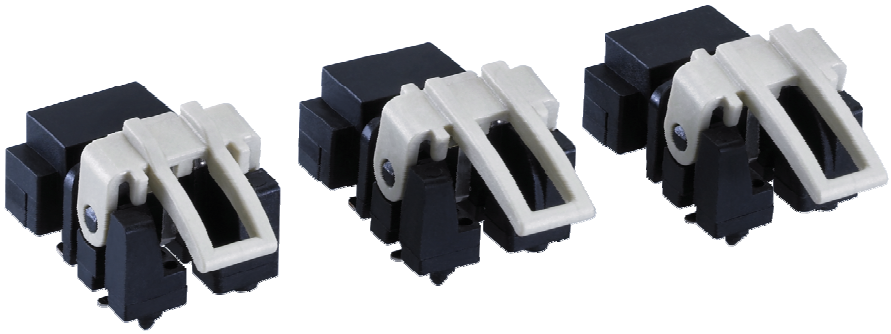
ddm hopt+schuler GmbH&Co.KG
Königsberger Straße 12
78628 Rottweil | Germany

www.hopt-schuler.com

442 KIPPSCHALTER
ANGULAR DETECTOR SWITCH



RoHS COMPLAINT | Umwelt-management ISO 14001 DEKRA zertifiziert | Qualitäts-management ISO 9001 DEKRA zertifiziert

442

AUSFÜHRUNG

- 1-poliger Miniatur-Umschalter
- Überragende Lebensdauer **(8 Mio. Betätigungen)**
- Verschiedene Betätigungsvarianten

ANSCHLÜSSE

SMD-Ausführung

ABMESSUNGEN

17,3 x 12,3 x 7,6 mm

CONSTRUCTION

- Single-pole miniature change-over switch
- Excellent lifetime **(8 million operations)**
- Various operating methods

PINING

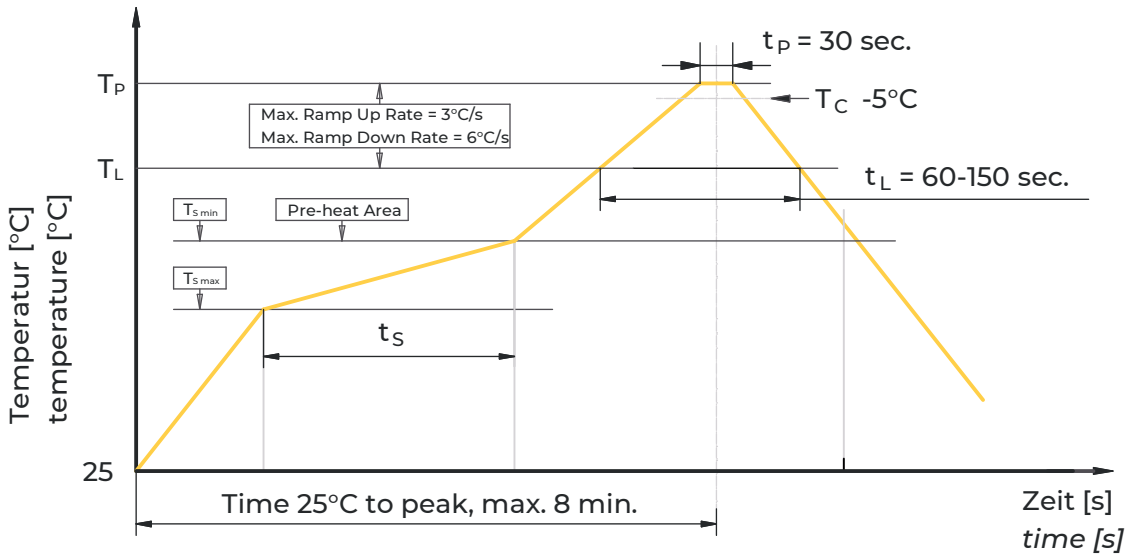
SMD design

DIMENSIONS

17.3 x 12.3 x 7.6 mm

AUSFÜHRUNG *CONSTRUCTION*	Schaltweise Anschlußmaße Abmessungen	Breake before make (bbm) See drawing See drawing	*Function* *Pitch* *Outline Dimensions*
ISOLIERWERKSTOFFE *INSULATION MATERIAL*	Kontaktträger Betätiger	Thermoplastic-UL-94-V0 Thermoplastic-UL-94-V0	*Contact Body* *Actuator*
KONTAKTWERKSTOFFE *CONTACT MATERIAL*	Festkontakte Schaltkontakte Lötanschlüsse	CuBe gal. Ni1 Au1 CuBe gal. Ni1 Au1 CuBe gal. Ni1 Au flash	*Fixed Contacts* *Sliding Contacts* *Pins*
ELEKTRISCHE DATEN *ELECTRICAL DATA*	Schaltspannung Schaltstrom max. Schaltleistung Übergangswiderstand (Neuwert) Isolierwiderstand Prellung und Signaleinbruch	Max. 30 VDC / AC Max. 20 mA 0,6 VA < 20 mOhm > 100 MOhm < 6 ms	*Switching Voltage* *Switching Current* *Max. Electrical Power* *Contact Resistance (value as new)* *Insulation Resistance* *Bouncing*
MECHANISCHE DATEN *MECHANICAL DATA*	Lebensdauer Betriebstemperatur Lagertemperatur Betätigungskraft Vibrationsfestigkeit	8 Million operations -25 °C to +130 °C -40 °C to +130 °C 1.5 N ± 0.5 N acc. to IEC 60 068-2-6: 10g from 30-300 Hz	*Life Expectancy* *Operating Temperature* *Storage Temperature* *Operating Force* *Vibration Resistance*
LÖTBEDINGUNGEN/ART *SOLDERING TIME / CONDITIONS*	SMD	acc. to IPC/JEDEC J-STD-020D Tab. 4-2 (max. peak temperature +260°)	*SMD*

Empfohlene Reflow Temperaturkurve
recommended reflow temperature pofile



T_P	260°C	$T_{S\,max}$	200°C
t_P	30 sec.	$T_{S\,min}$	150°C
T_L	217°C	t_S	60-120 sec.
t_L	60-150 sec.	T_C	250°C

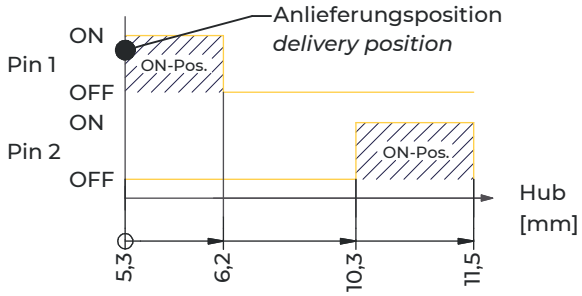
OPTIONEN | *OPTIONS*

Pos. 7 SCHALTERAUSFÜHRUNG | *SWITCH VERSION*

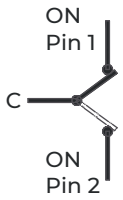
4	4	2	-	0	2	**7**	2		0	0	0	0	2

1 Variante 1 (bei Hebelausführung Hebel 1 **"kurz"** wählen)
*version 1 (choose shaft version 1 **"short"**)*

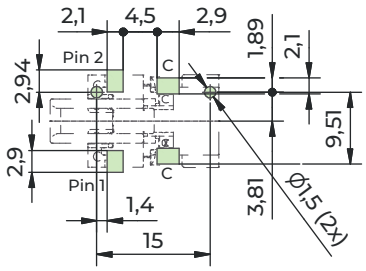
Angabe der Ein- und Ausschaltwege
travel declaration



Schaltdiagramm
circuit diagram

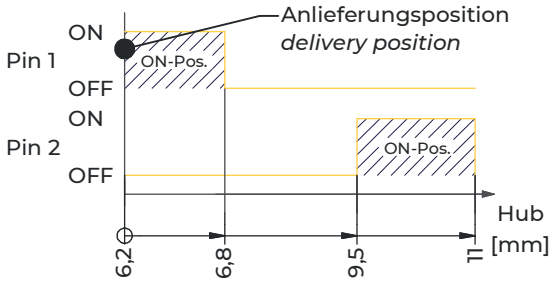


Löt-Pad-Anordnung
SMD soldering pad

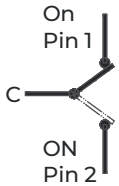


2 Variante 2 (bei Hebelausführung Hebel 2 **"lang"** wählen)
*version 2 (choose shaft version 2 **"long"**)*

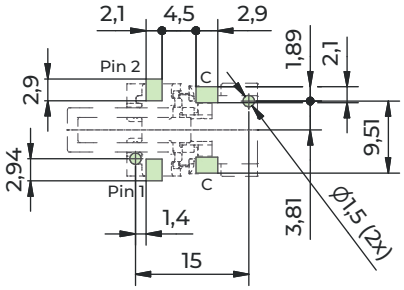
Angabe der Ein- und Ausschaltwege
travel declaration



Schaltdiagramm
circuit diagram



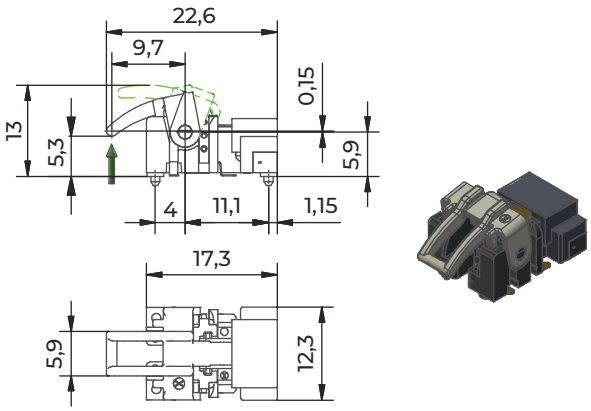
Löt-Pad-Anordnung
SMD soldering pad



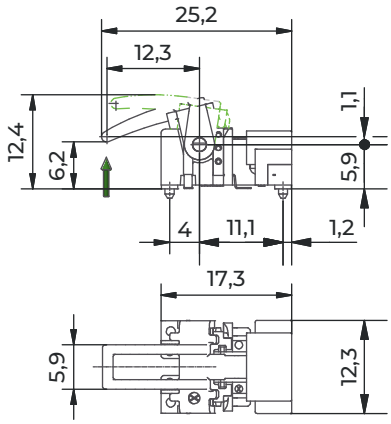
Pos. 9 HEBELAUSFÜHRUNG | *LEVER VERSION*

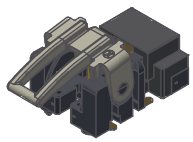
4	4	2	-	0	2		2	**9**	0	0	0	0	2

1 kurz
short



2 lang
long





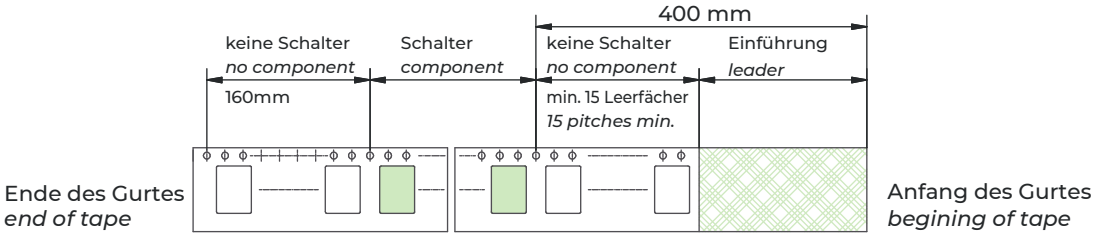
OPTIONEN | *OPTIONS*

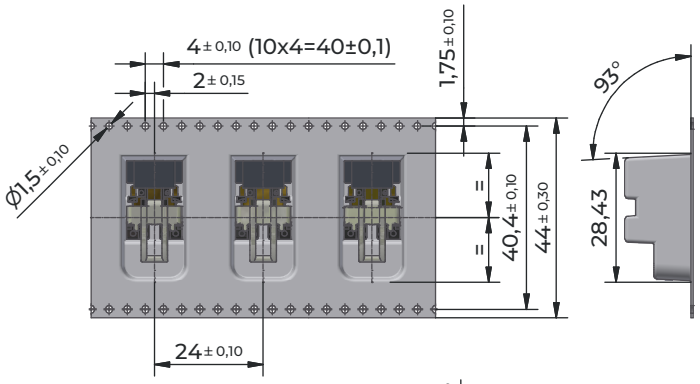
WERKSTOFFE *MATERIALS*	Blistergurt	PS	*Embossed tape*
	Abdeckband	PET	*Reel*
	Zugkraft	min. 10 N	*Embossed tape pull strength*
ABDECKBAND *TOP COVER TAPE*	Abzugswinkel	165° - 180°	*Peel - off angle*
	Abzugsgeschwindigkeit	300 mm / min.	*Peel - off speed*
	Abzugskraft	0.1 - 0.7 N	*Peel - off force*

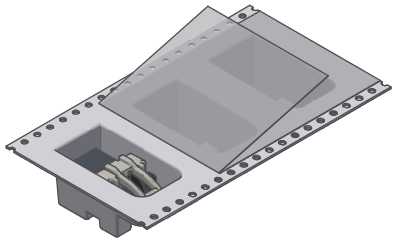
Pos. 15 VERPACKUNG | *PACKAGING*

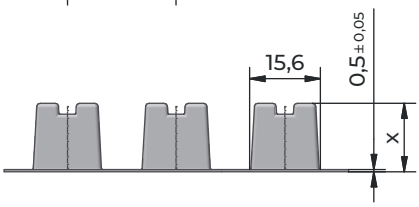
4	4	2	-	0	2		2		0	0	0	0	0	**15**

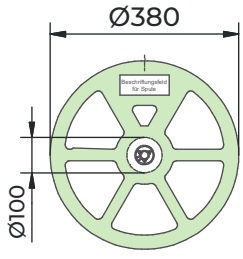
2 Gurt | *embossed tape*
Blistergurtabmessungen | *embossed tape dimensions*



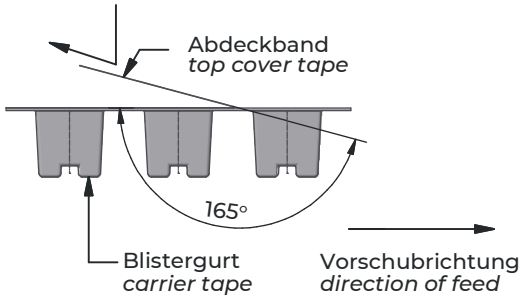








Abzugsrichtung | *peel direction*



Spulenabmessungen
reel dimensions

Schalter *switch*	max. Stückzahl *number of pieces*	Maß "x" *dimension "x"*
alle Versionen *all versions*	250	15.09 mm

ddm hopt+schuler

Anschrift | *Address*

Firma:
Company: _____

Datum:
Date: _____

Adresse:
Address: _____

Tel.:
Phone: _____

Name:
Name: _____

Fax:
Fax: _____

Kundennr.:
Customer No.: _____

E-Mail:
E-Mail: _____

Bestellschlüssel | *ordering code*

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
4	4	2	-	0	2		2		0	0	0	0	0	2

Schalterausführung
switch version

Hebelausführung
lever version

Verpackung
packaging

Muster und 3D-Daten | *Samples and 3D Data*

Bitte nutzen Sie die nebenstehenden Links und QR-Codes, um Ihre individuellen Muster und 3D-Daten anzufordern.

www.hopt-schuler.com

sales@hopt-schuler.com

Please use the links and QR-codes beside to require your specific samples and 3D Data.

ddm hopt+schuler GmbH & Co. KG | Königsberger Straße 12 | D-78628 Rottweil
Telefon +(49) 741 2607-0 | Fax +(49) 741 13398 | ddm@hopt-schuler.com | www.hopt-schuler.com