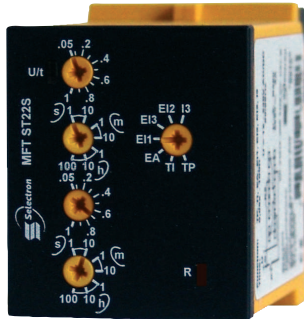


# Multifunction clock-pulse generator relay

## MFT ST22S



MFT ST22S

- **7 Function, 7 timer ranges**
- **Multivoltage:**  
**12 ... 240 VAC/DC**
- **2 Output contacts**

### Functions

- TP** Cycling timer relay beginning on a pause
- TI** Cycling timer relay beginning on a pulse
- EA** Delay on and delay off
- EI1** Input delay pulse limitation timer voltage control
- EI3** Input delay pulse limitation with control contact
- EI2** Wiping on leading and trailing edge with control contact
- I3** Pulse detection

### Time end ranges

Adjustable 0,05 s ... 100 h

### Output relay

2 potential free change over contact

250 VAC 8 A

### Indicators

- Green LED ON: indication of supply voltage
- Green LED flashes slowly: indication of time t1
- Green LED flashes fast: indication of time t2
- Yellow LED ON/OFF: indication of relay output

### Connecting voltage

12 ... 240 VAC/DC -10% +10%

48 ... 63 Hz, 100% duration of operation, IEC class 1c

### Reference data

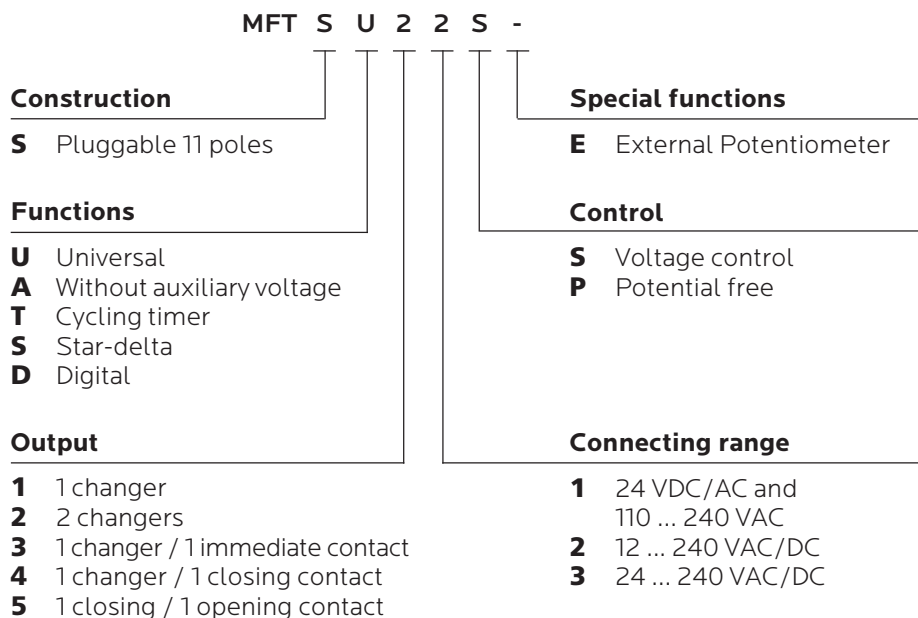
Selectron® MFT	Article no.
MFT ST22S	41140006
(Order data see chapter 1)	

# Multifunctional clock-pulse generator relay

## MFT ST22S

Technical data	
<b>Nominal consumption</b>	
12 ... 240 VAC/DC	6 VA / 2 W
<b>Control contact / Voltage controlled</b>	
Parallel switching of loads possible	
Parallel minimum load	1 VA or 0.5 W
Voltage dependence:	The potential between connections 2 and 5 must cover 90% of the supply voltage.
Connecting length between connections 2 and 5:	10 m or capacity <10 nF
Resistance	>1 MΩ (contact K2 open)
Rest current at parallel load:	approx. 2 mA at contact K2 open
<b>Accuracy</b>	
Base accuracy	±1% of scale limits
Repetition accuracy	±5ms or <0.5%
Adjustment accuracy	<5% of scale limits
Temperature influence	≤0.01% / °C
Voltage influence	-
<b>Reaction times</b>	
Operating/return time K1	max. 60 ms / 30 ms
Reaction time K2	max. 30 ms
Min. pulse/pause time K2	AC 100 ms / DC 50 ms
Recovery time	max. 100 ms

### Type key



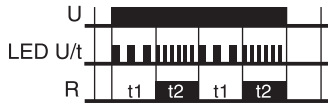
# Multifunctional clock-pulse generator relay

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### Function descriptions

#### TP - Cycling timer relay beginning on a pause

When the supply voltage U (K1 closed) is applied, the set interval t1 begins (green LED U/t flashes slowly). After the

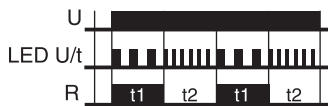


interval t1 has expired, the output relay R switches into on-position (yellow LED illuminated) and the set interval t2 begins (green LED U/t flashes fast). After the interval t2 has expired, the output relay switches into off-position (yellow LED not illuminated).

The output relay is triggered in the ratio of the two set intervals until the supply voltage U (K1 opened) is interrupted.

#### TI - Cycling timer relay beginning on a pulse

When the supply voltage U (K1 closed) is applied, the output relay R switches into on-position (yellow LED illuminated)

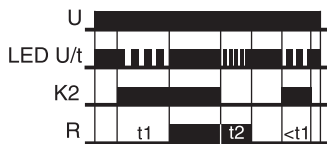


and the set interval t1 begins (green LED U/t flashes slowly). After the interval t1 has expired, the output relay switches into off-position (yellow LED not illuminated) and the set interval t2 begins (green LED U/t flashes fast). After the interval t2 has expired, the output relay switches into on-position again (yellow LED illuminated).

The output relay is triggered in the ratio of the two set intervals until the supply U (K1 opened) voltage is interrupted.

#### EA -Delay on and delay off

The supply voltage U (K1 closed or permanently connected) must be constantly applied to the device (green LED U/t

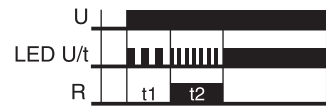


illuminated). When the control contact K2 is closed, the set interval t1 begins (green LED U/t flashes slowly). After the interval t1 has expired, the output relay R switches into on-position (yellow LED illuminated). When the control contact K2 is opened, the set interval t2 begins (green LED U/t flashes fast). After the interval t2 has expired, the output relay switches into off-position (yellow LED not illuminated).

If the control contact K2 is opened before the interval t1 has expired, the interval already expired is erased and is restarted with the next cycle.

#### E11 - Input delay pulse limitation timer voltage control

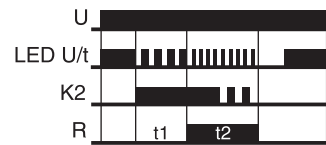
When the supply voltage U (K1 closed) is applied, the set interval t1 begins (green LED U/t flashes slowly). After the



interval t1 has expired, the output relay R switches into on-position (yellow LED illuminated) and the set interval t2 begins (green LED U/t flashes fast). After the interval t2 has expired, the output relay switches into off-position (yellow LED not illuminated). If the supply voltage is interrupted before the interval t1+t2 has expired, the interval already expired is erased and is restarted when the supply voltage is next applied.

#### E13 - Input delay pulse limitation timer with control contact

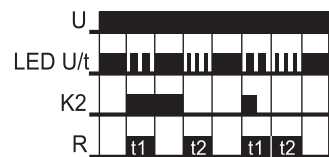
The supply voltage U (K1 closed) must be constantly applied to the device (green LED U/t illuminated). When the control



contact K2 is closed, the set interval t1 begins (green LED U/t flashes slowly). After the interval t1 has expired, the output relay switches into on-position (yellow LED illuminated) and the set interval t2 begins (green LED U/t flashes fast). After the interval t2 has expired, the output relay switches into off-position (yellow LED not illuminated). During the interval, the control contact K2 can be operated any number of times. A further cycle can only be started when the cycle run has been completed.

#### E12 - Wiping on leading and trailing edge with control contact

The supply voltage U must be constantly applied to the device (green LED U/t illuminated). When the control



contact K2 is closed, the output relay R switches into on-position (yellow LED illuminated) and the set interval t1 begins (green LED U/t flashes slowly). After the interval t1

# Multifunctional clock-pulse generator relay

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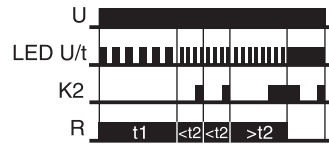
### Function descriptions

has expired, the output relay R switches into off-position (yellow LED not illuminated).

If the control contact is opened, the output relay again switches into on-position (yellow LED illuminated) and the set interval t2 begins (green LED U/t flashes fast). After the interval t2 has expired the output relay switches into off-position (yellow LED not illuminated). During the interval, the control contact can be operated any number of times.

### I3 - Pulse detection

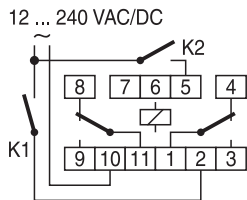
When the supply voltage U (K1 closed) is applied, the set interval t1 begins (green LED U/t flashes slowly) and the



output relay R switches into on-position (yellow LED illuminated). After the interval t1 has expired, the set interval t2 begins (green LED U/t flashes fast). For the output relay to remain in on-position, the control contact K2 must be closed and reopened within the set interval t2. If this does not occur, the output relay R switches into off-position (yellow LED not illuminated) and all further pulses at the control contact K2 are ignored. To restart the function, the supply voltage must be interrupted and reapplied.

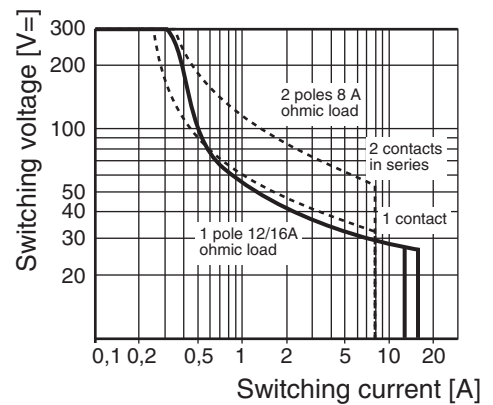
### Connection

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### Load limit curve

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### Dimensions

