



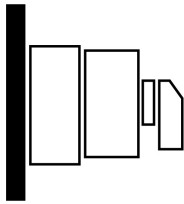
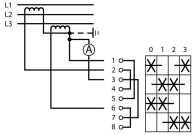
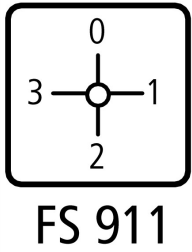
**Ammeter selector switches, T0, 20 A, surface mounting, 2 contact unit(s),  
Contacts: 4, 90 °, maintained, With 0 (Off) position, 3-0-1-2, design no. 8021**

**Part no. T0-2-8021/11**  
**Catalog No. 222617**



Similar to illustration

## Delivery program

Product range			Control switches
Part group reference			T0
Basic function			Ammeter selector switches with black thumb grip and front plate
Contacts			4
Degree of Protection			IP65
			<b>totally insulated</b>
Design			surface mounting
			
Contact sequence			
switching function			2 converters
Switching angle		°	90
Switching performance			maintained With 0 (Off) position
Design number			8021
Front plate no.			
front plate			3-0-1-2
<b>Motor rating AC-23A, 50 - 60 Hz</b>			
400 V	P	kW	5.5
Rated uninterrupted current	I <sub>u</sub>	A	20
Note on rated uninterrupted current I <sub>u</sub>			Rated uninterrupted current I <sub>u</sub> is specified for max. cross-section.
Number of contact units		contact unit(s)	2

## Technical data

### General

Standards			IEC/EN 60947, VDE 0660, IEC/EN 60204 Switch-disconnector according to IEC/EN 60947-3
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Climatic proofing			Damp heat, constant, to IEC 60068-2-78 Damp heat, cyclic, to IEC 60068-2-30
Ambient temperature			
Enclosed		°C	-25 - +40
Overvoltage category/pollution degree			III/3
Rated impulse withstand voltage	$U_{imp}$	V AC	6000
Mechanical shock resistance		g	15
Mounting position			As required

## Contacts

Electrical characteristics			
Rated operational voltage	$U_e$	V AC	690
Rated uninterrupted current	$I_u$	A	20
Note on rated uninterrupted current $I_u$			Rated uninterrupted current $I_u$ is specified for max. cross-section.
Load rating with intermittent operation, class 12			
AB 25 % DF		x $I_e$	2
AB 40 % DF		x $I_e$	1.6
AB 60 % DF		x $I_e$	1.3
Short-circuit rating			
Fuse		A gG/gL	20
Rated short-time withstand current (1 s current)	$I_{cw}$	$A_{rms}$	320
Note on rated short-time withstand current $I_{cw}$			Current for a time of 1 second
Rated conditional short-circuit current	$I_q$	kA	6

## Switching capacity

cos $\varphi$ rated making capacity as per IEC 60947-3		A	130
Rated breaking capacity cos $\varphi$ to IEC 60947-3		A	
230 V		A	100
400/415 V		A	110
500 V		A	80
690 V		A	60
Safe isolation to EN 61140			
between the contacts		V AC	440
Current heat loss per contact at $I_e$		W	0.6
Current heat loss per auxiliary circuit at $I_e$ (AC-15/230 V)		CO	0.6
Lifespan, mechanical	Operations	x $10^6$	> 0.4
Maximum operating frequency	Operations/h		1200
AC			
AC-3			
Rating, motor load switch	P	kW	
220 V 230 V	P	kW	3
230 V Star-delta	P	kW	5.5
400 V 415 V	P	kW	5.5
400 V Star-delta	P	kW	7.5
500 V	P	kW	5.5
500 V Star-delta	P	kW	7.5
690 V	P	kW	4
690 V Star-delta	P	kW	5.5
Rated operational current motor load switch			
230 V	$I_e$	A	11.5
230 V star-delta	$I_e$	A	20
400V 415 V	$I_e$	A	11.5
400 V star-delta	$I_e$	A	20
500 V	$I_e$	A	9
500 V star-delta	$I_e$	A	15.6
690 V	$I_e$	A	4.9

690 V star-delta	I <sub>e</sub>	A	8.5
<b>AC-23A</b>			
Motor rating AC-23A, 50 - 60 Hz	P	kW	
230 V	P	kW	3
400 V 415 V	P	kW	5.5
500 V	P	kW	7.5
690 V	P	kW	5.5
<b>Rated operational current motor load switch</b>			
230 V	I <sub>e</sub>	A	13.3
400 V 415 V	I <sub>e</sub>	A	13.3
500 V	I <sub>e</sub>	A	13.3
690 V	I <sub>e</sub>	A	7.6
<b>DC</b>			
<b>DC-1, Load-break switches L/R = 1 ms</b>			
Rated operational current	I <sub>e</sub>	A	10
Voltage per contact pair in series		V	60
<b>DC-21A</b>			
Rated operational current	I <sub>e</sub>	A	1
Contacts		Quantity	1
<b>DC-23A, motor load switch L/R = 15 ms</b>			
<b>24 V</b>			
Rated operational current	I <sub>e</sub>	A	10
Contacts		Quantity	1
<b>48 V</b>			
Rated operational current	I <sub>e</sub>	A	10
Contacts		Quantity	2
<b>60 V</b>			
Rated operational current	I <sub>e</sub>	A	10
Contacts		Quantity	3
<b>120 V</b>			
Rated operational current	I <sub>e</sub>	A	5
Contacts		Quantity	3
<b>240 V</b>			
Rated operational current	I <sub>e</sub>	A	5
Contacts		Quantity	5
<b>DC-13, Control switches L/R = 50 ms</b>			
Rated operational current	I <sub>e</sub>	A	10
Voltage per contact pair in series		V	32
Control circuit reliability at 24 V DC, 10 mA	Fault probability	H <sub>F</sub>	< 10 <sup>-5</sup> , < 1 failure in 100,000 switching operations

### Terminal capacities

Solid or stranded		mm <sup>2</sup>	1 x (1 - 2,5) 2 x (1 - 2,5)
Flexible with ferrules to DIN 46228		mm <sup>2</sup>	1 x (0.75 - 2.5) 2 x (0.75 - 2.5)
Terminal screw			M3.5
Tightening torque for terminal screw		Nm	1

### Technical safety parameters:

<b>Notes</b>			B10 <sub>d</sub> values as per EN ISO 13849-1, table C1
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### Rating data for approved types

Terminal capacity			
Terminal screw			M3.5

### Design verification as per IEC/EN 61439

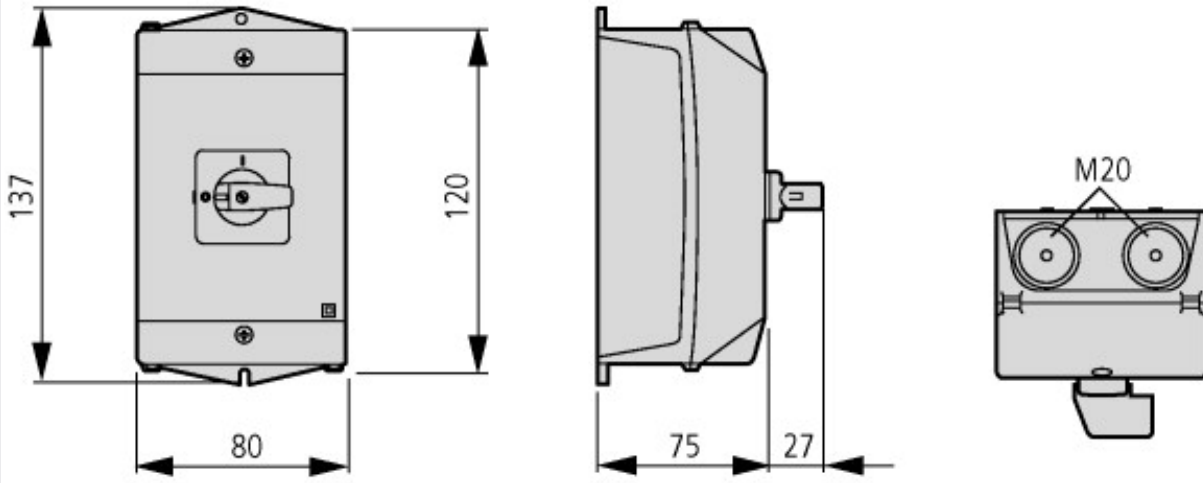
<b>Technical data for design verification</b>			
Rated operational current for specified heat dissipation	I <sub>n</sub>	A	20

Heat dissipation per pole, current-dependent	P <sub>vid</sub>	W	0.6
Equipment heat dissipation, current-dependent	P <sub>vid</sub>	W	0
Static heat dissipation, non-current-dependent	P <sub>vs</sub>	W	0
Heat dissipation capacity	P <sub>diss</sub>	W	0
Operating ambient temperature min.		°C	-25
Operating ambient temperature max.		°C	40
IEC/EN 61439 design verification			
10.2 Strength of materials and parts			
10.2.2 Corrosion resistance			Meets the product standard's requirements.
10.2.3.1 Verification of thermal stability of enclosures			Meets the product standard's requirements.
10.2.3.2 Verification of resistance of insulating materials to normal heat			Meets the product standard's requirements.
10.2.3.3 Verification of resistance of insulating materials to abnormal heat and fire due to internal electric effects			Meets the product standard's requirements.
10.2.4 Resistance to ultra-violet (UV) radiation			UV resistance only in connection with protective shield.
10.2.5 Lifting			Does not apply, since the entire switchgear needs to be evaluated.
10.2.6 Mechanical impact			Does not apply, since the entire switchgear needs to be evaluated.
10.2.7 Incriptions			Meets the product standard's requirements.
10.3 Degree of protection of ASSEMBLIES			Does not apply, since the entire switchgear needs to be evaluated.
10.4 Clearances and creepage distances			Meets the product standard's requirements.
10.5 Protection against electric shock			Does not apply, since the entire switchgear needs to be evaluated.
10.6 Incorporation of switching devices and components			Does not apply, since the entire switchgear needs to be evaluated.
10.7 Internal electrical circuits and connections			Is the panel builder's responsibility.
10.8 Connections for external conductors			Is the panel builder's responsibility.
10.9 Insulation properties			
10.9.2 Power-frequency electric strength			Is the panel builder's responsibility.
10.9.3 Impulse withstand voltage			Is the panel builder's responsibility.
10.9.4 Testing of enclosures made of insulating material			Is the panel builder's responsibility.
10.10 Temperature rise			The panel builder is responsible for the temperature rise calculation. Eaton will provide heat dissipation data for the devices.
10.11 Short-circuit rating			Is the panel builder's responsibility. The specifications for the switchgear must be observed.
10.12 Electromagnetic compatibility			Is the panel builder's responsibility. The specifications for the switchgear must be observed.
10.13 Mechanical function			The device meets the requirements, provided the information in the instruction leaflet (IL) is observed.

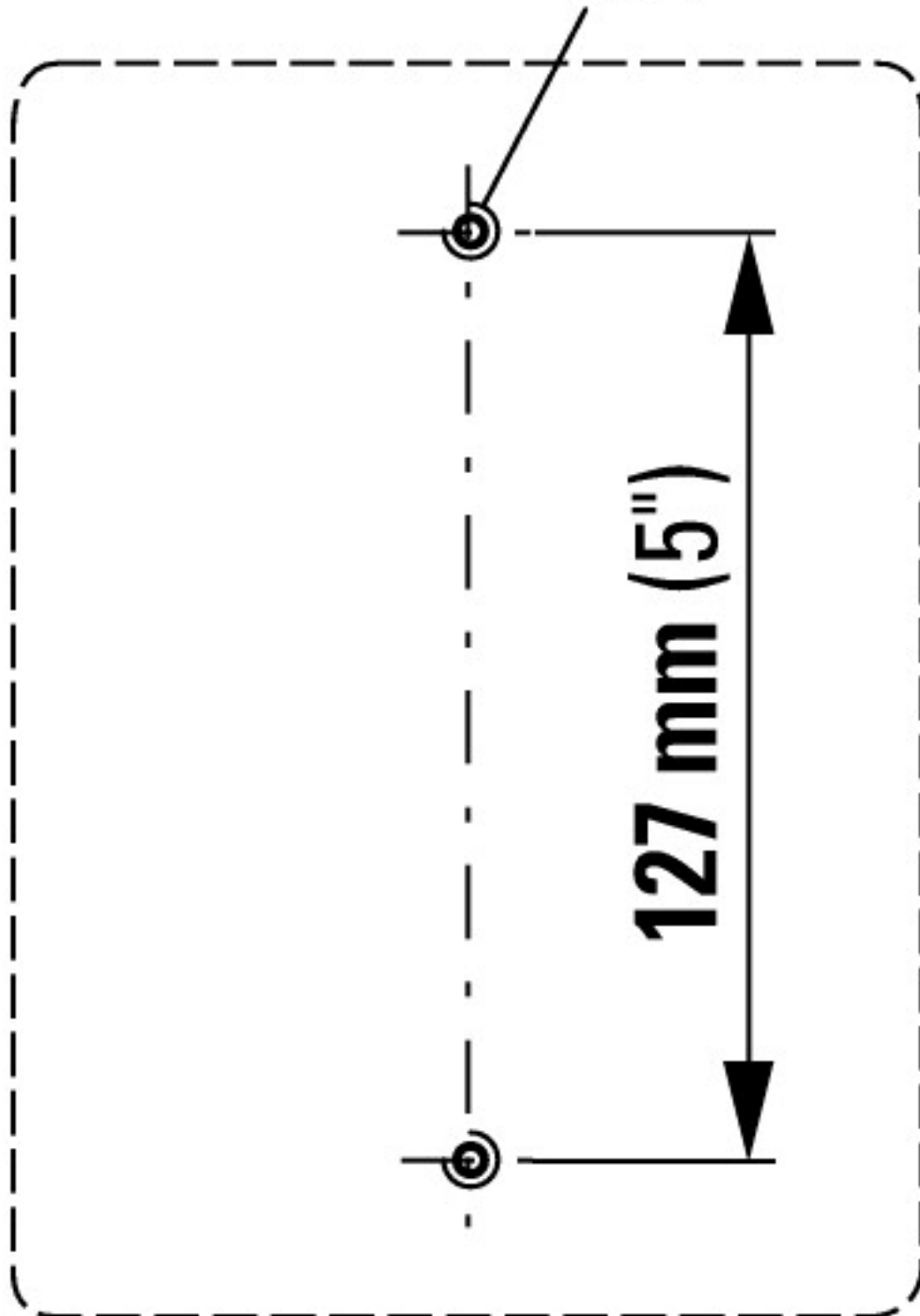
## Technical data ETIM 7.0

Low-voltage industrial components (EG000017) / Amp meter switch (EC000912)			
Electric engineering, automation, process control engineering / Low-voltage switch technology / Off-load switch, circuit breaker, control switch / Ammeter switch (ecl@ss10.0.1-27-37-14-12 [AKF069013])			
With 0 (off) position			Yes
Device construction			Surface mounting
Modular version			No
With control unit			Yes
Degree of protection (IP)			IP65
Degree of protection (NEMA)			Other

## Dimensions



M4



## Additional product information (links)

Display flip catalog page.	<a href="http://ecat.moeller.net/flip-cat/?edition=K115A&amp;startpage=96">http://ecat.moeller.net/flip-cat/?edition=K115A&amp;startpage=96</a>
Technical overview cam switch, switch-disconnector	<a href="http://de.ecat.moeller.net/flip-cat/?edition=HPLTEv1&amp;startpage=4.2">http://de.ecat.moeller.net/flip-cat/?edition=HPLTEv1&amp;startpage=4.2</a>
System overview cam switch T	<a href="http://de.ecat.moeller.net/flip-cat/?edition=HPLTEv1&amp;startpage=4.4">http://de.ecat.moeller.net/flip-cat/?edition=HPLTEv1&amp;startpage=4.4</a>
System overview switch-disconnector P	<a href="http://de.ecat.moeller.net/flip-cat/?edition=HPLTEv1&amp;startpage=4.6">http://de.ecat.moeller.net/flip-cat/?edition=HPLTEv1&amp;startpage=4.6</a>
Key to part numbers Cam switch	<a href="http://de.ecat.moeller.net/flip-cat/?edition=HPLTEv1&amp;startpage=4.8">http://de.ecat.moeller.net/flip-cat/?edition=HPLTEv1&amp;startpage=4.8</a>
Key to part numbers Switch-disconnector	<a href="http://de.ecat.moeller.net/flip-cat/?edition=HPLTEv1&amp;startpage=4.8">http://de.ecat.moeller.net/flip-cat/?edition=HPLTEv1&amp;startpage=4.8</a>
Switches for ATEX	<a href="http://www.coopercrouse-hinds.eu/en/products/25-ex-safety-and-main-current-switches.html">http://www.coopercrouse-hinds.eu/en/products/25-ex-safety-and-main-current-switches.html</a>