

# Datasheet



## SDU 404/420 Safety Shutdown Unit

Part#: 1006418 (SDU 404)  
1500158 (SDU 420)

Rev. Feb 28, 2024

### Interfaces

Section	Ch.	Cond.	Min	Typ.	Max	Unit	Comment
Power Supply	1	@ 24 VDC	18 100	24 200	32 400 <sup>1</sup>	VDC mA	Max ripple 10% without exceeding Min and Max values.
Switch Input	4 12	SDU 404 SDU 420	-	24	-	VDC	See switch input table for details.
Tacho Input	1	-	0.1 4 100	- - -	10 32 3000 <sup>2</sup>	kHz Vpp Ohm	Passive magnetic pickup
Tacho Input	1	-	0.1 4 40	- - -	10 32 60	kHz VDC %	Active pickup sensor <sup>3</sup>
Shutdown Relay	1	-	-	-	0.7	A	
Other Relay	2 4	SDU 404 SDU 420	-	-	0.7	A	
Configurable Output <sup>4</sup>	1	-	-	-	1.8 10k	A Ohm	Output current Resistive load <sup>5</sup>
SDU Link Connection	1	-	-	19200 8E1	-	Baud	DCU connection

### Interfaces (SDU 420 only)

Section	Ch.	Cond.	Min	Typ.	Max	Unit	Comment
4-20 mA Input	2	-	0	4-20	25	mA	Accuracy: $\pm 2\%$ in typical range
PT100 / PT1000	1	-	0	-	800	°C	Accuracy: $\pm(5\text{ }^\circ\text{C} + 0.02 \times t)$ With optional wire resistance comp.

### Switch Input

Type	Description	Resistor	Min	Typ.	Max	Unit
Type I	Broken wire and short circuit detectable	R1	8 k	10 k	12 k	$\Omega$
	R1 in series and R2 in parallel between pin A and pin B.	R2	8 k	10 k	12 k	
Type II	Broken wire detectable R in parallel between pin A and pin B.	R	8 k	10 k	12 k	$\Omega$
Type III	Not able to detect any faults	-	-	-	-	-

<sup>1</sup> Excluding configurable output

<sup>2</sup> 1000 ohm for software 1.3 or earlier

<sup>3</sup> Fault monitoring disabled when active sensor is selected

<sup>4</sup> Fault monitored: Short to low when active, short to high and broken wire when inactive

<sup>5</sup> Exceeding maximum resistive load will give broken wire fault

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### Measurements and Weight

Section	Part	Weight	Width	Height	Depth	Unit	Comment
Size	SDU 404	-	101	105	52	mm	Including connectors
	SDU 420	-	183	105	52	mm	Including connectors
Weight	SDU 404	0.4	-	-	-	kg	
	SDU 420	0.8	-	-	-	kg	

### Operator Interface

- Acknowledge Button
- Overspeed Test Button
- LED Indication

### Connectors

- 2 x 15 pin screw fastened terminal header, 5.08 mm
- 2 x 14 pin screw fastened terminal header, 5.08 mm (SDU 420 only)

### Environmental

Section	Condition	Min.	Typ.	Max.	Unit	Comment
Operating Temperature	Operational	+5	-	+70	°C	
Storage Temperature	Not powered	-30	-	+80	°C	
Enclosure Ingress Protection Rating	Operational	IP30	-	-	-	Intended to be installed in a cabinet.
Vibration	Operational	-	0.7	-	g	IEC 60068-2-6 Fc

### Testing & Approvals

Tested according to DNV Standard for Certification No. 2.4 (Main area: Machinery spaces, control room, accommodation), harmonized with IACS UR E10 and IEC 60092-504.

Parameter	DNV No 2.4 Class
Temperature	A, B, D
Humidity	B
Vibration	A
EMC	A
Enclosure	A

Type approved. See Auto-Maskin web page for type approval certificates.

#### Validity of Information

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