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					Overcurrent Circuit Breaker thermal trip 3120-...-..T1-.. one and two pole					Data Sheet 382.073.468 sheet 1 of 37									
Replacing data sheet dated 382.073.468 24. Oct. 1997																			
Technical data					to EN 60 934														
Max.voltage rating					AC 240V / DC 50 V, AC 415V														
Rated insulation voltage					AC 415 V														
Current rating range					0.1 20A 1 and 2 pole														
Current ratings					0.1; 0.2; 0.3; 0.4; 0.5; 0.6; 0.8; 1.0; 1.2; 1.5; 2.0; 2.5; 3.0; 3.5; 4.0; 4.5; 5.0; 6.0; 7.0; 8.0; 10.0; 12.0; 14.0; 15.0; 16.0; 18.0; 20A														
Reference ambient temperature					-30°C ... +60°C (T60)														
Effect of the ambient temperature on the tripping characteristics					Temperature (°C)										-30	-20	-10	-5	+10
					Factor										0.80	0.84	0.88	0.90	0.94
					Temperature (°C)										+23	+30	+40	+50	+60
					Factor										1.0	1.03	1.08	1.14	1.23
Creepage resistance					PTI 400														
Method of operation					S-type														
Mode of tripping					TO / positively trip free														
Typical electrical operational values																			
Voltage drop in V at 1 I _N					I _N (A) 0.1 0.2 0.3 0.4 0.5 0.6 0.8 1.0 1.2 1.5 V 9.4 4.8 3.6 2.2 2.2 1.8 1.8 0.9 1.0 0.7 I _N (A) 2.0 2.5 3.0 3.5 4.0 4.5 5.0 6.0 7.0 8.0 V 0.6 0.2 0.18 0.2 0.17 0.2 0.16 0.13 0.12 0.13 I _N (A) 9.0 10.0 12.0 14.0 15.0 16.0 18.0 20.0 V 0.1 0.13 0.11 0.11 0.12 0.12 0.12 0.11														
Insulation coordination (IEC 664 and 664A)					Rated impulse withstand voltage / Pollution degree max EN 60 934 4kV / 3 2.5KV / 2														
Dielectric strength (IEC 664 and 664A)					test voltage, AC max. EN 60 934 4000 V 3000 V 2000 V 1500 V 2000 V 1500 V														
operating area (reinforced insulation, sheet 23)																			
mounting area (sheet 23)																			
pole / pole (2-pole)																			
Insulation resistance					> 100 MΩ (DC 500 V)														
Minimum load (main circuit)					DC 10 V / 100 mA														
Index	ÄM	Sheet	Date	Name	Index	ÄM	Sheet	Date	Name										
g	17 866	1-37	26.06.00	K.Go															
h	18 056	32	13.12.00	K.Go															
i	18 338	22	23.07.01	K.Go															



Overcurrent Circuit Breaker
thermal trip
3120-...-T1-..
one and two pole

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Operating cycles

Behaviour at rated current (EN 60 934, test sequence C)

	mechanical	electrical, 1 I _N	
1 pole	50 000	0.1 - 16A, AC 240, cosφ 0.95	30,000
		> 16A, AC 240, cosφ 0.95	10,000
		0.1 - 10A, DC, L/R = 0 ms	30,000
		12 - 16A, DC 28V, L/R = 0 ms	30,000
		> 16A, DC 28V, L/R = 0 ms	10,000
2 pole	50 000	0.1 - 16A, AC 240, cosφ 0.95	50,000
		0.1 - 16A, DC, L/R = 0 ms	50,000
		> 16A, AC 240, cosφ 0.95	10,000
		> 16A, DC, L/R = 0 ms	10,000
2 pole	10 000	0.1 - 16A, AC 415, cosφ 0.95	10,000

Behavior at rated switching capacity (40 cycles)
(EN 60 934, test sequence D)

AC; 6 I _N power factor 0.6	DC; 4 I _N time constant 2.5 ms
0.1 ... 20A, 1 pole / AC 240	0.1 ... 10A, 1 pole DC 50V
0.1 ... 20A, 2 pole / AC 240	0.1 ... 20A, 2 pole DC 50V
0.1 ... 16A, 2 pole / AC 415	0.1 ... 20A, 1 pole DC 28V

Rated short-circuit capacity I_{cn}
(EN 60 934, test sequence E)

	I _N	U _N	I _{cn}
1 and 2 pole	0.1 ... 2A	AC 240 V	10 x I _N
1 pole	2.5 ... 20 A	AC 240 V	200 A
2 pole	2.5 ... 20 A	AC 240 V	300 A
1 and 2 pole	0.1 ... 2A	DC 50V	10 x I _N
1 pole	2.5 ... 10A	DC 50V	50 A
2 pole	2.5 ... 20A	DC 50 V	250 A
1 pole	2.5 ... 20 A	DC 28 V	200 A
2 pole	2.5 ... 20 A	DC 28 V	300 A

Rated conditional short-circuit current I_{nc}
(EN 60 934, PC 1 / UL 1077, § 21)

	I _N	U _N	I _{nc}
1 and 2 pole	0.1 ... 16 A	AC 240 V	3500A
2 pole	18 ... 20 A	AC 125 V	3500A
1 and 2 pole	0.1 ... 20 A	DC 50 V	200A

The current rating of the back-up fuse to IEC 269 (DIN VDE 0636) shall be four times the current rating of the curcuit breaker, but at least 15A.

Typical mechanical values

Operating force

	rocker	push button
ON	15 N	18 N
OFF	5 N	6 N
Operating force with X3120-U		
ON	23 N	29 N
OFF	8 N	9 N

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g	17 866	26.06.00	K.Go				

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				Overcurrent Circuit Breaker thermal trip 3120-...-..T1-.. one and two pole				Data Sheet 382.073.468 sheet 3 of 37							
Mounting values				200 N max. insertion											
Blade terminals P70				80 N max. insertion 80 N max. withdrawal											
Terminal screws				0.55 N max. tightening torque											
Mass				approx. 27 g 1 pole approx. 31 g 2 pole											
Environmental tests (typical values)															
Vibration (sinusoidal) to DIN IEC 68-2-6, test Fc, 10 frequency cycles / axis				± 0.61 mm (10 - 57 Hz), 8g (57 - 500 Hz)											
Shock to DIN IEC 68-2-27, test Ea				30 g (11ms)											
Corrosion to DIN IEC 68-2-11, test Ka				96 hours at 5% salt mist											
Humidity to DIN IEC 68-2-3, test Ca				240 hours at 95% RH, 40°C											
Degree of protection (IEC 529 / DIN 40 050) operating area terminal area				IP 40 (IP 54 with splash cover) IP 00											
Temperature limits				<table><tr><td>on duty</td><td>storage</td></tr><tr><td>- 30° C ...+ 60° C</td><td>- 40° C ...+ 80° C</td></tr></table>								on duty	storage	- 30° C ...+ 60° C	- 40° C ...+ 80° C
on duty	storage														
- 30° C ...+ 60° C	- 40° C ...+ 80° C														
Approval logos				see marking instructions											
Note:															
Time / current characteristic curve				see sheets 4 / 5											
Dimensions				see sheet 6											
Rocker / button variants				see sheets 7 / 8											
Flange dimensions				see sheets 9 - 26											
Connection variants and internal connetion diagram				see sheet 27											
Installation				see sheet 28											
Order numbering code				see sheets 29 - 37											

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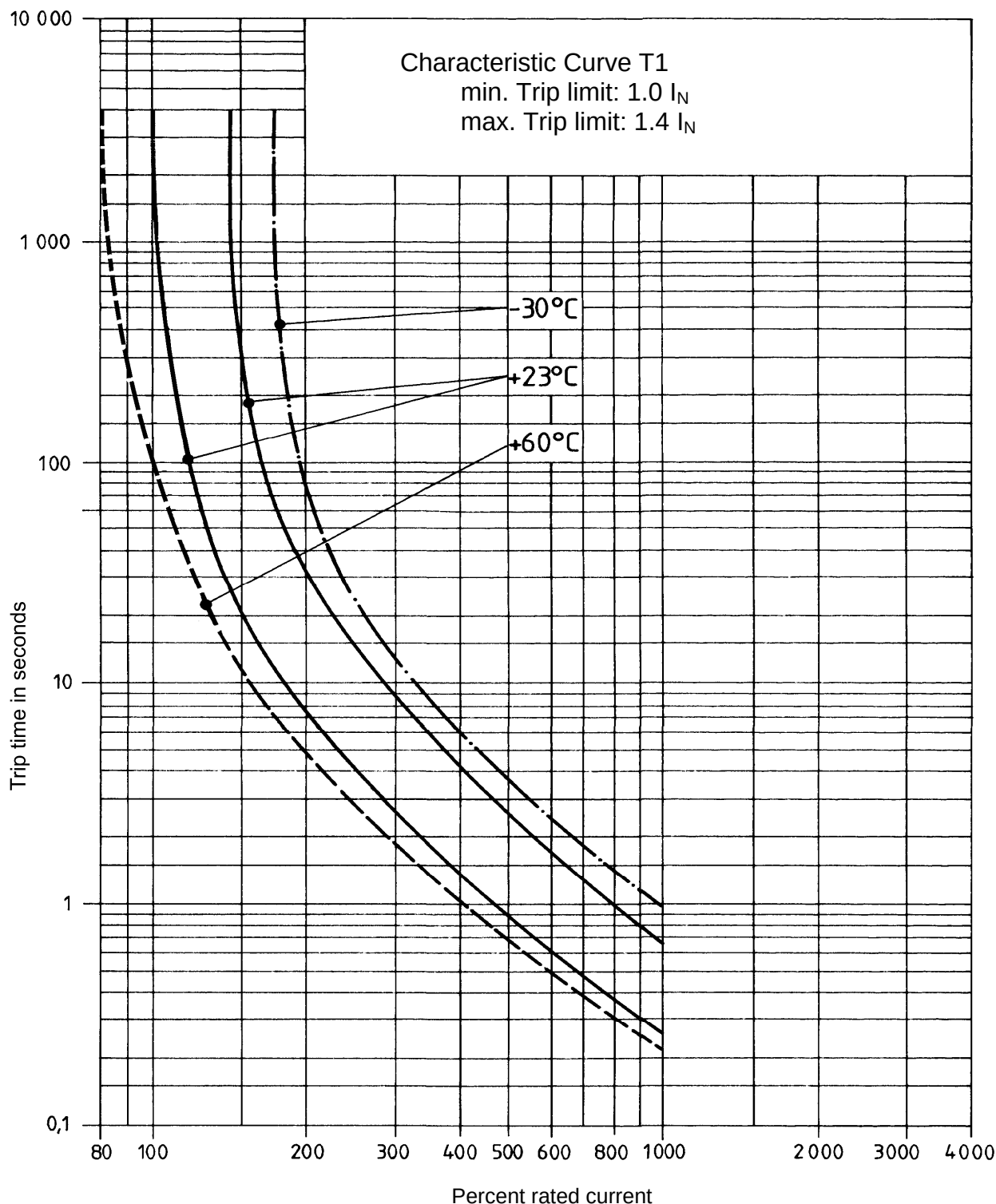
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Overcurrent Circuit Breaker
thermal trip
3120-...-..T1-..
one and two pole

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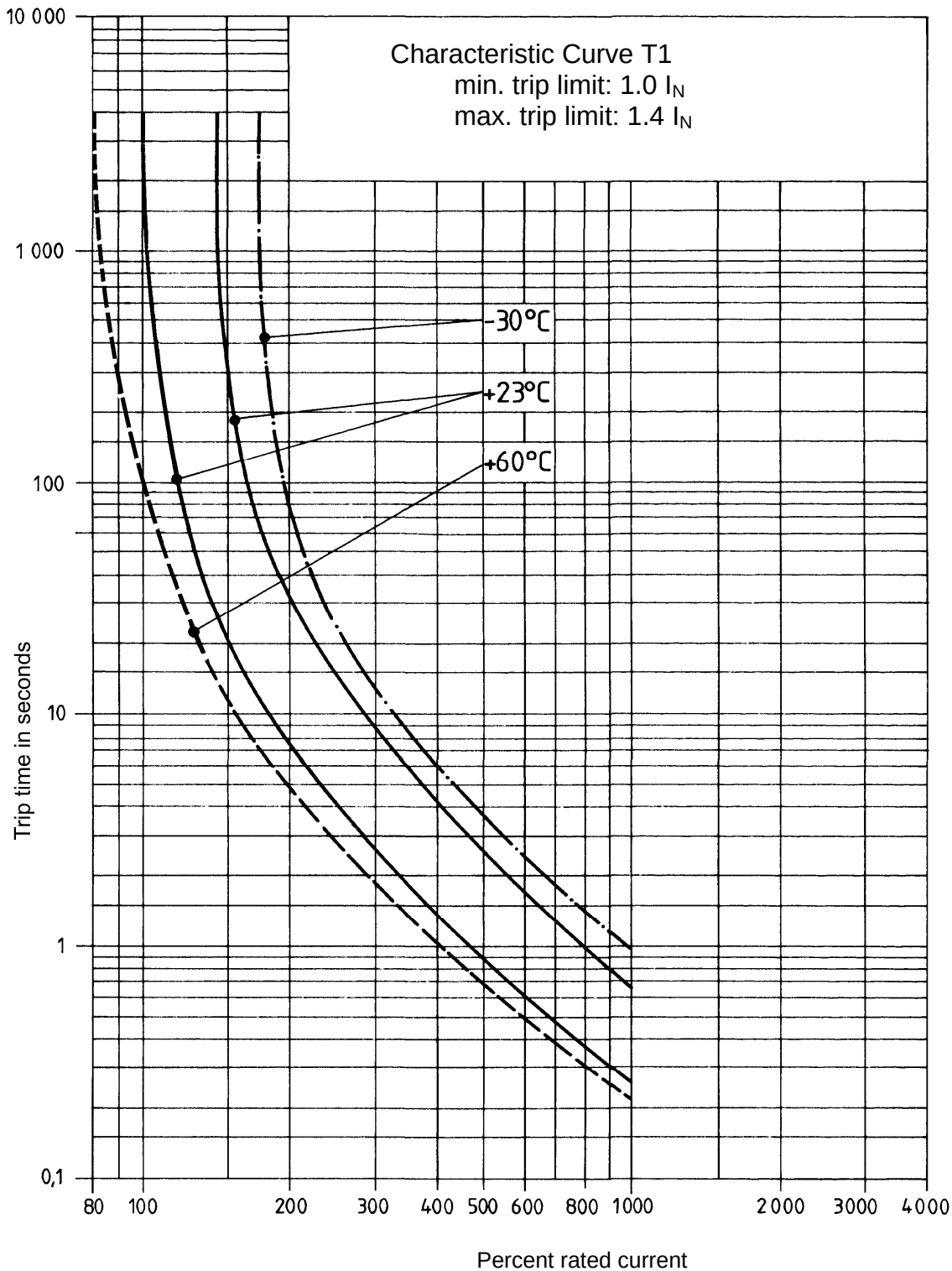
Type of current: AC / DC
Current rating range: 0.1 - 2A



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g	17 866	26.06.00	K.Go				



Type of current: AC / DC
Current rating range: 2.5 - 20A



Index	ÄM	Date	Name	Index	ÄM	Date	Name
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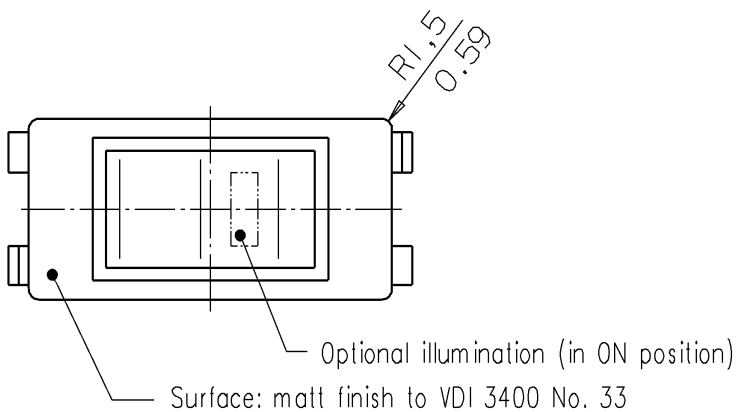
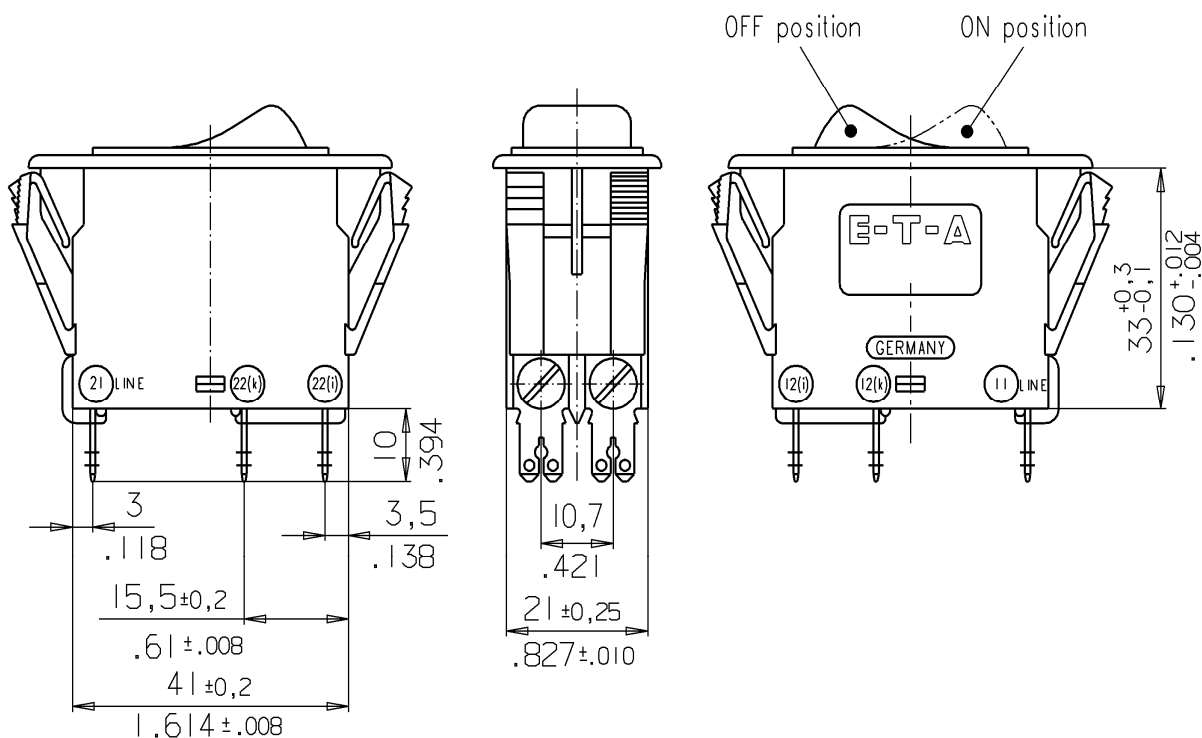
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Overcurrent Circuit Breaker
thermal trip
3120-...-..T1-..
one and two pole

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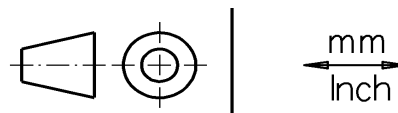
3120-F- - - - -
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27



Nominal dimensions without direct tolerance indication: $\pm IT13$
For dimensions of other flange versions see sheets 7-22
This is a metric design and millimeter dimensions take precedence

1:1

Index	ÄM	Date	Name	Index	ÄM	Date	Name
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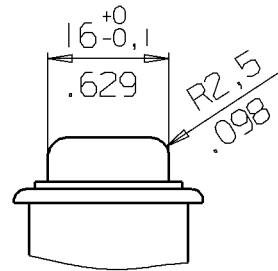
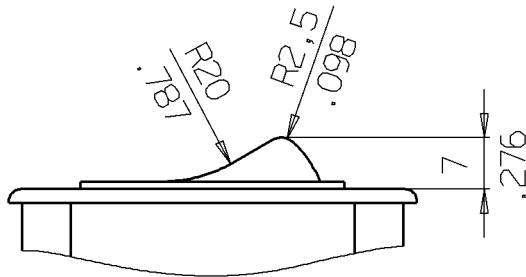


Overcurrent Circuit Breaker
thermal trip
3120-...-T1-..
one and two pole

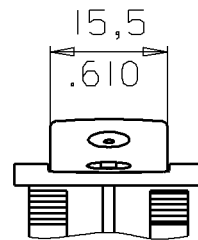
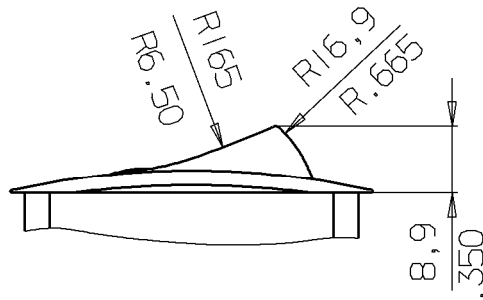
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3 1 2 0 - F - - - - - W - - - - -
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27

3 1 2 0 - F - - - - - M - - - - -
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27



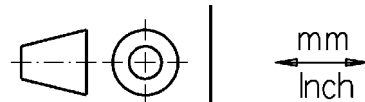
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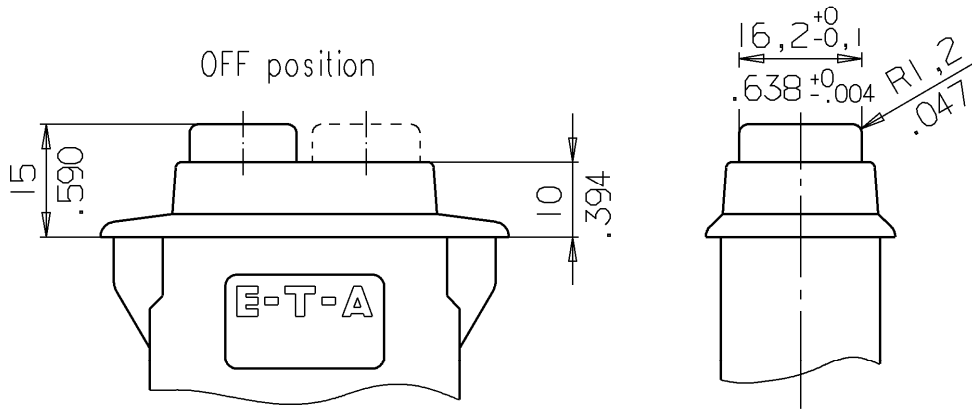
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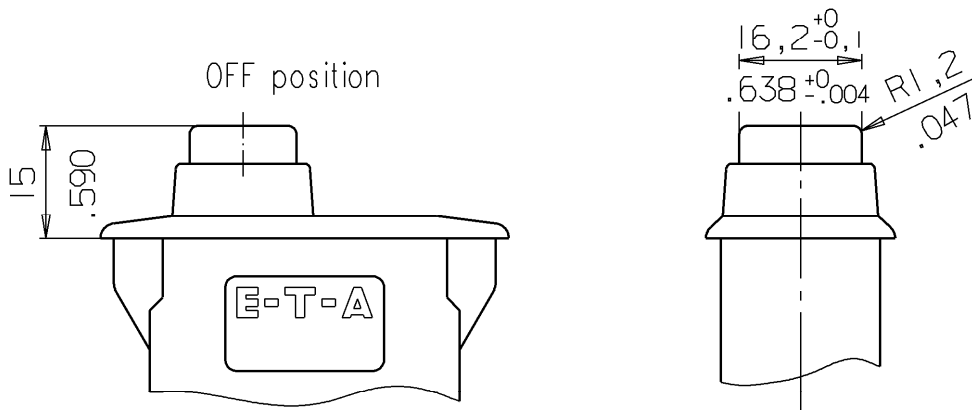
Overcurrent Circuit Breaker
thermal trip
3120-...-..T1-..
one and two pole

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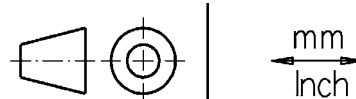


3 1 2 0 - F - - - - - D - - - - -
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27



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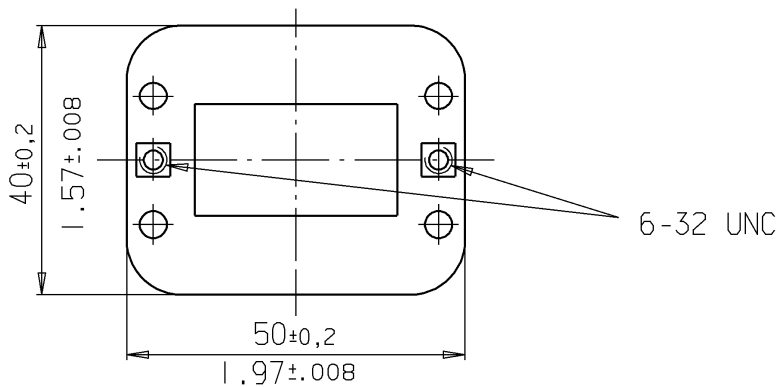
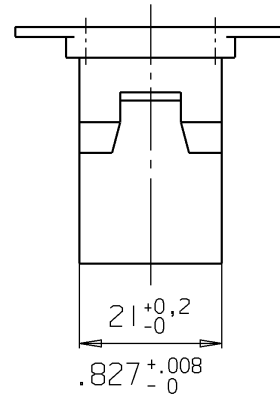
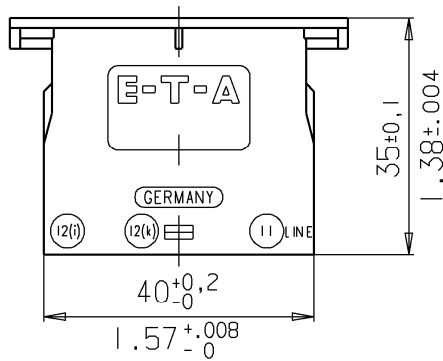
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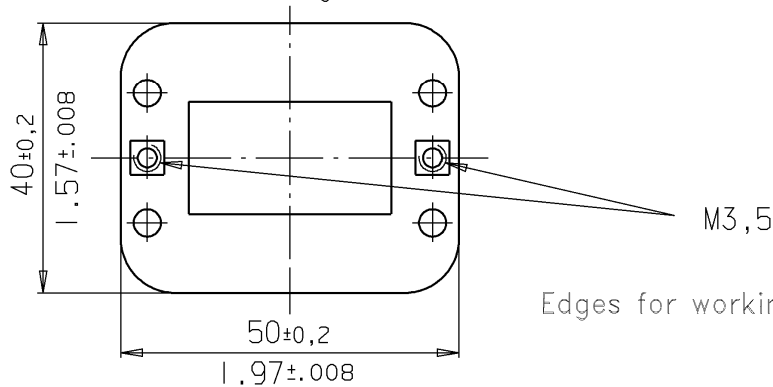
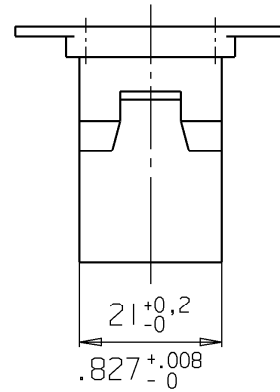
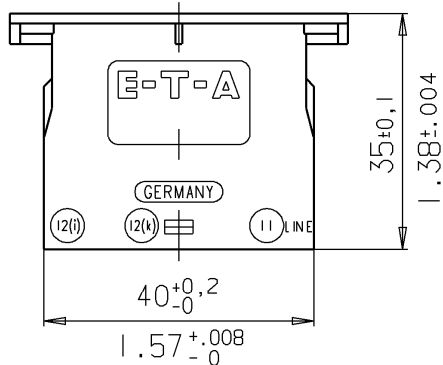
Overcurrent Circuit Breaker
thermal trip
3120-...-..T1-..
one and two pole

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F 1 6
6 7 8 9



F 1 7
6 7 8 9

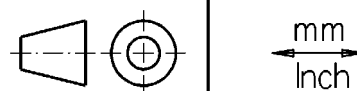


Edges for working parts: DIN 6784

This is a metric design and millimeter dimensions take precedence
Nominal dimensions without direct tolerance indication: ± IT 13

1 : 1

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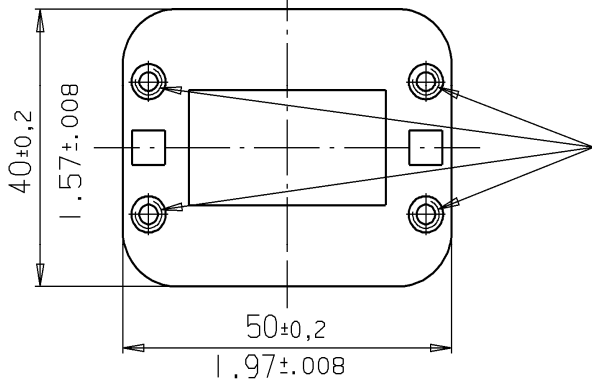
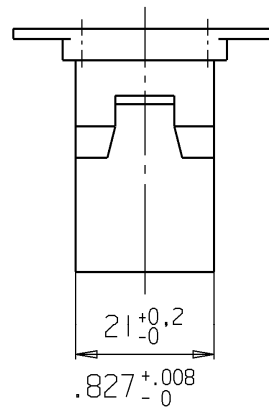
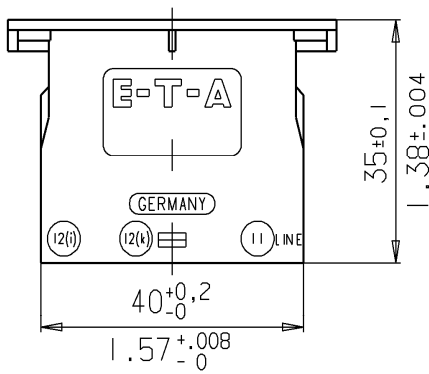
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thermal trip
3120-...-..T1-..
one and two pole

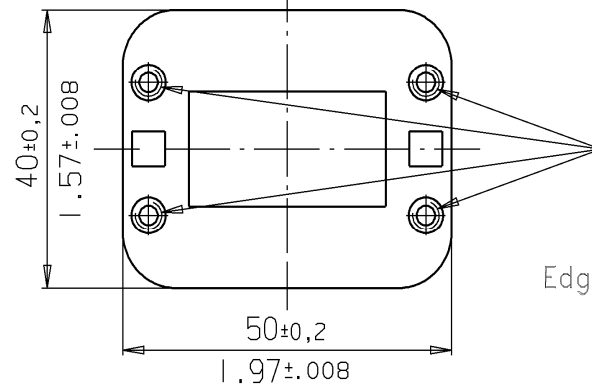
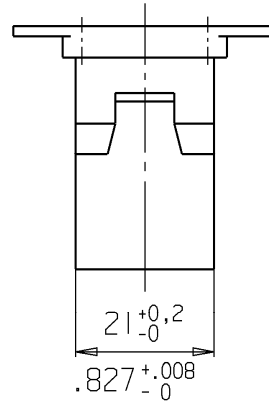
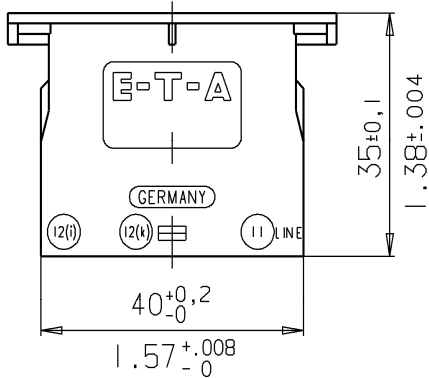
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F 1 8
6 7 8 9



6-32 UNC

F 1 9
6 7 8 9



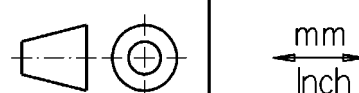
M3,5

Edges for working parts: DIN 6784

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Nominal dimensions without direct tolerance indication: $\pm$ IT 13

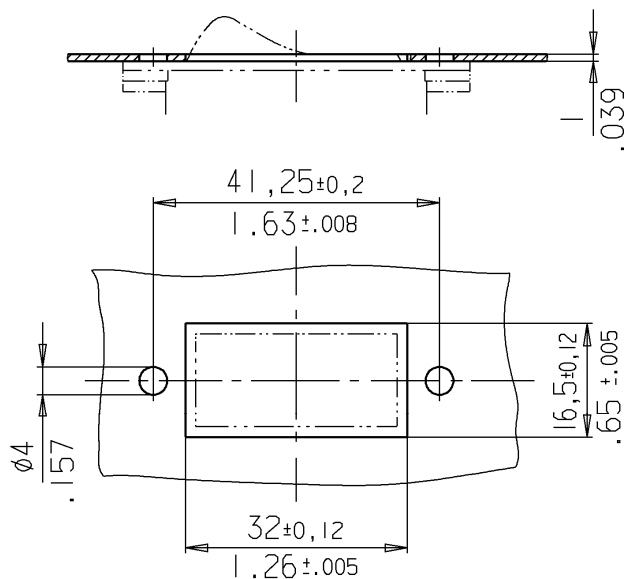
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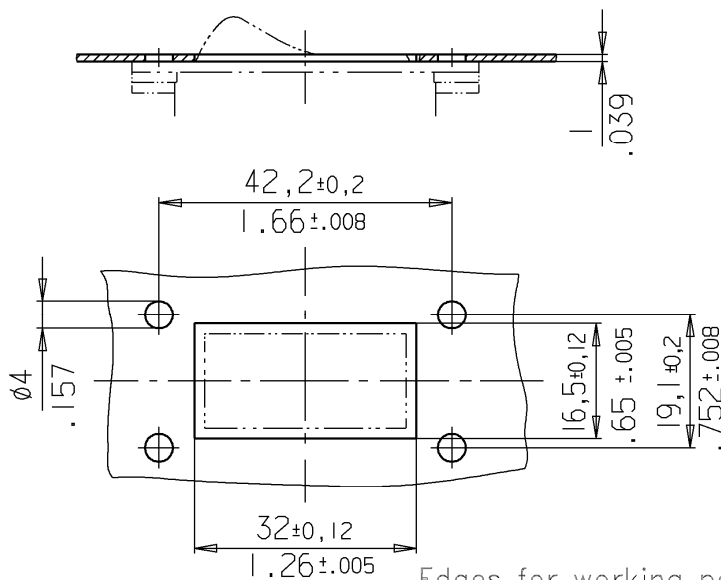


This is a metric design and millimeter dimensions take precedence

Panel cut-out F1.6 / F1.7



Panel cut-out F1.8 / F1.9

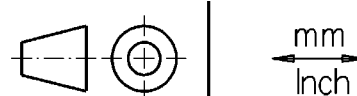


Edges for working parts: DIN 6784

Nominal dimensions without direct tolerance indication: ± IT 13

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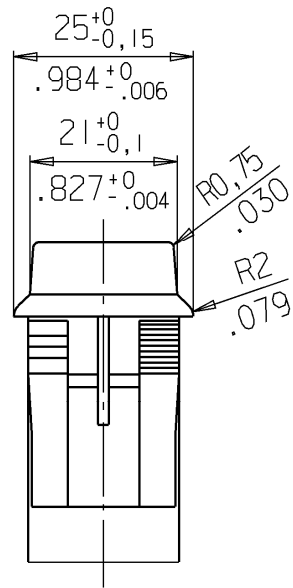
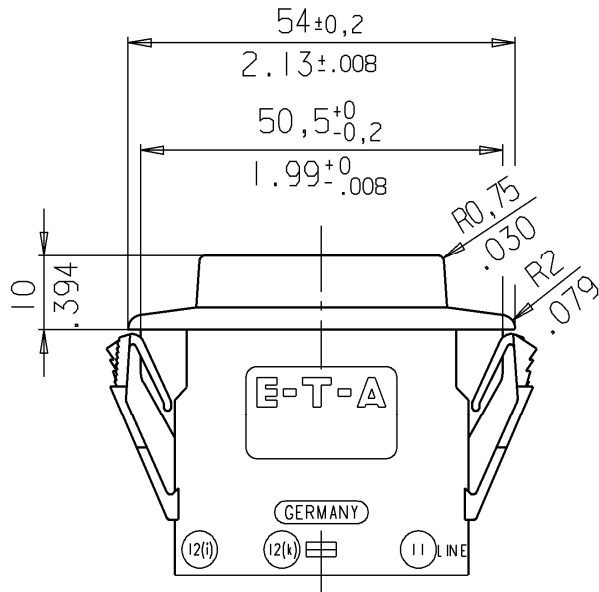
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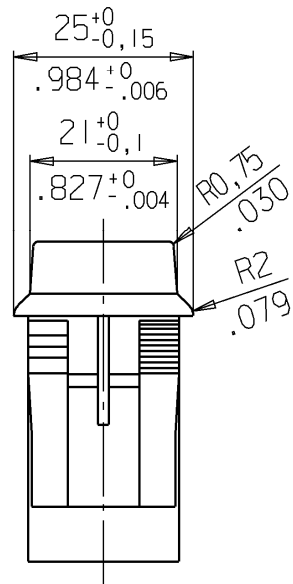
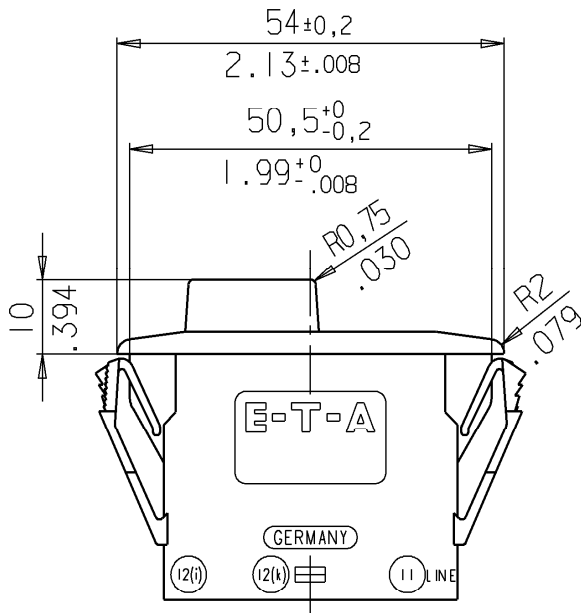
Overcurrent Circuit Breaker
thermal trip
3120-...-..T1-..
one and two pole

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F 3 . F
6 7 8 9



F 3 . G
6 7 8 9



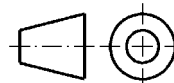
This is a metric design and millimeter dimensions take precedence

Edges for working parts: DIN 6784

Nominal dimensions without direct tolerance indication: $\pm IT 13$

1 : 1

Index	ÄM	Date	Name	Index	ÄM	Date	Name
g	17 866	26.06.00	K.Go				



mm
Inch

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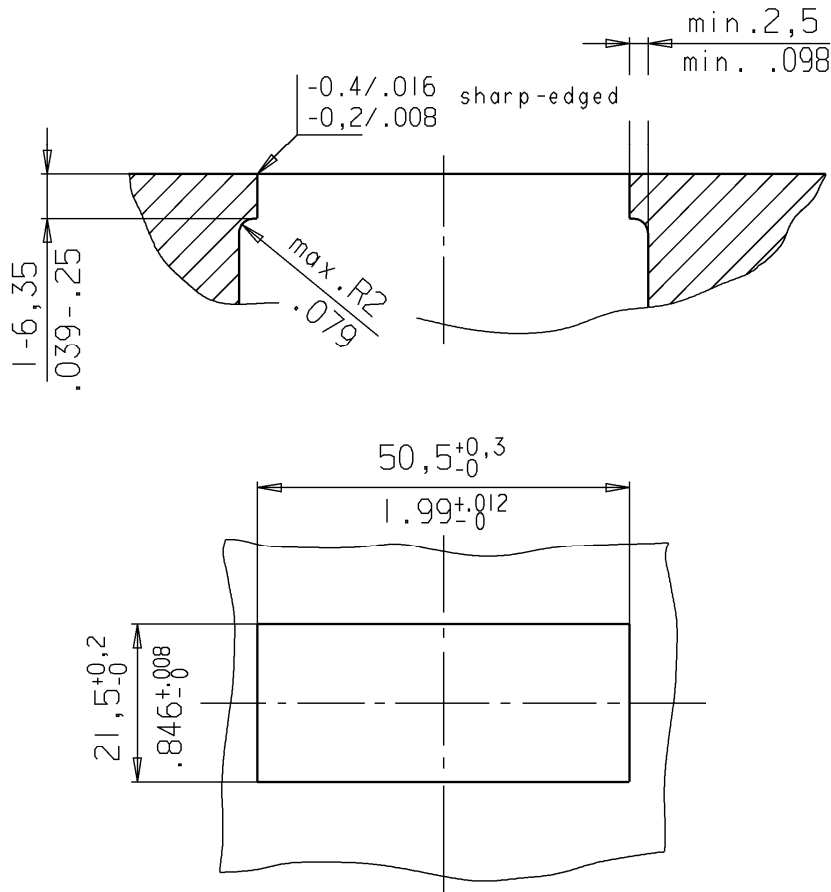
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thermal trip
3120-...-..T1-..
one and two pole

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Panel cut-out F3.F / F3.G



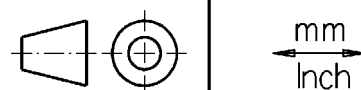
Edges of working parts: DIN 6784

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Nominal dimensions without direct tolerance indication: $\pm IT 13$

1:1

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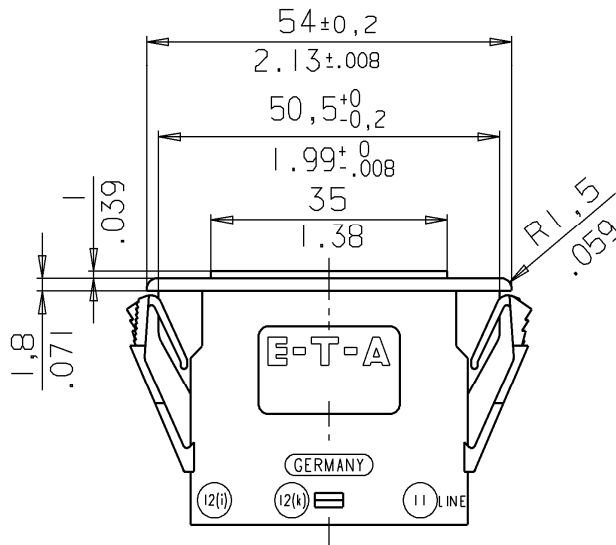


Overcurrent Circuit Breaker
thermal trip
3120-...-..T1-..
one and two pole

Data Sheet
382.073.468
sheet 15 of 37

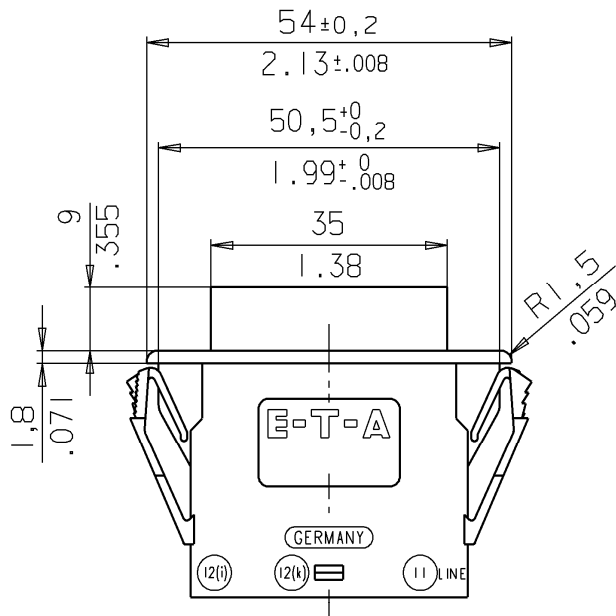
F 3 1
6 7 8 9

collar height .039 inch



F 3 3
6 7 8 9

collar height .355 inch



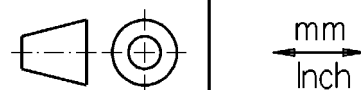
Edges of working parts: 6784

This is a metric design and millimeter dimensions take precedence

Nominal dimensions without direct tolerance indication: $\pm IT 13$

1:1

Index	ÄM	Date	Name	Index	ÄM	Date	Name
g	17 866	26.06.00	K.Go				



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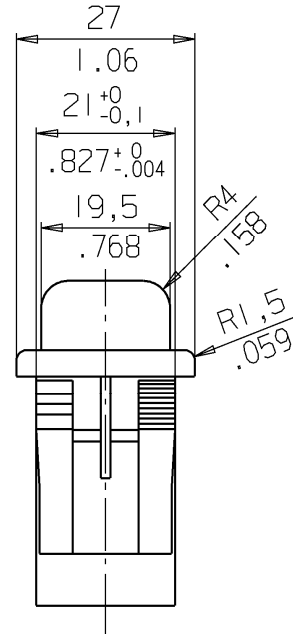
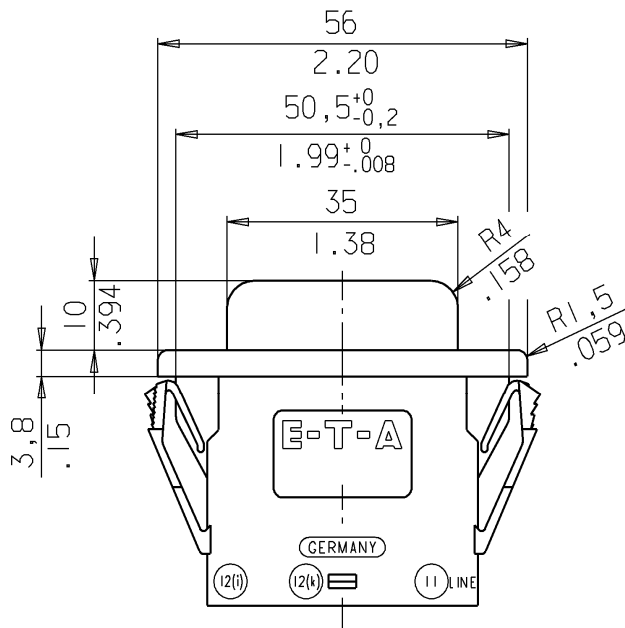


Overcurrent Circuit Breaker
thermal trip
3120-...-..T1-..
one and two pole

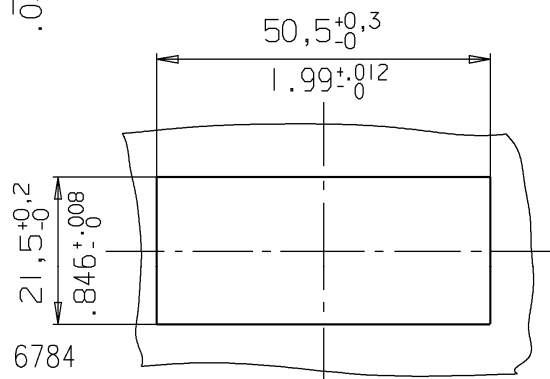
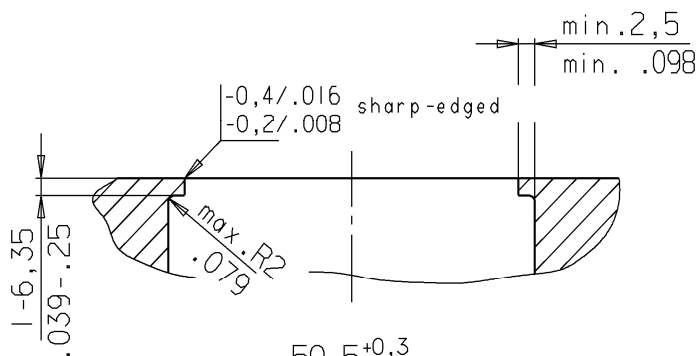
Data Sheet
382.073.468
sheet 16 of 37

F 3.1 4
6 7 8 9

collar height .079 inch with splash water protection



Panel cut-out F3.1 / F3.3 / F3.4



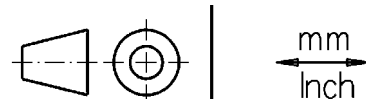
This is a metric design and millimeter dimensions take precedence

Edges of working parts: DIN 6784

Nominal dimensions without direct tolerance indication: $\pm IT 13$

1:1

Index	ÄM	Date	Name	Index	ÄM	Date	Name
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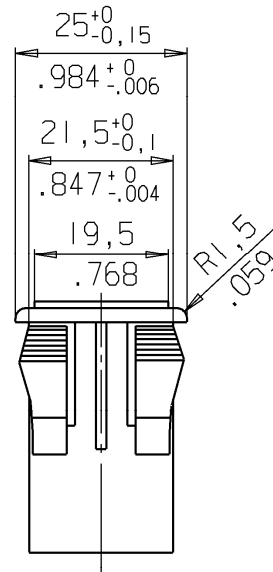
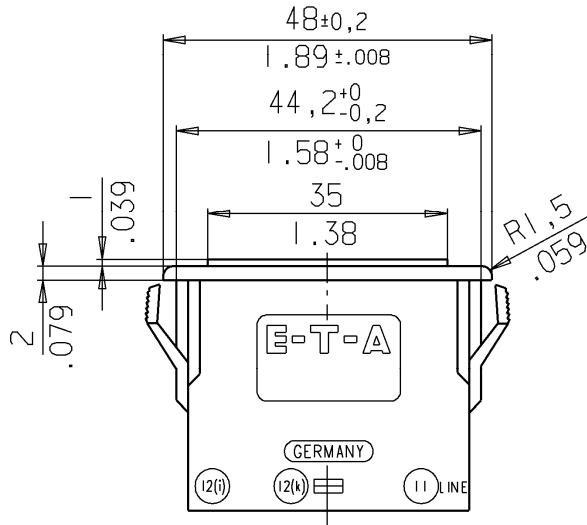


Overcurrent Circuit Breaker
thermal trip
3120-...-..T1-..
one and two pole

Data Sheet
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sheet 17 of 37

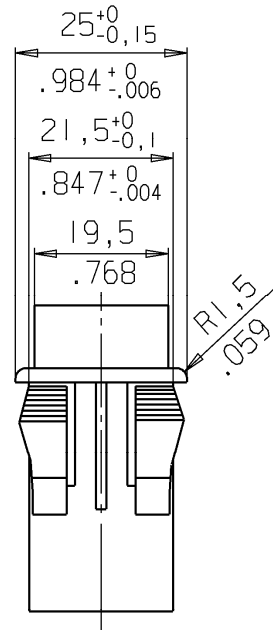
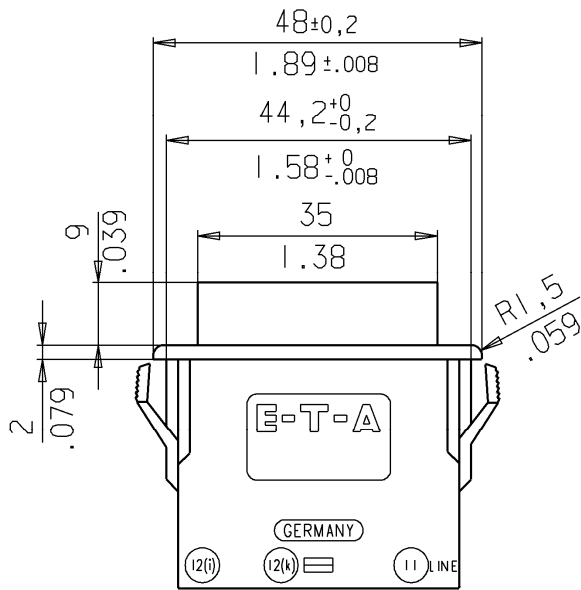
F 4 1
6 7 8 9

collar height .039 inch



F 4 3
6 7 8 9

collar height .355 inch



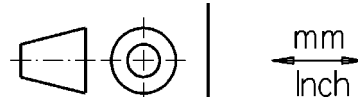
Edges of working parts: DIN 6784

This is a metric design and millimeter dimensions take precedence

Nominal dimensions without direct tolerance indication: $\pm IT 13$

1:1

Index	ÄM	Date	Name	Index	ÄM	Date	Name
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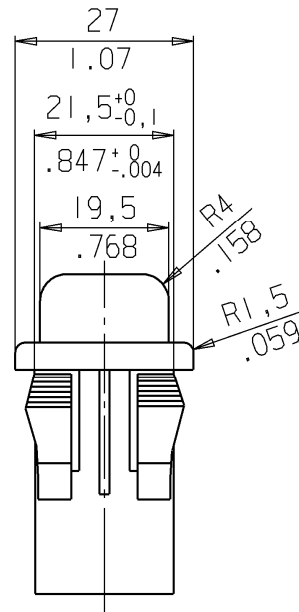
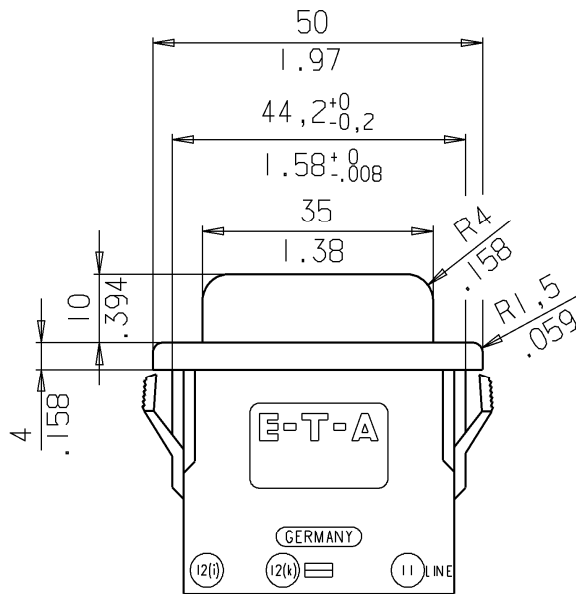


Overcurrent Circuit Breaker
thermal trip
3120-...-..T1-..
one and two pole

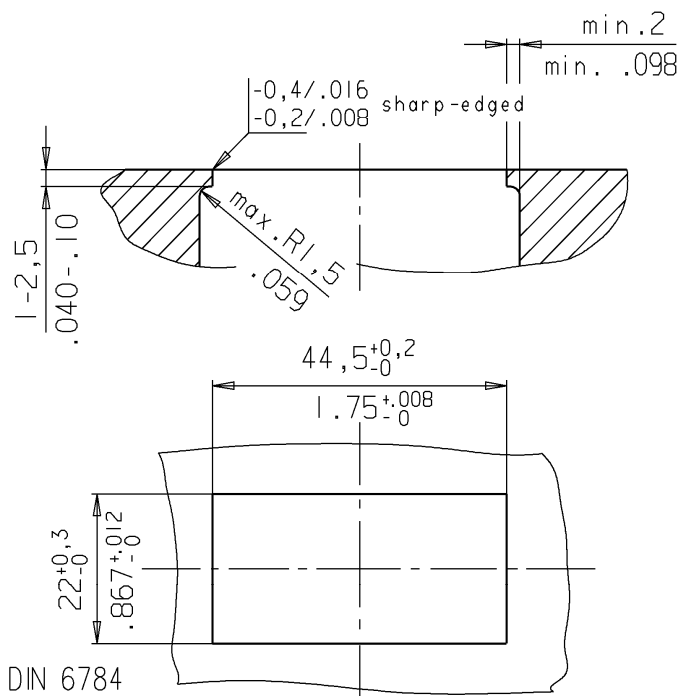
Data Sheet
382.073.468
sheet 18 of 37

F 4 1 4
6 7 8 9

collar height .079 inch with splash water protection



Panel cut-out F4.1 / F4.3 / F4.4



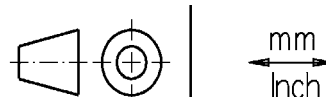
Edges of working parts: DIN 6784

Nominal dimensions without direct tolerance indication: $\pm IT 13$

This is a metric design and millimeter dimensions take precedence

1 : 1

Index	ÄM	Date	Name	Index	ÄM	Date	Name
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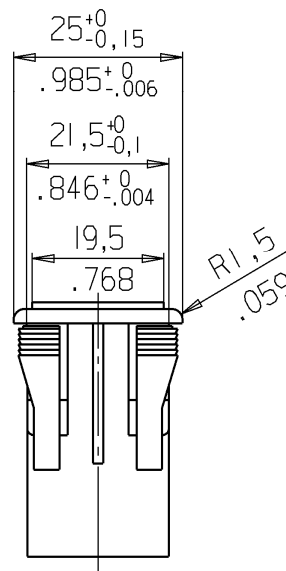
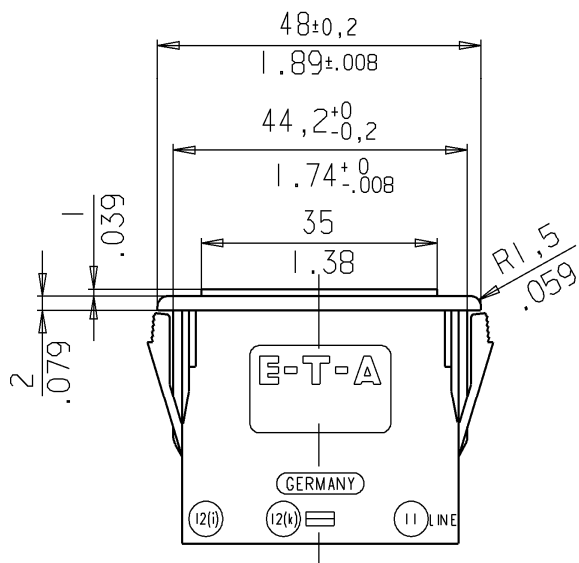


Overcurrent Circuit Breaker
thermal trip
3120-...-..T1-..
one and two pole

Data Sheet
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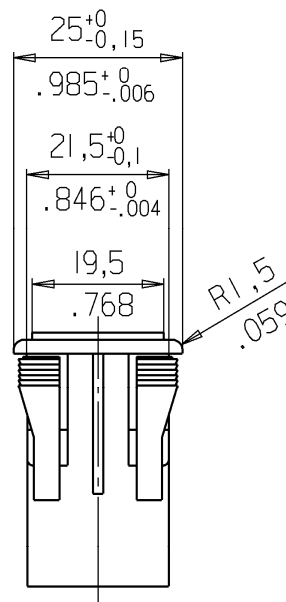
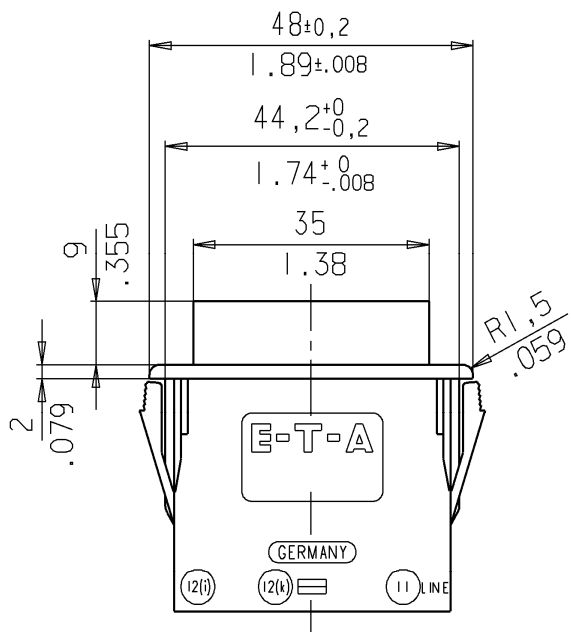
F 5.1
6 7 8 9

collar height .039 inch



F 5.3
6 7 8 9

collar height .355 inch



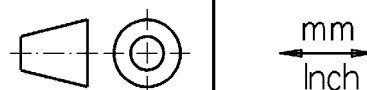
This is a metric design and millimeter dimensions take precedence

Edges of working parts: DIN 6784

Nominal dimensions without direct tolerance indication: ± IT 13

1:1

Index	ÄM	Date	Name	Index	ÄM	Date	Name
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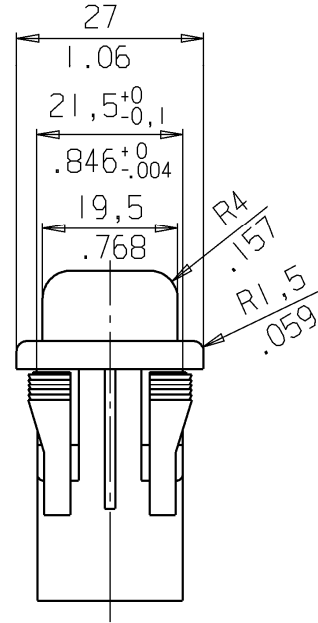
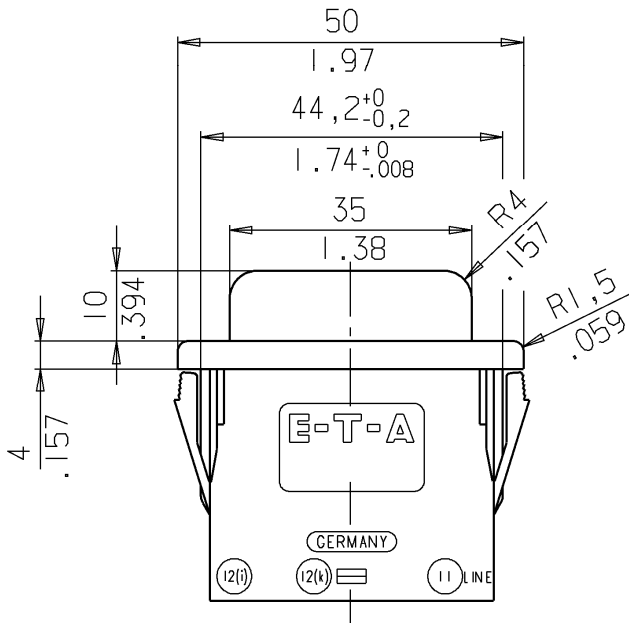


Overcurrent Circuit Breaker
thermal trip
3120-...-T1-..
one and two pole

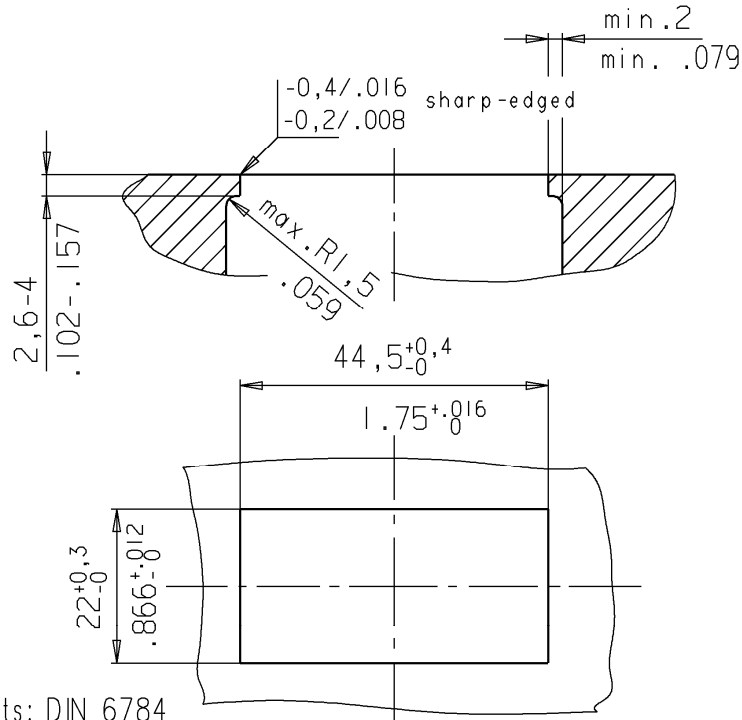
Data Sheet
382.073.468
sheet 20 of 37

F 5.1 4
6 7 8 9

collar height .079 inch with splash water protection



Panel cut-out F5.1 / F5.3 / F5.4



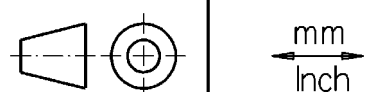
Edges of working parts: DIN 6784

Nominal dimensions without direct tolerance indication: $\pm IT 13$

This is a metric design and millimeter dimensions take precedence

1 : 1

Index	ÄM	Date	Name	Index	ÄM	Date	Name
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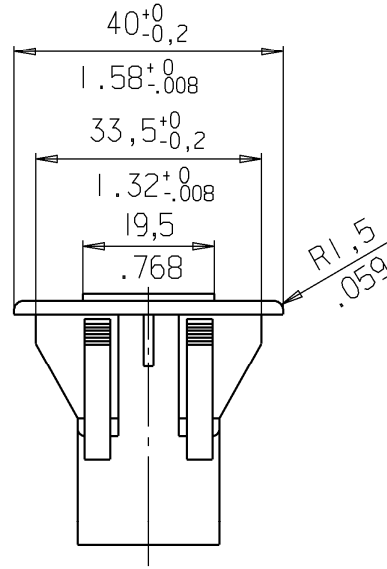
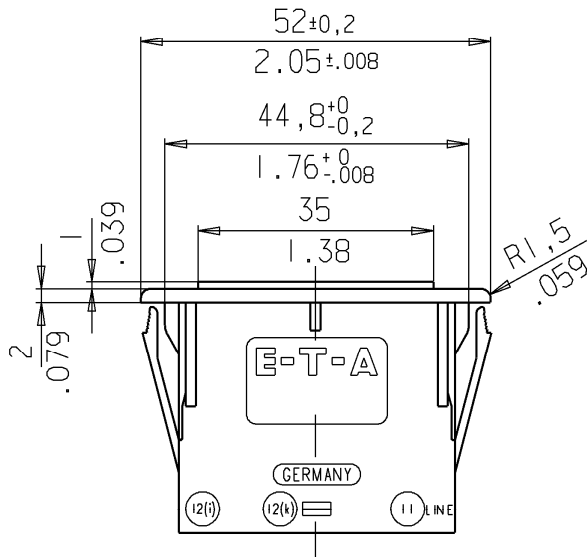


Overcurrent Circuit Breaker
thermal trip
3120-...-..T1-..
one and two pole

Data Sheet
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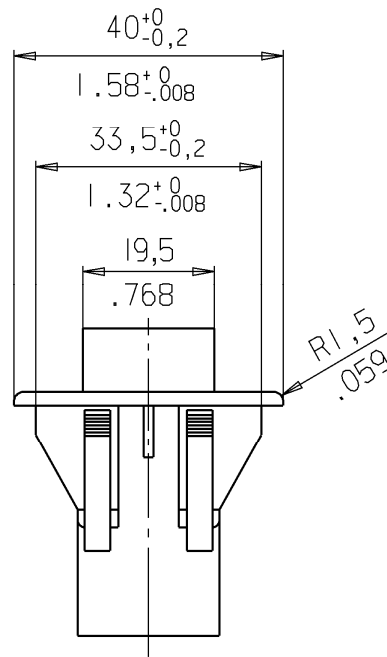
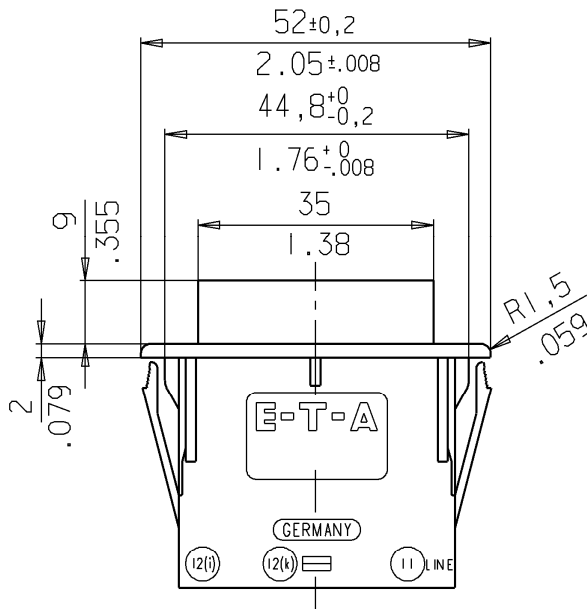
F 6 1
6 7 8 9

collar height .039 inch



F 6 3
6 7 8 9

collar height .355 inch



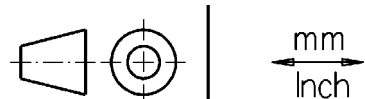
Edges of working parts: DIN 6784

Nominal dimensions without direct tolerance indication: ± IT 13

1:1

This is a metric design and millimeter dimensions take precedence

Index	ÄM	Date	Name	Index	ÄM	Date	Name
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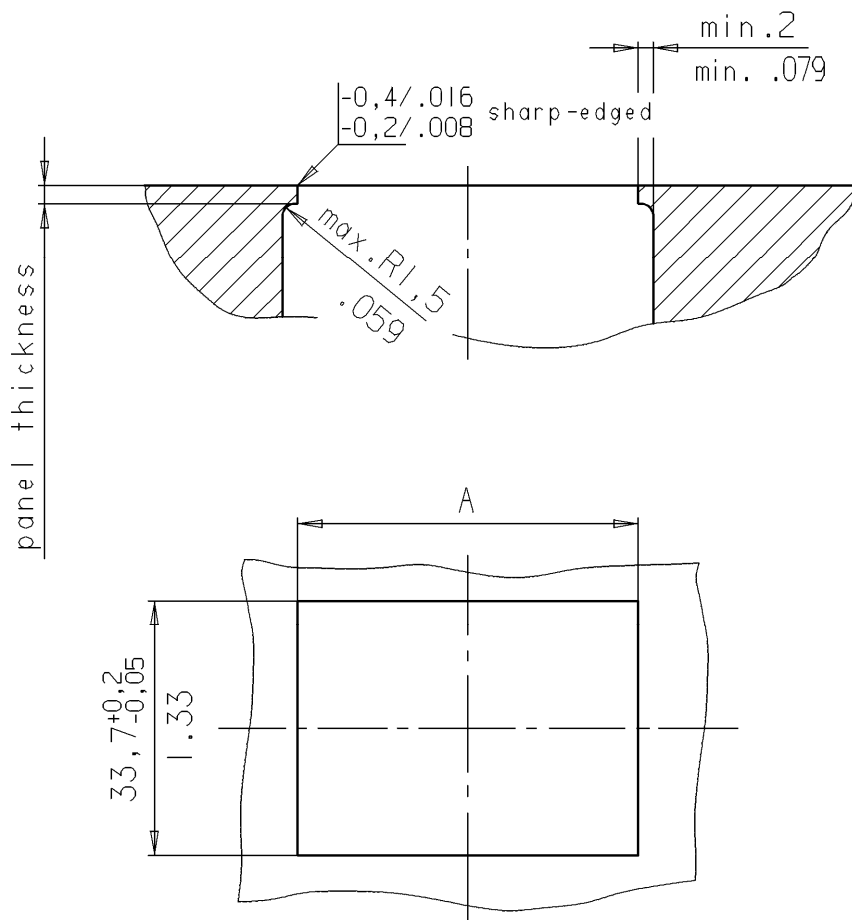
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Overcurrent Circuit Breaker
thermal trip
3120-...-..T1-..
one and two pole

Data Sheet
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sheet 22 of 37

Panel cut-out F6.1 / F6.3



Panel thickness	$.047^{+.016}_{-0}$	$.063^{+.032}_{-0}$	$.094^{+.040}_{-0}$	$.133^{+.004}_{-0}$
Dim. A	$1.77^{+.010}_{-0}$	$1.77^{+.045}_{-0}$	$1.77^{+.088}_{-0}$	$1.77^{+.088}_{-0}$

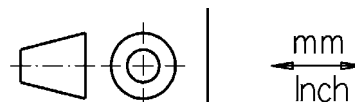
Edges of working parts: DIN 6784

This is a metric design and millimeter dimensions take precedence

Nominal dimensions without direct tolerance indication: $\pm IT 13$

1 : 1

Index	ÄM	Date	Name	Index	ÄM	Date	Name
g	17 866	26.06.00	K.Go				
i	18 338	23.07.01					



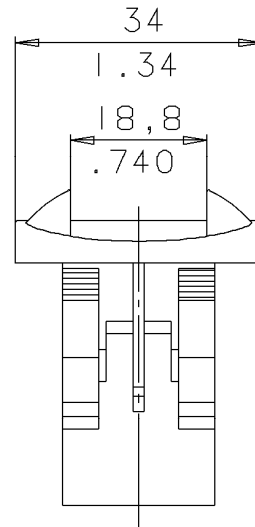
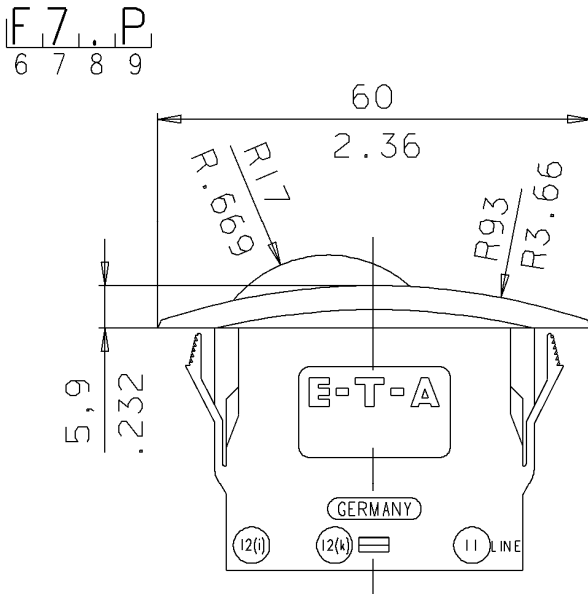
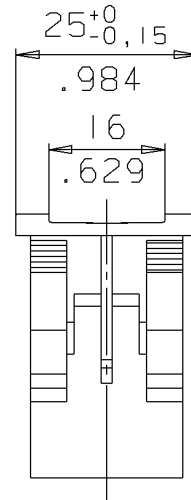
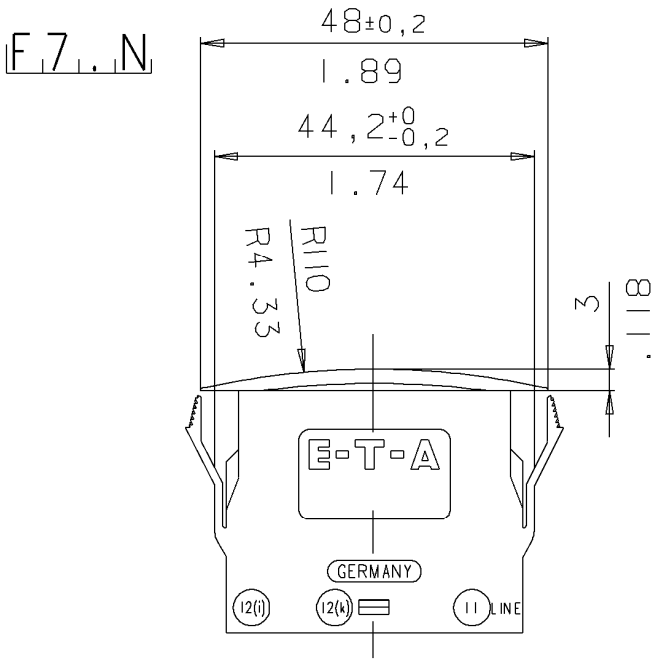
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Overcurrent Circuit Breaker
thermal trip
3120-...-..T1-..
one and two pole

Data Sheet
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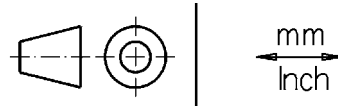


This is a metric design and millimeter dimensions take precedence

Edges of working parts: DIN 6784
Nominal dimensions without direct tolerance indication: $\pm IT 13$

1 : 1

Index	ÄM	Date	Name	Index	ÄM	Date	Name
g	17 866	26.06.00	K.Go				

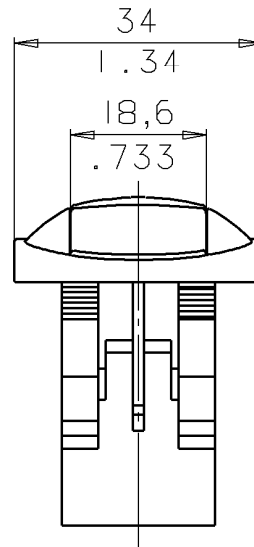
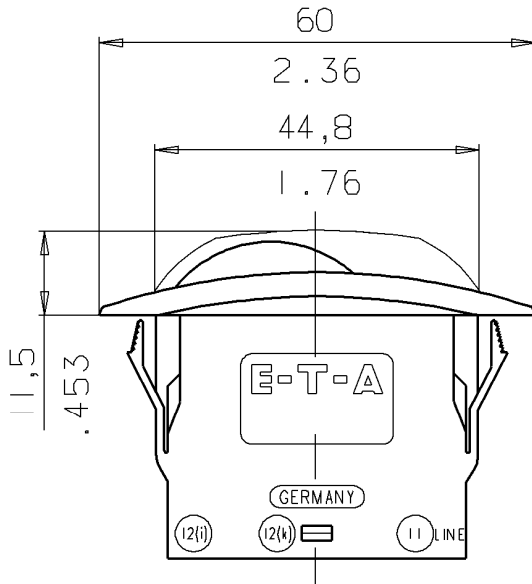




Overcurrent Circuit Breaker
thermal trip
3120-...-..T1-..
one and two pole

Data Sheet
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E 7...Q



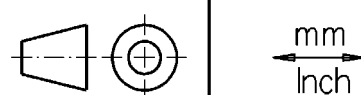
This is a metric design and millimeter dimensions take precedence

Edges of working parts: DIN 6784

Nominal dimensions without direct tolerance indication: $\pm IT 13$

1:1

Index	ÄM	Date	Name	Index	ÄM	Date	Name
g	17 866	26.06.00	K.Go				



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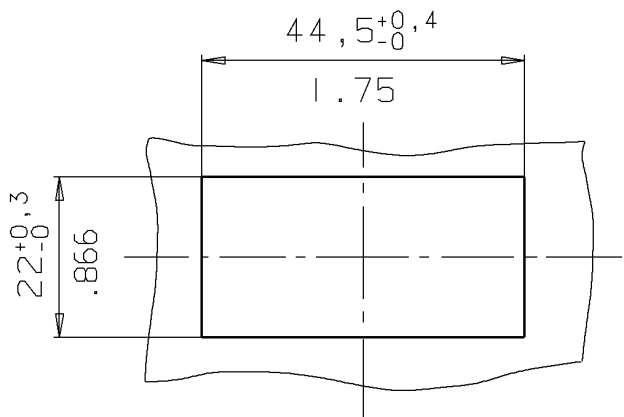
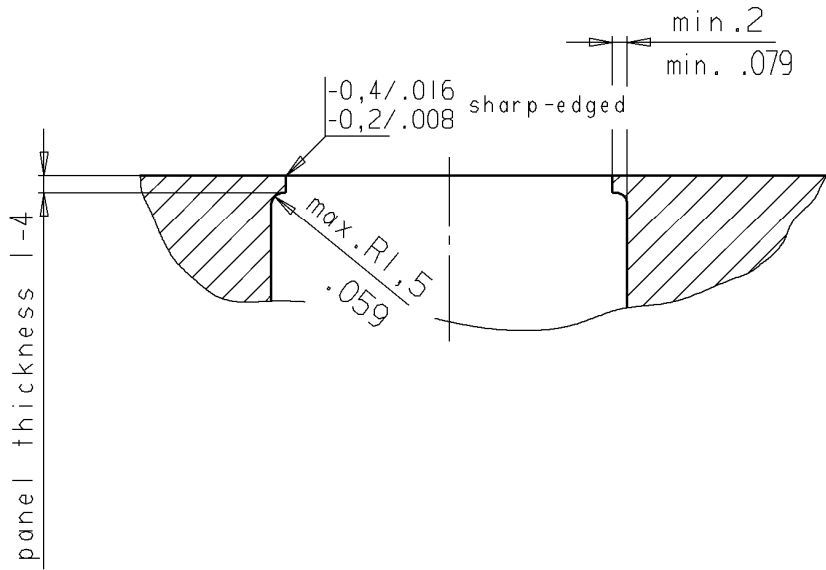
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Overcurrent Circuit Breaker
thermal trip
3120-...-..T1-..
one and two pole

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382.073.468
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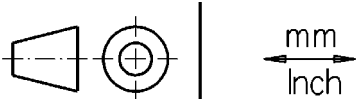
Panel cut-out F7.N / F7.P / F7.Q



This is a metric design and millimeter dimensions take precedence
Nominal dimensions without direct tolerance indication: $\pm IT 13$

1 : 1

Index	ÄM	Date	Name	Index	ÄM	Date	Name
g	17 866	26.06.00	K.Go				

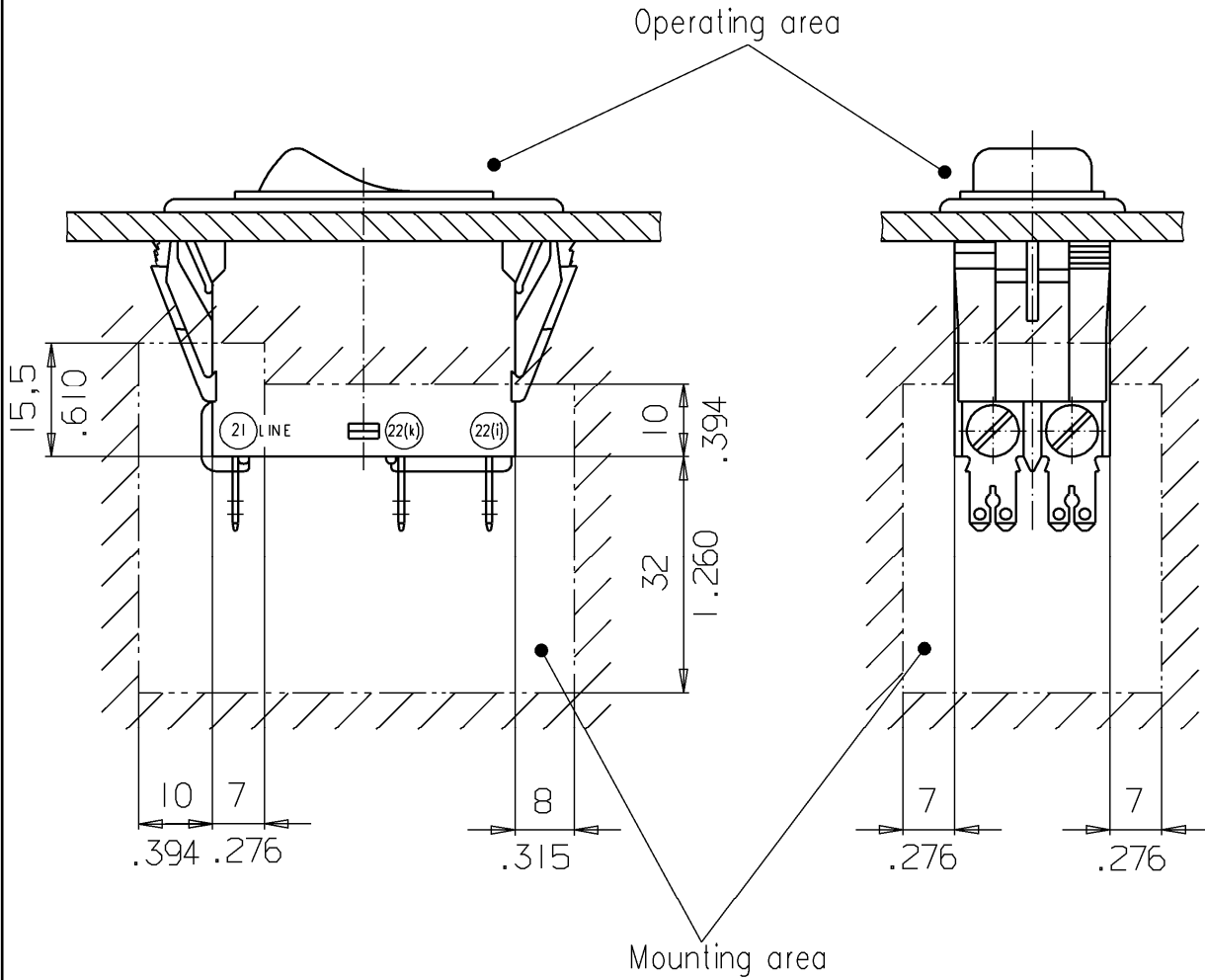




Overcurrent Circuit Breaker
thermal trip
3120-...-..T1-..
one and two pole

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sheet 26 of 37

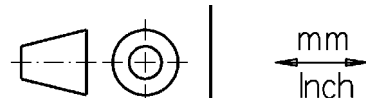
Safety distances required for installation to protection class II



This is a metric design and millimeter dimensions take precedence

1:1

Index	ÄM	Date	Name	Index	ÄM	Date	Name
g	17 866	26.06.00	K.Go				





Overcurrent Circuit Breaker
thermal trip
3120-...-..T1-..
one and two pole

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[illegible]



Overcurrent Circuit Breaker
thermal trip
3120-...-..T1-..
one and two pole

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Back-up fuses to ensure short-circuit protection

E-T-A Current rating (A)	Back-up fuses to DIN Current rating (A)	Back-up fuses to UL 1077 Current rating (A)
0.1	0.20	20
0.2	0.40	
0.3	0.63	
0.4	1.00	
0.5	1.25	
0.6	1.40	
0.8	1.60	
1.0	2.00	
1.2	2.00	
1.5	3.15	
2.0	4.00	
2.5	16	
3.0	16	
3.5	16	
4.0	20	
4.5	20	
5.0	20	20
6.0	25	25
7.0	25	30
8.0	25	30
10.0	25	40
12.0	25	50
14.0	25	60
16.0		60
18.0	32	70
20.0	32	80

Index	ÄM	Date	Name	Index	ÄM	Date	Name
g	17 866	26.06.00	K.Go				



Overcurrent Circuit Breaker
thermal trip
3120-...-..T1-..
one and two pole

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382.073.468
sheet 29 of 37

Ordering number code

3 120-F 3 2 1 -N7 T1 -W12A B 4 - 10A

1 2 3 4 5 6 7 8 9 10 11 12 13

1. Type number

3120: Thermal or thermal-magnetic circuit breaker, single or double pole (with ON / OFF switch only option)

2. Mounting method

F: Snap-in frame or screw mounting

3. Configuration

		panel cut-out	panel thickness	screw mounting	snap-in housing
1	for rocker	32.0 x 16.5 mm		x	
2	for 2 push buttons and water splash cover	50.0 x 26.0 mm		x	
3	for rocker or push buttons	50.5 x 21.5 mm	1.0 - 6.35 mm		x
4	for rocker	44.5 x 22.0 mm	1.0 - 2.5 mm		x
5	for rocker	44.5 x 22.0 mm	2.6 - 4.0 mm		x
6	for rocker	45.0 x 33.7 mm	1.2 - 3.4 mm		x
7	for rocker	44.5 x 22.0 mm	1.0 - 4.0mm		x

4. Number of poles

0	2 pole, unprotected, switch only
1	1 pole, thermally protected
2	2 pole, thermally protected
5	2 pole, thermally protected on one only
6	1 pole, unprotected, switch only

Index	ÄM	Date	Name	Index	ÄM	Date	Name
g	17 866	26.06.00	K.Go				



Overcurrent Circuit Breaker
thermal trip
3120-...-..T1-..
one and two pole

Data Sheet
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sheet 30 of 37

5. Style, accessory

		water splash protection	without collar	collar height			mounting method configuration						
				1mm	2mm	9mm	F1	F2	F3	F4	F5	F6	F7
1				X					X	X	X	X	
3						X			X	X	X	X	
4		X			X				X	X	X		
5					X				X	X	X		
6	mounting thread 2 x 6-32 UNC						X						
7	mounting thread 2 x M3,5						X						
8	mounting thread 4 x 6-32 UNC						X						
9	mounting thread 4 x M3,5						X						
A	with transverse hole 4mm dia					X			X	X	X	X	
B	current rating marked on top of flange			X					X	X	X	X	
C	with additional sealing (sealing grease)	X			X				X	X	X		
D	with silicone cover	X			X				X	X	X		
E	with silicone cover and additional sealing (sealing grease)	X			X				X	X	X		
F	frame with 2 push buttons							X	X				
G	frame with 1 push button								X				
H	I and O marked on top of flange			X					X	X	X	X	
K	I and O marked on top of flange					X			X	X	X	X	
L	I and O marked on top of flange			X					X	X	X	X	
M	I and O marked on top of flange					X			X	X	X	X	
N	colour grey (stratos grey), new design		X										X
P	Snap-on actuator guard preventing inadvertent operation		X										X
Q	Snap-on splash cover	X	X										X
Z	Snap-in frame			X					X				

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6. Terminal design

	blade terminals DIN 46 244 - C			number of poles				
	Terminal code							
	12(i), 22(i) A3 terminals	12(k), 22(k)	11, 12	0	1	2	5	6
A1		x	with screw ISO 1580 - M3.5 and clamping plates		x	x		
A2		x	with M3,5 screw with +/- slot and clamping plates		x	x	x	
A3	x	x	with M3,5 screw with +/- slot and clamping plates and A3 terminals	x	x	x	x	x
B1	x	x	with screw ISO 1580 - M3,5 and washer and tab DIN 46244-C	x	x	x	x	x
B2		x	with screw ISO 1580 - M3,5 and washer and tab DIN 46 244-C		x	x	x	
G7	x	x	with screw ISO 1580 - M3,5	x	x	x	x	x
H7		x	with screw ISO 1580 - M3,5		x	x	x	
K7		x	with M3.5 screw with +/- slot		x	x	x	
L7	x	x	with M3.5 screw with +/- slot	x	x	x	x	x
N7	x	x	x	x	x	x	x	x
P7		x	x		x	x	x	

Unprotected chambers only with B1, G7, L7 or N7, but without terminal 12 (k) or 22 (k)

7. Characteristic curve

		number of poles				
		0	1	2	5	6
M1	thermal - magnetic		x	x	x	
Q1	switch only; 50,000 operations, max 20A, cosφ 1, 250 V	x				x
T1	thermal 1. $I_N - 1.4 \times I_N$		x	x	x	
X.	special calibration		x	x	x	

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8. Actuator style

		Style																					
		1	3	4	5	6	7	8	9	A	B	C	D	E	F	G	H	K	L	M	N	P	Q
A	rocker																				x	x	x
D	1 push button															x							
K	rocker, momentary switch	x	x	x	x	x	x	x	x	x	x	x	x	x			x	x	x	x			
M	rocker	x	x	x	x	x	x	x	x	x	x	x	x	x			x	x	x	x			
S	2 push buttons														x								
U	rocker, momentary switch	x	x	x	x	x	x	x	x	x	x	x	x	x			x	x	x	x			
W	rocker	x	x	x	x	x	x	x	x	x	x	x	x	x			x	x	x	x			
X	custom designed rocker	x	x		x	x	x	x	x	x							x	x	x	x			
Z	1 push button, momentary switch															x							

For markings of A, K, M, U W and X see sheets 33 - 35

9. Actuator colour

			Actuator style								
opaque ((without illumination)	translucent (suitable for illumination)	colour	A	D	K	M	S	U	W	X	Z
01		black		x	x	x	x	x	x	x	
02		white			x	x		x	x		
04		red		x	x	x	x	x	x		x
06		blue			x	x		x	x		
08		light grey			x	x		x	x		
09		green			x	x		x	x		
	12	white		x	x	x	x	x	x		x
	14	red			x	x		x	x		
	15	orange			x	x		x	x		
	19	green		x	x	x	x	x	x		x
20	30	blue (katana blue)	x								
Special version											
2 push buttons of different colours	button „ON“ (translucent)	button „OFF“ (opaque)									
GR	green	red					x				
WB	white	black					x				
WR	white	red					x				

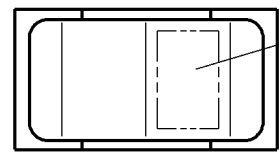
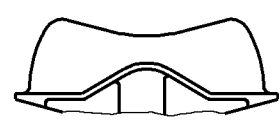
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10. Actuator marking
rocker



illumination window

				Actuator						Actuator / colour			
				A	K	M	U	W	X	U01	U02	W01	W02
A	I		0				X	X					
B	EIN		AUS				X	X					
C	ON		OFF				X	X					
D	0	I					X	X					
E	AUS	EIN					X	X					
F	OFF	ON					X	X					
G	OFF	ON					X	X					
H	OFF	ON					X	X					
J	○	I					X	X					
K	○	I					X	X					
L	OFF ○	I ON					X	X					
M	TRIPPED	RESET	PRESS TO				X	X					
N	BY HAND	NO					X	X					
P	OFF 0	I NO					X	X					
Q	0	I	marking impressed	X						X	X	X	X

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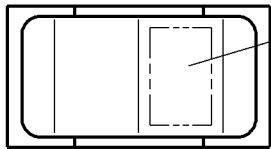
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10. Actuator marking
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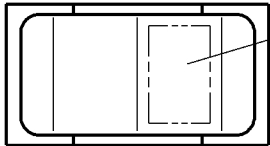
illumination window

				Actuator					
				A	K	M	U	W	X
R	OFF	NO					×	×	
S	OFF	ON					×	×	
T	BATT 1	PUSH ON					×	×	
U	BATT 2	PUSH ON					×	×	
V	MAIN PUMP	PUSH ON					×	×	
W	HORI ZONT	PUSH ON					×	×	
X			without marking				×	×	×
Y	TURN BANK	PUSH ON					×	×	
Z	TAXI LITE	PUSH ON					×	×	
1	LAND LITE	PUSH ON	LAND LITE				×	×	
2	CABIN LITE	PUSH ON	CABIN LITE				×	×	
3	POS LITE	PUSH ON	POS LITE				×	×	
4	AUX PUMP	PUSH ON	AUX PUMP				×	×	
5	SEAT HEAT	PUSH ON	SEAT HEAT				×	×	
6	GYRO	PUSH ON	GYRO				×	×	

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10. Actuator marking
rocker



illumination window

				Actuator					
				A	K	M	U	W	X
7	ACL	PUSH ON	ACL				×	×	
8	VENT	PUSH ON	VENT				×	×	
9	STROBE LITE	PUSH ON	STROBE LITE				×	×	
A	PITOT HEAT	PUSH ON	PITOT HEAT		×	×			
B	OFF	ON			×	×			
C	OFF	ON	LIGHT		×	×			
D	OFF	ON	ROTOR		×	×			
E	GEN	PUSH ON			×	×			
F	NO		OFF		×	×			
G		ON			×	×			

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10. Actuator marking

Push button

		Actuator		
		D	S	Z
X	without marking	x	x	x
Y	with black marking on actuator face	x	x	x

11. Actuator illumination

		Actuator			Actuator colour												
		D, S, Z	K, M, U, W	X	01	02	04	06	08	09	12	14	15	19	GR	WB	WR
B	Lamp illumination	x	x		x	x	x	x	x	x	x	x	x	x	x	x	x
L	Lamp illumination	x			x	x	x	x	x	x	x	x	x	x	x	x	x
G	LED illumination - green	x	x		x	x	x	x	x	x	x	x	x	x	x	x	x
R	LED illumination - red	x	x		x	x	x	x	x	x	x	x	x			x	x
Y	LED illumination - yellow	x	x		x	x	x	x	x	x	x	x	x	x	x	x	x

12. Illumination voltage range

		marked		Actuator illumination							
				B	B	L	G	R	R	Y	Y
0	4 - 7 V	6 V		x	x		x	x		x	
1	10 - 14 V	12 V		x	x		x	x		x	
2	20 - 28 V	24 V		x	x		x	x		x	
3	90 - 140 V	115 V		x		x					
4	185 - 275 V	230 V		x		x					
5	52 - 54 V	48 V		x	x				x		x
6	320 - 450 V	400 V		x		x					
7	50 - 70V	60 V							x		x
			Type of current	K, M, U, W	x			x	x	x	x
				D, S, Z		x	x	x	x	x	x
			DC	x	x	x	x	x	x	x	x
			AC	x	x	x	x	x		x	

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13. Current ratings

current rating (A)	characteristic curve						
	M1	T1	Q1	X1	X2	X3	X4
0.05		x					
0.1	x	x					
0.15	x	x					
0.2	x	x					
0.25	x	x					
0.3	x	x					
0.35	x	x					
0.4	x	x					
0.45	x	x					
0.5	x	x					
0.55	x	x					
0.6	x	x					
0.65	x	x					
0.7	x	x					
0.8	x	x					
0.9	x	x					
1	x	x					
1.2	x	x		x			
1.4	x	x					
1.5	x	x					
1.7	x	x					
1.8	x	x					
2	x	x					
2.5	x	x		x	x	x	
2.8	x	x					
3	x	x		x	x	x	x
3.5	x	x					
4	x	x			x	x	x
4.5	x	x			x		
5	x	x			x	x	
6	x	x		x			
7	x	x			x		
8	x	x			x		
9	x	x					
10	x	x					
11	x	x					
12	x	x					
13	x	x					
14	x	x			x		
15	x	x		x	x		
16	x	x					
17		x			x		
18		x					
20		x	x				

Note: Boldface references are in conformance with the ordering informations shown in the E-T-A Catalogue

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