

Section 4 Multifunction Timers

Multifunction Timers

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Relay Output



- TRDU..... 4.4
- TRU..... 4.6

Solid State Output



- ASQU..... 4.8
- ASTU..... 4.8
- DSQU..... 4.10
- DSTU..... 4.10

DIN Rail Mounting Multifunction Timers



- CT-MFS
 - CT-MBS
 - CT-MVS
 - CT-MFE
 - CT-MFD
 - CT-MKE
- Product pages are not included in this catalog.
Go to: www.ssac.com/s4.pdf
Click on the Product Name (ie: CT-MFS) to open the catalog page.
[Adobe Acrobat Reader is required]

Multifunction Timers - Fast Facts



TRDU Series Universal Time Delay Relay

- 21 Functions are Switch Selectable
- Switch Selectable Modes & Time Ranges
- 0.1 s to 1705 h in 8 Ranges
- 10 Amps, SPDT or DPDT Isolated Relay Contacts
- 8 or 11 Pin Plug-in Base
- 1.78 x 2.39 x 3.1 Inches (45 x 61 x 79 mm)
- Popular Part Numbers are In Stock
- UL Recognized, CSA Certified, CE

TRU Series Universal Time Delay Relay

- 6 Functions are Switch Selectable
- Knob Adjustable Time Delay
- 0.1 s to 1000 m in 6 Ranges
- Universal Voltage 19 to 264VAC and 19 to 30VDC
- 10 Amps, SPDT or DPDT Isolated Relay Contacts
- 1.78 x 2.39 x 3.44 Inches (45 x 61 x 87 mm)
- In Stock
- UL Recognized, CSA Certified, CE



22.5 mm - CT-MBS or CT-MFS - DIN Rail Mounting

- 8 Functions are Switch Selectable
- Multirange - 0.05 s to 300 h in 10 Ranges
- Input Voltages of 24 to 240VAC/DC (CT-MFS)
- Input Voltages of 12 to 240V in 3 Ranges (CT-MBS)
- 2 SPDT, 4 Amps Resistive, Isolated Relay Contacts
- Selectable Instantaneous SPDT Contact
- 1 s to 300 h Adjustable Time Delay in 10 Ranges
- LED Indicators; Dual Camphor Screw Terminals
- DIN3 Mount or Surface Mount (w/ Adaptor)
- 0.886 x 3.07 x 3.98 In. (22.5 x 78 x 101 mm)
- UL/cUL Listed, CE

22.5 mm - CT-MVS - DIN Rail Mounting

- 8 Functions are Switch Selectable
- Multirange - 0.05 s to 300 h in 10 Ranges
- Input Voltages of 24 to 240V in 2 Ranges
- 2 SPDT, 4 Amps Resistive, Isolated Relay Contacts
- Selectable Instantaneous SPDT Contact
- 1 s to 300 h Adjustable Time Delay in 10 Ranges
- LED Indicators
- Dual Camphor Screw Terminals
- DIN3 Mount or Surface Mount (w/ Adaptor)
- 0.886 x 3.07 x 3.98 In. (22.5 x 78 x 101 mm)
- UL/cUL Listed, CE



22.5 mm - CT-MFE - DIN Rail Mounting

- 6 Functions are Switch Selectable
- 0.05 s to 100 h in 8 Ranges
- 24 to 240V AC/DC
- 4 Amps Resistive, SPDT Isolated Relay Contacts
- 2 LED Indicators
- Screw Terminal Connections
- DIN3 Mount or Surface Mount (w/adaptor)
- 0.886 x 3.07 x 3.09 In. (22.5 x 78 x 78.5mm)
- UL/cUL Listed, CE

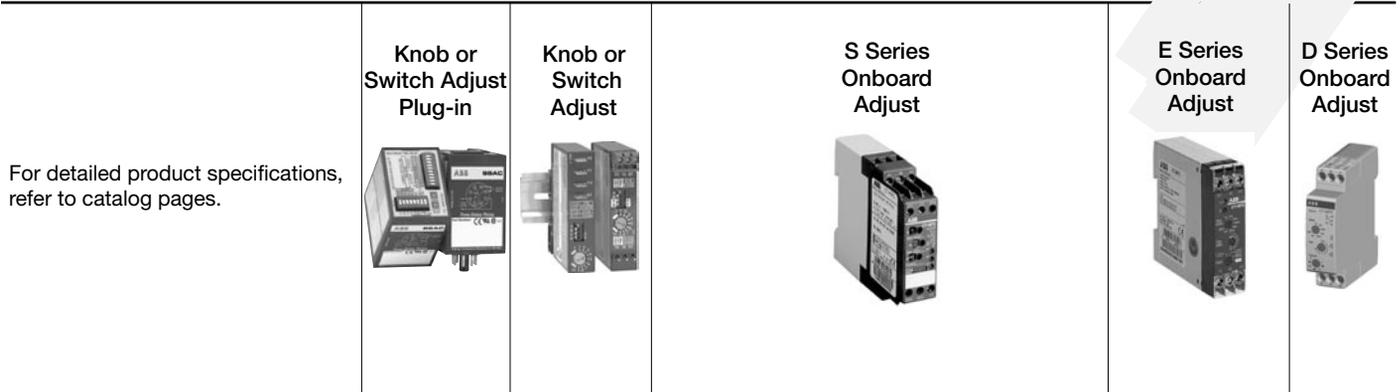
17.5mm - CT-MFD - DIN Rail Mounting

- 7 Functions are Switch Selectable
- 0.05 s to 100 h in 7 Ranges
- 24 to 240V AC; 24 to 48V DC
- 6 Amps Resistive, SPDT Isolated Relay Contacts
- 3 LED Indicators
- Screw Terminal Connections
- DIN3 Mount or Surface Mount (w/adaptor)
- 0.69 x 2.48 x 2.76 in (17.5 x 63 x 70 mm)
- UL/cUL Listed, CE



Selection Guide Multifunction Timers

Multifunction
timers



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		Knob or Switch Adjust Plug-in	Knob or Switch Adjust	S Series Onboard Adjust	E Series Onboard Adjust	D Series Onboard Adjust						
Series		TRDU SPDTor DPDT	TRU SPDTor DPDT	ASQU/ASTU DSQU/DSTU Solid State	CT-MFS DPDT	CT-MVS SPDTor DPDT	CT-MXS DPDT	CT-MBS DPDT	CT-WBS DPDT	CT-MFE SPDT	CT-MKE Solid State	CT-MFD SPDTor DPDT
Output Form												
Function and Features	Page	4.4	4.6	4.8 & 4.10	Product pages are not included in this catalog. Go to: www.ssac.com/sg4.pdf Click on the Product Name (ie: CT-MFS) [Adobe Acrobat Reader is required]							
Delay on Make (ON-delay)		•	•	•	•	•		•	•	•	•	•
Delay on Break (OFF-delay)		•	•	•	•	•		•		•		•
Delay on Break (Inverted)		•										
Single Shot (Pulse Former)		•	•	•	•	•	•	•		•		•
Single Shot Trailing Edge		•										
Single Shot Retriggerable (Motion Detector)		•	•									
Single Shot (Inverted)		•										
Interval (Impulse ON)		•	•	•	•	•	•	•	•	•	•	•
Interval, Trailing Edge (Impulse OFF)					•	•	!	•		•		•
Interval/Recycling (Equal)		•										
Recycling (Pulse Generator) (Both Times Adjustable)		•					•					
Recycling (Equal Times ON First)		•	•	•	•	•		•	•	•	•	•
Recycling (Equal Times OFF First)					•	•		•	•	•	•	•
Fast Function					•	•	•	•	•			
Dual Functions												
Star Delta Motor Starting					•	•		•				
Delay on Make & Delay on Break		•			•	•	•	•				
Delay on Make & Single Shot		•										
Delay on Make & Interval		•					•		•			
Delay on Make (Accumulative) & Interval		•										
Delay on Make & Recycling (Equal)		•										
Delay on Break & Recycle (Equal)		•										
Single Shot & Recycle (Equal Times)		•										
Interval & Delay on Make		•										
General Features												
Instantaneous Contacts					•	•		•	•			
Accumulative Timing		•			•	•		•				
Solid State Output				•							•	
Relay Output		•	•		•	•	•	•	•	•		•
Knob or Onboard Adjustment			•	•	•	•	•	•	•	•	•	•
Switch Adjustment		•		•								
External Adjustment				•	•	•	•	•				
Dimensions (w x h x d)	in mm	1.78 x 2.39 x ≤3.44 45.2 x 60.7 x 87.4	0.69 x 3.0 x ≤2.41 17.5 x 76.2 x 61.2		0.89 x 3.07 x ≤3.94 22.5 x 78 x 100					0.89 x 3.07 x ≤3.09 22.5 x 78 x 78.5		0.69 x ≤3.15 x 2.28 17.5 x ≤80 x 58

! Interval & Impulse OFF

SGM/F1B02 12.05.06

Multifunction TRDU Series Time Delay Relay

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10 YEAR WARRANTY

- Microcontroller +/-0.1% Repeat Accuracy
- Multifunction – 21 Timing Functions
- Multirange – 0.1 s ... 1,705 h in 8 Ranges
- Switch Selectable Modes, Time Delay, & Ranges
- AC and DC Input Voltages are Available
- 10 A, Isolated SPDT or DPDT Output Contacts

Approvals:

Accessories

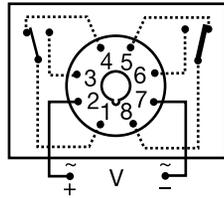
- Panel mount kit
P/N: **BZ1**
- Hold down clips
P/Ns:
PSC8 (NDS-8)
PSC11 (NDS-11)
- 11 pin socket
P/N: **NDS-11**
- Octal 8 pin socket
P/N: **NDS-8**
- DIN rail P/Ns:
017322005 (Steel)
C103PM (Al)

See accessory pages for specifications.

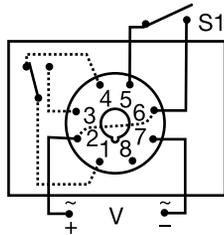
Description

The TRDU Series is a versatile universal time delay relay with 21 selectable single and dual functions. The dual functions replace up to three timers required to accomplish the same function. Both the function and the timing range are selectable with switches located on the face of the unit. Two LED's indicate input voltage and output status. This device offers full 10 A isolated relay output contacts in either SPDT or DPDT. The TRDU replaces hundreds of part numbers, thereby, reducing your stock inventory requirements.

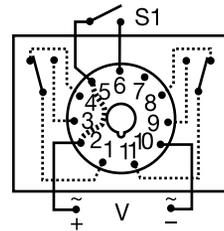
Connection



8 Pin DPDT



8 Pin SPDT



11 Pin DPDT

V = Voltage S1 = Initiate Switch
Relay contacts are isolated. Dashed lines are internal connections.

21 Functions

Five switches are provided to set one of 10 single or 11 dual modes of operation.

Single Functions-

- * Delay on Make
- Delay on Break
- * Recycle (ON Time First, Equal Recycle Delays)

Single Shot

- * Interval
- Trailing Edge Single Shot
- Inverted Single Shot
- Inverted Delay on Break
- Accumulative Delay on Make
- Retriggerable Single Shot (Motion Detector)

Dual Functions -

- Delay on Make/Delay on Break
- * Delay on Make/Recycle (ON Time First, Equal Recycle Delays)
- * Delay on Make/Interval
- Delay on Make/Single Shot
- * Interval/Recycle (ON Time First, Equal Recycle Delays)
- Delay on Break/Recycle (ON Time First, Equal Recycle Delays)
- Single Shot/Recycle (ON Time First, Equal Recycle Delays)
- * Recycle - Both Times Adjust. (ON Time First)
- * Recycle - Both Times Adjust. (OFF Time First)
- * Interval/Delay on Make
- Accumulative Delay on Make/Interval

*9 Functions in 8 PIN DPDT UNITS

Ordering Table

TRDU Series	X Input	X Base Connection
	- 12D - 12 V DC	- 1 - 8 pin DPDT *
	- 24A - 24 V AC/DC	- 2 - 8 pin SPDT
	- 120A - 120 V AC	- 3 - 11 pin DPDT
	- 230A - 230 V AC	

Example P/N: **TRDU120A2**

*Limited to Nine Operating Functions

Multifunction TRDU Series Time Delay Relay

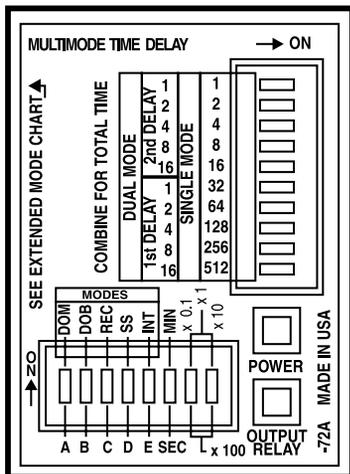
Multifunction
timers

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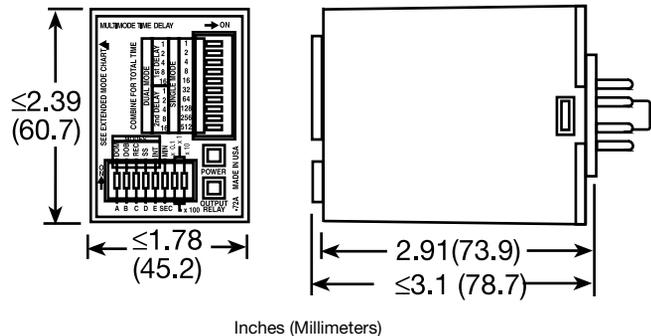
Technical Data

Time Delay Type Range: Switch Selectable** Adjustments Setting Accuracy Repeat Accuracy Timing Functions Reset Time Initiate Time Time Delay vs. Temp. & Voltage	Microcontroller Single Functions: 0.1 s ... 1,705 h in 8 ranges Dual Functions: 0.1 s ... 3,100 m each in 8 ranges Three switches are provided to set secs/mins & multipliers of x0.1, x1, x10, or x100 +/-1% or 50 ms, whichever is greater +/-0.1% or 20 ms, whichever is greater Five switches are provided to set one of twenty-one single or dual functions ≤ 50 ms 120 V AC: 75 ms +/-1%
Indication Two LED's indicate	1) Input voltage applied; 2) Output relay status
Input Voltage Tolerance 12 V DC & 24 V DC/AC 120 & 230 V AC Frequency Power Consumption	12 V DC, 24 V AC/DC, 120 V AC, or 230 V AC -15% ... +20% -20% ... +10% 50 ... 60 Hz 24 ... 230 V ≤ 3 W; 12 V DC ≤ 2 W
Output Type Form Rating Life	Electromechanical relay SPDT or DPDT 10 A resistive at 120/240 V AC & 28 V DC; 1/3 hp at 120/240 V AC Mechanical – 1 x 10 ⁷ ; Electrical – 1 x 10 ⁶
Protection Isolation Voltage Insulation Resistance Polarity	≥ 1500 V RMS input to output ≥ 100 MΩ DC units are reverse polarity protected
Mechanical Mounting Package Termination	Plug-in socket 3.1 x 2.39 x 1.78 in. (78.7 x 60.7 x 45.2 mm) Octal plug (8 Pin) or Magnal plug (11 Pin)
Environmental Operating Temperature Storage Temperature Weight	-20°C ... +65°C -40°C ... +85°C ≅ 5.8 oz (164 g)

**For CE approved applications, power must be removed from the unit when a switch position is changed.



Mechanical View



Inches (Millimeters)

TRDU2B01 06.29.04

Multifunction, Multirange TRU Series Universal Time Delay Relay

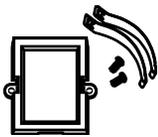
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- Microcontroller +/-0.1% Repeat Accuracy
- Six Timing Functions are Switch Selectable
- 0.1 s ... 1000 m in Six Ranges
- Knob Adjustable Time Delay
- Universal Input Voltage 19...264 V AC & 19...30 V DC
- 10 A, SPDT or DPDT Relay Contacts

Approvals:

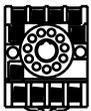
Accessories



Panel mount kit
P/N: **BZ1**



Hold down clips
P/Ns:
PSC8 (NDS-8)
PSC11 (NDS-11)



11 pin socket
P/N: **NDS-11**



Octal
8 pin socket
P/N: **NDS-8**

See accessory pages for specifications.

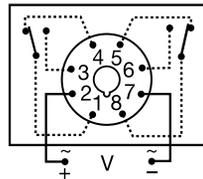
Description

The TRU Series is a multifunction, knob adjustable, Universal Time Delay Relay. It includes six of the most popular timing functions selected by a slide switch. The time delay is knob adjustable and the time delay range is switch selectable. The repeat accuracy is $\pm 0.1\%$. Both function and time range can be selected on the top face of the unit. In addition to multifunctioning and multiple time ranges, the TRU Series features universal input voltage; 19 to 264 V AC and 19 to 30 V DC and full 10 A output relay. The TRU Series can directly replace up to 1000 competitive time delay relay models.

Operation

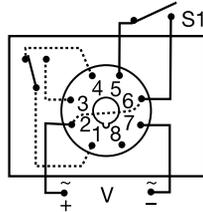
A six position slide switch selects Delay on Make, Interval, Single Shot, Recycling (ON time first), Delay on Break, and Retriggerable Single Shot. 8 Pin DPDT base wiring is limited to Delay on Make, Interval, and Recycling functions. All six functions are available in the 8 pin SPDT and 11 pin DPDT versions.

Connection



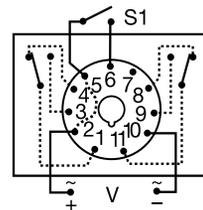
8 Pin DPDT

Delay On Make
Interval
Recycling



8 Pin SPDT

Delay On Make
Interval
Single Shot
Recycling (ON Time First)
Delay on Break
Retriggerable Single Shot

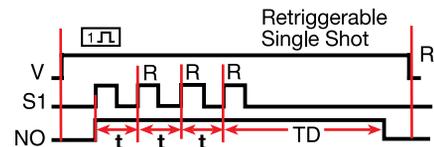
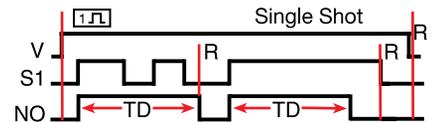
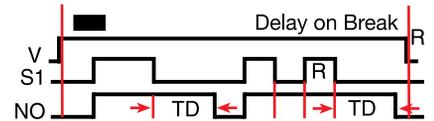
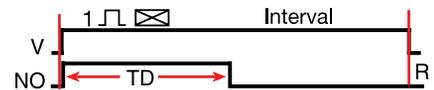
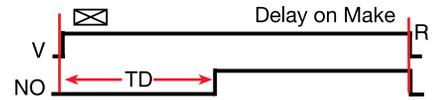


11 Pin DPDT

S1 = Initiate Switch

Dashed lines are internal connections.
Relay contacts are isolated.

Function



V = Voltage S1 = Initiate Switch R = Reset TD = Time Delay NO = Normally Open Contact
t = Incomplete Time Delay

Ordering Table

Voltage	Base Wiring	Functions	Part Number
19 ... 264 V AC; 19 ... 30 V DC	8 pin DPDT	3	TRU1
19 ... 264 V AC; 19 ... 30 V DC	8 pin SPDT	6	TRU2
19 ... 264 V AC; 19 ... 30 V DC	11 pin DPDT	6	TRU3

Multifunction, Multirange TRU Series Universal Time Delay Relay

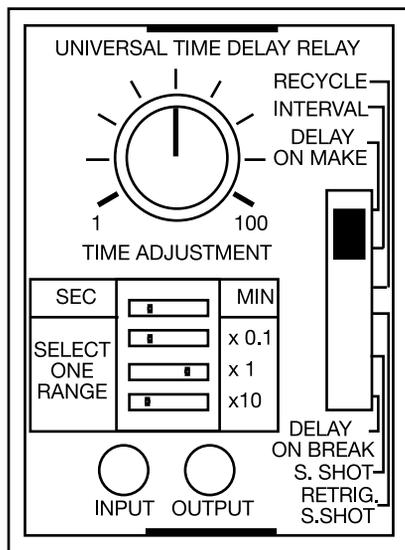
Multifunction
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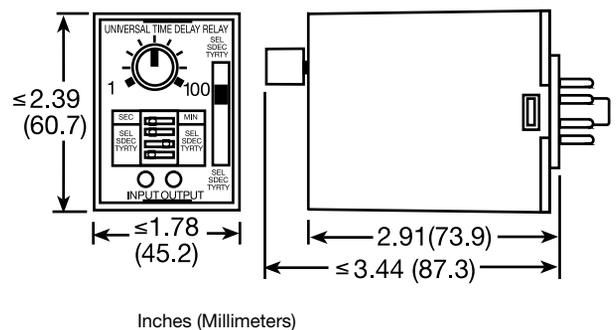
Technical Data

Time Delay Type Range: Switch Selectable** Adjustments LED Indication Repeat Accuracy Reset Time Time Delay vs. Temp. & Voltage	Digital integrated circuitry 0.1 s ... 1000 m in 6 ranges--0.1 ... 10, 1 ... 100 or 10 ... 1000 s; 0.1 ... 10, 1 ... 100 or 10 ... 1000 m Multiplier: 4 position DIP switch selects x0.1, x1, x10, and s or m Time Setting: Onboard knob adjustment with 1 ... 100 reference dial Two LED's indicate input voltage applied & output relay status +/-0.1%, or +/-20 ms, whichever is greater ≤ 300 ms +/-2%
Input Voltage--Universal Input Range Line Frequency	19 ... 264 V AC and 19 ... 30 V DC 50 ... 60 Hz
Output Type Form Rating Life	Electromechanical relay Isolated SPDT & DPDT 10 A resistive at 120/240 V AC & 28 V DC; 1/3 hp at 120/240 V AC Mechanical: 1 x 10 ⁷ ; Electrical: 1 x 10 ⁶
Protection Transient Isolation Voltage Polarity	38 joules ≥ 1500 V RMS input to output DC units are reversed polarity protected
Mechanical Mounting Package Termination	Plug-in socket 3.44 x 2.39 x 1.78 in. (87.3 x 60.7 x 45.2 mm) Octal plug (8 Pin) or magnal plug (11 Pin)
Environmental Operating Temperature Storage Temperature Weight	-20°C ... +65°C -30°C ... +85°C ≅ 6 oz (170 g)

** For CE approved applications, power must be removed when a switch position is changed.



Mechanical View



Knob Adjustable Universal Timer

ASQU/ASTU MicroTime

Timing Module



4

- 17.5 mm Package for High Rail Density
- Microprocessor Controlled with +/-1% Repeat Accuracy
- Multimode: 5 Selectable Functions
- Multirange: Knob Adjustable from 0.1 s ... 100 m
- Multivoltage: 24 ... 240 V AC or 9 ... 110 V DC
- 0.7 A Steady, 10 A Inrush Rated Solid State Output

Approvals:

Description

The ASQU/ASTU Series of 17.5 mm, knob adjustable, universal solid state timers offer multiple functions, voltages, and time delay ranges. Choose one of 5 functions and 4 time delay ranges via 4 selection switches located on top of the unit. Adjustment through the time range is accomplished by an onboard knob.

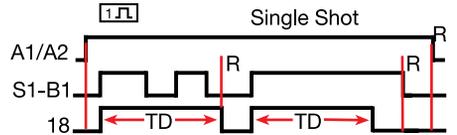
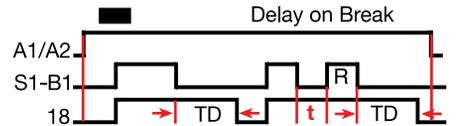
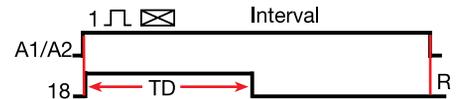
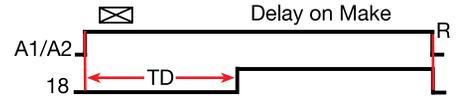
Adjustment

DOM	A <input type="checkbox"/> B <input type="checkbox"/>
SS	A <input type="checkbox"/> B <input type="checkbox"/>
R	A <input type="checkbox"/> B <input type="checkbox"/>
DOB	A <input type="checkbox"/> B <input type="checkbox"/>

R	M	S
0.1...10s	X1s	C <input type="checkbox"/> E <input type="checkbox"/> D <input type="checkbox"/> F <input type="checkbox"/>
1...100s	X10s	C <input type="checkbox"/> E <input type="checkbox"/> D <input type="checkbox"/> F <input type="checkbox"/>
10...1 000s	X100s	C <input type="checkbox"/> E <input type="checkbox"/> D <input type="checkbox"/> F <input type="checkbox"/>
1...100m	X10m	C <input type="checkbox"/> E <input type="checkbox"/> D <input type="checkbox"/> F <input type="checkbox"/>

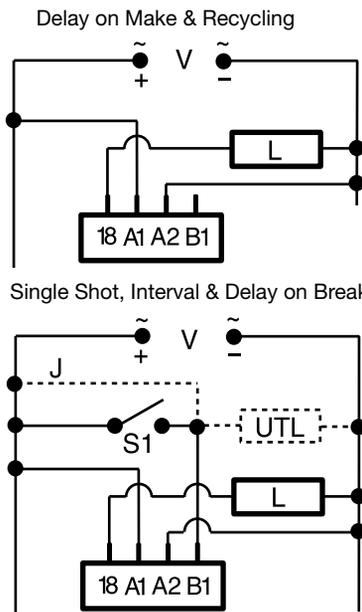
DOM = Delay On Make R = Range
 SS = Single Shot/Interval M = Multiplier
 R = Recycling S = Setting
 DOB = Delay On Break

Function



R = Reset TD = Time Delay
 t = Incomplete Time Delay
 TD1 = TD2

Connection



V = Voltage L = Load J = Wire Required for Interval Operation
 S1 = Initiate Switch UTL = Optional Untimed Load

Accessories



Female quick connect
P/Ns:

- P1015-13 (AWG 10/12)
- P1015-64 (AWG 14/16)
- P1015-14 (AWG 18/22)

See accessory pages for specifications.

Ordering Table

X Series
ASQU - Quick Connects
ASTU - Terminal Blocks

X Input
A - Universal AC Voltage (24 ... 240 V AC)
D - Universal DC Voltage (9 ... 110 V DC)

X Base Adaptors
3 - Both - Surface & DIN Rail Adaptors, with Quick Mount Fasteners

Example P/N: **ASQUA3, ASTUD3**

Knob Adjustable Universal Timer

ASQU/ASTU MicroTime

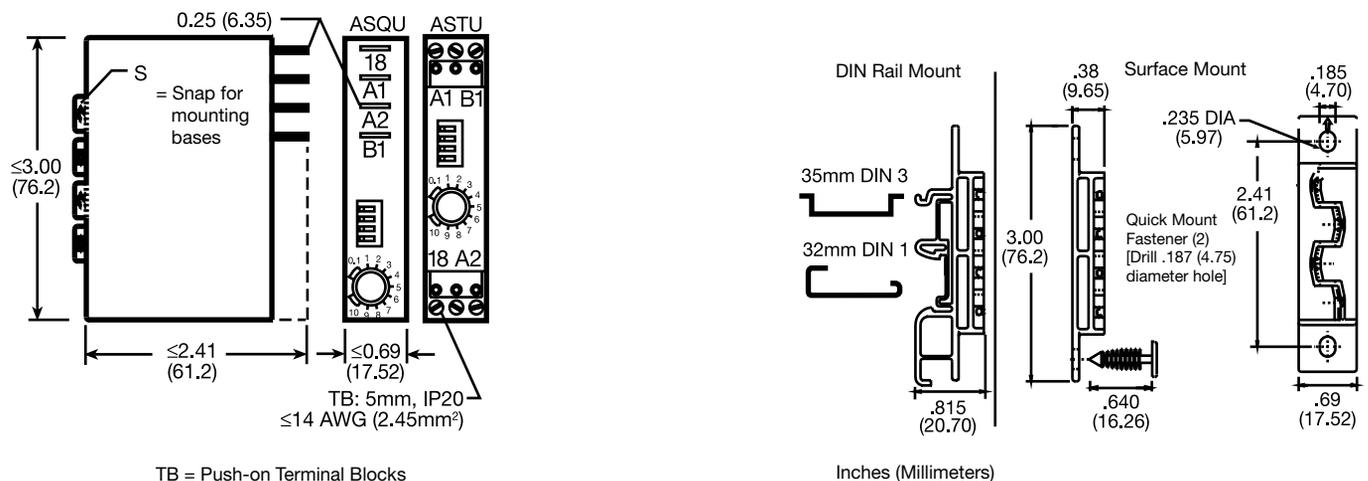
Timing Module

Technical Data

Time Delay	
Type	Microcontroller based with ceramic resonator and watchdog circuitry
Adjustment and Range*	Knob with dial; 2 switches select 1 of 4 multipliers x1s = 0.1 ... 10 s; x10s = 1 ... 100 s; x100s = 10 ... 1000 s; x10m = 1 ... 100 m
Repeat Accuracy	+/-1%, or +/-50 ms, whichever is greater
Tolerance (Factory Calibration)	+/-2%, or +/-50 ms, whichever is greater
Reset Time	≤ 300 ms
Initiate Time	Single Shot & Delay on Break: ≤ 32 ms
Time Delay vs. Temp. & Voltage	+/-2%, or +/-50 ms, whichever is greater
Input	
Voltage	AC: 24 ... 240 V AC; -20% ... +10% DC: 9 ... 110 V DC; -0% ... +20% at -25°C 9.4 ... 110 V DC; -0% ... +20% at -40°C
AC Line Frequency	50 ... 60 Hz
DC Ripple	≤ 10%
Output	
Type	Solid state
Form	Normally Open
Rating	0.7 A steady state, 10 A inrush
Voltage Drop	AC: ≅ 2.5 V at 0.7 A; DC: ≅ 1.5 V at 0.7 A
Protection	
Surge	IEEE C62.41-1991 Level A
Circuitry	Encapsulated
Dielectric Breakdown	≥ 2000 V RMS terminals to mounting surface
Polarity	DC units are reverse polarity protected
Mechanical	
Mounting	Two base adaptors are available
DIN Rail	Snap on to 32 mm DIN 1 & 35 mm DIN 3 rail
Surface	Two #6 (M3.5 x 0.6) screws or quick mount fasteners
Termination	
ASQU	0.25 in. (6.35 mm) male quick connect terminals
ASTU	0.197 in. (5 mm) push-on terminal blocks for up to #14 AWG (2.5 mm ²) wire
Environmental	
Operating Temperature	-40°C ... +60°C
Storage Temperature	-40°C ... +85°C
Humidity	95% relative, non-condensing
Weight	≅ 4 oz (113 g)

*For CE approved applications, power must be removed from the unit when a switch position is changed.

Mechanical View

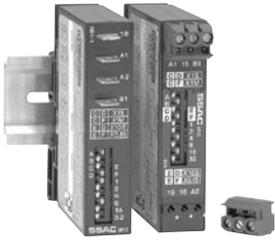


ASQU2B01 08.04.05

Switch Adjustable Universal Timer

DSQU/DSTU MicroTime

Timing Module



4

- 17.5 mm Package for High Rail Density
- Microprocessor Controlled with +/-0.1% Timing Accuracy
- Multimode: 5 Selectable Functions
- Multirange: Switch Adjust from 0.1 s ... 63 m
- Multivoltage: 24 ... 240 V AC or 9 ... 110 V DC
- 0.7 A Steady, 10 A Inrush Rated Solid State Output

Approvals:

Description

The DSQU/DSTU Series of 17.5 mm, switch adjustable, universal solid state timers offer multiple functions, voltages, and time delay ranges. Choose one of 5 functions and 4 time delay ranges via 4 selection switches located on top of the unit. Six switches adjust the time delay through the selected range.

Adjustment

DOM	A	<input type="checkbox"/>
	B	<input type="checkbox"/>
SS	A	<input type="checkbox"/>
	B	<input type="checkbox"/>
R	A	<input type="checkbox"/>
	B	<input type="checkbox"/>
DOB	A	<input type="checkbox"/>
	B	<input type="checkbox"/>

R	M	S	I
0.1 ... 6.3s	X0.1s	C <input type="checkbox"/> E <input type="checkbox"/>	0.1s
1 ... 63s	X1s	D <input type="checkbox"/> F <input type="checkbox"/>	1s
10 ... 630s	X10s	C <input type="checkbox"/> E <input type="checkbox"/>	10s
1 ... 63m	X1m	D <input type="checkbox"/> F <input type="checkbox"/>	1m

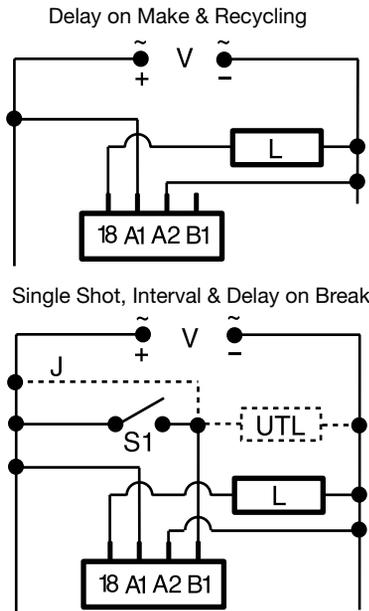
Time Delay Adjustment



Add switches in ON Position
TD = 2+8+16=26

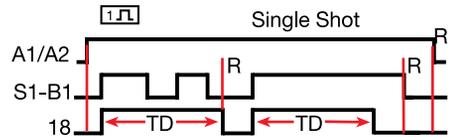
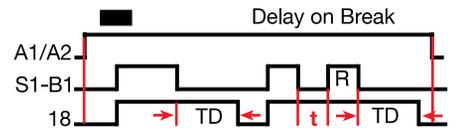
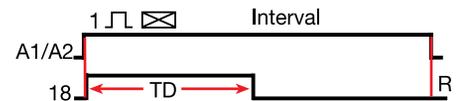
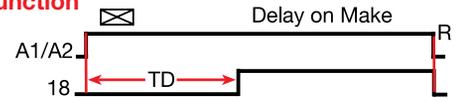
DOM = Delay On Make R = Range
 SS = Single Shot/Interval M = Multiplier
 R = Recycling S = Setting
 DOB = Delay On Break I = Increments of Time

Connection



V = Voltage L = Load J = Wire Required for Interval Operation
 S1 = Initiate Switch UTL = Optional Untimed Load

Function



R = Reset TD = Time Delay
 t = Incomplete Time Delay
 TD1 = TD2

For Function Descriptions, See Timer Function Section

Accessories



Female quick connect P/Ns:
P1015-13 (AWG 10/12)
P1015-64 (AWG 14/16)
P1015-14 (AWG 18/22)

Ordering Table

X	Series	X	Input
	DSQU - Quick Connects		A - Universal AC Voltage (24 ... 240 V AC)
	DSTU - Terminal Blocks		D - Universal DC Voltage (9 ... 110 V DC)

X	Base Adaptors
	3 - Both - Surface & DIN Rail Adaptors, with Quick Mount Fasteners

Example P/N: **DSQUA3, DSTUD3**

See accessory pages for specifications.

Switch Adjustable Universal Timer

DSQU/DSTU MicroTime

Timing Module

Mul
timers
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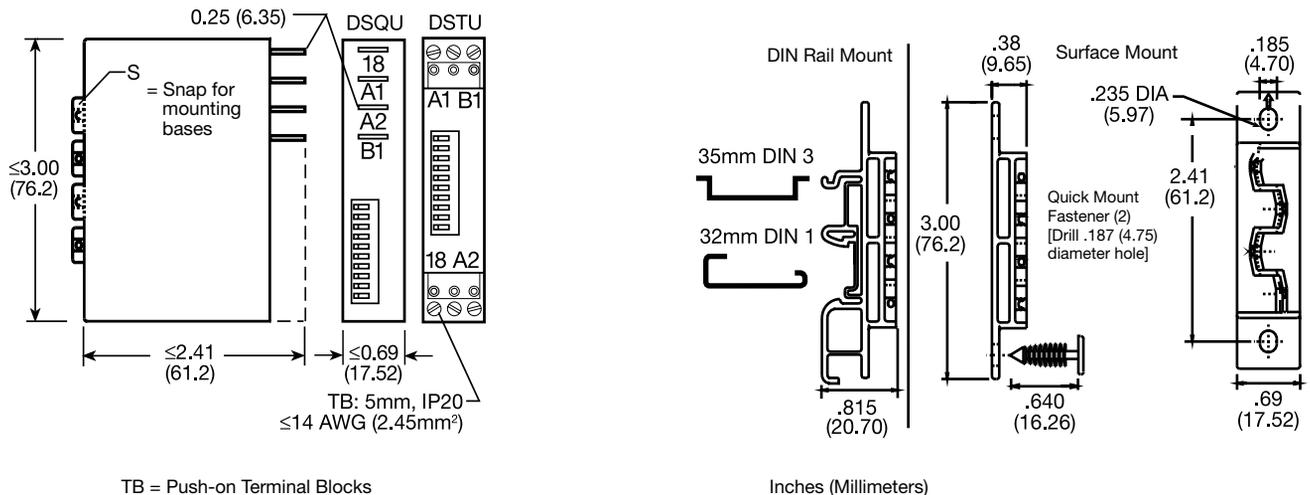
4

Technical Data

Time Delay Type Adjustment and Range*	Microcontroller based with ceramic resonator and watchdog circuitry 6 switches adjust the time delay; 2 switches select 1 of 4 multipliers; x0.1s = 0.1 ... 6.3 s in 0.1 s increments x1s = 1 ... 63 s in 1 s increments x10s = 10 ... 630 s in 10 s increments x1m = 1 ... 63 m in 1 m increments +/-0.1% or +/-20 ms, whichever is greater +/-2% or +/-50 ms, whichever is greater ≤ 300 ms Single Shot & Delay on Break: ≤ 32 ms +/-2% or +/-50 ms, whichever is greater
Repeat Accuracy Setting Accuracy Reset Time Initiate Time Time Delay vs. Temp. & Voltage	
Input Voltage	AC: 24 ... 240 V AC; -20% ... +10% DC: 9 ... 110 V DC; -0% ... +20% @ -25°C 9.4 ... 110 V DC; -0% ... +20% @ -40°C
AC Line Frequency DC Ripple	50 ... 60 Hz ≤ 10%
Output Type Form Rating Voltage Drop	Solid state Normally Open 0.7 A steady state, 10 A inrush AC: ≅ 2.5 V at 0.7 A; DC: ≅ 1.5 V at 0.7 A
Protection Surge Circuitry Dielectric Breakdown Polarity	IEEE C62.41-1991 Level A Encapsulated ≥ 2000 V RMS terminals to mounting surface DC units are reverse polarity protected
Mechanical Mounting DIN Rail Surface Termination DSQU DSTU	Two base adaptors are available Snap on to 32 mm DIN 1 & 35 mm DIN 3 rail Two #6 (M3.5 x 0.6) screws or quick mount fasteners 0.25 in. (6.35 mm) male quick connect terminals 0.197 in. (5 mm) push-on terminal blocks for up to #14 AWG (2.5 mm ²) wire
Environmental Operating Temperature Storage Temperature Humidity Weight	-40°C ... +60°C -40°C ... +85°C 95% relative, non-condensing ≅ 4.2 oz (119 g)

*For CE approved applications, power must be removed from the unit when a switch position is changed.

Mechanical View



DSQU2B01 08.04.05