

SDU 410 Safety Shutdown Unit

Part#: 1006451

Rev. October 2024

Interfaces

Section	Ch.	Cond.	Min	Typ	Max	Unit	Comment
Power Supply	1	@ 24 VDC	18 200	24 300	32 600	VDC mA	
Switch Inputs	8	-	-	24	-	VDC	Optocoupled External switch resistance must be 10 kΩ ± 2 kΩ
Tacho Inputs	2	- -	0.1 4	5 -	10 32	kHz Vpp	Frequency Amplitude Applicable to passive magnetic pickup sensors with sine-wave output. For active sensors with square-wave output, see table under <i>Tacho Inputs</i> for details.
Shutdown Relay	-	@ 24 VDC	-	-	1.8	A	
All other relays	-	@ 24 VDC	-	-	0.5	A	
Shutdown Coil Output	1	@ 24 VDC	-	24	-	VDC	External relay coil resistance must be 300 – 700 ohm
USB Port	1	-	-	-	-	-	Reserved for firmware update
Ethernet Port	1	-	-	10	-	Mbps	Default <u>off</u> from firmware 1.50
SDU Link Connection	1	-	-	19200	-	baud	DCU Connection

Measurements and Weight

Section	Weight	Width	Height	Depth	Unit	Comment
Size	-	195	105	45	mm	
Weight	0.80	-	-	-	kg	

Environmental

Section	Condition	Min	Typ	Max	Unit	Comment
Vibration	Operational	-	0.7	-	g	IEC 60068-2-6 Fc
Dry Heat	Operational	-	-	70 16	C hours	IEC 60068-2-2 Bb/Bd
Damp Heat, cyclic	Cyclic 20-55-20 Humidity 95% Duration	- - -	- - -	- - 48	C - hours	IEC 60068-2-30 Db
Low Temperature	Operational Duration	5 -	- -	- 2	C hours	IEC 60068-2-1 Ab/Ad
IP-rating	-	-	30	-	-	
High Voltage	Not powered	-	-	548 1	Vrms minute	Voltage applied between <i>clamped</i> supply and shield.
Fast low-energy Transients/bursts	Operational	- -	- -	- 2 1	- kV kV	IEC 61000-4-4 24 VDC supply lines, 5kHz Signal lines, 5kHz
Slow high-energy Transients/surges	Operational	- -	- -	- 0.5 1	- kV kV	IEC 61000-4-5 24 VDC supply lines Signal lines
Electrostatic Discharge, ESD	Operational	- -	- -	- 8 6	- kV kV	IEC 61000-4-2 Air Contact

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EMC

Section	Condition	Min	Typ	Max	Unit	Comment
Conducted emission	Operational	-	-	-	-	CISPR 16-1-1 / 16-1-2 / 16-2-1
Radiated emission	Operational	-	-	-	-	Quasi-peak at 3m:
		150	-	300	kHz	80-50 dBμV/m
		0.3	-	300	MHz	50-34 dBμV/m
		30	-	156	MHz	54 dBμV/m
		156	-	165	MHz	24 dBμV/m
		165	-	2000	MHz	54 dBμV/m
Radio frequency Immunity	Operational	-	-	10	Vrms	IEC 61000-4-6
Radiated electric Immunity	Operational	80	-	2000	MHz	IEC 61000-4-3 10 V/m, 80% AM, 1kHz

Tacho Inputs

Allowed signal type	Passive magnetic pickup sensors (sine-wave signal)
	Active pickup sensors (square-wave signal with duty-cycle as in table below)

Required range of duty-cycle (min% / max%) given signal voltage (referenced to 0 V) and frequency:

Square wave Voltage [V]	Frequency [Hz]				
	100	200	500	1000	10000
4	41 / 56	45 / 53	46 / 52	45 / 51	43 / 51
8	35 / 61	35 / 58	42 / 56	41 / 55	36 / 54
10	33 / 62	33 / 59	30 / 57	40 / 56	35 / 55
22	33 / 62	32 / 60	30 / 57	40 / 57	31 / 56

Validity of Information

Data valid at revision date. Auto-Maskin reserves the right to make improvements and changes of specification at any time.