

	Door-opening buttons			Hand-pole buttons				Warning- and Signal devices			Display devices				Wiring systems
	MP	PK	CK	HST	TSG 108	TSG 101	WM 28	WM 87	SL 63	SL 150	PKM	ML 52	ML 63	ML 100	TBV
<b>Description</b>	Electromechanical short-stroke push button in a compact and robust construction form. The one-piece switching enclosure provides for long durability and reliable operation. Adapted for 30 mm mounting-boreholes.	Electromechanical short-stroke push button according to BN 65074 and EN 14752. The one-piece switching enclosure provides for long durability and reliable operation. Very well adapted for surface flush mounting in high-speed trains with speed up to 450 km/h.	Vandalism-proof, electromechanical surface button in extremely flat version with 23 cm² active touch surface. Optionally with find signal and more acoustic and optical signals. Especially adapted for physically handicapped passengers. The button is according to EN 14752.	Mechanical button with extra large touch surface according to EU-guidelines 2001/85/EG. Wide range of colours and pictograms. Adapted for mounting on hand poles with Ø 35 mm. Pictograms are permanently protected against wear and tear and destruction.	Electromechanical button, used as a door opening button inside buses and trains. Robust construction form, adapted for mounting on hand poles with Ø 35 mm. The large pictogram surface is coloured and background-illuminated. The pictograms are permanently protected against wear and tear and destruction.	Electromechanical button with 2 separate controllable text-displays in various fluorescent colours. Wide choice of text-displays and pictograms optionally readable permanently or only with illuminated background. The robust metal enclosure is adapted for mounting on hand poles with Ø 35 mm.	Optical /acoustic warning-signal, used as internal and external door-closed-warning unit. The hermetically closed enclosure provides for protection against penetration of humidity and complies with protection degree IP 67. The powerful LEDs illuminate red/green in turn parallel to the tone generator displaying optimal attention and warning effect. The tone generator achieves 75 dBA at a distance of 1 m.	Acoustic tone generator in robust stainless steel version and with a closed sound chamber. Various tones and tone sequences as well as voice response system are possible. The maximum sound pressure is 80 dBA at a distance of 1 m. The frequency range of the tone generator is 100 Hz .. 10 KHz. The acoustic signals are custom-made programmable.	Signal lamp used as door closing warning signal in LED-technology. Vandalism-proof and resistant to graffiti-remover through use of stainless steel and special glass. Very good lateral recognition through dispersion lenses with maximum 22 mm projection. Optionally available with 40 standard-LEDs or 3 power-LEDs.	LED-lamp used as door closing warning lamp or as a pathway signpost lamp. Vandalism-proof and resistant to graffiti-remover through use of stainless steel and special glass. Very good lateral recognition through a dome-shaped dispersion lens. Also available as a reading lamp in a dimmer version.	Signal lamp, suitable for the PK series, in compact construction form for various text displays. Texts or pictograms are readable with background illumination.	Display lamp, suitable for the CK70 series with a Ø 52 mm lamp surface. Various text-displays are indicated by background illumination by means of LEDs. 4 functions are possible and separately controllable. <ul style="list-style-type: none"> <li>• Illuminating colour green</li> <li>• Illuminating colour red</li> <li>• Illuminating colour red-blinking</li> <li>• Signal tone parallel to blinking display</li> </ul>	Display lamp, suitable for SL 63 lamp series with Ø 63 mm illuminating surface. Various text displays are indicated through background illumination by means of LEDs. 4 functions are possible and separately controllable. <ul style="list-style-type: none"> <li>• Illuminating colour green</li> <li>• Illuminating colour red</li> <li>• Illuminating colour red-blinking</li> <li>• Signal tone parallel to blinking-display.</li> </ul>	Display lamp with extra large lamp surface of 90 x 54 mm for mounting in glass areas of door wings. 2-sided display, in robust version with stainless-steel diaphragms and aluminium enclosure. Visual display out of single-layer safety glass. Vandalism-proof and resistant to graffiti remover. Texts and pictograms only readable with background illumination.	Connectible door-panel wiring for easy connection of all electrical components in the door-wing. <ul style="list-style-type: none"> <li>• 4- or 6-way junction module with LED-status display</li> <li>• wireable-ready connecting-cables with push-pull-locking in straight or angled version (IEC 61076-2-101)</li> <li>• wireable-ready control and supply cable with drag-chain adapted cable and push-pull-locking</li> </ul>
<b>Electrical data</b>	Nominal voltage/switching-current/current consumption 24 V DC / 200 mA 110 V DC / 200 mA	24 V DC / 200 mA 110 V DC / 200 mA	24 V DC / 200 mA 110 V DC / 200 mA	24 V DC / 200 mA	24 V DC / 30 mA	24 V DC / 30 mA	24 V DC / 200 mA	24 V DC / 200 mA 110 V DC / 50 mA	24 V DC / 140 mA 110 V DC / 20 mA	24 V DC / 5 W 110 V DC / 5 W	24 V DC / 40 mA	24 V DC / 10 mA	24 V DC / 140 mA 110 V DC / 20 mA	24 V DC / 200 mA 110 V DC / 200 mA	48 V DC
<b>Voltage tolerance</b>	± 30%	± 30%	± 30%	± 30%	± 30%	± 30%	± 30%	± 30%	± 30%	± 30%	± 30%	± 30%	± 30%	± 30%	
<b>Switching contact</b>	normally open	normally open	normally open	normally open	normally open	normally open									
<b>Electrical strength</b>	according to DIN EN 61000-4	according to DIN EN 61000-4	according to DIN EN 61000-4	according to DIN EN 61000-4	according to DIN EN 61000-4	according to DIN EN 61000-4	according to DIN EN 61000-4	according to DIN EN 61000-4	according to DIN EN 61000-4	according to DIN EN 61000-4	according to DIN EN 61000-4	according to DIN EN 61000-4	according to DIN EN 61000-4	according to DIN EN 61000-4	gemäß DIN EN 61000-4
<b>Display / illumination</b>	Stand-by display 3 LEDs	6 LEDs	6 LEDs	no	no	1 LED	6 LEDs								1 LED
<b>Confirmation display</b>	1 LED	6 LEDs	6 LEDs	no	4 LEDs	1 LED	6 LEDs								4 LEDs / 6 LEDs
<b>Illumination</b>	no	no	no	no	yes	yes	yes	no	max. 40 LEDs	4 LEDs	12 LEDs	25 + 25 LEDs	40 + 40 LEDs	6 LEDs	
<b>Acoustics</b>	no	optional	optional	no	no	optional	yes	yes	optional	no	no	optional	optional	no	
<b>Mechanical data</b>	Switching distance 0.15 mm	0.15 mm	approx. 0.4 mm	approx. 2 mm	approx. 1.5 mm	approx. 1.5 mm									
<b>Operating force</b>	7.5 - 9 N	7.5 - 9 N	7.5 - 9 N												
<b>Operating temperature</b>	-40°C ... +80°C	-40°C ... +80°C	-40°C ... +80°C	-40°C ... +80°C	-40°C ... +80°C	-40°C ... +80°C	-40°C ... +80°C	-40°C ... +80°C	-40°C ... +80°C	-40°C ... +80°C	-40°C ... +80°C	-40°C ... +80°C	-40°C ... +80°C	-40°C ... +80°C	-40°C ... +80°C
<b>Switching cycles</b>	7 million	7 million	7 million												
<b>Standards / tests</b>	Mechanical/dynamic strength acc. to IEC 61373 + EN 50155	acc. to IEC 61373 + EN 50155	acc. to IEC 61373 + EN 50155						acc. to IEC 61373 + EN 50155			acc. to IEC 61373 + EN 50155	acc. to IEC 61373 + EN 50155		
<b>Climate/corrosion operation</b>	acc. to EN 50155	acc. to EN 50155	acc. to EN 50155						acc. to EN 50155			acc. to EN 50155	acc. to EN 50155		
<b>Protection degree</b>	IP 67 acc. to EN 60529	IP 67 acc. to EN 60529	IP 67 acc. to EN 60529	IP 40 acc. to EN 60529	IP 54 acc. to EN 60529	IP 54 acc. to EN 60529	IP 67 acc. to EN 60529	IP 67 acc. to EN 60529	IP 67 acc. to EN 60529	IP 67 acc. to EN 60529	IP 67 acc. to EN 60529	IP 67 acc. to EN 60529	IP 67 acc. to EN 60529	IP 67 nach EN 60529	IP 67 nach EN 60529
<b>Flammability degree</b>	S1 acc. to DIN 53438 + 5510	S1 acc. to DIN 53438 + 5510	S1 acc. to DIN 53438 + 5510				S1 acc. to DIN 53438 + 5510	S1 acc. to DIN 53438 + 5510	S1 acc. to DIN 53438 + 5510		S1 acc. to DIN 53438 + 5510	S1 acc. to DIN 53438 + 5510	S1 acc. to DIN 53438 + 5510		
<b>High-tension strength</b>	acc. to IEC 60077-1	acc. to IEC 60077-1	acc. to IEC 60077-1								acc. to IEC 60077-1	acc. to IEC 60077-1	acc. to IEC 60077-1	acc. to IEC 60077-1	acc. to IEC 60077-1
<b>Material</b>	Connection halogen-free cable, flame-retardant	halogen-free cable, flame-retardant	halogen-free cable, flame-retardant	flat contacts, CuZn, 6.3 x 0.8 mm	flat contacts, CuZn, 2.8 x 0.8 mm	flat contacts, CuZn, 6.3 x 0.8 mm	halogen-free cable, flame-retardant	halogen-free cable, flame-retardant	halogen-free cable, flame-retardant	halogen-free cable, flame-retardant	halogen-free cable, flame-retardant	halogen-free cable, flame-retardant	halogen-free cable, flame-retardant	halogen-free cable, flame-retardant	halogen-free cable, flame-retardant
<b>Enclosure</b>	polycarbonate	polycarbonate	polycarbonate	polyamide	zinc - die cast	aluminium - die cast	polycarbonate	polycarbonate	polyamide	polycarbonate UL94V0	polycarbonate	polycarbonate	polyamide	metal	PUR / polyamide
<b>Fixing-ring</b>		polyamide	stainless steel				polyamide	stainless steel	stainless steel	stainless steel	polyamide	stainless steel	stainless steel	stainless steel	
<b>Options</b>	<ul style="list-style-type: none"> <li>• Various fixing possibilities</li> <li>• Various colours</li> <li>• Various pictograms</li> <li>• LEDs in white, red, green, yellow</li> <li>• Various plugs</li> </ul>	<ul style="list-style-type: none"> <li>• Various fixing possibilities</li> <li>• Double-sided operation</li> <li>• Various colours</li> <li>• Various pictograms</li> <li>• Pictograms projected</li> <li>• Various signal tones</li> <li>• LEDs in white, red, green, yellow</li> <li>• Various plugs</li> </ul>	<ul style="list-style-type: none"> <li>• Various fixing possibilities</li> <li>• Double-sided operation</li> <li>• Various colours</li> <li>• Various pictograms</li> <li>• Pictograms projected</li> <li>• Various signal tones</li> <li>• LEDs in white, red, green, yellow</li> <li>• Various plugs</li> </ul>	<ul style="list-style-type: none"> <li>• Various colours</li> <li>• Various pictograms</li> <li>• Touch surface projected with Ø 30 mm</li> </ul>	<ul style="list-style-type: none"> <li>• Various colours</li> <li>• Various pictograms</li> <li>• Reducer for hand poles with Ø 30 mm</li> <li>• LEDs in white, red, green, yellow</li> <li>• Warning tone</li> </ul>	<ul style="list-style-type: none"> <li>• Various colours</li> <li>• Pictograms</li> <li>• Wall mounting</li> <li>• Reducer for hand poles with Ø 30 mm and Ø 32 mm</li> <li>• LEDs in white, red, green, yellow</li> <li>• Connection with a spring terminal</li> </ul>	<ul style="list-style-type: none"> <li>• Various fixing possibilities</li> <li>• Various colours</li> <li>• Various signal tones</li> <li>• Various plugs</li> </ul>	<ul style="list-style-type: none"> <li>• Various colours</li> <li>• Various signal tones</li> <li>• Various plugs</li> </ul>	<ul style="list-style-type: none"> <li>• 2 LED-colour version with red/green-display</li> <li>• Various signal tones</li> <li>• Various fixing possibilities</li> <li>• Various plugs</li> </ul>	<ul style="list-style-type: none"> <li>• Various colours</li> <li>• LEDs in white, red, green, yellow</li> <li>• Various plugs</li> <li>• Dimmer</li> </ul>	<ul style="list-style-type: none"> <li>• Various fixing possibilities</li> <li>• Double-sided operation</li> <li>• Various colours</li> <li>• Various pictograms</li> <li>• LEDs in white, red, green, yellow</li> <li>• Blinking function</li> <li>• Various signal tones</li> <li>• Various plugs</li> </ul>	<ul style="list-style-type: none"> <li>• Various fixing possibilities</li> <li>• Double-sided display</li> <li>• Various colours</li> <li>• Various pictograms</li> <li>• LEDs in white, red, green, yellow</li> <li>• Blinking function</li> <li>• Various signal tones</li> <li>• Various plugs</li> </ul>	<ul style="list-style-type: none"> <li>• Double-sided display</li> <li>• Various colours</li> <li>• Various pictograms</li> <li>• LEDs in white, red, green, yellow</li> <li>• Various plugs</li> </ul>	<ul style="list-style-type: none"> <li>• Integrated status-display for easy diagnosis</li> <li>• Wireable-ready lengths</li> <li>• Wireable-ready connecting cable</li> </ul>	

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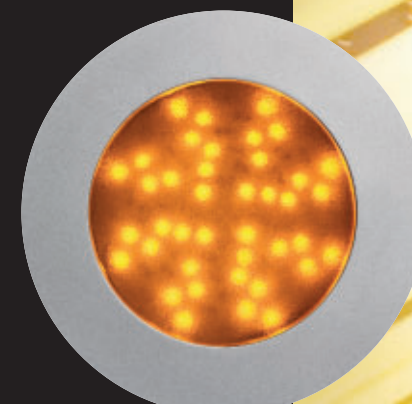
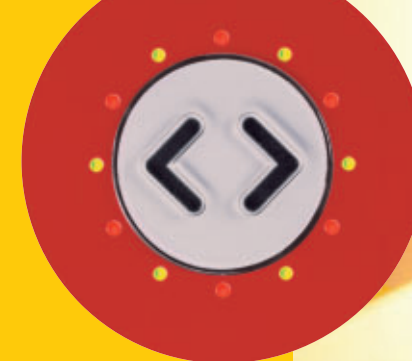
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