

**DATASHEET - T5B-9-8365/E**

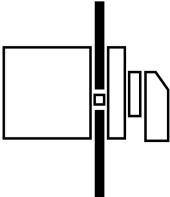


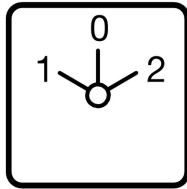
**Changeoverswitches, T5B, 63 A, flush mounting, 9 contact unit(s),  
Contacts: 18, 60 °, maintained, With 0 (Off) position, 1-0-2, Design number  
8365**



**Part no. T5B-9-8365/E  
Catalog No. 090957**

**Delivery program**

Product range		Control switches																																																																																																																																																				
Part group reference		T5B																																																																																																																																																				
Basic function		Changeoverswitches with black thumb grip and front plate																																																																																																																																																				
Contacts		18																																																																																																																																																				
Degree of Protection		Front IP65																																																																																																																																																				
Design		flush mounting 																																																																																																																																																				
Contact sequence		<table border="1" style="border-collapse: collapse; text-align: center;"> <thead> <tr> <th></th> <th>1</th> <th>0</th> <th>2</th> </tr> </thead> <tbody> <tr><td>1</td><td>X</td><td></td><td></td></tr> <tr><td>2</td><td></td><td></td><td>X</td></tr> <tr><td>3</td><td></td><td></td><td></td></tr> <tr><td>4</td><td></td><td></td><td>X</td></tr> <tr><td>5</td><td>X</td><td></td><td></td></tr> <tr><td>6</td><td>X</td><td></td><td></td></tr> <tr><td>7</td><td></td><td></td><td>X</td></tr> <tr><td>8</td><td></td><td></td><td>X</td></tr> <tr><td>9</td><td>X</td><td></td><td></td></tr> <tr><td>10</td><td>X</td><td></td><td></td></tr> <tr><td>11</td><td></td><td></td><td>X</td></tr> <tr><td>12</td><td></td><td></td><td>X</td></tr> <tr><td>13</td><td>X</td><td></td><td></td></tr> <tr><td>14</td><td>X</td><td></td><td></td></tr> <tr><td>15</td><td></td><td></td><td>X</td></tr> <tr><td>16</td><td></td><td></td><td>X</td></tr> <tr><td>17</td><td>X</td><td></td><td></td></tr> <tr><td>18</td><td>X</td><td></td><td></td></tr> <tr><td>19</td><td></td><td></td><td>X</td></tr> <tr><td>20</td><td></td><td></td><td>X</td></tr> <tr><td>21</td><td>X</td><td></td><td></td></tr> <tr><td>22</td><td>X</td><td></td><td></td></tr> <tr><td>23</td><td></td><td></td><td>X</td></tr> <tr><td>24</td><td></td><td></td><td>X</td></tr> <tr><td>25</td><td>X</td><td></td><td></td></tr> <tr><td>26</td><td>X</td><td></td><td></td></tr> <tr><td>27</td><td></td><td></td><td>X</td></tr> <tr><td>28</td><td></td><td></td><td>X</td></tr> <tr><td>29</td><td>X</td><td></td><td></td></tr> <tr><td>30</td><td></td><td></td><td>X</td></tr> <tr><td>31</td><td></td><td></td><td>X</td></tr> <tr><td>32</td><td></td><td></td><td>X</td></tr> <tr><td>33</td><td>X</td><td></td><td></td></tr> <tr><td>34</td><td></td><td></td><td>X</td></tr> <tr><td>35</td><td></td><td></td><td>X</td></tr> <tr><td>36</td><td></td><td></td><td>X</td></tr> </tbody> </table>		1	0	2	1	X			2			X	3				4			X	5	X			6	X			7			X	8			X	9	X			10	X			11			X	12			X	13	X			14	X			15			X	16			X	17	X			18	X			19			X	20			X	21	X			22	X			23			X	24			X	25	X			26	X			27			X	28			X	29	X			30			X	31			X	32			X	33	X			34			X	35			X	36			X
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Switching angle	°	60																																																																																																																																																				
Switching performance		maintained With 0 (Off) position																																																																																																																																																				
Design number		8365																																																																																																																																																				

Front plate no.				
				<b>FS 684</b>
front plate				1-0-2
<b>Motor rating AC-23A, 50 - 60 Hz</b>				
400 V	P	kW		30
Rated uninterrupted current	$I_u$	A		63
Note on rated uninterrupted current $I_u$				Rated uninterrupted current $I_u$ is specified for max. cross-section.
Number of contact units		contact unit(s)		9

## Technical data

### General

Standards				IEC/EN 60947, VDE 0660, IEC/EN 60204, CSA, UL Switch-disconnector according to IEC/EN 60947-3
Climatic proofing				Damp heat, constant, to IEC 60068-2-78 Damp heat, cyclic, to IEC 60068-2-30
Ambient temperature				
Open		°C		-25 - +50
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		63
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		$\times I_e$		2
AB 40 % DF		$\times I_e$		1.6
AB 60 % DF		$\times I_e$		1.3
Short-circuit rating				
Fuse		A gG/gL		80
Rated short-time withstand current (1 s current)	$I_{cw}$	$A_{rms}$		1300
Note on rated short-time withstand current $I_{cw}$				Current for a time of 1 second
Rated conditional short-circuit current	$I_q$	kA		2

### Switching capacity

$\cos \varphi$ rated making capacity as per IEC 60947-3		A		800
Rated breaking capacity $\cos \varphi$ to IEC 60947-3		A		
230 V		A		520
400/415 V		A		600
500 V		A		480
690 V		A		340
Safe isolation to EN 61140				
between the contacts		V AC		440
Current heat loss per contact at $I_e$		W		4.5
Current heat loss per auxiliary circuit at $I_e$ (AC-15/230 V)		CO		4.5
Lifespan, mechanical	Operations	$\times 10^6$		> 0.5
Maximum operating frequency	Operations/h			1200

AC			
AC-3			
Rating, motor load switch	P	kW	
220 V 230 V	P	kW	15
230 V Star-delta	P	kW	18.5
400 V 415 V	P	kW	22
400 V Star-delta	P	kW	30
500 V	P	kW	22
500 V Star-delta	P	kW	37
690 V	P	kW	15
690 V Star-delta	P	kW	22
Rated operational current motor load switch			
230 V	I <sub>e</sub>	A	51
230 V star-delta	I <sub>e</sub>	A	63
400V 415 V	I <sub>e</sub>	A	41
400 V star-delta	I <sub>e</sub>	A	63
500 V	I <sub>e</sub>	A	33
500 V star-delta	I <sub>e</sub>	A	57.2
690 V	I <sub>e</sub>	A	17
690 V star-delta	I <sub>e</sub>	A	29.4
AC-21A			
Rated operational current switch			
440 V	I <sub>e</sub>	A	63
AC-23A			
Motor rating AC-23A, 50 - 60 Hz			
230 V	P	kW	18.5
400 V 415 V	P	kW	30
500 V	P	kW	22
690 V	P	kW	22
Rated operational current motor load switch			
230 V	I <sub>e</sub>	A	63
400 V 415 V	I <sub>e</sub>	A	63
500 V	I <sub>e</sub>	A	33
690 V	I <sub>e</sub>	A	23.8
DC			
DC-1, Load-break switches L/R = 1 ms			
Rated operational current	I <sub>e</sub>	A	63
Voltage per contact pair in series		V	60
DC-23A, motor load switch L/R = 15 ms			
24 V			
Rated operational current	I <sub>e</sub>	A	50
Contacts		Quantity	1
48 V			
Rated operational current	I <sub>e</sub>	A	50
Contacts		Quantity	2
60 V			
Rated operational current	I <sub>e</sub>	A	50
Contacts		Quantity	3
120 V			
Rated operational current	I <sub>e</sub>	A	25
Contacts		Quantity	3
240 V			
Rated operational current	I <sub>e</sub>	A	20
Contacts		Quantity	6

DC-13, Control switches L/R = 50 ms			
Rated operational current	$I_e$	A	25
Voltage per contact pair in series		V	24
Control circuit reliability at 24 V DC, 10 mA	Fault probability	$H_F$	$< 10^{-5}$ , $< 1$ failure in 100,000 switching operations

### Terminal capacities

Solid or stranded		mm <sup>2</sup>	1 x (2,5 - 35) 2 x (2,5 - 16)
Flexible with ferrules to DIN 46228		mm <sup>2</sup>	1 x (1 - 25) 2 x (1.5 - 10)
Terminal screw			M6
Tightening torque for terminal screw		Nm	4

### Technical safety parameters:

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

Contacts			
Rated operational voltage	$U_e$	V AC	600
Rated uninterrupted current max.			
Main conducting paths			
General use		A	63
Switching capacity			
Maximum motor rating			
Single-phase			
120 V AC		HP	3
200 V AC		HP	7.5
240 V AC		HP	10
Three-phase			
200 V AC		HP	15
240 V AC		HP	15
480 V AC		HP	40
600 V AC		HP	40
Short Circuit Current Rating			
High fault rating		kA	10
max. Fuse		A	100, Class J
Terminal capacity			
Solid or flexible conductor with ferrule		AWG	12 - 4
Terminal screw			M6
Tightening torque		lb-in	35.4

### Design verification as per IEC/EN 61439

Technical data for design verification			
Rated operational current for specified heat dissipation	$I_n$	A	63
Heat dissipation per pole, current-dependent	$P_{vid}$	W	4.5
Equipment heat dissipation, current-dependent	$P_{vid}$	W	0
Static heat dissipation, non-current-dependent	$P_{vs}$	W	0
Heat dissipation capacity	$P_{diss}$	W	0
Operating ambient temperature min.		°C	-25
Operating ambient temperature max.		°C	50
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 Inscriptions		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.

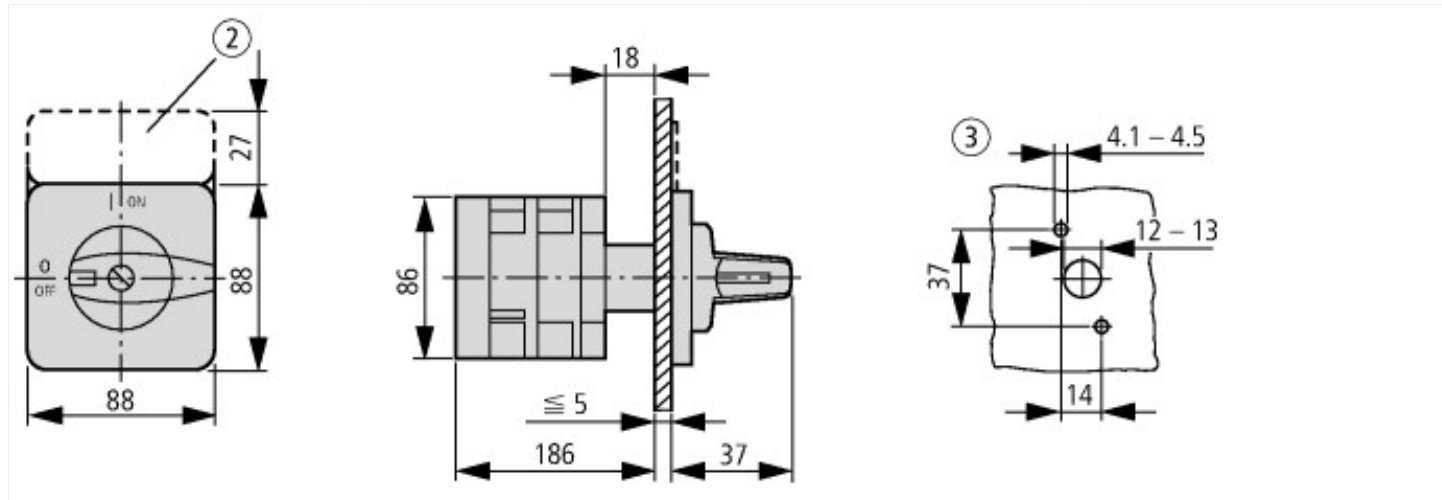
## Technical data ETIM 7.0

Low-voltage industrial components (EG000017) / Off-load switch (EC001105)			
Electric engineering, automation, process control engineering / Low-voltage switch technology / Off-load switch, circuit breaker, control switch / Changeover switch (ecl@ss10.0.1-27-37-14-05 [AKF062013])			
Model			Reverser
Number of poles			9
With 0 (off) position			Yes
With retraction in 0-position			No
Rated permanent current I <sub>u</sub>		A	63
Rated operation current I <sub>e</sub> at AC-3, 400 V		A	41
Rated operation power at AC-3, 400 V		kW	22
Degree of protection (IP), front side			IP65
Degree of protection (NEMA), front side			12
Number of auxiliary contacts as normally closed contact			0
Number of auxiliary contacts as normally open contact			0
Number of auxiliary contacts as change-over contact			0
Suitable for ground mounting			No
Suitable for front mounting 4-hole			Yes
Suitable for distribution board installation			No
Suitable for intermediate mounting			No
Complete device in housing			No
Material housing			Plastic
Type of control element			Toggle
Type of electrical connection of main circuit			Screw connection

## Approvals

Product Standards			UL 60947-4-1; CSA - C22.2 No. 60947-4-1-14; CSA-C22.2 No. 94; IEC/EN 60947-3; CE marking
UL File No.			E36332
UL Category Control No.			NLRV
CSA File No.			12528
CSA Class No.			3211-07
North America Certification			UL listed, CSA certified
Suitable for			Branch circuits, suitable as motor disconnect
Degree of Protection			IEC: IP65; UL/CSA Type 1, 12

**Dimensions**



② ZFS... Label mount not included as standard

③ Drilling dimensions door

Cam switches T5B and T5 are of identical design, only their contacts are different



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