11 EN61000-4-39
mounting: carrier rail / top-hat rail	according to DIN 55022 in the electrical panel

#### Suitable for the following consumers

- LED lamps (from 1,5 Watt)
- compact fluorescent lamps (energy-saving lamp)
- conventional illuminants (high-voltage halogen, G9, incandescent lamps)

#### Scope of delivery

- switchgear (1 pcs.)  
[installation in the electrical distribution board].
- control lamp KO-L-NA (1 pcs.)  
[for earthed socket outlet]

#### Available accessories

- basic load element GLW Plus



**Installation instructions / Manual**

**NA 16-2P (Standard)**

**INSTALLATION**

- Install the demand switch in the fuse box in a free space on a DIN top-hat rail.
- Connect the NA 16-2P Standard according to the connection diagram in Fig.1.

We cannot be held liable for improper use and handling. If you have any questions or problems, please use our e-mail service at [info@biologadanell.com](mailto:info@biologadanell.com).

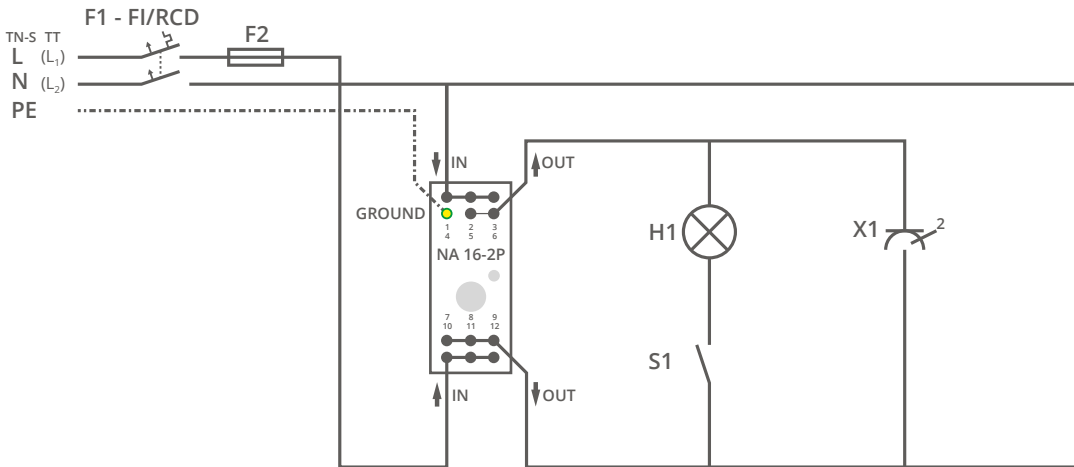
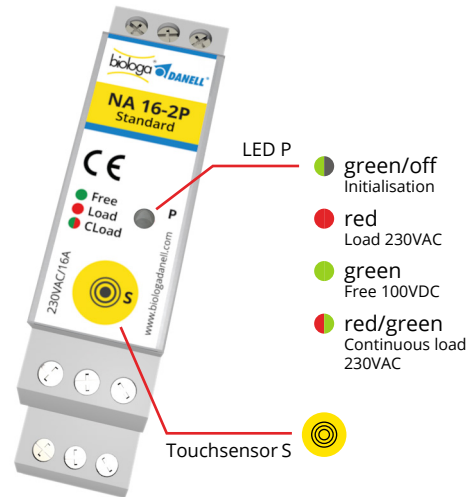


Fig.1

**INSTALLATION INSTRUCTIONS / MANUAL**

- Disconnect all units in the circuit to be disconnected from the mains.
- Apply the 230 VAC operating voltage to the demand switch.
- The mains decoupler flashes green ● and switches to „load“ after approx. 10 sec. ●, and to „free“ mode after approx. 6 sec. ●.
- **Function test** - See „FUNCTION TEST“ box
- If the demand switch shows load after initialisation ● there are hidden loads in the circuit. Check the circuit again for loads that are not disconnected from the mains (e.g. standby devices, receivers, antenna amplifiers, etc.). If all consumers are found and disconnected, the mains decoupler switches free ●.
- **Function test** - See „FUNCTION TEST“ box
- The demand switch NA 16-2P Standard has a built-in load detection. This is indicated by the LED P during initialisation.



**FUNCTION TEST:**

Carry out a function test in the disconnected circuit. To do this, switch the existing loads on and off one after the other. The mains decoupler signals red „load“ ● as soon as a consumer is switched on and green „free“ ● when the consumer is switched off. Switch-off delay approx. 10 sec.









**Order.-No.:** 301092  
**ShortRef.:** NA 16-2P Standard









Installation instructions / Manual


NA 16-2P (Standard)

DEVICE STATUS INDICATOR - LED „P

1.		flashing green, red (approx. 6 sec.) Initialisation	approx. 16 sec. operation „load“ then „free
1a.		Permanent green	No consumer on the grid
2.		green red flashing Initialisation	approx. 10 sec. Consumer on the mains
2a.		Permanent red	„Last“ 230 VAC
3.		green flashing red occasionally Initialisation approx. 10 sec.	Small consumer on the grid
3a.		Permanent green	Small reactive current flows
4.		Permanent red green	230 VAC Continuous mains voltage Continuous operation „load
5.		flashing red during operation	Failure Internal temperature of the unit above 60 °C

- If all consumers are disconnected from the mains and a load is nevertheless detected by the demand switch, e.g. in the case of leakage currents, this micro-load can be suppressed with the teach-in programme on the mains decoupler as follows:
- Disconnect the demand switch from the mains and reconnect it immediately. The NA 16-2P then starts to flash green . Touch the touch sensor S  within approx. 10 seconds to teach in the demand switch. The NA 16-2P reinitialises (approx. 10 seconds) and displays the uncoupled state in green „free“ .
- If the demand switch is to supply 230 VAC continuously, briefly touch the touch sensor S  to reach the „continuous“ mode. The mains decoupler indicates this with a flashing green/red LED . To exit this mode, touch the touch sensor S  again.



Mains filter plugs or similar consumers with high reactive currents must be disconnected from the mains! High reactive currents can lead to a temperature rise in the mains decoupler! If this becomes too hot, approx. 60 °C, the mains decoupler switches off to protect the unit and flashes  until the temperature drops below 60 °C.