
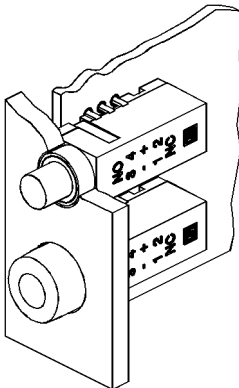
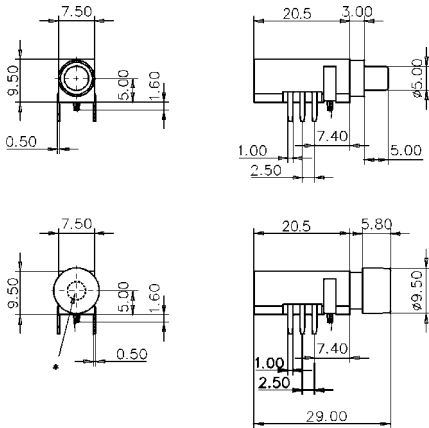
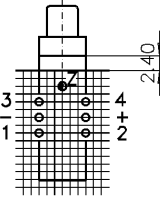
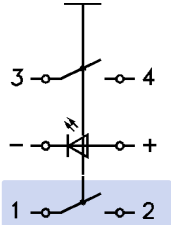

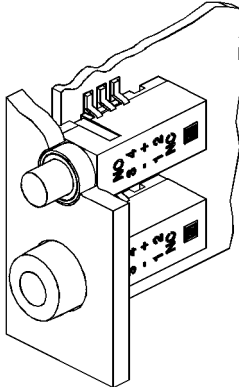
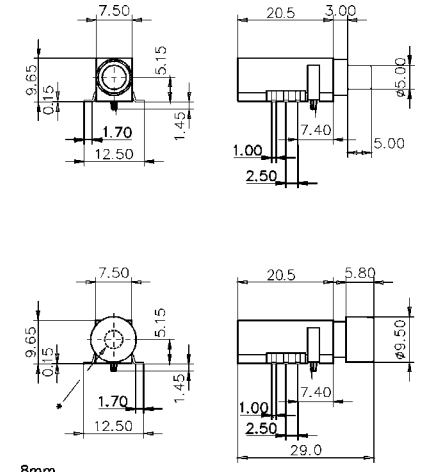
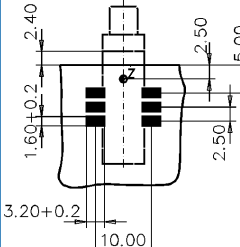
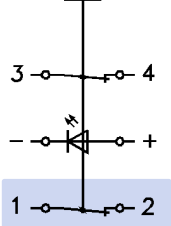

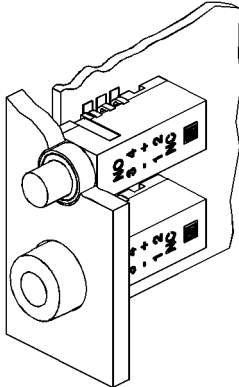
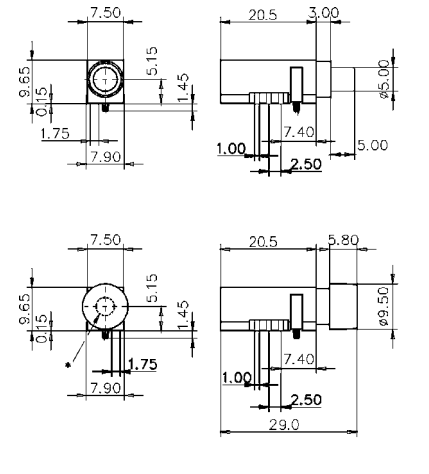
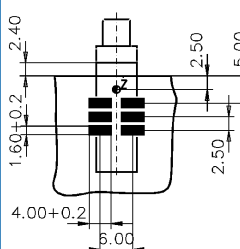
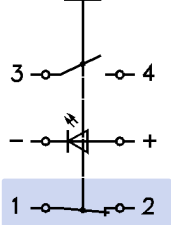


Switches in momentary action HDT and latching action

Models	Construction	Dimensions	Drilling diagram	Circuit diagram
			<p>Drilling diagramm = 1,25mm</p>  <p>Z = Drilling for pin location</p> <ul style="list-style-type: none"> ● = $\varnothing 1,2+0,1$ ○ = $\varnothing 1,2+0,1$ <p>Small button: cut out $\varnothing 8$mm</p> <p>Large button: cut out $\varnothing 10$mm</p>	<p>NO</p>  <p>fixed contact 1 pole</p>
		 <p>8mm</p>	<p>Drilling diagramm = 1,25mm</p>  <p>Z = Drilling for pin location</p> <ul style="list-style-type: none"> ● = $\varnothing 1,2+0,1$ <p>Small button: cut out $\varnothing 8$mm</p> <p>Large button: cut out $\varnothing 10$mm</p>	<p>NC</p>  <p>fixed contact 1 pole</p>
			<p>Drilling diagramm = 1,25mm</p>  <p>Z = Drilling for pin location</p> <ul style="list-style-type: none"> ● = $\varnothing 1,2+0,1$ <p>Small button: cut out $\varnothing 8$mm</p> <p>Large button: cut out $\varnothing 10$mm</p>	<p>NO/NC</p>  <p>fixed contact 1 pole</p>

Technical Data HDT, HDS

1. Mechanical data

Actuating force	IP 40	1,5 N ±0,3 N
	IP 65	2,5 N ±0,5 N
	washproof	2,5 N ±0,3 N
Contact travel	NO	1,2 mm ±0,2 mm
	NC	1,3 mm ±0,2 mm
End contact travel		2,5 mm ±0,1 mm
(DIN 41640 T. 19) / End stop strength		> 100 N
(IEC 512-5 Test 9a) / Lifetime		> 5 x 10 ⁵ Operations

2. Electrical data

Switching voltage max.	50 V DC / 60 V AC
Switching current max.	200 mA
Lifetime (rated interrupting capacity 1,2 W)	> 2 x 10 ⁵ Cycles
(IEC 512-2, mV-Method) Initial contact resistance, new	< 30 mΩ
Initial contact resistance, after 2 x 10 ⁵ cycles	< 50 mΩ
(IEC 512-2) / Insulation resistance	> 10 ¹⁰ Ω
Contact bounce time	typ. 0,5 ms

3. Other data

	PCB-mounting	SMT-mounting
Solderability	CECC 00802 and IEC 68-2-20	
Soldering heat resistance	IEC 68-2-20 Test Tb, Methode 1A	
	IEC 68-2-20 Test Tb, Methode 2	
	CECC 00802 Classification B	
	CECC 00802 Classification C	
Ambient temperature	-40 °C...+85 °C	
Storage temperature	-40 °C...+85 °C	
(IEC 68-2-45) Testmedium Cleaning agent proof	Zestron	
(DIN 41640 Teil 84) / Flux-proof	IP65	
Degree of protection	IP40 / IP65	

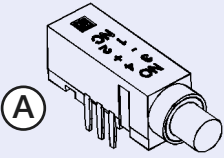
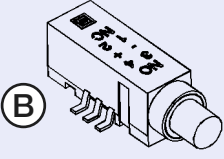
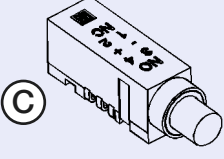



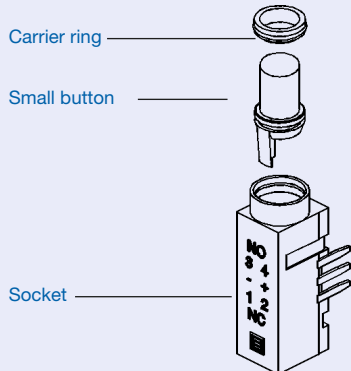
4. Materials

Socket, cover, contact unit, carrier ring	Thermoplast PA 4.6
Button non illuminated	Thermoplast PA 4.6
Button illuminated	Thermoplast PES
Sealing ring	Silicon tempered
Terminals	CuZn, 3 μm Ag, hot tinned
Contacts	CuBe2 HM, 5 μm Ag

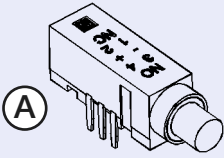
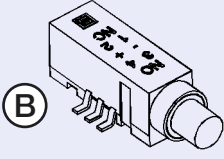
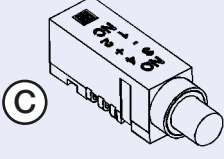
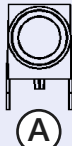


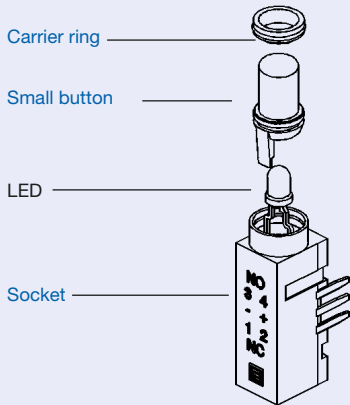
5. LED data

see page 38	0925.9730	0925.9731	0925.9732
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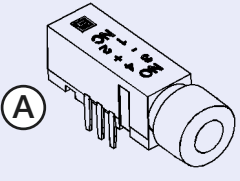
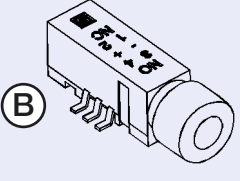
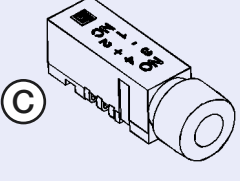
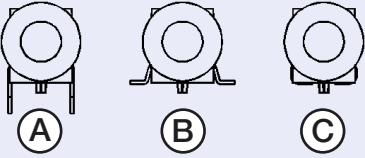
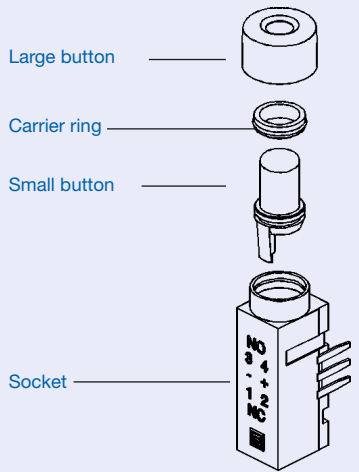
HDT with small button — non-illuminated

Models	Degree of protection	Variations	Part Number	
Momentary action   	IP 40	Switching functions	NO 1-pole	1241.1 X 01. X .0.0
			NO 2-pole	1241.1 X 02. X .0.0
			NC 1-pole	1241.1 X 03. X .0.0
			NC 2-pole	1241.1 X 04. X .0.0
			NC/NO 1pole	1241.1 X 05. X .0.0
	IP 65	Switching functions	NO 1-pole	1241.1 X 11. X .0.0
			NO 2-pole	1241.1 X 12. X .0.0
			NC 1-pole	1241.1 X 13. X .0.0
			NC 2-pole	1241.1 X 14. X .0.0
			NC/NO 1pole	1241.1 X 15. X .0.0
   	Terminal types	A Through hole B SMD / Gullwing C SMD / J-Lead	7 8 9	
	Color of small button	red green grey black	3 5 6 7	
	non-illuminated		0	
	No large button		0	

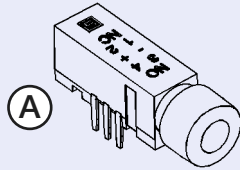
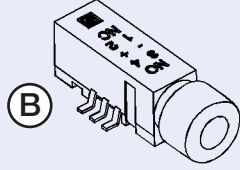
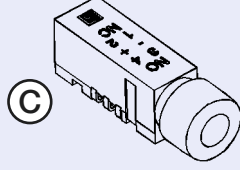
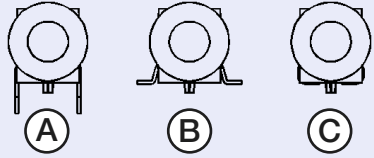
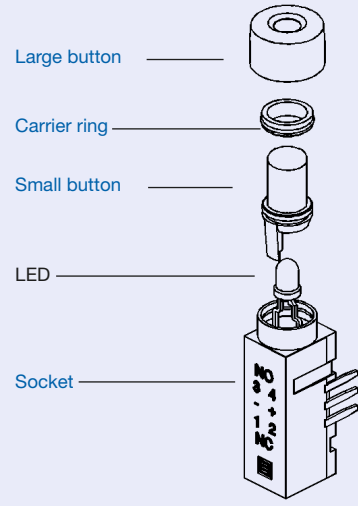
HDT with small button — illuminated

Models	Degree of protection	Variations		Part Number
<p>Momentary action</p>   	IP 40	Switching functions	NO 1-pole	1241.1 X 21.9. X. 0
			NO 2-pole	1241.1 X 22.9. X. 0
			NC 1-pole	1241.1 X 23.9. X. 0
			NC 2-pole	1241.1 X 24.9. X. 0
			NC/NO 1pole	1241.1 X 25.9. X. 0
	IP 65	Switching functions	NO 1-pole	1241.1 X 31.9. X. 0
			NO 2-pole	1241.1 X 32.9. X. 0
			NC 1-pole	1241.1 X 33.9. X. 0
			NC 2-pole	1241.1 X 34.9. X. 0
			NC/NO 1pole	1241.1 X 35.9. X. 0
	  	Terminal types	A Through hole	7
B SMD / Gullwing			8	
C SMD / J-Lead			9	
		Small button	transparent	9
			Color of LED	red
	green			2
	yellow			3
blue	4			
No large button			0	

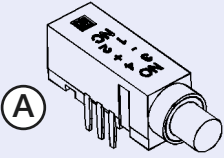
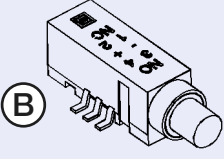
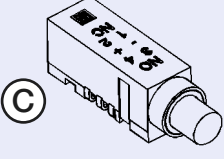
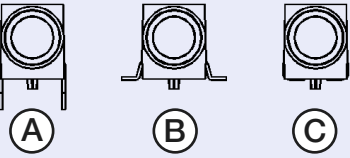
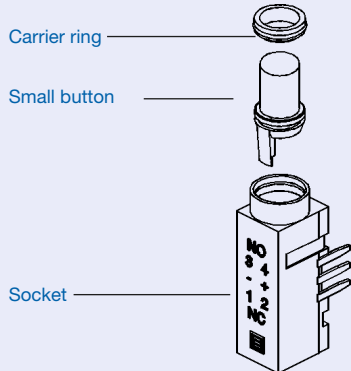
HDT with large button — non-illuminated

Models	Degree of protection	Variations	Part Number	
Momentary action   	IP 40	Switching functions	NO 1-pole	1241.2 X 01. X .0. X
			NO 2-pole	1241.2 X 02. X .0. X
			NC 1-pole	1241.2 X 03. X .0. X
			NC 2-pole	1241.2 X 04. X .0. X
			NC/NO 1pole	1241.2 X 05. X .0. X
	IP 65	Switching functions	NO 1-pole	1241.2 X 11. X .0. X
			NO 2-pole	1241.2 X 12. X .0. X
			NC 1-pole	1241.2 X 13. X .0. X
			NC 2-pole	1241.2 X 14. X .0. X
			NC/NO 1pole	1241.2 X 15. X .0. X
 	Terminal types	A Through hole	0	
		B SMD / Gullwing	1	
		C SMD / J-Lead	2	
	Color of small button	red	3	
		green	5	
		grey	6	
		black	7	
	non-illuminated		0	
	Color of large button	red	3	
		green	5	
grey		6		
black		7		

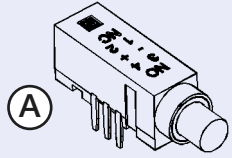
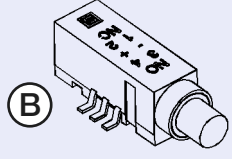
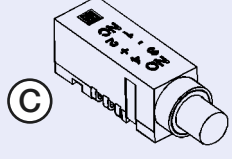
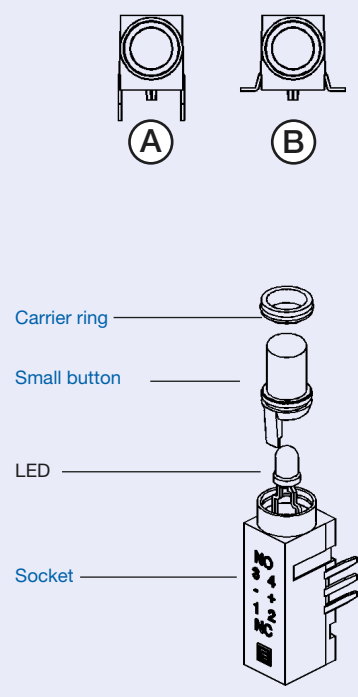
HDT with large button — illuminated

Models	Degree of protection	Variations		Part Number				
Momentary action  	IP 40	Switching functions	NO 1-pole	1241.2	X 21.9	X	X	
			NO 2-pole	1241.2	X 22.9	X	X	
			NC 1-pole	1241.2	X 23.9	X	X	
			NC 2-pole	1241.2	X 24.9	X	X	
			NC/NO 1pole	1241.2	X 25.9	X	X	
				IP 65	Switching functions	NO 1-pole	1241.2	X 31.9
NO 2-pole	1241.2	X 32.9				X	X	
NC 1-pole	1241.2	X 33.9				X	X	
NC 2-pole	1241.2	X 34.9				X	X	
Öffner/Schließer 1-polig NC/NO 1pole	1241.2	X 35.9				X	X	
 		Terminal types				A Through hole	0	
			B SMD / Gullwing	1				
			C SMD / J-Lead	2				
		Small button	transparent			9		
				Color of LED	red			1
		green				2		
		yellow				3		
		blue				4		
		Color of large button	red				3	
			green				5	
grey					6			
black					7			
transparent					9			

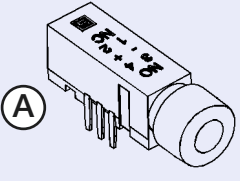
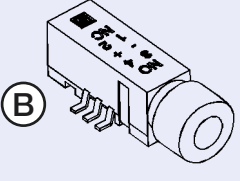
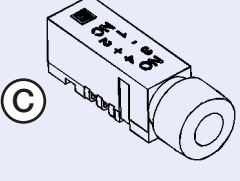
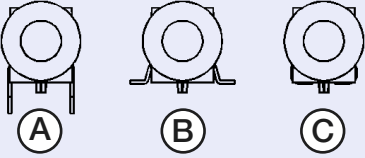
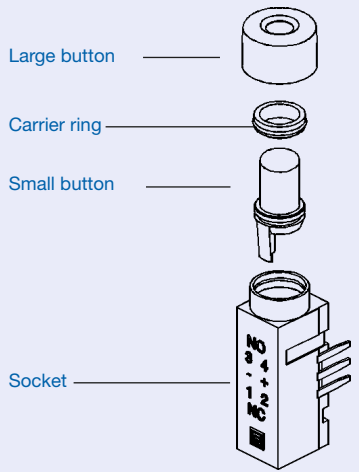
HDS with small button — non-illuminated

Models	Degree of protection	Variations		Part Number	
<p>Latching action</p>  <p>(A)</p>  <p>(B)</p>  <p>(C)</p>  <p>(A) (B) (C)</p>  <p>Carrier ring</p> <p>Small button</p> <p>Socket</p>	IP 40	Switching functions	NO 1-pole	1241.1 X 41. X .0.0	
				NO 2-pole	1241.1 X 42. X .0.0
				NC 1-pole	1241.1 X 43. X .0.0
				NC/NO 1pole	1241.1 X 45. X .0.0
	IP 65	Switching functions	NO 1-pole	1241.1 X 51. X .0.0	
				NO 2-pole	1241.1 X 52. X .0.0
				NC 1-pole	1241.1 X 53. X .0.0
				NC/NO 1pole	1241.1 X 55. X .0.0
		Terminal types	(A) Through hole	7	
			(B) SMD / Gullwing	8	
			(C) SMD / J-Lead	9	
		Color of small button	red	3	
		green	5		
		grey	6		
		black	7		
	non-illuminated			0	
	No large button			0	

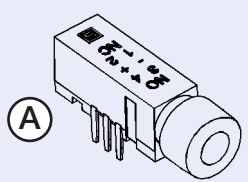
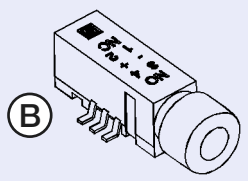
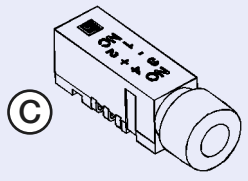
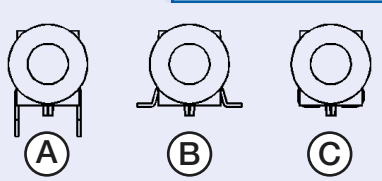
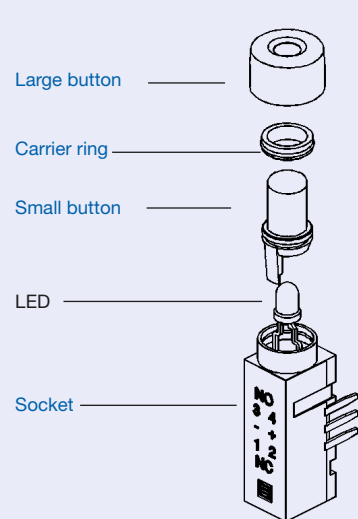
HDS with small button — illuminated

Models	Degree of protection	Variations		Part Number
<p>Latching action</p>  <p>(A)</p>  <p>(B)</p>  <p>(C)</p>  <p>Carrier ring Small button LED Socket</p>	IP 40	Switching functions	NO 1-pole	1241.1 X 61.9. X.0
			NO 2-pole	1241.1 X 62.9. X.0
			NC 1-pole	1241.1 X 63.9. X.0
			NC/NO 1pole	1241.1 X 65.9. X.0
	IP 65	Switching functions	NO 1-pole	1241.1 X 71.9. X.0
			NO 2-pole	1241.1 X 72.9. X.0
			NC 1-pole	1241.1 X 73.9. X.0
			NC/NO 1pole	1241.1 X 75.9. X.0
	Terminal types		(A) Through hole	7
			(B) SMD / Gullwing	8
			(C) SMD / J-Lead	9
	Small button		transparent	9
Color of LED		red	1	
		green	2	
		yellow	3	
		blue	4	
No large button			0	

HDS with large button — non-illuminated

Models	Degree of protection	Variations	Part Number
<p>Latching action</p>   	IP 40	Switching functions NO 1-pole	1241.2 X 41. X .0. X
		NO 2-pole	1241.2 X 42. X .0. X
		NC 1-pole	1241.2 X 43. X .0. X
		NC/NO 1pole	1241.2 X 45. X .0. X
	IP 65	Switching functions NO 1-pole	1241.2 X 51. X .0. X
		NO 2-pole	1241.2 X 52. X .0. X
		NC 1-pole	1241.2 X 53. X .0. X
		NC/NO 1pole	1241.2 X 55. X .0. X
 	Terminal types	(A) Through hole (B) SMD / Gullwing (C) SMD / J-Lead	0 1 2
	Color of small button	red	3
		green	5
		grey	6
		black	7
	non-illuminated		0
	Color of large button	red	3
		green	5
		grey	6
		black	7

HDS with large button — illuminated

Models	Degree of protection	Variations		Part Number
<p>Latching action</p>   	IP 40	Switching functions	NO 1-pole	1241.2 X 61.9 . X . X
			NO 2-pole	1241.2 X 62.9 . X . X
			NC 1-pole	1241.2 X 63.9 . X . X
			NC/NO 1pole	1241.2 X 65.9 . X . X
	IP 65	Switching functions	NO 1-pole	1241.2 X 71.9 . X . X
			NO 2-pole	1241.2 X 72.9 . X . X
			NC 1-pole	1241.2 X 73.9 . X . X
			NC/NO 1pole	1241.2 X 75.9 . X . X
 	Terminal types		(A) Through hole (B) SMD / Gullwing (C) SMD / J-Lead	0 1 2
	Small button	transparent		9
	Color of LED	red		1
		green		2
		yellow		3
		blue		4
	Color of large button	red		3
		green		5
		grey		6
		black		7
transparent			9	