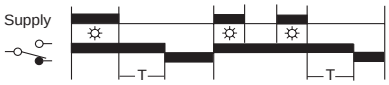
## DESCRIPTION

Timer with release delay function, the timer operates without auxiliary supply voltage during the timing period.
Fixed time ranges: 0.1-3sec, 1-30sec. or 0.1-3min. The time is adjustable on the timer front.
The timer is available in different versions for AC and DC supply voltage.
Single or double relay output with LED indication of energized relay.
Versions available for DIN rail or 11-pole plug-in mounting.

## OPERATION

**Release delay - true off.**
When supply voltage is connected, the output relay is energized.
When the supply voltage is disconnected, the timing period starts and the output relay remains energized until the preset time has elapsed.




## VERSIONS/ORDERING CODES

XF - S 1 230 1

**Type:**
Release delay - true off. XF

**Mounting:**
11-pole plug-in. S
DIN rail. D

**Output relay:**
SPDT. 1
DPDT. 2

**Supply voltage:**
24V AC/DC 024
48V AC/DC 048
110/120V AC 115
220/240V AC 230
380V AC 380

**Timing ranges:**
0.1-3sec. 1
1-30sec. 2
0.1-3min. 3



BRODERSEN controls

**Export:**
Tel: +45 46 74 00 00
Fax: +45 46 75 73 36
E-mail: bc@brodersencontrols.com

**United Kingdom:**
Tel: +44 181 546 4283
Fax: +44 181 547 3628
E-mail: bcs@brodersen.co.uk

**Germany:**
Tel: +49 208 46954-0
Fax: +49 208 46954-50
E-mail: ba@brodersen.de

## TECHNICAL DATA

**Time ranges:** 0.1-3sec, 1-30sec, 0.1-3min.

**Timer accuracy:**
Repeating accuracy: ± 0.5% at constant conditions.
Setting accuracy: ± 10%.
Temperature drift: Max. 0.15% per °C.

**Start time:** Min. 100msec. [2)]

**Reset time:** Max. 100msec.

**Output relay:** SPDT or DPDT. [1)]
Load (cosφ=1): D1/S1: Max. 8A/24V AC [3)]
Min.10mA/240V DC
D2/S2: Max. 5A/240V AC [3)]
Min.100mA/24V DC
Contact material: AgCdO.
Frequency: Max. 1000 operations per hour at max. load.
Mechanical life time: Min. 10 x $10^6$ operations.
Electrical life time: Min. 100,000 operations at max. load.
Operate and release time: Max. 20msec.

**Mounting:**
S1/S2: 11-pole plug-in.
D1/D2: Directly on DIN rail TS35 (EN50022).

**Terminals:** Max. conductor size 4 $mm^2$.
(D1/D2 only)
Screw type terminals with self-lifting clamps shrouded in accordance to VDE0106 (finger and back of hand protection).

**Supply voltage:** 24V AC/DC (20-28V),
48V AC/DC (40-56V),
110/120V AC/DC (95-135V),
220/240V AC (195-265V),
380V (340-420V).

**Mains frequency:** 40-60Hz.

**Consumption:** 0.7-1VA [2)].

**Cable lengths:**
Supply voltage: Max. 50 m.

**Protection:**
S1/S2: IP40.
D1/D2: IP20.

**EMC:** Conforming to EN 50081-1/EN 50082-2.

**Isolation:**
Supply to relay contacts: 2kV AC according to EN 60950 class I.

**Ambient temperature:** -20 to +55°C.

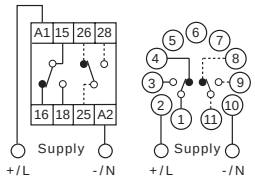
**Housing:** Black Noryl SE-1.

**Weight:** Typically 80 g.

## NOTES/REMARKS

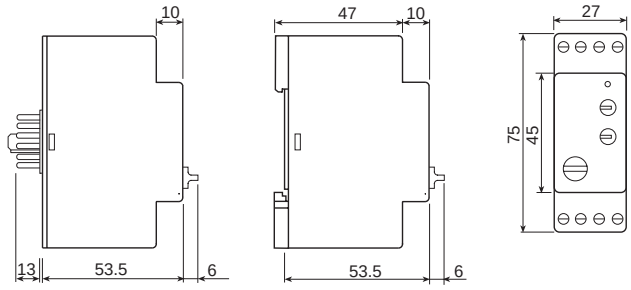
1) Double output relay available in S2/D2 versions.
2) The supply voltage must be applied for minimum 100 msec. or the output relay will remain activated after the preset time has elapsed. The power supply must be able to supply an in-rush current of minimum 300mA during the 100msec. start time.
3) When inductive or DC loads are switched the load capacity of the output relay is reduced, see the output load diagrams on fig. 1 and 2. When inductive loads are switched, it is recommended to use a RC-network, see accessories on page 130, to protect the relay contacts.

## WIRING DIAGRAMS




note 1

## MECHANICAL DIMENSIONS




## OUTPUT LOAD DIAGRAMS

Fig.1

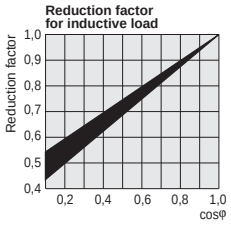
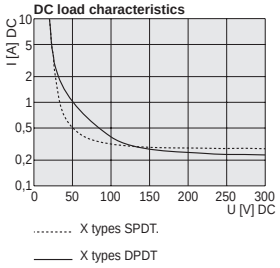



Fig. 2






**Export:**
**Tel: +45 46 74 00 00**
**Fax: +45 46 75 73 36**
**E-mail: bc@brodersencontrols.com**

**United Kingdom:**
**Tel: +44 181 546 4283**
**Fax: +44 181 547 3628**
**E-mail: bcs@brodersen.co.uk**

**Germany:**
**Tel: +49 208 46954-0**
**Fax: +49 208 46954-50**
**E-mail: ba@brodersen.de**

BRODERSEN controls