

ON-OFF TIMER

Main Features

- Switch between cyclic OFF or cyclic ON start mode.
- Independent ON time and OFF time Setting.
- 10 time ranges from 0.1 s to 30 h.

Technical Specification

TIME RANGES

Time range setting	0.1 s	1 s	3 s	10 s	1 min	3 min	10 min	30 min	1 h	3 h
Set time range	0.1-1 s	1-10 s	3-30 s	10-100 s	1-10 min	3-30 min	10-100 min	30-300 min	1-10 h	3-30 h
Number of scale	1-10									
Knob Setting	Knob 1st & 2 nd is for ON Time Setting					Knob 3rd & 4th is for OFF Time Setting				

RATING

Power supply voltage	12 to 240 VAC/DC, 50/60Hz
Allowable voltage fluctuation Range	12 to 240 VAC/DC: 85% to 110% of rated voltage
Power reset	Minimum Power-OFF time : 0.1 s
Reset voltage	10 % of rated voltage
Power consumption	At 240 VAC : 4 VA max.
Control output	Contact output: 5/8 A at 250 VAC with resistive load (cos ϕ = 1) , 5/8 A at 30 VDC with resistive voltage
Accuracy of operating time	$\pm 1\%$ of FS max.($\pm 1\%$ ± 10 ms max. at 1 s range)
Protection Level	IP 20

GENERAL DATA

Module width (w)	17.5 mm	22.5 mm
Module height (h)	60 mm	103 mm
Module depth (d)	88 mm	75.4 mm
Housing colour	Gray	Grey (base), Black(cover)
Relay	SPDT / DPDT	
Ambient operating temperature	(0 to 50) $^{\circ}$ C	
Storage temperature	(-20 to 75) $^{\circ}$ C	
Ambient operating humidity	25% to 85%	
Weight	Approx. 110 g	

CONNECTION DATA

Module width (w)	17.5 mm	22.5 mm
Type of connection	Screw Connection	
Nominal current carrying capacity	24 A	
Rated voltage capacity	400 V	
Connector cross section solid	Min./Max. 0.14/2.5 mm ²	Min./Max. 0.2/4.0 mm ²
Conductor cross section stranded	Min./Max. 0.14/2.5 mm ²	Min./Max. 0.2/2.5 mm ²
Tightening torque	0.5-0.6 Nm	

EM/EMC COMPLIANCE

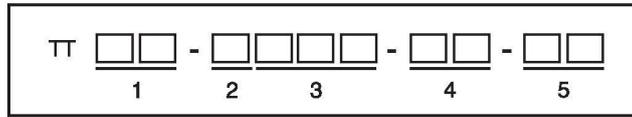
As per IEC 61000-4-2, 3, 4, 5, 6, 11.



ON-OFF TIMER

Model Number Legend

(Note all model that can be represented with the model number legend can necessarily be produced.)

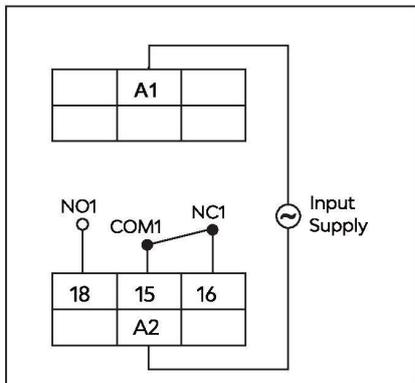


		Symbol	Meaning
1	HOUSING SIZE	17	17.5 mm Housing Width
		22	22.5 mm Housing Width
2	INPUT SUPPLY TYPE	U	Universal Supply Voltage (AC/DC)
3	SUPPLY VOLTAGE RANGE	240	12-240 VAC/DC
4	CONTROL OUTPUT	1S	SPDT
		2S	DPDT
5	FUNCTION	OO	Cyclic ON/OFF First

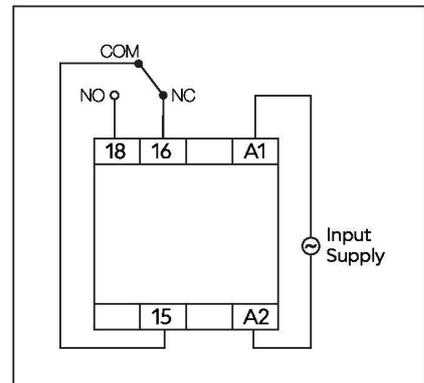
Sr.	Article Number	Article Description	Pcs/Pkt.
1	011709056	TT17-U240-1S-OO	01
2	011709069	TT17-U240-2S-OO	01
3	011707063	TT22-U240-1S-OO	01
4	011707064	TT22-U240-2S-OO	01

TERMINAL CONNECTIONS

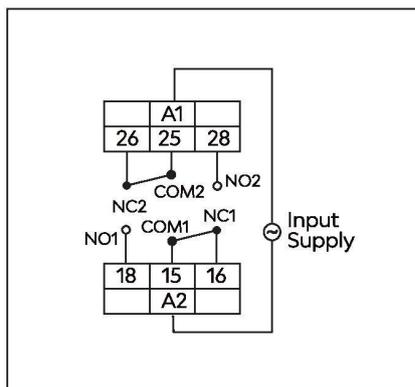
17.5 MM 1 C/O



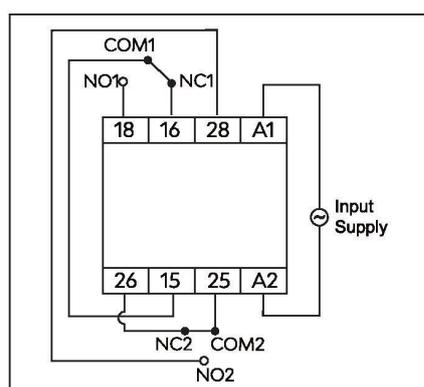
22.5 MM 1 C/O



17.5 MM 2 C/O

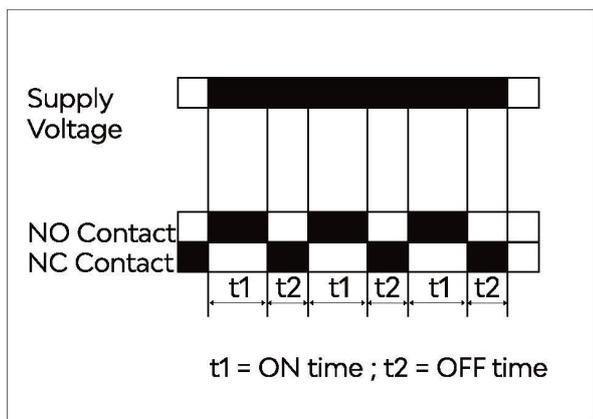


22.5 MM 2 C/O

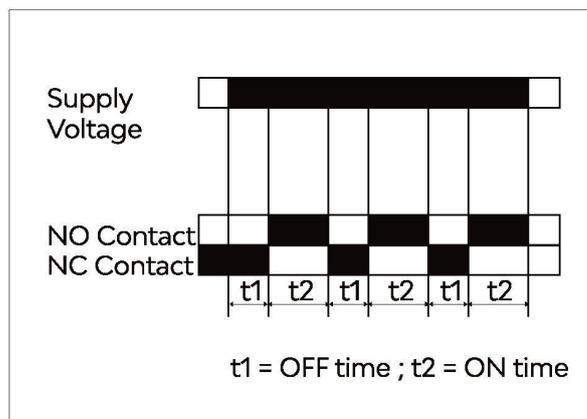


ON-OFF TIMER

TIMING DIAGRAM

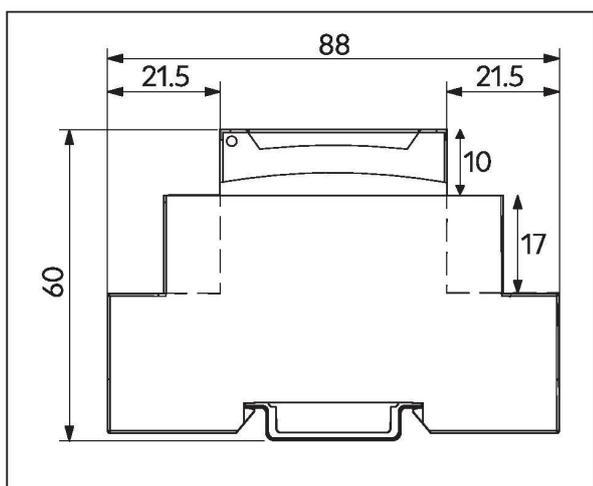


Function: Cyclic ON First

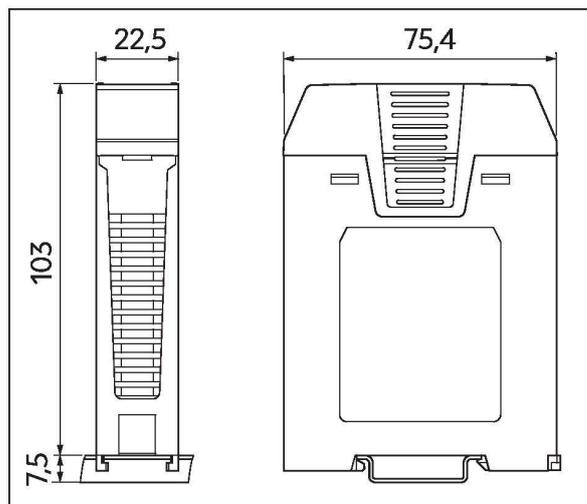


Function: Cyclic OFF First

HOUSING DIMENSIONS



17.5 mm



22.5 mm

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MULTI FUNCTION TIMER

Main Features

- Independent Function
- 10 time ranges from 0.1 s to 30 h.



Technical Specification

TIME RANGES

Time range setting

0.1 s 1 s 3 s 10 s 1 min 3 min 10 min 30 min 1 h 3 h

Set time range

0.1-1 s 1-10 s 3-30 s 10-100 s 1-10 min 3-30 min 10-100 min 30-300 min 1-10 h 3-30 h

Number of scale

1-10

Functional mode

On delay (A) Interval (B) Cyclic equal off first (C) Cyclic equal on first (D) Delay on break (E)

Delay on make / break (F) Interval after break (G) Negative edge impulse trigger (H)

Re-triggerable single shot (I)

Latching relay (J)

RATING

Power supply voltage

12 to 240 VAC/DC, 50/60Hz

Allowable voltage fluctuation Range

12 to 240 VAC/DC: 85% to 110% of rated voltage

Power reset

Minimum power-OFF time : 0.1 s

Reset voltage

10 % of rated voltage

Power consumption

At 240 VAC : 4 VA max.

Control output

Contact output: 5 A at 250 VAC with resistive load ($\cos\phi = 1$),
5 A at 30 VDC with resistive voltage

Accuracy of operating time

±1% of FS max.(±1% ±10 ms max. at 1 s range)

Protection level

IP 20

GENERAL DATA

Module width (w)

17.5 mm

22.5 mm

Module height (h)

60 mm

103 mm

Module depth (d)

88 mm

75.4 mm

Housing colour

Gray

Grey (base), Black(cover)

Relay

SPDT

Ambient operating temperature

(0 to 50)°C

Storage temperature

(-20 to 75)°C

Ambient operating humidity

25% to 85%

Weight

Approx. 110 g

CONNECTION DATA

Module width (w)

17.5 mm

22.5 mm

Type of connection

Screw Connection

Nominal current carrying capacity

24 A

Rated voltage capacity

400 V

Connector cross section solid

Min./Max. 0.14/2.5 mm²Min./Max. 0.2/4.0 mm²

Conductor cross section stranded

Min./Max. 0.14/2.5 mm²Min./Max. 0.2/2.5 mm²

Tightening torque

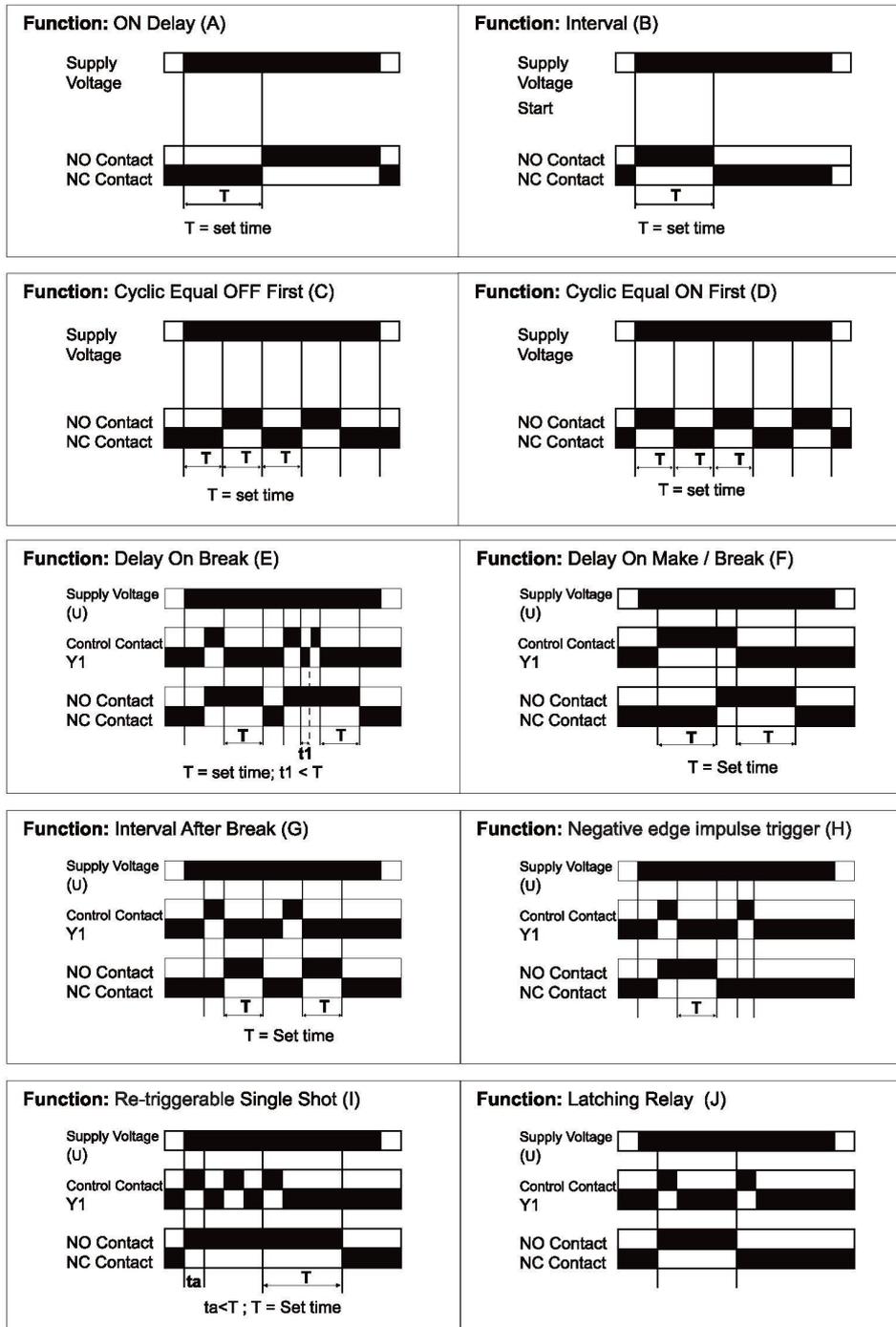
0.5-0.6 Nm

EMI/EMC COMPLIANCE

As per IEC 61000-4-2, 3, 4, 5, 6, 11.

MULTI FUNCTION TIMER

TIMING DIAGRAM



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ON DELAY / INTERVAL TIMER

Main Features

- Independent ON delay and interval selectable.
- 10 time ranges from 0.1s to 30h.



Technical Specification

TIME RANGES

Time range setting	0.1 s	1 s	3 s	10 s	1 min	3 min	10 min	30 min	1 h	3 h
Set time range	0.1-1 s	1-10 s	3-30 s	10-100 s	1-10 min	3-30 min	10-100 min	30-300 min	1-10 h	3-30 h
Number of scale	1-10									
Dip switch setting	For mode selection ON delay / Interval									

RATING

Power supply voltage	12 to 240 VAC/DC,50/60Hz
Allowable voltage fluctuation Range	12 to 240 VAC/DC, 415 VAC : 85% to 110% of rated voltage
Power reset	Minimum Power-OFF time : 0.1 s
Reset voltage	10 % of rated voltage
Power consumption	At 240 VAC : 4 VA max.
Control output	Contact output: 10 A at 250 VAC with resistive load (cosφ = 1) , 10 A at 30 VDC with resistive voltage
Accuracy of operating time	±1% of FS max.(±1% ±10 ms max. at 1 s range)
Protection level	IP 20

GENERAL DATA

Module width (w)	17.5 mm	22.5 mm
Module height (h)	60 mm	103 mm
Module depth (d)	88 mm	75.4 mm
Housing colour	Gray	Grey (base), Black(cover)
Relay	SPDT / DPDT	
Ambient operating temperature	(0 to 50)°C	
Storage temperature	(-20 to 75)°C	
Ambient operating humidity	25% to 85%	
Weight	Approx. 110 g	

CONNECTION DATA

Module width (w)	17.5 mm	22.5 mm
Type of connection	Screw Connection	
Nominal current carrying capacity	24 A	
Rated voltage capacity	400 V	
Connector cross section solid	Min./Max. 0.14/2.5 mm ²	Min./Max. 0.2/4.0 mm ²
Conductor cross section stranded	Min./Max. 0.14/2.5 mm ²	Min./Max. 0.2/2.5 mm ²
Tightening torque	0.5-0.6 Nm	

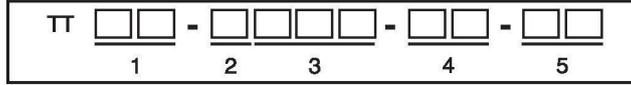
EMI/EMC COMPLIANCE

As per IEC 61000-4-2, 3, 4, 5, 6, 11.

ON DELAY / INTERVAL TIMER

Model Number Legend

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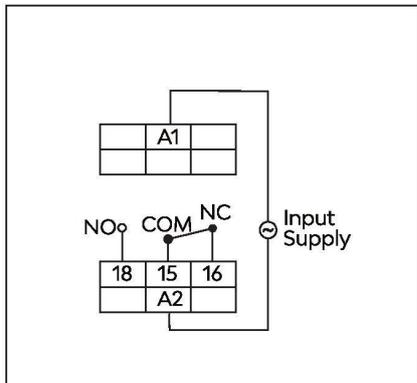
		Symbol	Meaning
1	HOUSING SIZE	17	17.5 mm Housing Width
		22	22.5 mm Housing Width
2	INPUT SUPPLY TYPE	U	Universal Supply Voltage (AC/DC)
		A	Alternating Current (AC)
3	SUPPLY VOLTAGE RANGE	240	12-240 VAC/DC
		415	415 VAC
4	CONTROL OUTPUT	1S	SPDT
		2S	DPDT
5	FUNCTION	OI	ON Delay / Interval

Sr.	Article Number	Article Description	Pcs/Pkt.
1	011709057	TT17-U240-1S-OI	01
2	011709070	TT17-U240-2S-OI	01
3	011707065	TT22-U240-1S-OI	01
4	011709067	TT22-A415-1S-OI	01
5	011707066	TT22-U240-2S-OI	01

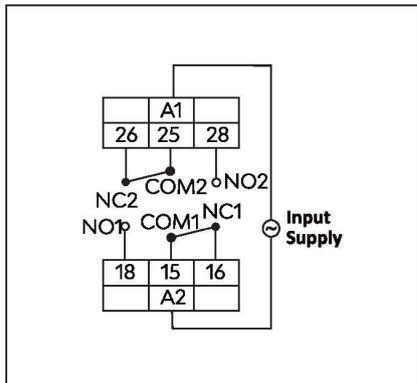
TERMINAL CONNECTIONS

17.5 MM

1 C/O

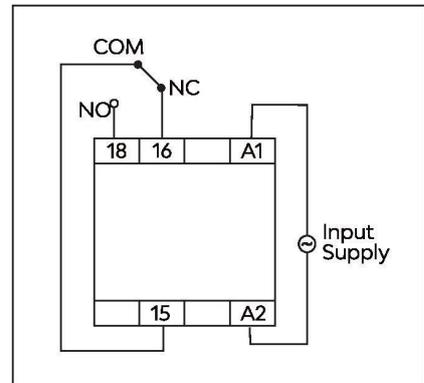


2 C/O

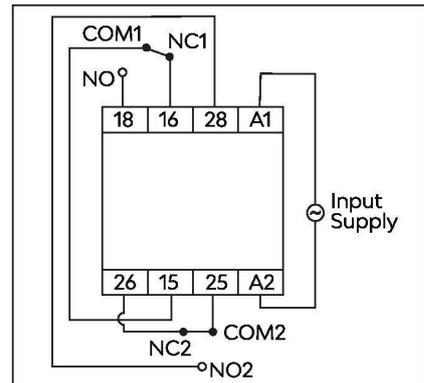


22.5 MM

1 C/O

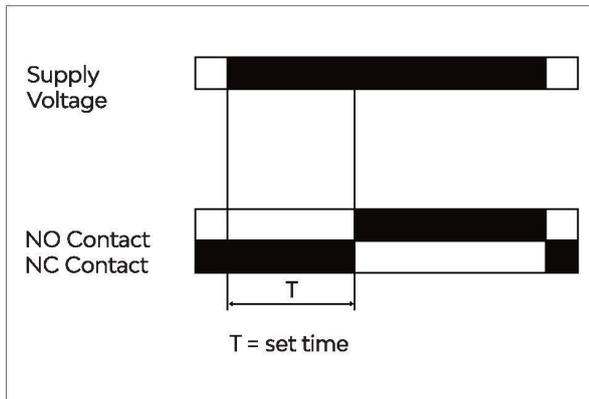


2 C/O

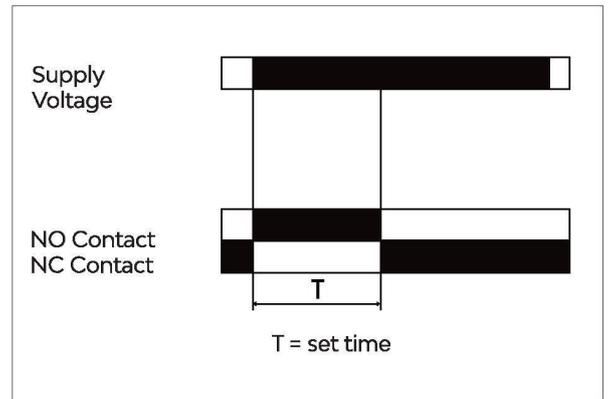


ON DELAY / INTERVAL TIMER

TIMING DIAGRAM

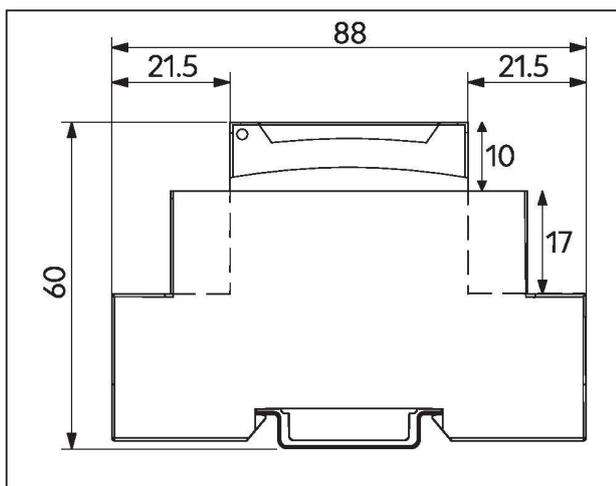


Function: ON Delay

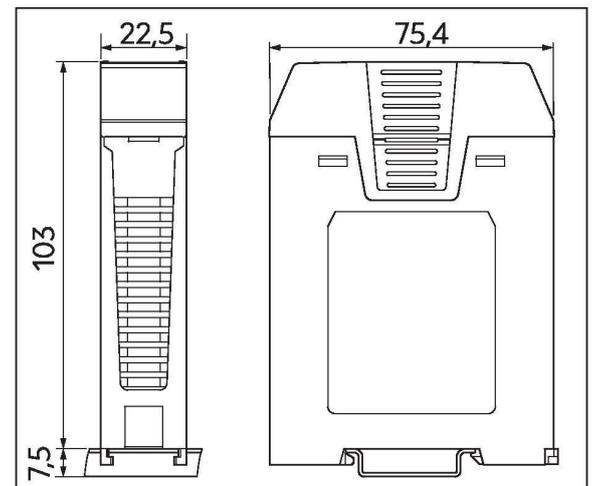


Function: Interval

HOUSING DIMENSIONS



17.5 mm



22.5 mm

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DIGITAL ON DELAY / INTERVAL TIMER

TT-DT48-F2-3DSR

Main Features

- Preset timer, Push wheel setting
- 3 digits, 7 segment LED display
- 2 C/O output
- Size : 1/16 DIN 48X48X110 mm



Technical Specification

Input Specification

Accuracy

99.80% of F.S. or 50 msec (Whichever is greater)

Reset

Front, Remote, On Power interruption.

Dip switch setting

For Time Range & Function Selection

Start Input

Pulse Start

Set Point

Single Set Point

LED Indications

Relay Status

Output Specifications

Output Contact

DPDT (2 C/O)

Contact Rating

5A @ 230V AC / 24 V DC

Functional Specifications

Operating Modes

ON delay / Interval delay

Time Ranges

0 - 9.99 sec, 0 - 99.9 sec, 0 - 999 sec, 0 - 99.9 min, 0 - 999 min, 0 - 99.9 hr

Time Range Setting

By Push wheel switch

Counting Direction

Down

Display

0.36" (H), 3- Digit, 7- Segment, Red

Supply Voltage

Supply Voltage

85 to 270V AC @50 or 60 Hz

Environmental Specifications

Temperature

Operating : 0 to 50°C

Storage : -20 to 75°C

Humidity (non - condensing)

95% RH

Protection Level

Ip50 for faceplate

Mounting

Panel Mount

Weight

140 gms

MODEL NUMBER LEGEND

(Note all model that can be represented with the model number legend can necessarily be produced.)

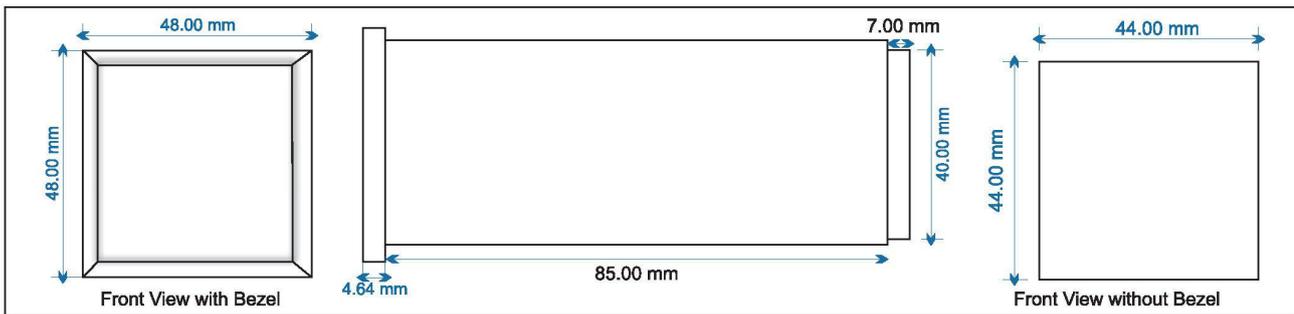


DIGITAL ON DELAY / INTERVAL TIMER

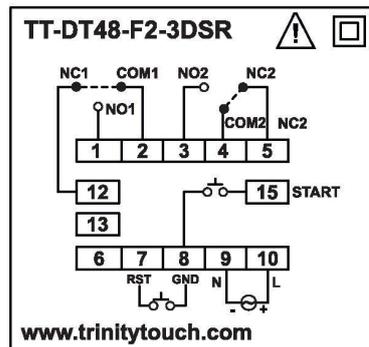
		Symbol	Meaning
1	Type of Product	DT	Digital Timer
2	Housing Size	48	48X48 Bezel size
3	Function Mode	2	On-Delay / Interval
4	Display Type	3D	3-Digit, 7-Segment Display
5	Display Type	SR	Single Row Display

Sr.	Article Number	Article Description	Pcs/Pkt.
1	011708390	TT-DT48-F2-3DSR	01

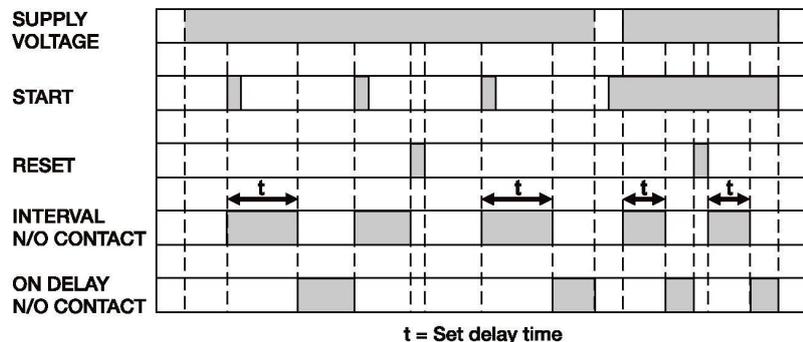
DIMENSIONS



TERMINAL CONNECTIONS



TIMING DIAGRAM



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DIGITAL MULTIFUNCTION TIMER

TT-DT48-F4-3DSR

Main Features

- Single Set Point, Front Keypad Setting
- 3 digits, 7 segment LED display
- 2 C/O output
- Size : 1/16 DIN 48x48x110 mm



Technical Specification

Input Specification

Accuracy	99.80% of F.S. or 50 msec (Whichever is greater)
Reset	Front, Remote On Power interruption.
Reset Time	Less than 100 msec
Start Input	Gate / Pulse Start (Programmable)
Set Point	Single Set Point

Output Specifications

Output Contact	DPDT (2 C/O)
Contact Rating	8A @ 230V AC / 24 V DC

Functional Specifications

Modes	ON delay / Interval delay / Cyclic on first / Cyclic off first (configurable by keys)
Time Ranges	0 - 9.99 sec, 0 - 99.9 sec, 0 - 999 sec, 9:59 min:sec, 0 - 99.9 min, 0 - 999 min, 9:59 hr:min 0 - 99.9 hr, 0 - 999 hrs
Time Range Setting	Front Key Pad
Counting Direction	Down
LED Indication	Relay Status
Display	0.4" (H), 3- Digits, 7- Segment LED, Red
Configuration Lock	Via rear terminals

Supply Voltage

Supply Voltage	85 to 270V AC @50 or 60 Hz
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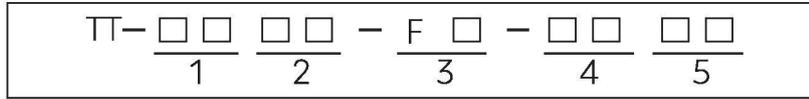
Environmental Specifications

Temperature	Operating : 0 to 50°C Storage : -20 to 75°C
Humidity (non - condensing)	95% RH
Protection Level	Ip50 for faceplate
Mounting	Panel Mounting
Weight	140 gms

DIGITAL MULTIFUNCTION TIMER

MODEL NUMBER LEGEND

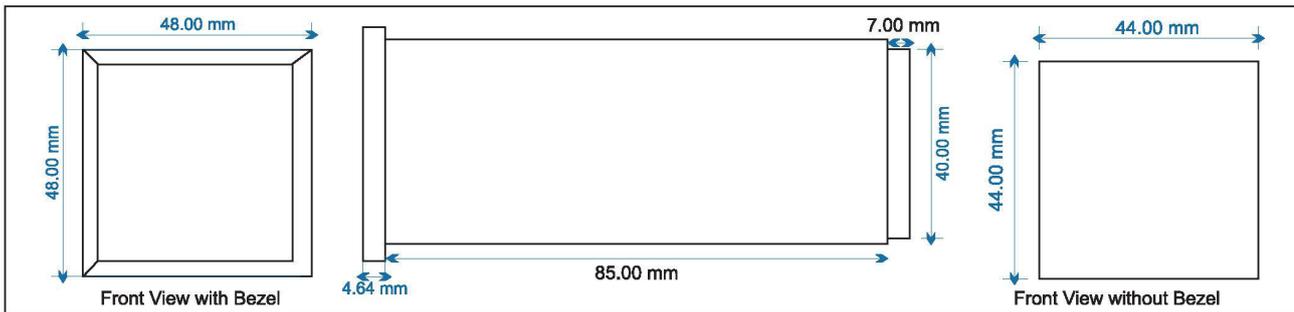
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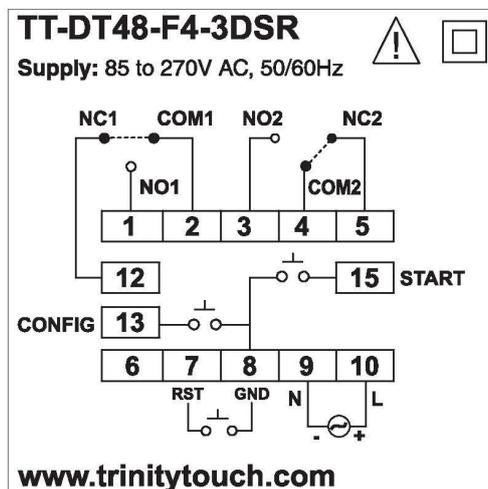
		Symbol	Meaning
1	Type of Product	DT	Digital Timer
2	Housing Size	48	48X48 Bezel size
3	Function Mode	4	On-Delay / Interval / Cyclic on first / Cyclic off first
4	Display Type	3D	3-Digit, 7-Segment Display
5	Display Size	SR	Single Row Display

Sr.	Article Number	Article Description	Pcs/Pkt.
1	011708391	TT-DT48-F4-3DSR	01

DIMENSIONS

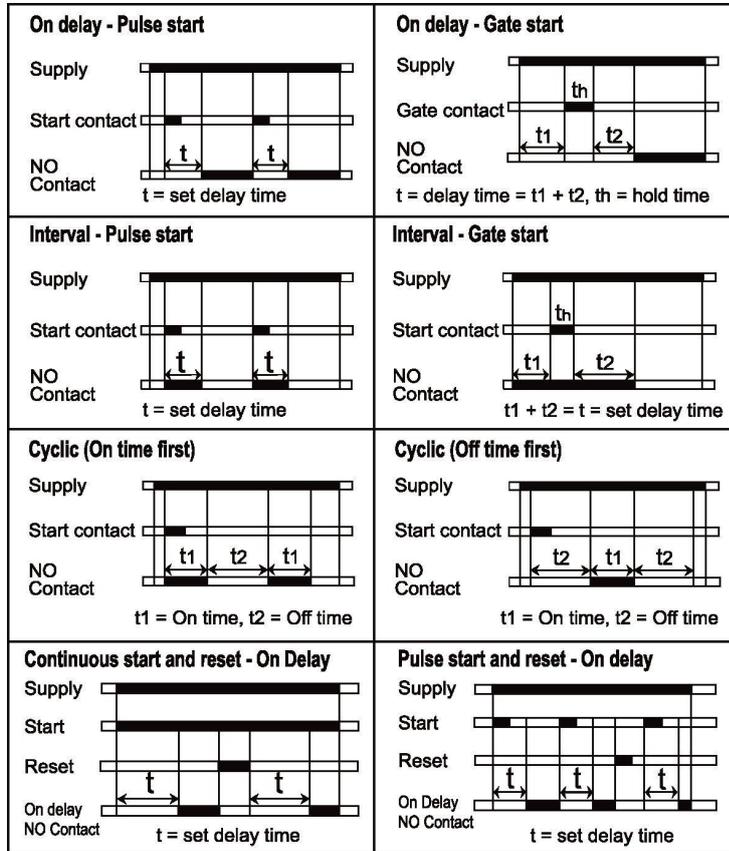


TERMINAL CONNECTIONS



DIGITAL MULTIFUNCTION TIMER

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Main Features

- Eight Set Point
- LED Indications : Relay status, Cascade O/P , Time range, ON/OFF time, Timing in progress
- 2+4 digits, 7 segment LED, Two Display
- Size : 1/16 DIN 96x96x110 mm

**Technical Specification****Display Specifications**

Display

7 segment LED, Dual display

Digits

2+4 digits

LED Indications

Relay ON, Relay status, Cascade O/P , Time range, ON/OFF time, Timing in progress

Input Specifications

Accuracy

99.80% of F.S. or 50 msec (Whichever is greater)

Start Input

Start, Hold

Output Specifications

Output

8 nos., NO with single common

Contact Rating

5A @ 250V AC

No. of Channels

8 Channels

Functional Specifications

Modes

ON delay, Interval, Cyclic ON first, Cyclic OFF first (start up delay & no. of cycles programmable for cyclic mode)

Time Ranges

0 - 9.99 sec	0 - 99.9 sec	0 - 999 sec	0 - 9:59 min:sec	0 - 99.9 min
0 - 999 min	9:59 hr:min	0 - 99.9 hr	0 - 999 hr	

Counting Direction

Up

Set Point

8

Time Setting

By keys on front panel

Reset

Front, Remote, On power interruption (programmable)

Memory Retention

Yes (selectable)

Configuration Lock

Yes

Supply Voltage

Supply Voltage

85 to 270V AC (50 / 60Hz)

Environmental Specifications

Temperature

Operating : 0 to 50°C (32 to 122°F)
Storage : -20 to 75°C (-4 to 167°F)

Protection Level

Ip50 for face plate

Humidity (non - condensing)

95% RH

Mounting

Panel Mount

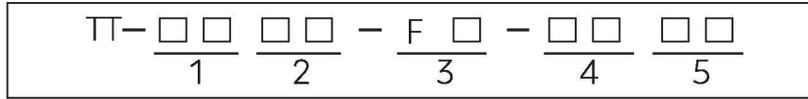
Weight

420gms

DIGITAL DUAL DISPLAY MULTIFUNCTION TIMER

MODEL NUMBER LEGEND

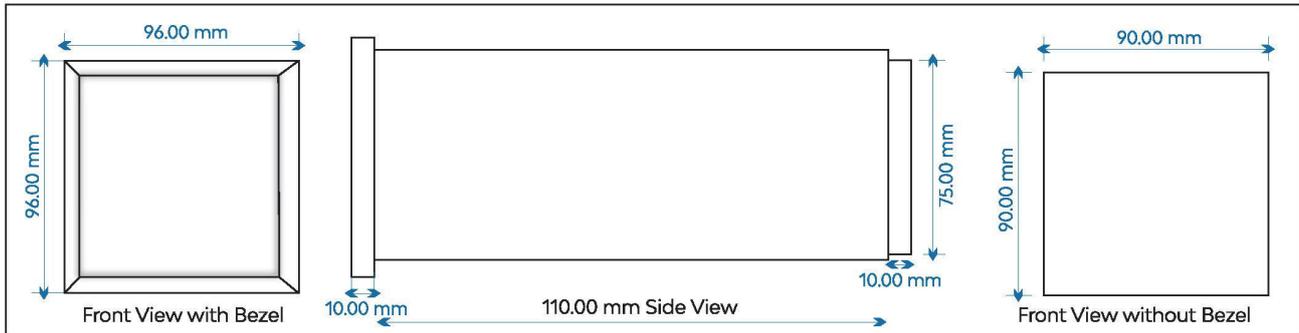
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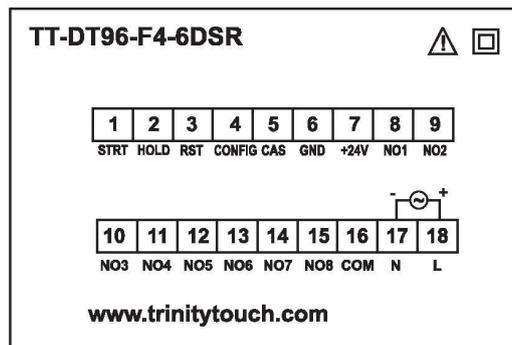
		Symbol	Meaning
1	Type of Product	DT	Digital Timer
2	Housing Size	96	96X96 Bezel size
3	Function Mode	6	On-Delay / Interval / Cyclic on first / Cyclic off first
4	Display Type	6D	2+4-Digits, 7-Segment Display
5	Display Size	SR	Single Row Display

Sr.	Article Number	Article Description	Pcs/Pkt.
1	01 1708394	TT-DT96-F4-6DSR	01

HOUSING DIMENSIONS

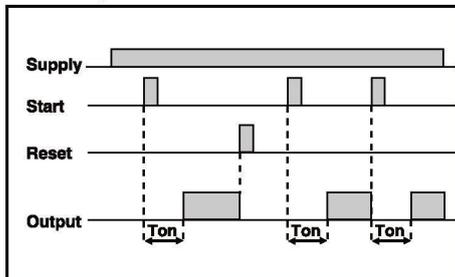


TERMINAL CONNECTIONS

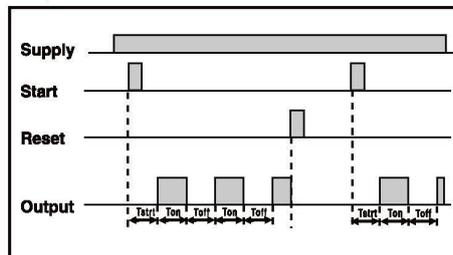


TIMING DIAGRAM

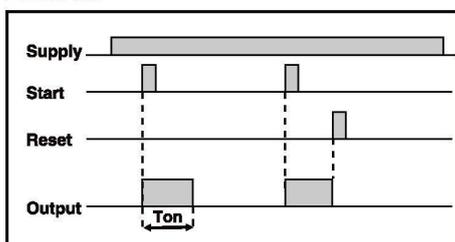
1. Ondelay



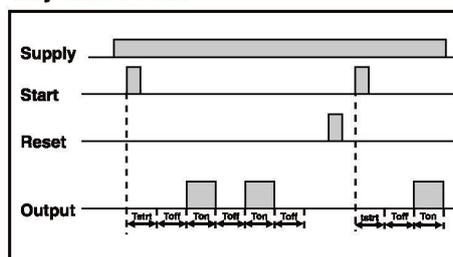
3. CyclicON-First



2. Interval



4. CyclicOFF-First



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DIGITAL DUAL DISPLAY MULTIFUNCTION TIMER

TT-DT48-F8-4DDR

Main Features

- Dual set point
- LED Indications : Relay ON, Seconds, Minutes, Hours
- 4 digits, 7 segment LED, Dual Display
- Size : 1/16 DIN 48x48x85 mm



Technical Specification

Display Specifications

Display

4 digits, 7 segment LED, Dual display

Height of Upper Display : 0.3785"

Height of Lower Display : 0.2720"

LED Indications

Relay ON, Hr / Min /Sec

Input Specifications

Accuracy

99.80% of F.S. or 50 msec (Whichever is greater)

Start Input

Gate / Pulse (Programmable)

Output Specifications

Relay Contact

2 SPDT (C/O)

Contact Rating

5A @ 250V AC

Functional Specifications

Modes

ON delay / Interval delay / Cyclic ON first / Cyclic OFF first / Forward-pause-reverse / instantaneous + delayed / timer / batch

Time Ranges

99.99 / 9999.9 / 9999 sec, 99:59 min:sec,
9999.9 / 9999 min, 99:59 hr:min,
9999.9 / 9999 hr

Counting Direction

Up / down

Set Point

2

Time Setting

By keys on front panel

Reset

Front, Remote, On power interruption (programmable)

Memory Retention

Yes (selectable)

Configuration Lock

Yes

Supply Voltage

Supply Voltage

85 to 270V AC (50 / 60Hz)

Power Consumption

4VA max

Environmental Specifications

Temperature

Operating : 0 to 50°C (32 to 122°F)

Storage : -20 to 75°C (-4 to 167°F)

Protection Level

Ip50 for face plate

Humidity (non - condensing)

95% RH

Mounting

Panel Mount

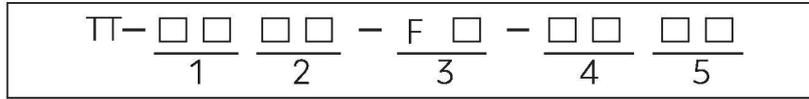
Weight

142gms

DIGITAL DUAL DISPLAY MULTIFUNCTION TIMER

MODEL NUMBER LEGEND

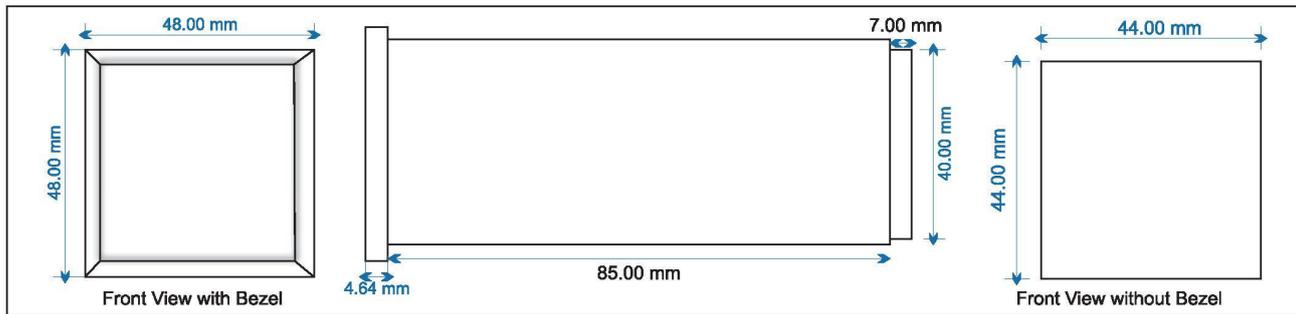
(Note all model that can be represented with the model number legend can necessarily be produced.)



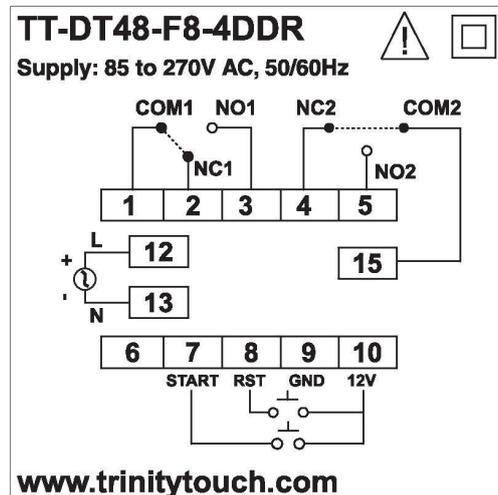
		Symbol	Meaning
1	Type of Product	DT	Digital Timer
2	Housing Size	48	48X48 Bezel size
3	Function Mode	8	ON delay / Interval delay / Cyclic ON first / Cyclic OFF first / Forward-pause-reverse/ instantaneous + delayed / timer / batch
4	Display Type	4D	4-Digit, 7-Segment Display
5	Display Size	DR	Dual Row Display

Sr.	Article Number	Article Description	Pcs/Pkt.
1	01 1708393	TT-DT48-F8-4DDR	01

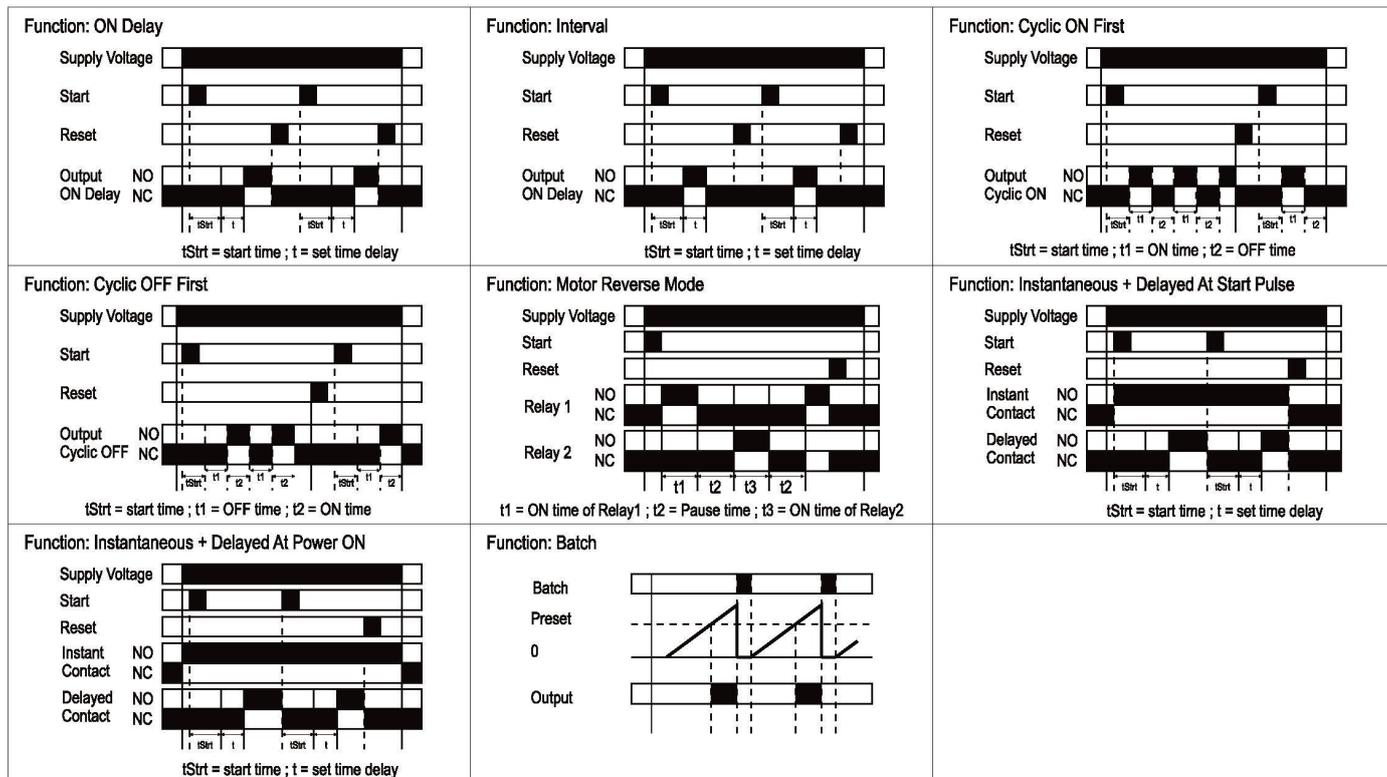
HOUSING DIMENSIONS



TERMINAL CONNECTIONS



TIMING DIAGRAM



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TRUE POWER OFF DELAY TIMER

Main Features

- True power- OFF delay.
- Power ON led indication.
- Din rail mount.



Technical Specification

TIME RANGES

Set time range

15 s 35 s 65 s 85 s 115 s 135 s 160 s

RATING

Power supply voltage

230 VAC/DC, 50/60Hz

Allowable voltage fluctuation Range

230 VAC/DC: 85% to 110% of rated voltage

Power reset

Minimum Power-OFF time : 0.1 s

Reset voltage

10 % of rated voltage

Power consumption

At 230 VAC : 4 VA max.

Control output

Contact output: 5 A at 250 VAC with resistive load ($\cos\phi = 1$) ,
5 A at 30 VDC with resistive voltage

Accuracy

Setting : $\pm 10\%$ of F.S (Full Scale)

Repeat : $\pm 2\%$

Boot time

1.5 Sec ± 0.5 Sec

Protection Level

IP 20

GENERAL DATA

Module width (w)

22.5 mm

Module height (h)

103 mm

Module depth (d)

75.4 mm

Housing colour

Grey (base), Black(cover)

Relay

DPDT

Ambient operating temperature

(0 to 50) $^{\circ}$ C

Storage temperature

(-20 to 75) $^{\circ}$ C

Ambient operating humidity

25% to 85%

Weight

Approx. 110 g

CONNECTION DATA

Module width (w)

22.5 mm

Type of connection

Screw Connection

Nominal current carrying capacity

24 A

Rated voltage capacity

400 V

Connector cross section solid

Min./Max. 0.2/4.0 mm²

Conductor cross section stranded

Min./Max. 0.2/2.5 mm²

Tightening torque

0.5-0.6 Nm

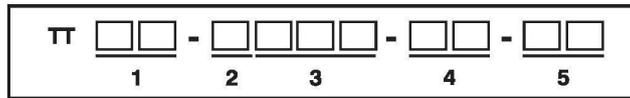
EMI/EMC COMPLIANCE

As per IEC 61000-4-2, 3, 4, 5, 6, 11.

TRUE POWER OFF DELAY TIMER

Model Number Legend

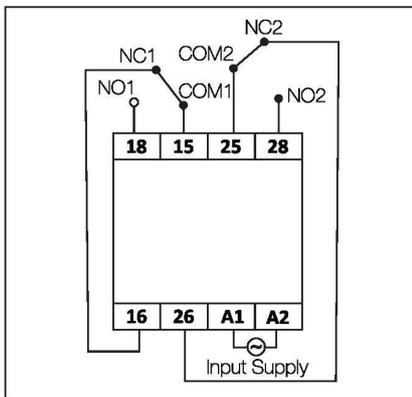
(Note all model that can be represented with the model number legend can necessarily be produced.)



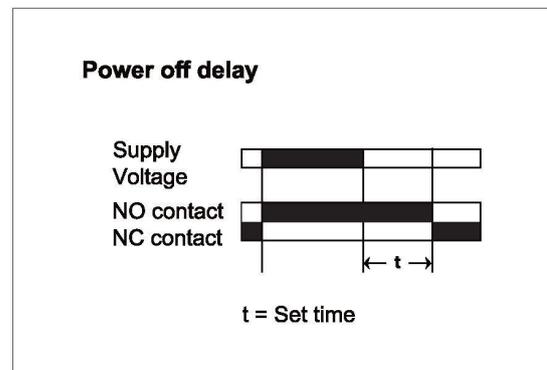
		Symbol	Meaning
1	HOUSING SIZE	22	22.5 mm housing width
2	INPUT SUPPLY TYPE	A	Alternate Current (AC)
3	SUPPLY VOLTAGE RANGE	230	230 V
4	CONTROL OUTPUT	2S	DPDT
5	FUNCTION	OD	Power off delay

Sr.	Article Number	Article Description	Pcs/Pkt.
1	011707308	TT22-A230-2S-OD	01

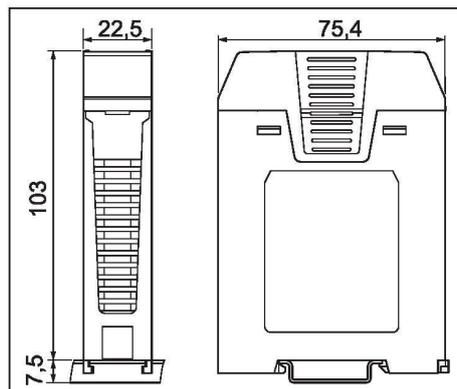
TERMINAL CONNECTIONS



TIMING DIAGRAM



HOUSING DIMENSIONS



22.5 mm

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 E-mail: gbsales@trinitytouch.com

Main Features

- Single Set Point
- LED Indications : Relay ON, Seconds, Minutes, Hours
- 3 digits, 7 segment LED, Dual Display
- Size : 1/16 DIN 48x48x85 mm

**Technical Specification****Display Specifications**

Display

3 digits, 7 segment LED, Dual display

Height of Upper Display : 0.3785"

Height of Lower Display : 0.2720"

LED Indications

Relay ON, Hr / Min /Sec

Input Specifications

Accuracy

99.80% of F.S. or 50 msec (Whichever is greater)

Start Input

Gate / Pulse (Programmable)

Output Specifications

Relay Contact

2 SPDT (C/O)

Contact Rating

5A @ 250V AC

Functional Specifications

Modes

ON delay, Interval, Cyclic ON first, Cyclic OFF first

Time Ranges

0 - 9.99 sec	0 - 99.9 sec	0 - 999 sec	0 - 9:59 min:sec	0 - 99.9 min
0 - 999 min	9:59 hr:min	0 - 99.9 hr	0 - 999 hr	

Resolution

0.01sec

Counting Direction

Down

Set Point

1

Time Setting

By keys on front panel

Reset

Front, Remote, On power interruption (programmable)

Memory Retention

Yes (selectable)

Configuration Lock

Yes

Supply Voltage

Supply Voltage

85 to 270V AC (50 / 60Hz)

Protection Consumption

4VA max

Environmental Specifications

Temperature

Operating : 0 to 50°C (32 to 122°F)

Storage : -20 to 75°C (-4 to 167°F)

Protection Level

Ip50 for face plate

Humidity (non - condensing)

95% RH

Mounting

Panel Mount

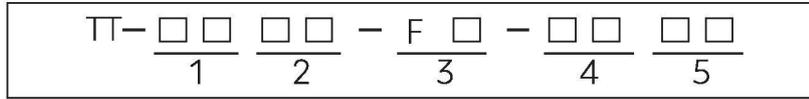
Weight

142gms

DIGITAL DUAL DISPLAY MULTIFUNCTION TIMER

MODEL NUMBER LEGEND

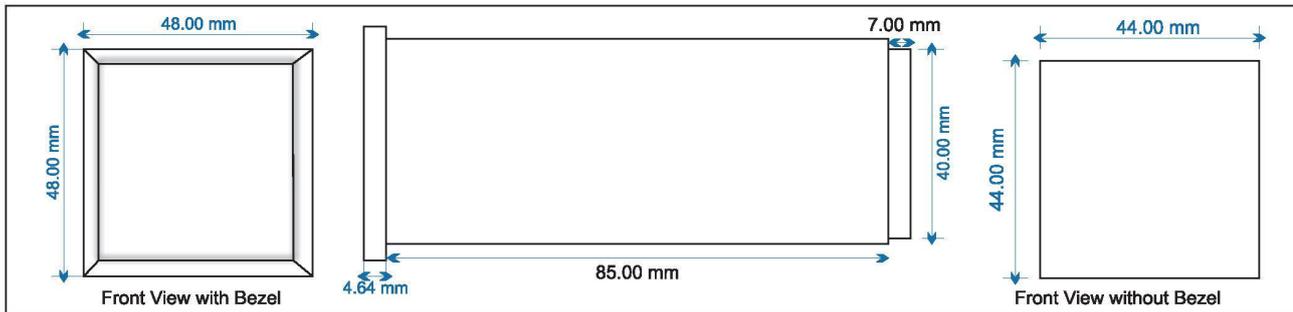
(Note all model that can be represented with the model number legend can necessarily be produced.)



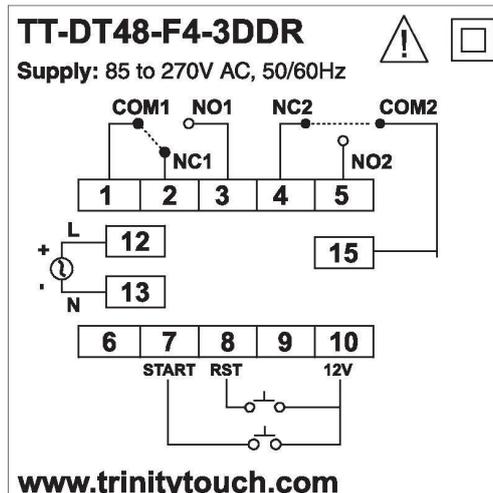
	Symbol	Meaning
1	Type of Product	DT Digital Timer
2	Housing Size	48 48X48 Bezel size
3	Function Mode	4 On-Delay / Interval / Cyclic on first / Cyclic off first
4	Display Type	3D 3-Digit, 7-Segment Display
5	Display Size	DR Dual Row Display

Sr.	Article Number	Article Description	Pcs/Pkt.
1	01 1708392	TT-DT48-F4-3DDR	01

DIMENSIONS

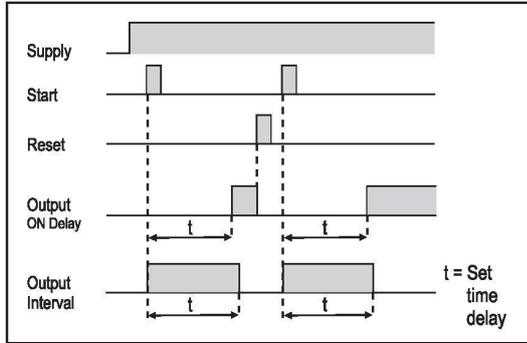


TERMINAL CONNECTIONS

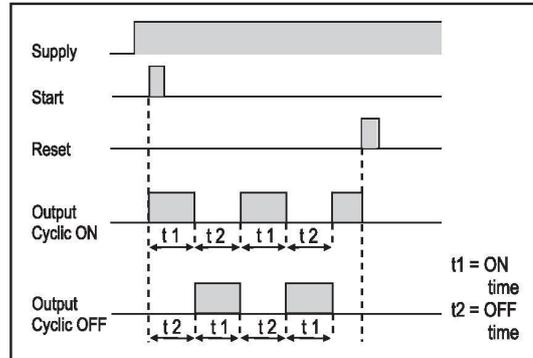


TIMING DIAGRAM

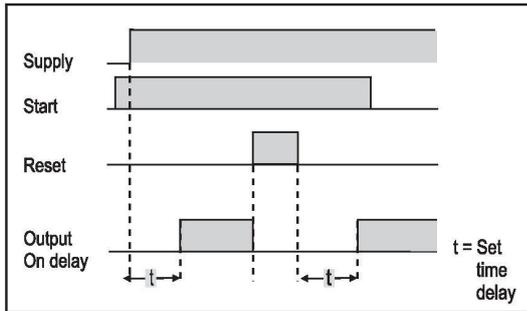
1. On delay, Interval modes :



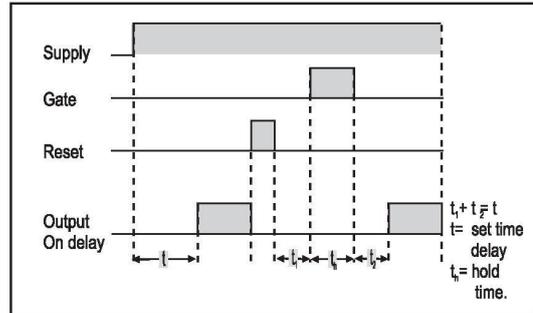
2. Cyclic ON first, Cyclic OFF first modes :



Typical application of Continuous start and reset in On delay mode :



Typical application of Gate start :



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Main Features	PSR-17.5	PSR-22.5	PFR-22.5	PSR-MI 17.5	PFR-MI 17.5
Input Supply Type	3 phase-3wire	3 phase-3wire	3 phase-3wire	3 phase-3wire	3 phase-3wire
Nominal Input Voltage	415V AC (phase to phase)	415V AC (phase to phase)	415V AC (phase to phase)	415V AC (phase to phase)	415V AC (phase to phase)
Operating Voltage	154 to 500V AC (phase to phase)	154 to 500V AC (phase to phase)	154 to 500V AC (phase to phase)	220 to 520V AC (phase to phase)	220 to 520V AC (phase to phase)
Nominal Frequency	50/60 H(±10%)	50/60 H(±10%)	50/60 H(±10%)	50/60 H(±10%)	50/60 H(±10%)
Monitors	Unbalancing, Phase sequence, Phase missing	Unbalancing, Phase sequence, Phase missing	Unbalancing, Phase missing	Asymmetry, Phase loss, Phase sequence	Asymmetry, Phase loss
LED Indication	Trip and Power ON	Trip and Power ON	Trip and Power ON	Power ON, Asymmetry, Phase loss, Phase sequence	Phase loss, Power ON, Asymmetry
Mounting	DIN Rail mount	DIN Rail mount	DIN Rail mount	DIN Rail mount	DIN Rail mount

Technical Specifications

Input Specification

Accuracy	±3% of FS(F.S.=Full scale)				
Reset	Auto reset on removal of fault condition				
Power On Indication (Green)	Yes	NA	Yes	Yes	Yes
Trip Indication (Red)	Yes	Yes	Yes	NA	NA
Asymmetry (Red)	NA	NA	NA	Yes	Yes
Phase Loss (Red)	NA	NA	NA	Yes	Yes
Phase Sequence (Red)	NA	NA	NA	Yes	NA

Output Specifications

Output Contact	SPDT(I C/O)	SPDT(I C/O)	SPDT(I C/O)	SPDT(I C/O)	SPDT(I C/O)
Contact Rating	NO/5A,NC/3A@250V AC	NO/5A,NC/3A@250V AC	NO/5A,NC/3A@250V AC	5A@250V AC/30V DC	5A@250V AC/30V DC
VA Rating	30 VA Max.	30 VA Max.	30 VA Max.	30 VA Max.	30 VA Max.

Functional Specifications

Phase Failure Trip	<154V AC	<154V AC	<154V AC	< 280V AC, >460V	< 280V AC, >460V
Phase Sequence	Yes	Yes	NA	Yes	NA
Asymmetry (Unbalance) Trip Setting	60V AC Fixed ±10V AC (phase To Phase)	60V AC Fixed ±10V AC (Phase To Phase)	60V AC Fixed ±10V AC (Phase to Phase)	60V ±10V	60V ±10V
Hysteresis	6V	20V	20V	10V ±5V	10V ±5V
Response Time	200ms max.	200ms max.	0-2 sec	200ms max.	200ms max.
Power On Delay	200 msec	200 msec	0-2 sec	200 msec	200 msec

Supply Monitoring Products Datasheet

Phase Sequence Relay (PSR) and Phase Failure Relay (PFR)



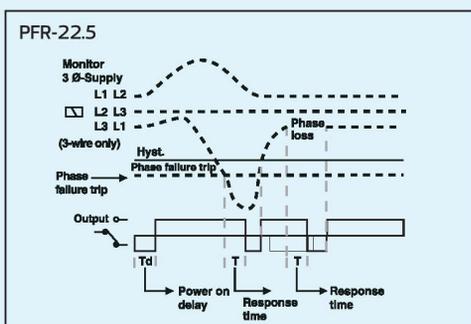
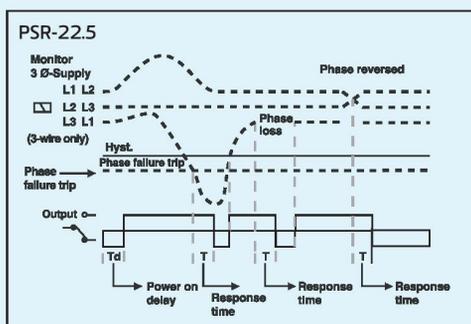
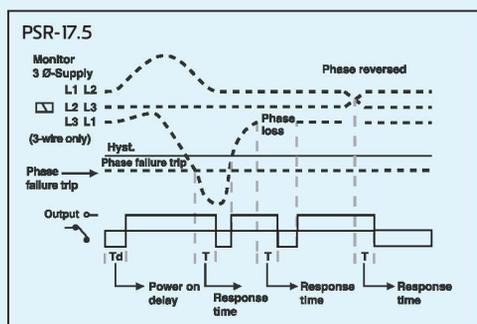
General Data	PSR-17.5	PSR-22.5	PFR-22.5	PSR-MI 17.5	PFR-MI 17.5
Module width (w)	17.5mm	22.5 mm	22.5 mm	17.5mm	17.5mm
Module height (h)	60mm	103 mm	103 mm	60mm	60mm
Module depth (d)	90mm	75.4 mm	75.4 mm	90mm	90mm
Housing colour	Grey(base)	Grey(base), Black (cover)	Grey(base), Black (cover)	Grey(base)	Grey(base)
Ambient operating temperature	(0 to 50) ⁰ C (32 to 122 ⁰ F)	(0 to 50) ⁰ C (32 to 122 ⁰ F)	(0 to 50) ⁰ C (32 to 122 ⁰ F)	(0 to 50) ⁰ C (32 to 122 ⁰ F)	(0 to 50) ⁰ C (32 to 122 ⁰ F)
Storage temperature	(-20 to 75) ⁰ C (-4 to 167 ⁰ F)	(-20 to 75) ⁰ C (-4 to 167 ⁰ F)	(-20 to 75) ⁰ C (-4 to 167 ⁰ F)	(-20 to 75) ⁰ C (-4 to 167 ⁰ F)	(-20 to 75) ⁰ C (-4 to 167 ⁰ F)
Ambient operating humidity	95%(Rn)	95%(Rn)	95%(Rn)	95%(Rn)	95%(Rn)
Weight	Approx 62 gms(0.163 lbs)				

Connection Data					
Type of connection	Screw connection				
Nominal current carrying capacity	24A	24A	24A	24A	24A
Rated Voltage capacity	400 V				
Connector cross section solid	Min/Max 0.2/4.0 mm ²				
Conductor cross section stranded	Min/Max 0.2/2.5 mm ²				
Tightening torque	0.5-0.6 Nm				

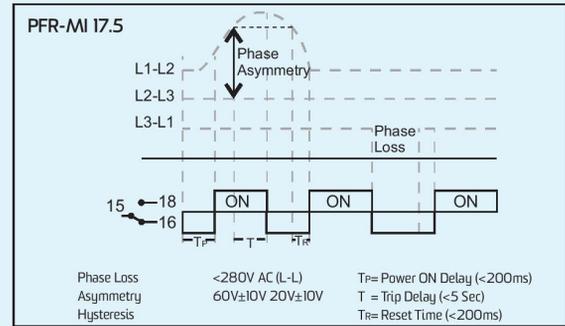
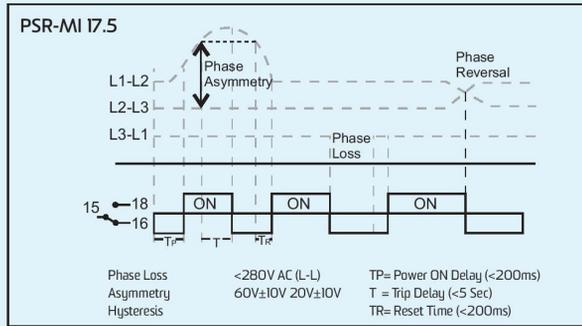
Ordering Information

Sl/ no/	Article Number	Description	Pcs/Pkt.
1	11709055	TT17-A415-IS-PSR	1
2	11708396	TT22-A415-IS-PSR	1
3	11709096	TT22-A415-IS-PFR	1
4	11715061	TT17-A415-IS-PSR-MI	1
5	11715062	TT17-A415-IS-PFR-M	1

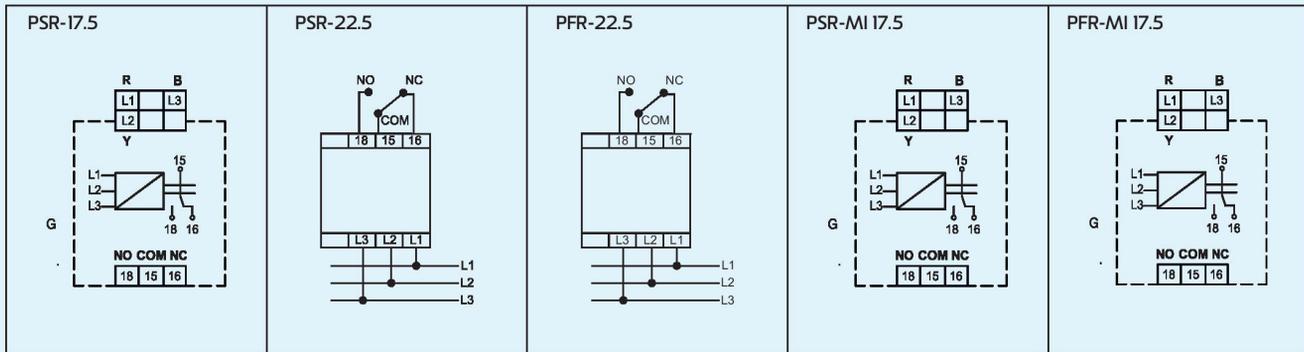
Timing Diagram



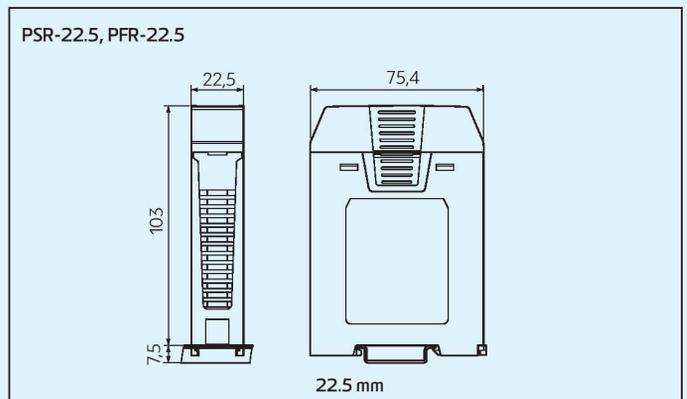
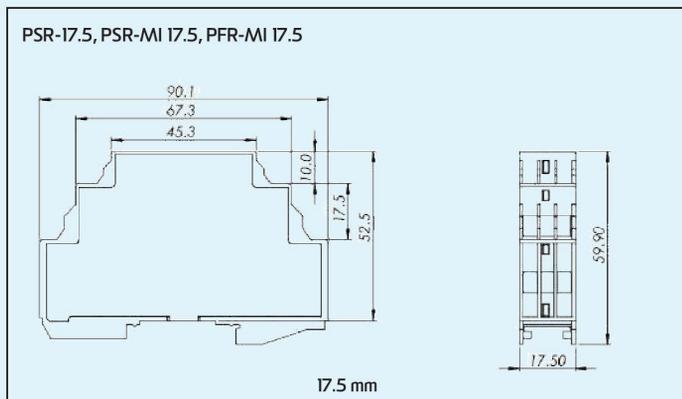
Phase Sequence Relay (PSR) and Phase Failure Relay (PFR)



Terminal Connection



Housing Dimensions



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REVERSE PAUSE FORWARD TIMER

Main Features

- Reverse - Pause - Forward Timer.
- LED status indicator :
Relay 1 ON, Relay 2 ON
- DIN Rail Mount



Technical Specification

FUNCTION

Mode	Reverse - Pause - Forward	
Time range	1 / 2 / 3 ... 9 / 10 min (ON time)	10 / 20 / 30 ... 90 / 100 sec (Pause time)
LED indication	Relay 1 ON	Relay 2 ON
Reset time	Less than 100 ms	
Accuracy	Setting : $\pm 1\%$ of full scale.	

RATING

Power supply voltage	12 to 240 VAC/DC,50/60Hz
Allowable voltage fluctuation Range	12 to 240 VAC/DC: 85% to 110% of rated voltage
Reset voltage	10 % of rated voltage
Power consumption	4 VA max.
Control output	Contact output : 5 A at 250 VAC with resistive load ($\cos\phi = 1$), 5 A at 30 VDC with resistive voltage
Protection Level	IP 20

GENERAL DATA

Module width (w)	17.5 mm	22.5 mm
Module height (h)	60 mm	103 mm
Module depth (d)	88 mm	75.4 mm
Housing colour	Gray	Grey (base), Black(cover)
Relay	SPDT	
Ambient operating temperature	(0 to 50) °C	
Storage temperature	(-20 to 75)°C	
Ambient operating humidity	25% to 85%	
Weight	Approx. 110 g	

CONNECTION DATA

Module width (w)	17.5 mm	22.5 mm
Type of connection	Screw Connection	
Nominal current carrying capacity	24 A	
Rated voltage capacity	400 V	
Connector cross section solid	Min./Max. 0.14/2.5 mm ²	Min./Max. 0.2/4.0 mm ²
Conductor cross section stranded	Min./Max. 0.14/2.5 mm ²	Min./Max. 0.2/2.5 mm ²
Tightening torque	0.5-0.6 Nm	

EMI/EMC COMPLIANCE

As per IEC 61000-4-2, 3, 4, 5, 6, 11.

REVERSE PAUSE FORWARD TIMER

Model Number Legend

(Note all model that can be represented with the model number legend can necessarily be produced.)



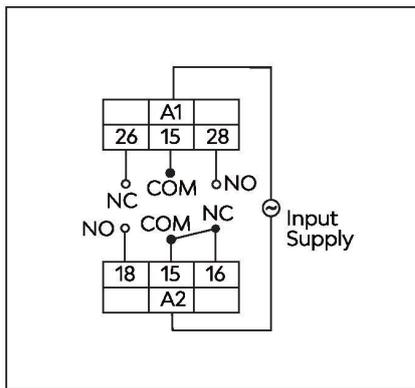
		Symbol	Meaning
1	HOUSING SIZE	17	17.5 mm Housing Width
		22	22.5 mm Housing Width
2	INPUT SUPPLY TYPE	U	Universal Supply Voltage (AC/DC)
		A	Alternate Current (AC)
3	SUPPLY VOLTAGE RANGE	240	12-240 VAC/DC
		415	415 VAC
4	CONTROL OUTPUT	1S	SPDT
5	FUNCTION	RF	Reverse Pause Forward

Sr.	Article Number	Article Description	Pcs/Pkt.
1	011709059	TT17-U240-1S-RF	01
2	011709068	TT22-A415-1S-RF	01
3	011707068	TT22-U240-1S-RF	01

TERMINAL CONNECTIONS

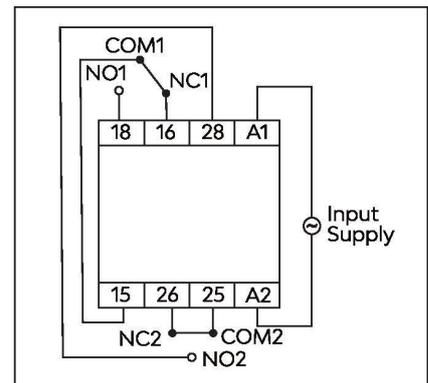
17.5 MM

1 C/O



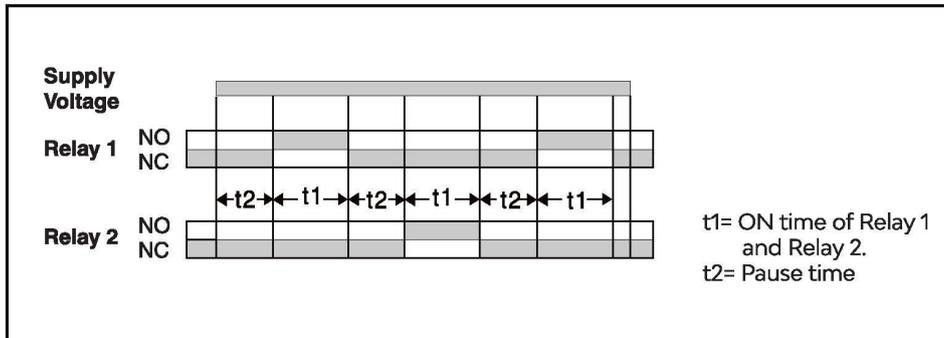
22.5 MM

1 C/O

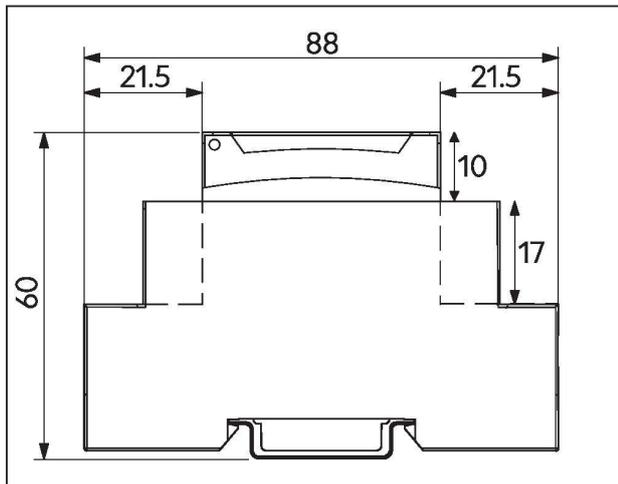


REVERSE PAUSE FORWARD TIMER

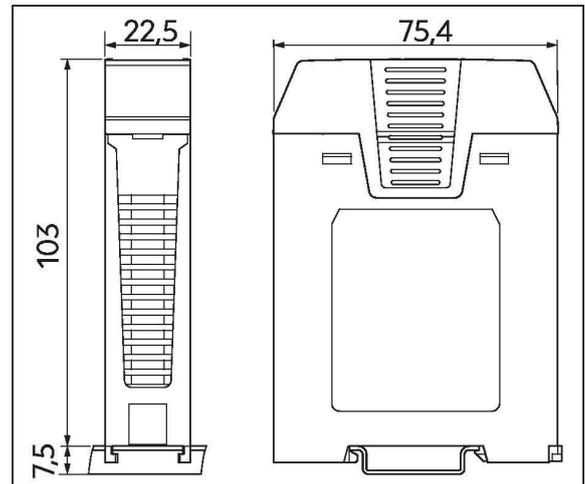
TIMING DIAGRAM



HOUSING DIMENSIONS



17.5 mm



22.5 mm

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