
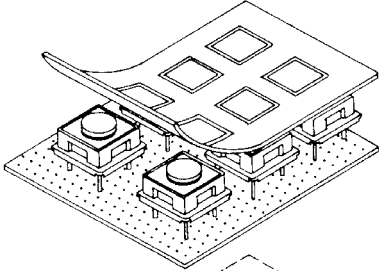
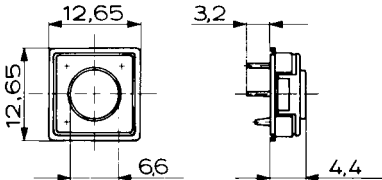
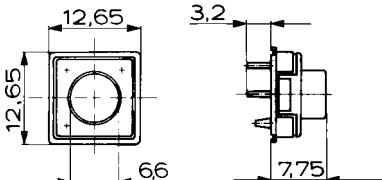
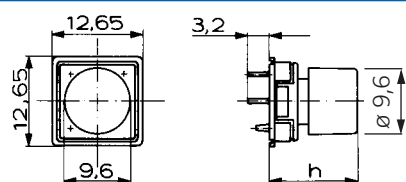
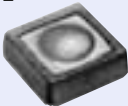

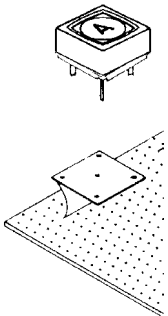
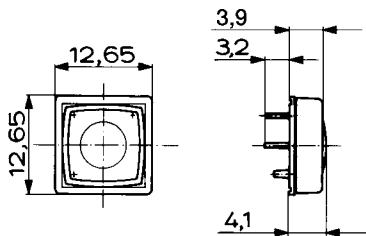


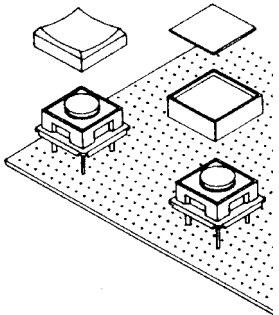
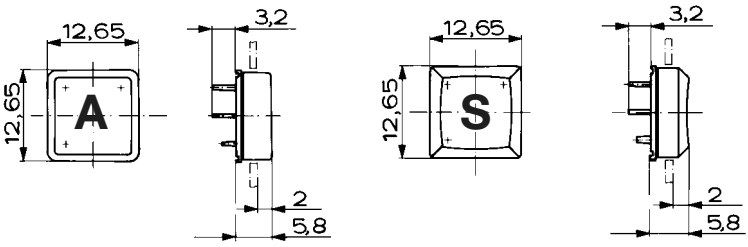


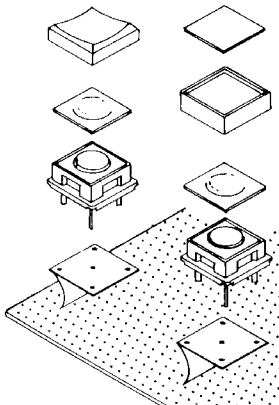
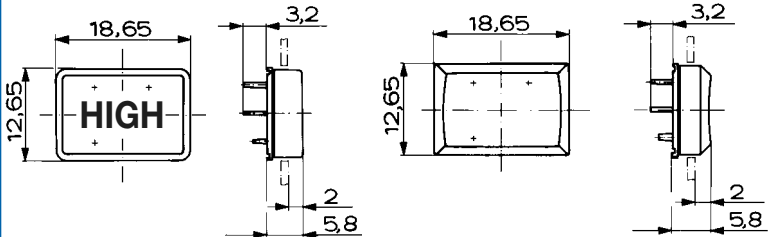


Taster MTG, MCS, MTP 1/2"

Switches in momentary action MTG, MCS, MTP 1/2"

Ausführungen Models	Aufbau Construction	Abmessungen Dimensions
<p>MTG 1/2"</p> 		   <p>Gesamthöhe h variabel / Overall height h variable</p>
<p>MCS 1/2"</p>  <p>MCS 1/2"</p> 		
<p>MTP 1/2"</p>  <p>MTP 1/2"</p> 		
<p>MTP 1/2"</p>  <p>MTP 1/2"</p> 		

1. Mechanische Kennwerte / Mechanical data	MTG	MCS	MTP
Betätigungskraft Actuating force	2,5N ±0,5N	3N ±0,5N	IP40: 2,3N ±0,5N IP65: 2,0N ±0,4N
Schaltweg Contact travel	0,45mm ±0,1mm	0,45mm ±0,1mm	IP40: 0,45mm ±0,05 IP54: 0,25mm ±0,05
Endanschlagfestigkeit (DIN 41640 Teil 19) / End stop strength	> 50N		
Lebensdauer (IEC 512-5 Test 9a, Betätigungskraft 5N) / Lifetime	> 10 ⁶ Betätigungen / Operations		

2. Elektrische Kennwerte / Electrical data	MTG	MCS	MTP
Kontaktmaterial / Contact material	Gold / Gold	Silber / Silver	
Schaltspannung max. / Switching voltage max.	max. 24V DC	max. 48V DC	
Schaltstrom max. / Switching current max.	max. 50mA	max. 125mA	
Nennschaltleistung / Rated breaking capacity	0,48W	2,40W	
Lebensdauer (bei Nennschaltleistung) Lifetime (at rated breaking capacity)	> 10 ⁶ Schaltungen Cycles		
Durchgangswiderstand, neu (IEC 512-2, mV-Methode) Initial contact resistance, new	< 50mΩ		
Durchgangswiderstand, nach 10 ⁶ Schaltungen Initial contact resistance, after 10 ⁶ cycles	< 50mΩ		
Isolationswiderstand (IEC 512-2) / Insulation resistance	> 10 ⁸ Ω		
Prellzeit / Contact bounce time	typ. 0,1ms		

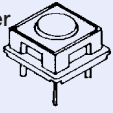
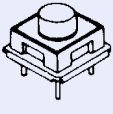
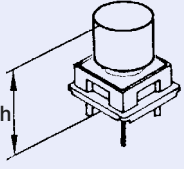
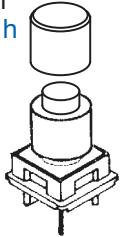
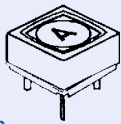
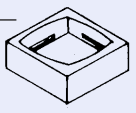

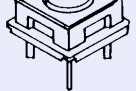
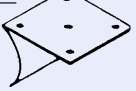
3. Sonstige Kennwerte / Other data	MTG	MCS	MTP
Schutzgrad / Degree of protection	IP 40	IP 65	IP 40 / IP 65
Lötbarkeit / Solderability (IEC 68-2-20 Test Ta, Methode 1)	235 °C / 2s		
Lötwärmebeständigkeit (IEC 68-2-20 Test Tb, Methode 1A) Soldering heat resistance	260 °C / 5s		
Umgebungstemperatur / Ambient temperature	-25 °C...+85 °C		
Lagertemperatur / Storage temperature	-25 °C...+85 °C		

4. Werkstoffe / Materials	MTG	MCS	MTP
Kontaktmaterial Gold / Contact material gold	CuZn -3µm Ni +2µm Au		
Kontaktmaterial Silber / Contact material silver	CuZn - 2,5µm Ag passiviert / passivated		
Sockel / Socket	Thermoplast PES		
Betätiger / Actuator	Thermoplast PC		

Bohrbild / Drilling diagram	Schaltymbol / Circuit diagram
<p> $\phi = \phi 1^{+0,1}$ $\phi = \phi 1,3^{+0,1}$ </p>	

Taster MTG, MCS 1/2"

Switches in momentary action MTG, MCS 1/2"

Ausführungen Models MTG 1/2"	Varianten Variations		Artikelnummer Part Number			
kurzer Betätiger short actuator 	Kontaktmaterial Contact material	Ag	1241.1052			
		Au	1241.1002			
		Ag	1241.1072			
		Au	1241.1022			
langer Betätiger long actuator 	Kontaktmaterial Contact material	Ag	1241.1082.XX			
		Au	1241.1032.XX			
höhenvariabel height variable 	Gesamthöhe h Overall height h 	(gelb / yellow)	8,50 mm = 1	14,50 mm = 11		
		(orange / orange)	9,25 mm = 2	15,25 mm = 21		
		(rot / red)	10,00 mm = 3	16,00 mm = 31		
		(blau / blue)	10,75 mm = 4	16,75 mm = 41		
		(grün / green)	11,50 mm = 5	17,50 mm = 51		
		(grau / grey)	12,25 mm = 6	18,25 mm = 61		
		(schwarz / black)	13,00 mm = 7	19,00 mm = 71		
		(weiß / white)	13,75 mm = 8	19,75 mm = 81		
		*Ab 14,50 mm werden die Höhen mit einer zusätzl. (zweiten) Verlängerungskappe realisiert. Starting with 14,50 mm, the heights were realized with an additional (second) keycap.				
		MCS 1/2" Ohne Dichtung zur Platine Without sealing pad on reverse side 	Kontaktmaterial Contact material	Ag	1241.1053.X.XXX	
	Au		1241.1003.X.XXX			
Farbe der Blende Colour of bezel	rot red				3	
	grün green				5	
	grau grey				6	
	schwarz black				7	
	weiß white			8		
Beschriftung Tastenfeld (Schrifthöhe/ Schriftarten siehe Seite 39) Legend of face foil (Type height/ type face see page 39)  Blende Bezel  Tastenfeld Face foil  Grundmodul Base module  Dichtung (auf Anfrage) Sealing pad (on request)	A = 001	P = 016	4 = 031	⇕ = 046	EIN = 061	
	B = 002	Q = 017	5 = 032	→ = 047	AUS = 062	
	C = 003	R = 018	6 = 033	← = 048	AUF = 063	
	D = 004	S = 019	7 = 034	↓ = 049	AB = 064	
	E = 005	T = 020	8 = 035	↑ = 050	ON = 065	
	F = 006	U = 021	9 = 036	% = 051	OFF = 066	
	G = 007	V = 022	+ = 037	√ = 052	UP = 067	
	H = 008	W = 023	- = 038	CTRL = 053	DOWN = 068	
	I = 009	X = 024	. = 039	RETURN = 054	HIGH = 069	
	J = 010	Y = 025	x = 040	SHIFT = 055	LOW = 070	
	K = 011	Z = 026	÷ = 041	LOCK = 056	ON/OFF = 071	
	L = 012	0 = 027	* = 042	STOP = 057	START = 072	
	M = 013	1 = 028	= = 043	ENTER = 058		
	N = 014	2 = 029	# = 044	BACK = 059		
	O = 015	3 = 030	↔ = 045	LINE = 060		
Farbe des Tastenfeldes bei unbeschrifteter Ausführung Colour of face foil without legend	gelb yellow	= 091	grau grey	= 096		
	orange orange	= 092	schwarz black	= 097		
	rot red	= 093	weiß white	= 098		
	blau blue	= 094	anthrazit anthracite	= 099		
	grün green	= 095				

Taster MTP 1/2" Switches in momentary action MTP 1/2"

Ausführungen Models	Varianten Variations	Artikelnummer Part Number																																																																											
MTP 1/2" IP 40																																																																													
Form 1 Shape 1 	Kontaktmaterial Contact material Ag Au	1241.1057.X.XXX 1241.1007.X.XXX																																																																											
Form 2 Shape 2 	Ag Au	1241.1055.X.XXX 1241.1005.X.XXX																																																																											
MTP 1/2" IP 65																																																																													
Form 1 ohne Dichtung Shape 1 without sealing pad 	Kontaktmaterial Contact material Ag Au	1241.1091.X.XXX 1241.1041.X.XXX																																																																											
Form 2 ohne Dichtung Shape 2 without sealing pad 	Ag Au	1241.1090.X.XXX 1241.1040.X.XXX																																																																											
MTP 1/2" IP 65																																																																													
Form 1 Shape 1 	Ag	1241.1088.X.XXX																																																																											
Form 2 Shape 2 	Ag	1241.1086.X.XXX																																																																											
Form 1 / Shape 1	Farbe der Tastkappe Colour of key cap	rot red 3 grün green 5 grau grey 6 schwarz black 7 weiß white 8																																																																											
<p>IP 40 IP 65</p>	<p>Beschriftung Tastkappe/Einlegeschild (Schrifthöhe/ Schriftarten siehe Seite 39)</p> <p>Legend of key cap/insert plate (Type height/ type face see page 39)</p>	<table border="0"> <tr> <td>A= 001</td> <td>P= 016</td> <td>4= 031</td> <td>⇕= 046</td> <td>EIN= 061</td> </tr> <tr> <td>B= 002</td> <td>Q= 017</td> <td>5= 032</td> <td>→= 047</td> <td>AUS= 062</td> </tr> <tr> <td>C= 003</td> <td>R= 018</td> <td>6= 033</td> <td>←= 048</td> <td>AUF= 063</td> </tr> <tr> <td>D= 004</td> <td>S= 019</td> <td>7= 034</td> <td>↓= 049</td> <td>AB= 064</td> </tr> <tr> <td>E= 005</td> <td>T= 020</td> <td>8= 035</td> <td>↑= 050</td> <td>ON= 065</td> </tr> <tr> <td>F= 006</td> <td>U= 021</td> <td>9= 036</td> <td>%= 051</td> <td>OFF= 066</td> </tr> <tr> <td>G= 007</td> <td>V= 022</td> <td>+ = 037</td> <td>√ = 052</td> <td>UP= 067</td> </tr> <tr> <td>H= 008</td> <td>W= 023</td> <td>- = 038</td> <td>CTRL= 053</td> <td>DOWN= 068</td> </tr> <tr> <td>I= 009</td> <td>X= 024</td> <td>· = 039</td> <td>RETURN= 054</td> <td>HIGH= 069</td> </tr> <tr> <td>J= 010</td> <td>Y= 025</td> <td>x = 040</td> <td>SHIFT= 055</td> <td>LOW= 070</td> </tr> <tr> <td>K= 011</td> <td>Z= 026</td> <td>÷ = 041</td> <td>LOCK= 056</td> <td>ON/OFF= 071</td> </tr> <tr> <td>L= 012</td> <td>0= 027</td> <td>* = 042</td> <td>STOP= 057</td> <td>START= 072</td> </tr> <tr> <td>M= 013</td> <td>1= 028</td> <td>= = 043</td> <td>ENTER= 058</td> <td></td> </tr> <tr> <td>N= 014</td> <td>2= 029</td> <td># = 044</td> <td>BACK= 059</td> <td></td> </tr> <tr> <td>O= 015</td> <td>3= 030</td> <td>↔ = 045</td> <td>LINE= 060</td> <td></td> </tr> </table>	A= 001	P= 016	4= 031	⇕= 046	EIN= 061	B= 002	Q= 017	5= 032	→= 047	AUS= 062	C= 003	R= 018	6= 033	←= 048	AUF= 063	D= 004	S= 019	7= 034	↓= 049	AB= 064	E= 005	T= 020	8= 035	↑= 050	ON= 065	F= 006	U= 021	9= 036	%= 051	OFF= 066	G= 007	V= 022	+ = 037	√ = 052	UP= 067	H= 008	W= 023	- = 038	CTRL= 053	DOWN= 068	I= 009	X= 024	· = 039	RETURN= 054	HIGH= 069	J= 010	Y= 025	x = 040	SHIFT= 055	LOW= 070	K= 011	Z= 026	÷ = 041	LOCK= 056	ON/OFF= 071	L= 012	0= 027	* = 042	STOP= 057	START= 072	M= 013	1= 028	= = 043	ENTER= 058		N= 014	2= 029	# = 044	BACK= 059		O= 015	3= 030	↔ = 045	LINE= 060	
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Form 2 / Shape 2	Farbe des Einlegeschildes bei unbeschrifteter Ausführung Form 1 Colour of insert plate without legend shape 1	gelb yellow = 091 grau grey = 096 orange orange = 092 schwarz black = 097 rot red = 093 weiß white = 098 blau blue = 094 anthrazit anthracite = 099 grün green = 095																																																																											
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