	Specification	Symbol	Condition / Comment						HTS 500-1200 SCR	Unit
	Maximum Operating Voltage	$V_{O(max)}$		ADC, T _{case} =					50	kVDC
	Minimum Operating Voltage	$V_{O(min)}$							2000	VDC
	Maximum Isolation Voltage	Vı	Between HV switch and control / GND, continuously						± 60	kVDC
S	Max. Housing Insulation Voltage	V _{INS}	Between switch and housing surface, 3 minutes						± 60	kVDC
RATINGS	Maximum Turn-On Peak Current	I _{P(max)}	T _{case} =	t _p < 200 μs,					12000	
4			25°C t _p < 1 ms, duty c						6000	ADC
			t_p < 10 ms, duty cycle <1% t_0 < 100 ms, duty cycle <1%						4080 2400	
5	May Non Donatitive Dook Current	1	т _		• • •					ADC
M	Max. Non-Repetitive Peak Current	I _{p(nr)}	1 case =	T _{case} = Half sine single pulse, tp<200 μs 25°C Half sine single pulse, tp<20 μs					24000 48000	ADC
MAXIMUM	Max. Coutinuous Load Current	IL		3 - 1 - 3 - p - 1 - 1 - 1					3.26	ADC
. 7	Wax. Codulidodo Eodo Carroni	"	T _{case} = 25°C						0.20	7.00
UTE	Max. Rate-of-Rise of OFF-State Voltage	dv/dt	@ V _{O(max)}	nax), exponential waveform					150	kV/ µs
	Max. Continuous Power Dissipation	D	T _{case} = 25°C Standard devices & FC, forced air 4 m/s						162	Watt
4 <i>BS0</i> 7	Linear Derating	P _{d(max)}	Above 25°C Standard devices & FC, forced air 4 m/s						3.8	W/K
4	Operating Temperature Range	To	Standard devices & options CF, GCF, ILC. (Option DLC)						-4075	C°
	Storage Temperature Range	Ts	Switches with option ILC may require frost protection!						-5090	C°
	Max. Permissible Magnetic Field	Homogeneous steady-field, surrounding the whole switch						25	mT	
	Max. Auxilliary Voltage	V _{aux}	Built-in overvoltage limiter (replaceable)						5	VDC
	Permissible Operating Voltage Range	Vo							0 ± 50	kVDC
	Typical Breakdown Voltage	V_{br}	NOTE: V _{br} is a test parameter for quality control purposes only. Not applicable in				_# > 0.5 mA		>55	kVDC
	Typical Off-State Current	l _{off}				e in °			< 400	μADC
	Typical Holding Current		0.8xV _O , T _{case} =2570°C, reduced l _{off} on request					35	mADC	
	Typical On-State Voltage	V _{sat}					0.01 x I _{P(max)}		52	111/120
	Typical on otato voltage	• sut	t₀ < 1µs, duty cycle < 1%		0.1 x I _{P(max)}			97		
						1.0 x I _{P(max)}			260	VDC
	Typical Propagation Delay Time t _{d(on)}		Resistive load, 0.1 x I _{P(max)} , 0.8 x						0.4	μs
	Typical Output Pulse Jitter	t _j	Impedance matched input, V _{aux} / V						1	ns
Ś	Typical Turn-On Rise Time						$0.1 \times V_{O(max)}$, $I_L = 0.1 \times I_{p(max)}$		550	
7						$0.8 \times V_{O(max)}$, $I_L = 0.1 \times I_{p(max)}$			220	
CHARACTERISTICS	Typical Turn-Off Time	t _{off,} t _q					$I_{D(max)}$, $I_{L} = 1.0 \text{ x } I_{p(max)}$		650 10	ns
Ē	Typical fulfi-Oil fillie	Loff, Lq	Resistive load, 10-90%				0.01 x $V_{O(max)}$, $I_L = 0.1$ x $I_{p(max)}$ 0.1 x $V_{O(max)}$, $I_L = 0.1$ x $I_{p(max)}$		35	ns
40			$0.8 \times V_{O(max)}$, $I_L = 1.0 \times I_{p(max)}$						90	
AR.	On Time	Ο(πω), -Σ						35∞	ns	
Š	Internal Driver Recovery Time							1000	μs	
44	Max. Continuous Switching	f _(max)	@ V _{aux} = 5.00 V Standard devices without HFS option							
Š	Frequency		Sw. shutdown i	f f _(max) is		d devices with			tbd.	
ECTRICAL			exceeded			S + sufficient c	0 1			kHz
•	Maximum Burst Frequency	f _{b(max)}		Use option HFB for >10 pulses within 20µs or less					10	kHz
EF	Maximum Number of Pulses / Burst	$N_{(max)}$	@ f _{b(max)}	@ f _{b(max)} Standard					15 Use option HFB for >150 >100	Pulses
				Note: Option HFB requires external buffer capacitors with a voltage rating of > 630VDC and a cpacitance of 100nF per additional Option HFB Option HFB					>1000	
	Coupling Capacitance	Сс	, "							
	Control Voltage Range	V _{ctrl}		The V _{ctrl} has no impact on the output pulse shape.					4 5	pF VDC
	Auxiliary Supply Voltage Range V					the HFS mod			5	VDC
	Typical Auxiliary Supply Current	laux	V _{aux} = 5.00 VDC, T _{case} = 25°C.			0.01 x f _(max)		tbd.		
	, , , , , , , , , , , , , , , , , , ,		Active curre	ent limitation a	bove 1A.		@ f _(max)		600	mADC
	Fault Signal Output	Switch will be turn off, if f>f _(max) , V _{aux} <4.75V or T _{case} >75°C						H=4V, L=0.5V	VDC	
	Trigger Voltage Range V _{TR}		Fault condition is indicated by a logical "L"							
	Trigger Voltage Range	Switching behaviour is not influenced by trigger quality Standard housing						<10	VDC	
-	Dimensions	Standard housing Devices with option CF, non-isolated cooling fins						Please contact the	mm3	
fh.		Devices with option DLC						manufactured!	mm ³	
ING			Standard housing Devices with option CF, non-isolated cooling fins						Please contact the	
USING	Weight								manufactured!	g
HOUSING	Weight		Devices w	ith option CF.						
HOUSING	Weight			ith option CF, ith option DL(ŭ				
HOUSING		ow. TTL cor	Devices w	ith option DL	С		ntrol voltage 2-	10 V (3-5	V recommended for low jitter).	
	Control Signal Input Pin 1 / Yell		Devices with mpatible with	ith option DL0 n Schmitt-Trig	C gger chara	acteristics. Cor			V recommended for low jitter). insert) on bottom side.	
	Control Signal Input Logic GND / 5V Return 5V Auxiliary Supply Pin 1 / Yell Pin 2 / Blar Pin 3 / Rec	k. The grou	Devices with mpatible with and pin is into	ith option DL0 n Schmitt-Trig ernally conne	C gger chara cted with	acteristics. Cor the safety ear	thing terminal	threaded		
	Control Signal Input Logic GND / 5V Retum 5V Auxiliary Supply Pin 1 / Yell Pin 2 / Blar Pin 3 / Rec	ck. The grou I. The 5 V in	Devices with mpatible with and pin is into put is used to	ith option DL0 Schmitt-Trigernally connector reprates to the content of the cont	C gger chara ected with up to the s	acteristics. Cor the safety earl specified max.	thing terminal (frequency f _{(max}	(threaded). Higher r	insert) on bottom side.	
	Control Signal Input Logic GND / 5V Retum 5V Auxiliary Supply Fault Signal Output Inhibit Signal Input Pin 1 / Yell Pin 2 / Blar Pin 3 / Rec Pin 4 / Ora Pin 5 / Gre	ck. The grou I. The 5 V in nge. TTL ou en. TTL con	Devices with mpatible with and pin is interpreted by the put is used to atput, short on patible, Sch	ith option DL(n Schmitt-Trig ernally conne for rep rates u circuit proof. In nmitt-Trigger	gger chara ected with up to the s ndicating s characteri	acteristics. Cor the safety earl specified max. switch & driver istics for the co	thing terminal of frequency f _{(max} over-heat, over-hea	(threaded k). Higher r er-frequent kternal safe	insert) on bottom side. ep rates require option HFS. icy, low auxiliary voltage. L = Fault. ety circuits. L = Switch Inhibited.	
FUNCTIONS HOUSING	Control Signal Input Logic GND / 5V Retum 5V Auxiliary Supply Fault Signal Output Inhibit Signal Input LED Indicators Pin 1 / Yell Pin 2 / Blac Pin 3 / Rec Pin 4 / Ora Pin 5 / Gre GREEN: "A	ck. The grou I. The 5 V in nge. TTL ou en. TTL con auxiliary pov	Devices with mpatible with and pin is into put is used to atput, short compatible, Schorer good, sw	ith option DL(n Schmitt-Trig ernally conne for rep rates o circuit proof. In mmitt-Trigger vitch OFF".	gger chara ected with up to the s ndicating s characteri YELLOW:	acteristics. Cor the safety earl specified max. switch & driver istics for the co	thing terminal of frequency f _{(max} over-heat, over-heat, overnection of example of the frequency of the frequency over the frequency of the f	(threaded d) Higher r er-frequent sternal saf- itch ON".	insert) on bottom side. ep rates require option HFS. icy, low auxiliary voltage. L = Fault. ety circuits. L = Switch Inhibited. RED: "Fault condition, switch OFF"	
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FUNCTIONS	Control Signal Input Logic GND / 5V Retum 5V Auxiliary Supply Fault Signal Output Inhibit Signal Input LED Indicators Temperature Protection Pin 1 / Yell Pin 2 / Bla Pin 3 / Rec Pin 4 / Ora Pin 5 / Gre GREEN: "A A) Standard	ck. The grounds. The 5 V in nge. TTL outlings. TTL concurrings power with the suitches and switches are switches and switches and switches and switches are switches and switches are switches and switches and switches are switches and switches are switches and switches and switches are switches and switches are switches and switches and switches are switc	Devices with put is used to the	ith option DLu Schmitt-Trig ernally conne for rep rates u circuit proof. In mitt-Trigger vitch OFF". N with option Cl LC: 65°C, resp v Pass. Input filter	gger characteristics of the second with up to the second cating second control of the se	acteristics. Cor the safety earl specified max. switch & driver istics for the co "Control signa hermo trigger 7 < 3 s @ 3xPd(d noise immunity.	thing terminal of frequency f _(max) over-heat, over-he	(threaded (threaded) Higher re-frequent (ternal safetitch ON". time < 60 (40 to 65°)	insert) on bottom side. ep rates require option HFS. icy, low auxiliary voltage. L = Fault. ety circuits. L = Switch Inhibited. RED: "Fault condition, switch OFF" s @ 3xPd(max), \(\Delta T = 25K\) (50 to 75°C). Separate d C), coolant flow > 3I / min. Separate driver protection.	o 3.
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