



# ASCON 'TH0C' SERIES SSR

- Current ratings from 10 to 125 amps
- Output voltage from 24 to 660Vac
- Back to back SCR's for severe inductive loads
- Direct bond to copper substrate
- Improved power lead frame design
- LED input status indicator
- Built in transient protection built in
- 4000Vac optical isolation
- UL E79183, CSA LR38595, TUV Approved, CE Compliant



ASCON CORPORATION  
1884 East Fabyan Parkway  
Batavia, Illinois 60510

Phone: +1 (630) 482-2950  
[www.asconcorp.com](http://www.asconcorp.com)



## TH0C Technical Specifications

### 1. Output Specifications

VOLTAGE RANGES	24 to 280Vac	48 to 660Vac
Peak voltage ( $V_{pk}$ , $t = 1 \text{ min.}$ )	600	1200
Off state leakage (@ max. line voltage & $T_a = 25^\circ\text{C}$ )	0.1 mArms	0.25mArms

CURRENT RATINGS	10	25	50	75	100	125
Minimum current (mArms)	50	50	100	100	100	100
Max. 1 Cycle surge current ( $A_{pk}$ , $T_a=25^\circ\text{C}$ )	150	300	750	1000	1200	1700
Max. 1 second surge current ( $A_{pk}$ , $T_a=25^\circ\text{C}$ )	30	75	150	225	300	375
Forward voltage drop $V_{pk}$ @ $I_{max}$ , $T_a=25^\circ\text{C}$ )	1.35	1.35	1.35	1.3	1.3	1.3
$I^2T$ (60Hz 1/2 cycle)	416	937	2,458	5,000	6,000	12,041
$R_{jb}$ (thermal resistance – Junction to base plate $^\circ\text{C/W}$ )	0.50	0.40	0.25	0.16	0.155	0.150
Static off-state $dv/dt$ $V_{\mu s}$ , $T_a = 25^\circ\text{C}$	500	500	500	500	500	500
Minimum heat sink @ ambient (for max current = $^\circ\text{C/W}$ & $T_a$ )	3.0 @ $70^\circ\text{C}$	1.5 @ $50^\circ\text{C}$	1.0 @ $40^\circ\text{C}$	0.7 @ $40^\circ\text{C}$	0.6 @ $40^\circ\text{C}$	0.4 @ $40^\circ\text{C}$

## 2. Input Specifications

<b>INPUT VOLTAGE*</b>	<b>3-32Vdc</b>	<b>90-280Vac***</b>
<i>Drop out voltage</i>	1Vdc	10Vrms
<i>Maximum input current</i>	14mA	10mA <sub>rms</sub>
<i>Minimum input current</i>	7mA	5mA <sub>rms</sub>
<i>Input resistance</i>	Current regulated	Current regulated
<i>Turn-on time**</i>	8.33ms	20ms
<i>Turn-off time</i>	8.33ms	30ms

## 3. General Characteristics

<i>Operating Temperature (°C)****</i>	-20 to +80
<i>Storage Temperature (°C)</i>	-40 to +100
<i>Input to output isolation</i>	4000Vrms
<i>Input/Output to ground isolation</i>	2500Vrms
<i>Input to output capacitance</i>	8pF (typical)
<i>Operating frequency</i>	47 to 63 Hz
<i>Housing material</i>	UL 94V0 (self extinguishing)

\*4-32Vdc for 48-660Vac models

\*\*Random SSR's turn on in less than 100µs

\*\*\* For ambient temperatures above 40°C the maximum control voltage must not exceed 250Vac.

\*\*\*\* Increase minimum input voltage by 1Vdc for operation from -20°C to -40°C.

## 4. Safety and Noise Immunity Compliance

- CE Compliant with the LVD 73/23/EEC
- UL /cUL Recognized per UL 508 and CSA C22.2 no. 14-M91
- TUV EN60950
- IEC 1000-4-2: Electrostatic Discharge – Level 3
- IEC 1000-4-3: Radiated Electromagnetic Noise – Level 3
- IEC 1000-4-4: Electrically Fast Transients – Level 3
- IEC 1000-4-5: Electrical Surges – Level 3
- IEC 1000-4-6: Conducted Electromagnetic Noise – Level 3
- CISPR 11 – Class A: Allowable Levels of Conducted and Radiated Noise for Industrial Environments

## 5. Part Number Ordering Codes

TH0C-660-010  
TH0C-660-025  
TH0C-660-050  
TH0C-660-075  
TH0C-660-100  
TH0C-660-125

Products and specifications subject to change without notice.