

DATA SWITCHES-MOMENTARY (HDT, SDK) ACTION



BENEFITS

- High life time with maximum quality materials
- Compact design with SMD assembly (HDT)
- Suitable for state-of-the-art soldering techniques (HDT)
- Extremely good illumination (HDT)
- Various contact materials for every field of application
- Tested to degree of protection IP 40 and IP 65 (HDT)

Switching voltage max. [V] So DC/60 AC So DC/125 AC		HDT	SDK		
Switching voltage max. IV 50 DC/60 AC 50 DC/125 AC Switching current max. 200 mA silver 2A AC /1.2A DC gold 80 mA/AC pC gold 80 mA/AC	Flectrical data		1157	OSIC	
Cifetime (at rated breaking capacity) 2 x > 10° 10° 10° 11°			50 DC/60 AC	50 DC/125 AC	
Cifetime (at rated breaking capacity) 2 x > 10° 310°	ÿ ÿ		200 mA	silver 2A AC /1.2A DC	
Initial contact resistance, new [m:Q] <30 silver <10 / gold <20	Sittering Garrette Hazi			gold 80 mA/AC DC	
Initial contact resistance, after lifetime [mu]	Lifetime (at rated breaking capacity)		2 x > 10 ⁵	> 105	
Insulation resistance [23]	Initial contact resistance, new $[m\Omega]$		< 30	silver < 10 / gold < 20	
Contact bounce time [ms] typ. 0.5 Mechanical data Actuating force IP 40 [N] 1.5 ± 0.3 3 − 5 Contact travel NO [mm] 1.2 ± 0.2 2.4 ± 0.3 End contact travel [mm] 2.5 ± 0.1 3.3 ± 0.4 End stop strength [N] >100 >100 Lifetime [operations] >5 x 10° >2 x 10° Other data **** *** *** *** *** *** *** *** *** *	Initial contact resistance, after lifetime $[m\Omega]$		< 50		
Mechanical data	Insulation resistance	[Ω]	> 1010	> 109	
Actuating force IP 40 [N] IP 65 [N] 1.5 ± 0.3 (2.5 ± 0.5) 3 - 5 (2.5 ± 0.5) Contact travel NO [mm] 1.2 ± 0.2 (2.4 ± 0.3) 2.4 ± 0.3 End contact travel [mm] 2.5 ± 0.1 (3.3 ± 0.4) 3.3 ± 0.4 End stop strength [m] > 100 (3.5 ± 0.1) > 100 (3.5 ± 0.1) Lifetime [operations] > 5 x 10° (3.5 ± 0.1) > 2 x 10° (3.5 ± 0.1) Other data Degree of protection IP 40 / IP 65 (3.5 ± 0.1) IP 40 Soldering heat resistance IEC 68-2-20 test Tb, method 1/P (6/s) (1.5 ± 0.2) 2 260 / 10 2 260 / 5 IEC 68-2-20 test Tb, method 1/P (7/s) (1.5 ± 0.2) 2 260 / 10 2 260 / 5 2 260 / 10 <t< td=""><td>Contact bounce time</td><td>[ms]</td><td colspan="2">typ. 0.5</td><td></td></t<>	Contact bounce time	[ms]	typ. 0.5		
P 65 [N] 2.5 ± 0.5	Mechanical data				
Contact travel NO [mm] 1.2 ± 0.2 2.4 ± 0.3 End contact travel [mm] 2.5 ± 0.1 3.3 ± 0.4 End stop strength [N] >100 >100 Lifetime [operations] >5 x 10° >2 x 10° Other data Degree of protection IP 40 / IP 65 IP 40 Solderability (EEC 68-2-20 test Ta, method 1A) [°C/s] 235 / 2 Soldering heat resistance IEC 68-2-20 test Ta, method 1 [°C/s] 260 / 10 IEC 68-2-20 test Tb, method 1A, print-mounting [°C/s] 260 / 10 IEC 68-2-20 test Tb, method 2, print-mounting [°C/s] 350 / 10 CECC 00802 classification B, SMT-mounting [°C/s] 215 / 40 CECC 00802 classification C, SMT-mounting [°C/s] 260 / 10 Ambient temperature [°C] -40 - +85 -40 - +85 Storage temperature [°C] -40 - +85 -40 - +85 Storage temperature [°C] -40 - +85 -40 - +85 Storage temperature [°C] -40 - +85 -40 - +85 Storage temperature [°C] -40 - +85 </td <td>Actuating force</td> <td>P 40 [N]</td> <td>1.5 ± 0.3</td> <td>3 – 5</td> <td></td>	Actuating force	P 40 [N]	1.5 ± 0.3	3 – 5	
End contact travel (mm) 2.5 ± 0.1 3.3 ± 0.4 End stop strength (N) > 100 > 100 Lifetime (operations) > 5 x 10 ⁵ > 2 x 10 ⁵ Other data Degree of protection IP 40 / IP 65 IP 40 Solderability (CECC 00802 and IEC 68-2-20) (IEC 68-2-20 test Ta, method 1A) [PC/s] 235 / 2 Soldering heat resistance IEC 68-2-20 test Tb, method 1A, print-mounting [PC/s] 260 / 10 IEC 68-2-20 test Tb, method 1A, print-mounting [PC/s] 350 / 10 CECC 00802 classification B, SMT-mounting [PC/s] 260 / 10 CECC 00802 classification B, SMT-mounting [PC/s] 260 / 10 CECC 00802 classification C, SMT-mounting [PC/s] 260 / 10 Ambient temperature PC -40 - +85 -40 - +85 Storage temperature PC -40 - +85 -40 - +85 Cleaning agent proof Zestron Flux proof given Materials Socket, cover, contact unit, carrier ring Thermoplast PA 4.6 Thermoplast PC Button non-illuminated Thermoplast PA 4.6 Thermoplast PC Button illuminated Thermoplast PC	ı	P 65 [N]	2.5 ± 0.5		
End stop strength [N] > 100 > 100 Lifetime [operations] > 5 x 10 ⁶ > 2 x 10 ⁶ Other data Degree of protection IP 40 / IP 65 IP 40 Solderability (CECC 00802 and IEC 68-2-20) (IEC 68-2-20 test Ta, method 1A) [°C/s] Soldering heat resistance IEC 68-2-20 test Tb, method 1 [°C/s] IEC 68-2-20 test Tb, method 1A, print-mounting [°C/s] IEC 68-2-20 test Tb, method 2, print-mounting [°C/s] CECC 00802 classification B, SMT-mounting [°C/s] CECC 00802 classification C, SMT-mounting [°C/s] Ambient temperature [°C] -40 − +85 -40 − +85 Storage temperature [°C] -40 − +85 -40 − +85 Cleaning agent proof Zestron Flux proof given Materials Socket, cover, contact unit, carrier ring Thermoplast PA 4.6 Thermoplast PC Button non-illuminated Thermoplast PA 4.6 Thermoplast PC Button illuminated Thermoplast PE S Sealing ring Silicon tempered Terminals CuZn, 3μm Ag, hot tinned	Contact travel	IO [mm]	1.2 ± 0.2	2.4 ± 0.3	
Lifetime (operations) S x 10° S x 10° Other data	End contact travel	[mm]	2.5 ± 0.1	3.3 ± 0.4	
Other data Degree of protection IP 40 / IP 65 IP 40 Solderability (CECC 00802 and IEC 68-2-20) 235 / 2 (IEC 68-2-20 test Ta, method 1A) [°C/s] 235 / 2 Soldering heat resistance IEC 68-2-20 Test Tb, method 1A, print-mounting [°C/s] 260 / 10 IEC 68-2-20 test Tb, method 2A, print-mounting [°C/s] 260 / 10 IEC 68-2-20 test Tb, method 2. print-mounting [°C/s] 350 / 10 CECC 00802 classification B, SMT-mounting [°C/s] 215 / 40 CECC 00802 classification C, SMT-mounting [°C/s] 260 / 10 Ambient temperature [°C] -40 - +85 -40 - +85 Storage temperature [°C] -40 - +85 -40 - +85 Cleaning agent proof Zestron Testron Flux proof given Thermoplast PA 4.6 Thermoplast PC Button non-illuminated Thermoplast PA 4.6 Thermoplast PC Button illuminated Thermoplast PES Sealing ring Silicon tempered Terminals CuZn, 3µm Ag, hot tinned Terminals Terminals	End stop strength	[N]	> 100	> 100	
Degree of protection IP 40 / IP 65 IP 40 Solderability (CEC 00802 and IEC 68-2-20) (IEC 68-2-20 test Ta, method 1A) [°C/s] 235 / 2 Soldering heat resistance IEC 68-2-20 Test Tb, method 1 [°C/s] IEC 68-2-20 test Tb, method 1A, print-mounting [°C/s] IEC 68-2-20 test Tb, method 2, print-mounting [°C/s] 350 / 10 CECC 00802 classification B, SMT-mounting [°C/s] 215 / 40 CECC 00802 classification C, SMT-mounting [°C/s] 260 / 10 260 / 10 CECC 00802 classification B, SMT-mounting [°C/s] 260 / 10 CECC 00802 classification C, SMT-mounti	Lifetime [operations]		>5 x 10 ⁵	> 2 x 10 ⁵	
Solderability (CECC 00802 and IEC 68-2-20)	Other data				
CEC 68-2-20 test Ta, method 1A) [°C/s] 235 / 2	Degree of protection		IP 40 / IP 65	IP 40	
Soldering heat resistance EC 68-2-20 Test Tb, method 1 °C/s 260 / 10	Solderability (CECC 00802 and IEC 68-2-20)				
IEC 68-2-20 test Tb, method 1A, print-mounting [°C/s] 260 / 10 IEC 68-2-20 test Tb, method 2, print-mounting [°C/s] 350 / 10 CECC 00802 classification B, SMT-mounting [°C/s] 215 / 40 CECC 00802 classification C, SMT-mounting [°C/s] 260 / 10 Ambient temperature [°C	(IEC 68-2-20 test Ta, method 1A) [°C/s]				
IEC 68-2-20 test Tb, method 2, print-mounting [°C/s] 350 / 10 CECC 00802 classification B, SMT-mounting [°C/s] 215 / 40 CECC 00802 classification C, SMT-mounting [°C/s] 260 / 10 Ambient temperature [°C] -40 - +85 -40 - +85 Storage temperature [°C] -40 - +85 -40 - +85 Cleaning agent proof Zestron Flux proof given Materials Socket, cover, contact unit, carrier ring Thermoplast PA 4.6 Thermoplast PC Button non-illuminated Thermoplast PA 4.6 Thermoplast PC Button illuminated Thermoplast PES Sealing ring Silicon tempered Terminals CuZn, 3 µm Ag, hot tinned	<u> </u>		2/0/10	260 / 5	
CECC 00802 classification B, SMT-mounting [°C/s] 215 / 40 CECC 00802 classification C, SMT-mounting [°C/s] 260 / 10 Ambient temperature [°C] -40 - +85 -40 - +85 Storage temperature [°C] -40 - +85 -40 - +85 Cleaning agent proof Zestron Flux proof given Materials Socket, cover, contact unit, carrier ring Thermoplast PA 4.6 Thermoplast PC Button non-illuminated Thermoplast PA 4.6 Thermoplast PC Button illuminated Thermoplast PES Sealing ring Silicon tempered Terminals CuZn, 3 µm Ag, hot tinned	•				
CECC 00802 classification C, SMT-mounting [°C/s] 260 / 10 Ambient temperature [°C] -40 - +85 -40 - +85 Storage temperature [°C] -40 - +85 -40 - +85 Cleaning agent proof Zestron Flux proof given Materials Socket, cover, contact unit, carrier ring Thermoplast PA 4.6 Thermoplast PC Button non-illuminated Thermoplast PA 4.6 Thermoplast PC Button illuminated Thermoplast PES Sealing ring Silicon tempered Terminals CuZn, 3 µm Ag, hot tinned	•				
Storage temperature [°C] -40 - +85		-			
Cleaning agent proof Zestron Flux proof given Materials Socket, cover, contact unit, carrier ring Thermoplast PA 4.6 Thermoplast PC Button non-illuminated Thermoplast PA 4.6 Thermoplast PC Button illuminated Thermoplast PES Sealing ring Silicon tempered Terminals CuZn, 3 µm Ag, hot tinned	Ambient temperature	[°C]	-40 – +85	-40 - +85	
Flux proof given Materials Socket, cover, contact unit, carrier ring Thermoplast PA 4.6 Thermoplast PC Button non-illuminated Thermoplast PA 4.6 Thermoplast PC Button illuminated Thermoplast PES Sealing ring Silicon tempered Terminals CuZn, 3 µm Ag, hot tinned	Storage temperature	[°C]	-40 – +85	-40 - +85	
Materials Socket, cover, contact unit, carrier ring Thermoplast PA 4.6 Thermoplast PC Button non-illuminated Thermoplast PA 4.6 Thermoplast PC Button illuminated Thermoplast PES Sealing ring Silicon tempered Terminals CuZn, 3 µm Ag, hot tinned	Cleaning agent proof		Zestron		
Socket, cover, contact unit, carrier ring Thermoplast PA 4.6 Thermoplast PC Button illuminated Thermoplast PS Sealing ring Silicon tempered Terminals Thermoplast PA 4.6 Thermoplast PC Thermoplast	Flux proof		given		
Button non-illuminated Thermoplast PA 4.6 Thermoplast PC Button illuminated Thermoplast PES Sealing ring Silicon tempered Terminals CuZn, 3 µm Ag, hot tinned	Materials				
Button illuminated Thermoplast PES Sealing ring Silicon tempered Terminals CuZn, 3 µm Ag, hot tinned	Socket, cover, contact unit, carrier ring		Thermoplast PA 4.6	Thermoplast PC	
Sealing ring Silicon tempered Terminals CuZn, 3 µm Ag, hot tinned	Button non-illuminated		Thermoplast PA 4.6	Thermoplast PC	
Terminals CuZn, 3 µm Ag, hot tinned	Button illuminated		Thermoplast PES		
	Sealing ring		Silicon tempered		
0.000	Terminals		CuZn, 3 µm Ag, hot tinned		
Contacts CuBe2 HM, 5 µm Ag gold (2µ Au on hard silver)	Contacts		CuBe2 HM, 5 µm Ag	gold (2µ Au on hard silver)	

LED, see page 29

DIMENSIONS SWITCHES-MOMENTARY (HDT, SDK) ACTION

CONSTRUCTION HDT Through hole HDT Gullwing HDT J-Lead SDK DIMENSIONS 7.50 7.50 25,5 98 12.50 Clamp 7.90 7.50 20.50 3.00 20.50 20.50 3.00 DRILLING DIAGRAM/SOLDER PADS 50 ഹ 4.00+0.2 3.20+0.2 6.00 10.00 7.50 Drilling diagram = 1.25 mm Drilling diagram = 1.25 mm Drilling diagram = 1.25 mm Drilling for pin location ⊕= Ø1.2 + 0.1 Drilling for pin location ⊕= Ø1.2+0.1 Drilling for pin location ⊕= Ø1.2 + 0.1 Cut out Ø8mm Cut out Ø8mm Cut out Ø8mm CIRCUIT DIAGRAM fixed contact 1 pole fixed contact 1 pole fixed contact 1 pole NO NO NO



OVERVIEW HDT SWITCHES-MOMENTARY ACTION WITH SMALL BUTTON AND SDK SWITCHES-MOMENTARY ACTION-NON-ILLUMINATED



^{*} X in the Part No. must be replaced by the desired version

OVERVIEW HDT SWITCHES-MOMENTARY ACTION WITH SMALL BUTTON-ILLUMINATED



In addition to the versions with the small button, further versions with a large button and switching functions are available on request for HDT.

FEATURES Illumination illuminated illuminated Degree of protection IP 40 IP 65	
Degree of protection IP 40 IP 65	
PART NUMBER *	
Switching functions	
HDT NO 1-pole 1241.1 x 21.9 x 0 1241.1 x 31.9 x 0	
HDT NO 2-pole 1241.1 x 22.9 x 0 1241.1 x 32.9 x 0	
Terminal types	
A Through hole 7 B Gullwing 8	
B Gullwing 8 8 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	
Colour of LED	
red 1	
green 2 2	
blue 4	
Colour of small button	
with illumination transparent transparent transparent	
Terminal types:	
A Through hole B Gullwing C J-Lead	
A Through hole B Gullwing C J-Lead	

^{*} X in the Part No. must be replaced by the desired version



LETTERING

Depending on the application and font, there are various lettering possibilities. The following standards can be used for key letterings:

ORDER INDEX LETTERING

A = 001	P = 016	4 = 031	\$\rightarrow\$ = 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	$\mathbf{x} = 040$	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		LINE = 060	



MCS 18, LETTER HEIGHTS AND FONTS

- Single characters, Univers 65
- Legends max. 6 characters in line, Univers 65
- Insert label and front foil anthracite, RAL 7016
- Characters and symbols light grey, RAL 7035



SSM 27, LETTER HEIGHTS AND FONTS

- Single characters, Univers 65
- Legends max. 6 characters in line, Akzident-Grotesk condensed bold type
- Front foil anthracite, RAL 7016
- Characters and symbols light grey, RAL 7035



LIGHTING TECHNOLOGY

TECHNICAL DATA LEDS						
1. Maximum ratings						
Part number		0925.9730	0925.9731	0925.9732		
Light colour		red	green	yellow		
Forward current, DC	I _F max. [mA]	40	40	40		
Power dissipation	P tot max. [mW]	130	130	130		
2. Characteristics (typ. at T _U = 25 °C)						
Forward voltage	at I _F =10mA, U _F typ. [mA]	2.0 (< 2.6)	2.0 (< 2.6)	2.0 (< 2.6)		
Luminous intensity	at I _F =10mA, I _V typ. [mcd]	11.2 - 28	18 - 45	11.2 - 28		
Viewing angle	φtyp. [Dergree]	50	50	50		
Peak wave length	λ _{peak} typ. [nm]	635	565	586		
Reverse voltage	U _R typ. [V]	5	5	5		