Push buttons

Buttons, switches, and indicator lights

PHOENIX CONTACT

Buttons, switches, and indicator lights

Buttons, switches, and indicator lights are widely used in industrial control applications and serve as a common control element for human-machine interaction. Operators use buttons to start and stop the system and to determine the current operating state of the device via indicator lights. They are used in control cabinets and field control units for machines and systems, distribution cabinets, and in power distribution systems.

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Buttons, switches, and indicator lights

The portfolio for the push button family consists of over 200 products. These include various buttons, switches, and indicator lights as well as buzzers. All of these products can be integrated into applications with a 22 mm diameter mounting hole, thus enabling quick and easy mounting.

ARBURG
ALLROUNDER 470 E
1000
EDRIVE
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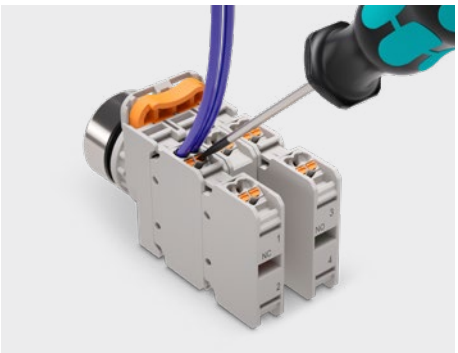
Buttons and switches

The range of buttons and switches includes a diverse selection of designs. Different actuating elements, colors, and LED versions enable custom configuration for a wide range of applications. In addition to push buttons and mushroom push buttons, selector switches, illuminated selector switches, key switches, and emergency stop buttons are also available.

Your advantages

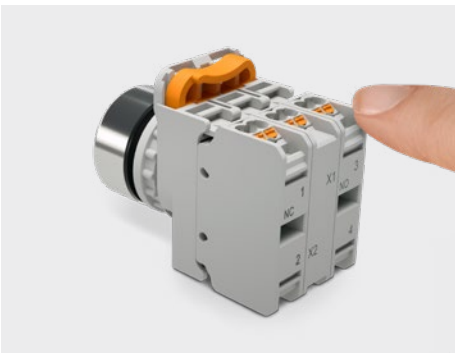
- Highly convenient operation due to tool-free Push-in connection technology and touch-proof design
- Robust and modern design combining plastic and metal enables a long service life
- Tool-free mounting and installation
- Wide variety of actuating elements

General information for buttons and switches



Highly convenient operation

Easy wiring and accessibility of contact modules without removal, even when installing double-layer contacts.



Touch-proof

The entire product range features an IP20 design for safer and more reliable installation and use.

Additional test pick-offs

The product includes test pick-offs for reliable and convenient testing.

Easy mounting

Modular kits are also available in addition to the preconfigured product versions. The modular versions consist of the following individual components:

- Actuating element
- Module holder
- Contact module
- LED module (optional)

Wide voltage input
Direct connection to voltage levels of 24 to 240 V AC/DC for easier model selection and use

Snap-in module
Three pairs of modules in a row, up to six pairs of modules can be installed

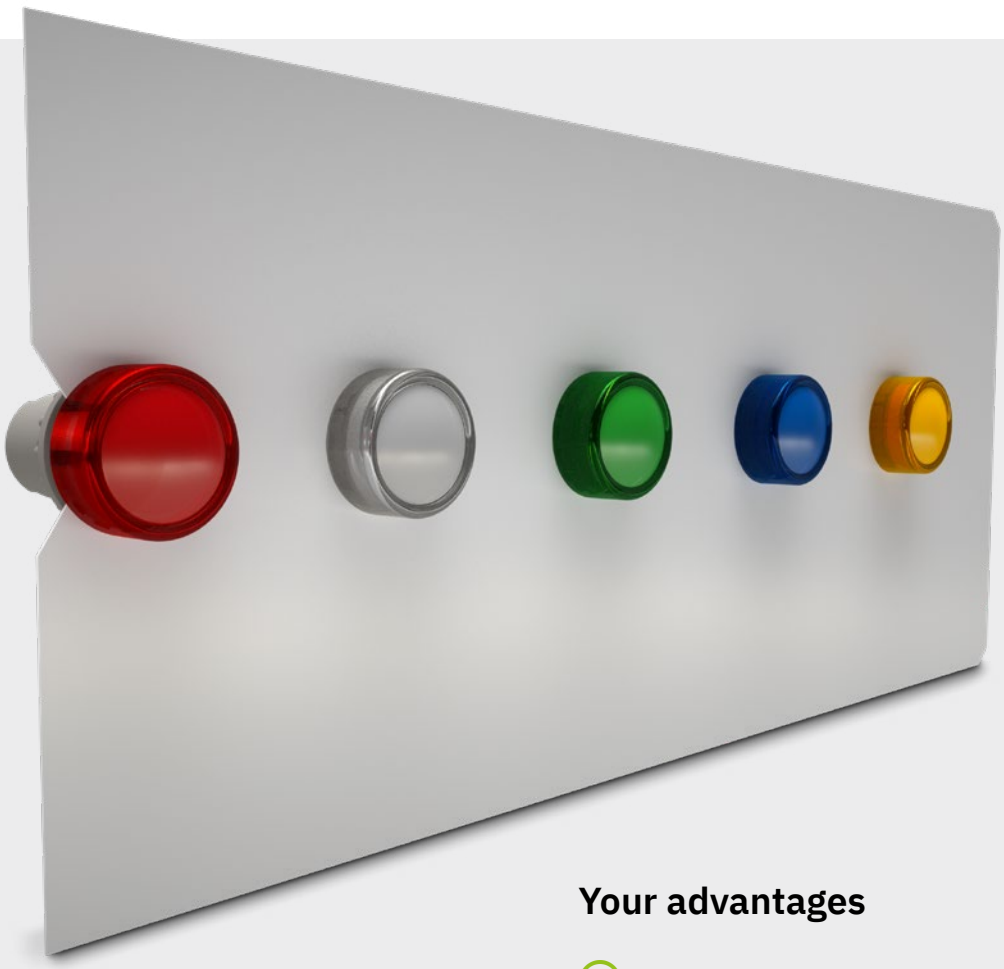
Metallic push button head
Aesthetic design, durable, and robust

Push-in connection technology
Tool-free direct wiring by simply plugging in

Quick installation
Tool-free installation of center frames and modules, with self-locking clips. Installation is reliable and simple

Indicator lights and buzzers

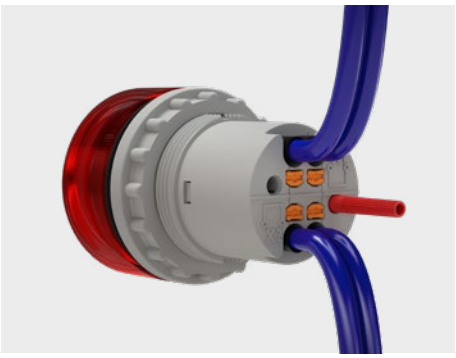
The indicator lights and buzzers serve as signaling elements at the control cabinet or on control panels. Like the buttons and switches, the signal elements are equipped with a modern Push-in connection that enables easy and direct wiring. The indicator lights and buzzers have a wide voltage input and can therefore be flexibly connected to a rated voltage of 24 to 240 V AC/DC.



Your advantages

- High luminosity of the LEDs enables good visibility even in bright surroundings
- Quick and easy connection due to the possibility of tool-free mounting and installation
- Robust and modern design

General information for indicator lights



Push-in Technology

Quick and easy direct-connection technology due to the integrated Push-in Technology and easy testability due to the integrated test pick-offs.

Wide voltage input

Direct connection to 24 to 240 V AC/DC for easier model selection and use.

Resistance to electromagnetic interference

The products are resistant to electromagnetic interference, which means that the LEDs are stable and flicker-free.

Versions

The indicator lights are available in five different colors and serve as a light signal. In addition to the indicator lights, the portfolio also includes buzzers that can trigger an acoustic warning signal.

Red

White

Indicator lights

Yellow

Green

Blue

Buzzers

Red

Black

Empty enclosures

The empty enclosures are made of high-strength, flame-retardant polycarbonate (PC) and impress with their excellent vibration resistance, high temperature resistance, and resistance to external influences and deformation. They are certified in accordance with IP66 degree of protection and therefore provide reliable protection. In combination with push buttons and indicator lights, the enclosures enable fast, safe, and reliable operation.

Your advantages

- Easy installation of buttons, switches, and indicator lights
- High degree of robustness against external influences
- Flexible mounting due to the free choice of cable outlet

General information for empty enclosures

High degree of flexibility

The 22 mm holes and integrated anti-rotation protection allow the enclosures to be easily assembled with indicator lights, switches, buttons, and emergency stop buttons.

Easy wiring

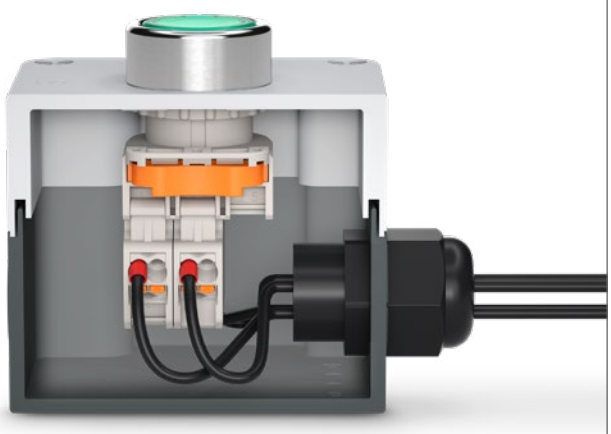
The enclosures provide sufficient space for neat and tidy wiring, which makes installation easier.

Safe and robust design

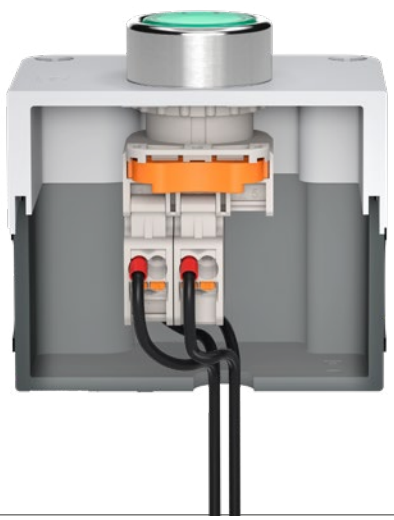
The enclosures are IP66-certified, which means they are protected against dust, water, and mechanical stress.

Easy mounting

The cable outlet can be positioned on either the side or the rear, ensuring a high degree of flexibility during mounting.



Side cable outlet



Rear cable outlet

Assembly notes

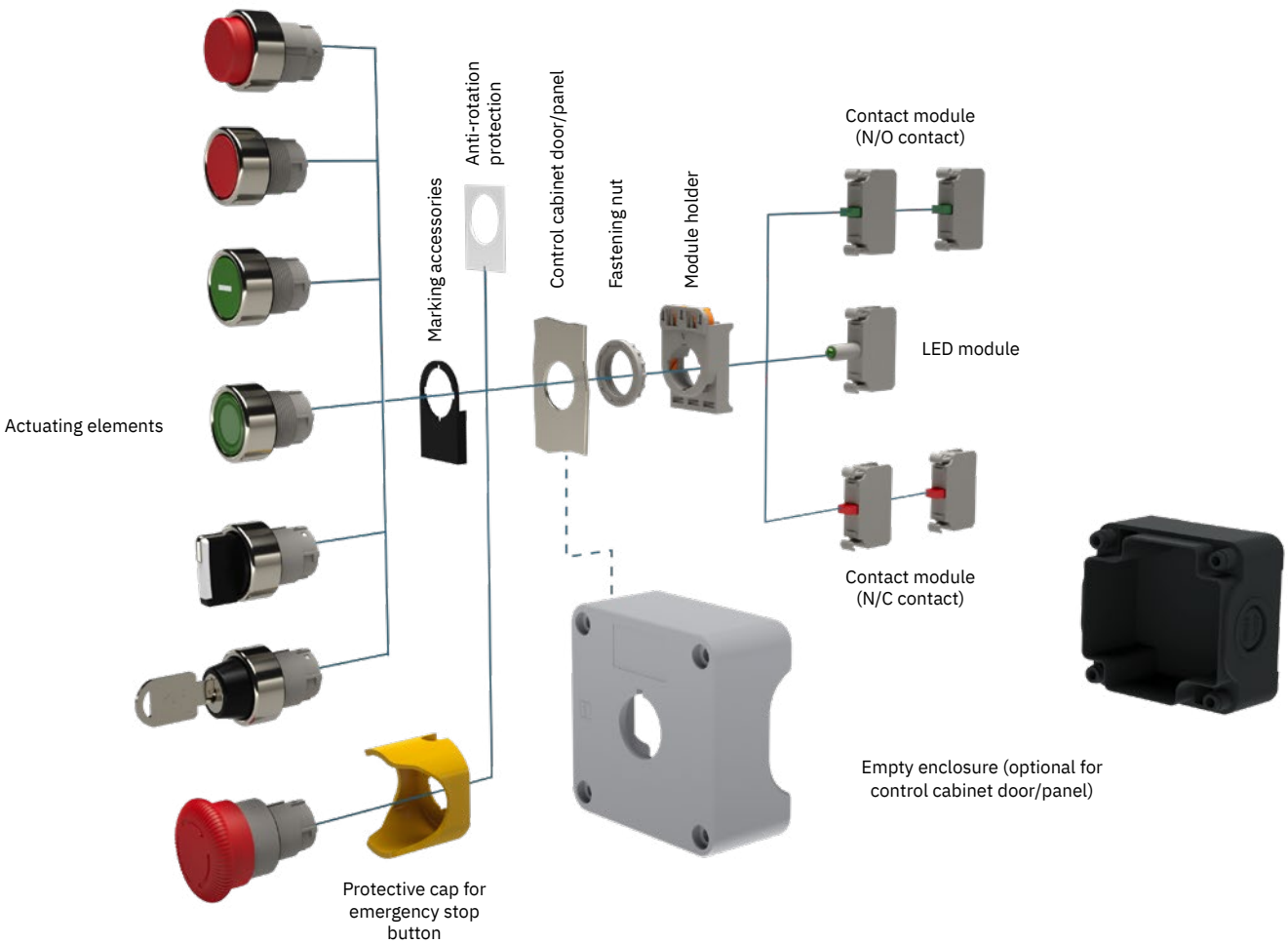
Ordering information

The push buttons can be ordered as a complete product or as individual components.

Complete product *Actuating element* *Module holder* *Contact module*

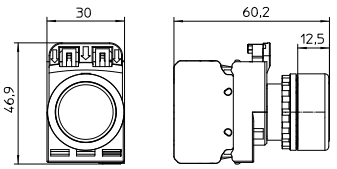
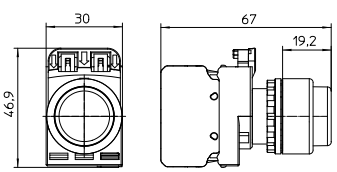
Possible combinations with various accessories

The modular structure makes it possible to create the optimum solution for every application.
The standardized design allows for the combination of more than 200 individual products.

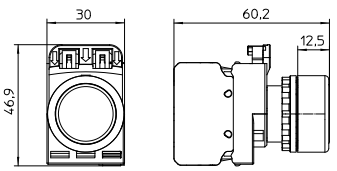
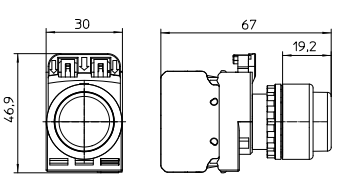


Push buttons

Push buttons with spring reset

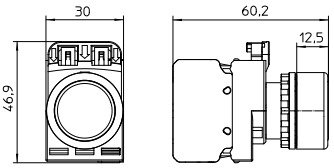
	Color	Contact conn. type		LED	Type	Item no.	Dimensions (mm)
		NO	NC				
	○	1			PHT22-FR-WH/PT10	1108029	
	●	1			PHT22-FR-GN/PT10	1108217	
	●	1			PHT22-FR-BU/PT10	1108218	
	●	1			PHT22-FR-YE/PT10	1108219	
	●	1			PHT22-FR-BK/PT10	1108220	
	●		1		PHT22-FR-RD/PT01	1108221	
	●		1		PHT22-FR-BK/PT01	1108222	
	○	1			PHT22-FRH-WH/PT10	1108256	
	●	1			PHT22-FRH-GN/PT10	1108257	
	●	1			PHT22-FRH-BU/PT10	1108258	
	●	1			PHT22-FRH-YE/PT10	1108260	
	●	1			PHT22-FRH-BK/PT10	1108261	
	●		1		PHT22-FRH-RD/PT01	1108262	
	●		1		PHT22-FRH-BK/PT01	1108263	

Illuminated push buttons with spring reset

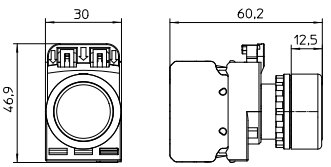
	Color	Contact conn. type		LED	Type	Item no.	Dimensions (mm)
		NO	NC				
	○	1		1	PHT22-FRD-WH/PT10/WH	1108277	
	●	1		1	PHT22-FRD-GN/PT10/GN	1108278	
	●	1		1	PHT22-FRD-BU/PT10/BU	1108279	
	●	1		1	PHT22-FRD-YE/PT10/YE	1108280	
	●	1		1	PHT22-FRD-RD/PT10/RD	1108281	
	○	1		1	PHT22-FRHD-WH/PT10/WH	1108282	
	●	1		1	PHT22-FRHD-GN/PT10/GN	1108284	
	●	1		1	PHT22-FRHD-BU/PT10/BU	1108285	
	●	1		1	PHT22-FRHD-YE/PT10/YE	1108286	
	●	1		1	PHT22-FRHD-RD/PT10/RD	1108287	

Push buttons and emergency stop buttons

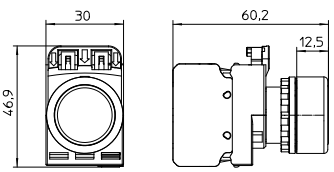
Self-locking push buttons

	Color	Contact conn. type		LED	Type	Item no.	Dimensions (mm)
		NO	NC				
	○	1			PHT22-FL-WH/PT10	1108223	
	●	1			PHT22-FL-GN/PT10	1108224	
	●	1			PHT22-FL-BU/PT10	1108225	
	●	1			PHT22-FL-YE/PT10	1108226	
	●		1		PHT22-FL-BK/PT01	1108232	
	●		1		PHT22-FL-RD/PT01	1108255	

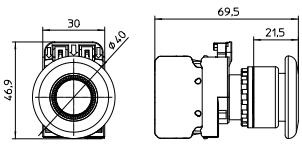
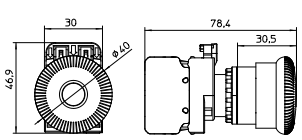
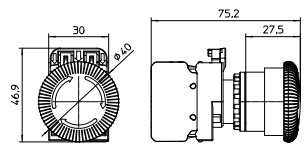
Illuminated self-locking push buttons

	Color	Contact conn. type		LED	Type	Item no.	Dimensions (mm)
		NO	NC				
	○	1		1	PHT22-FLD-WH/PT10/WH	1108272	
	●	1		1	PHT22-FLD-GN/PT10/GN	1108273	
	●	1		1	PHT22-FLD-BU/PT10/BU	1108274	
	●	1		1	PHT22-FLD-YE/PT10/YE	1108275	
	●	1		1	PHT22-FLD-RD/PT10/RD	1108276	

Push buttons with spring reset and marking

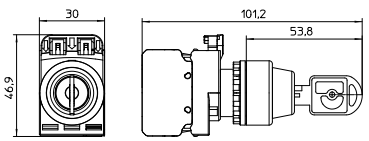
	Marking	Contact conn. type		Type	Item no.	Dimensions (mm)
		NO	NC			
	↑	1		PHT22-FM1-WH/PT10	1108264	
	I	1		PHT22-FM3-GN/PT10	1108266	
	↓	1		PHT22-FM1-BK/PT10	1108267	
	○		1	PHT22-FM2-RD/PT01	1108268	
	STOP		1	PHT22-FM4-RD/PT01	1108269	

Mushroom push buttons and emergency stop buttons

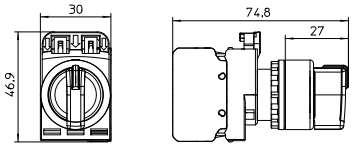
	Description	Color	Contact conn. type		Type	Item no.	Dimensions (mm)
			NO	NC			
	40 mm Spring return	●	1		PHT22-MBR-BK/PT10	1108289	
		●	1		PHT22-MBR-GN/PT10	1108292	
		●	1		PHT22-MBR-BU/PT10	1108293	
		●	1		PHT22-MBR-YE/PT10	1108294	
		●		1	PHT22-MBR-RD/PT01	1108297	
	40 mm Press and pull to release	●		1	PHT22-EP-RD/PT01	1108298	
	40 mm Turn to release	●		1	PHT22-ETT-RD/PT01	1839293	

Key switches and rotary switches

Key switches

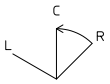
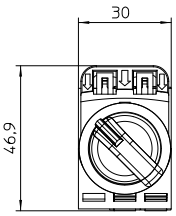
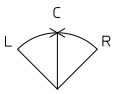
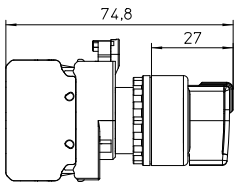
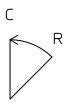
	Number of positions	Key removal positions	Operating positions	Contact conn. type NO	Contact conn. type NC	Type	Item no.	Dimensions (mm)
	2	C		1		PHT22-KR/PT10	1108300	
				1	1	PHT22-KR/PT11	1108301	
		C, R		1		PHT22-KS/PT10	1108302	
				1	1	PHT22-KS/PT11	1108304	
		L, R		1		PHT22-KSV/PT10	1108305	
				1	1	PHT22-KSV/PT11	1108306	
		L		1		PHT22-KSV/PT10/L	1540881	
	3	C		2		PHT22-KS3R/PT20	1108307	
		L, C, R		2		PHT22-KS3S/PT20	1108308	
		L, C		2		PHT22-KS31/PT20	1108311	
		C, R		2		PHT22-KS32/PT20	1108455	

Selector switches

	Number of positions	Operating positions	Contact NO	Contact NC	Type	Item no.	Dimensions (mm)
	2		1		PHT22-SR/PT10	1108312	
			1		PHT22-SV/PT10	1108314	
			1		PHT22-SS/PT10	1108316	
	3		2		PHT22-S3S/PT20	1108317	
			2		PHT22-S3R/PT20	1108319	
			2		PHT22-S32/PT20	1108320	
			2		PHT22-S31/PT20	1108456	

Note: It is recommended to use anti-rotation rings.

Rotary switches

Illuminated selector switches								
	Number of positions	Operating positions	LED	Contact conn. type		Type	Item no.	Dimensions (mm)
				NO	NC			
	3			2		PHT22-S31D-BU/PT20/BU	1108459	
				2		PHT22-S31D-GN/PT20/GN	1108458	
				2		PHT22-S3SD-BU/PT20/BU	1108347	
				2		PHT22-S3SD-GN/PT20/GN	1108346	
				2		PHT22-S3SD-RD/PT20/RD	1108350	
				2		PHT22-S3SD-WH/PT20/WH	1108344	
				2		PHT22-S3SD-YE/PT20/YE	1108349	
				2		PHT22-S3RD-BU/PT20/BU	1108440	
				2		PHT22-S3RD-GN/PT20/GN	1108439	
				2		PHT22-S3RD-RD/PT20/RD	1108442	
				2		PHT22-S3RD-WH/PT20/WH	1108438	
	2			1		PHT22-SSD-GN/PT10/GN	1108337	
				1		PHT22-SSD-RD/PT10/RD	1108342	
				1		PHT22-SSD-YE/PT10/YE	1108340	
				1		PHT22-SRD-GN/PT10/GN	1108322	
				1		PHT22-SRD-RD/PT10/RD	1108325	
				1		PHT22-SVD-BU/PT10/BU	1108328	
				1		PHT22-SVD-GN/PT10/GN	1108327	
				1		PHT22-SVD-RD/PT10/RD	1108333	
				1		PHT22-SVD-WH/PT10/WH	1108326	
				1		PHT22-SVD-YE/PT10/YE	1108329	

Note: It is recommended to use anti-rotation rings.

Actuating elements

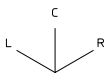
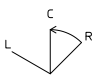
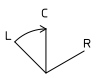
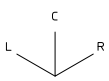
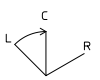
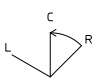
Push button heads with spring return				
	Description	**Color**	**Type**	**Item no.**
	Flat button head	○	PHT22-FR-WH	1108491
		●	PHT22-FR-GN	1108492
		●	PHT22-FR-BU	1108493
		●	PHT22-FR-YE	1108495
		●	PHT22-FR-BK	1108668
		●	PHT22-FR-RD	1108670
	Raised button head	○	PHT22-FRH-WH	1108677
		●	PHT22-FRH-GN	1108678
		●	PHT22-FRH-BU	1108679
		●	PHT22-FRH-YE	1108680
		●	PHT22-FRH-BK	1108681
		●	PHT22-FRH-RD	1108682
	Flat button head with function identification	●	PHT22-FM1-WH	1108683
		●	PHT22-FM3-GN	1108684
		●	PHT22-FM1-BK	1108686
		●	PHT22-FM2-RD	1108687
		●	PHT22-FM4-RD	1108688
	Flat illuminated button head	○	PHT22-FRD-WH	1108689
		●	PHT22-FRD-GN	1108690
		●	PHT22-FRD-BU	1108691
		●	PHT22-FRD-YE	1108692
		●	PHT22-FRD-RD	1108693
	Raised illuminated button head	○	PHT22-FRHD-WH	1108230
		●	PHT22-FRHD-GN	1108700
		●	PHT22-FRHD-BU	1109045
		●	PHT22-FRHD-YE	1108703
		●	PHT22-FRHD-RD	1108705

Actuating elements

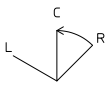
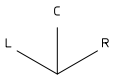
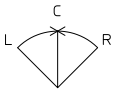
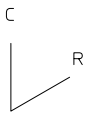
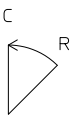
Self-locking push button heads				
	Description	**Color**	**Type**	**Item no.**
	Flat button head	○	PHT22-FL-WH	1108671
			PHT22-FL-GN	1108672
			PHT22-FL-BU	1108673
			PHT22-FL-YE	1108674
			PHT22-FL-BK	1108675
			PHT22-FL-RD	1108676
	Flat illuminated button head	○	PHT22-FLD-WH	1108694
			PHT22-FLD-GN	1108695
			PHT22-FLD-BU	1108696
			PHT22-FLD-YE	1108697
			PHT22-FLD-RD	1108698

Mushroom push button heads and emergency stop heads				
	Description	**Color**	**Type**	**Item no.**
	40 mm With spring return		PHT22-MBR-BK	1108706
			PHT22-MBR-GN	1108709
			PHT22-MBR-BU	1108711
			PHT22-MBR-YE	1108715
			PHT22-MBR-RD	1108716
		○	PHT22-MBR-WH	1108480
	40 mm Self-locking		PHT22-MBL-BK	1108472
			PHT22-MBL-GN	1108473
			PHT22-MBL-BU	1108474
			PHT22-MBL-RD	1108475
		○	PHT22-MBL-WH	1108476
			PHT22-MBL-YE	1108477
	60 mm With spring return		PHT22-MBR60-BK	1108452
			PHT22-MBR60-GN	1108453
			PHT22-MBR60-BU	1108454
			PHT22-MBR60-RD	1108462
		○	PHT22-MBR60-WH	1108463
			PHT22-MBR60-YE	1108464
	60 mm Self-locking		PHT22-MBL60-BK	1108465
			PHT22-MBL60-GN	1108466
			PHT22-MBL60-BU	1108467
			PHT22-MBL60-RD	1108468
		○	PHT22-MBL60-WH	1108469
			PHT22-MBL60-YE	1108471
	40 mm Press and pull to release		PHT22-EP-RD	1108722
	40 mm Turn to release		PHT22-ETT-RD	1839286

Actuating elements

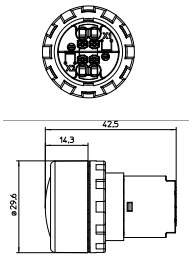
Key switch heads and selector switch heads					
	Key removal positions	**Number of positions**	**Operating positions**	**Type**	**Item no.**
	C	2		PHT22-KR	1108723
	C, R			PHT22-KS	1108724
	L, R			PHT22-KSV	1108725
	L			PHT22-KSV/L	1108490
	C	3		PHT22-KS3R	1108727
	L, C, R			PHT22-KS3S	1108728
	L, C			PHT22-KS31	1108729
	C, R			PHT22-KS32	1108448
	-	2		PHT22-SR	1108733
				PHT22-SV	1108734
				PHT22-SS	1108735
	-	3		PHT22-S3S	1108736
				PHT22-S3R	1108478
				PHT22-S32	1108231
				PHT22-S31	1108449

Actuating elements

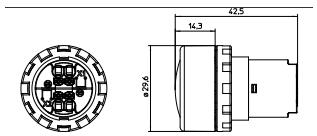
Illuminated selector switch heads					
	Number of positions	Operating positions	LED	Type	Item no.
	3		●	PHT22-S31D-BU	1108854
			●	PHT22-S31D-GN	1108853
			●	PHT22-S3SD-BU	1108824
			●	PHT22-S3SD-GN	1108823
			●	PHT22-S3SD-RD	1108827
			○	PHT22-S3SD-WH	1108821
			●	PHT22-S3SD-YE	1108826
			●	PHT22-S3RD-BU	1108831
			●	PHT22-S3RD-GN	1108829
			●	PHT22-S3RD-RD	1108833
			○	PHT22-S3RD-WH	1108828
	2		●	PHT22-SSD-BU	1108817
			●	PHT22-SSD-GN	1108814
			●	PHT22-SSD-RD	1108819
			○	PHT22-SSD-WH	1108813
			●	PHT22-SSD-YE	1108818
			●	PHT22-SRD-GN	1108228
			●	PHT22-SRD-RD	1108802
			●	PHT22-SVD-BU	1108808
			●	PHT22-SVD-GN	1108807
			●	PHT22-SVD-RD	1108812
			○	PHT22-SVD-WH	1108803
			●	PHT22-SVD-YE	1108810

Indicator lights, buzzers, and accessories

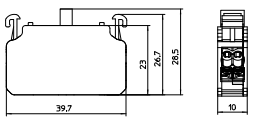
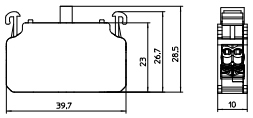
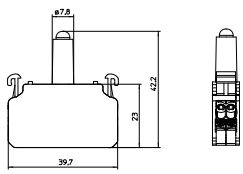
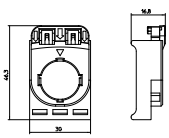
Indicator lights

	Input voltage	LED	Type	Item no.	Dimensions (mm)
	24 V ... 240 V AC/DC	○	PHT22-PL-WH	1109034	
		●	PHT22-PL-RD	1109035	
		●	PHT22-PL-GN	1109037	
		●	PHT22-PL-BU	1109038	
		●	PHT22-PL-YE	1109039	

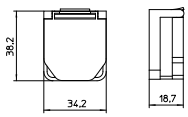
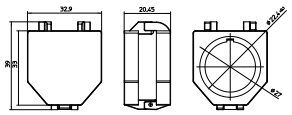
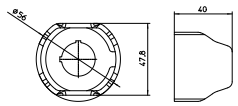
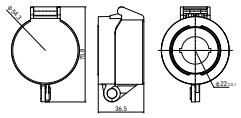
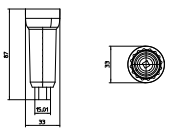
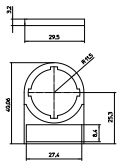
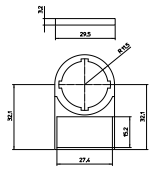
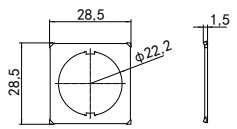
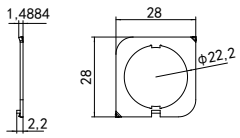
Buzzers

	Description	Input voltage	LED	Type	Item no.	Dimensions (mm)
	Flashing buzzer	24 V ... 240 V AC/DC	●	PHT22-BZ-RD	1108842	
	Non-illuminated buzzer	24 V ... 240 V AC/DC	●	PHT22-BZ-BK	1108843	

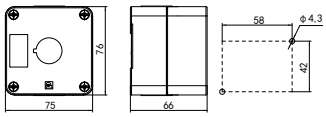
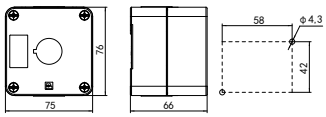
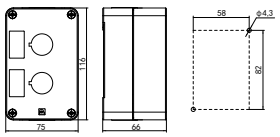
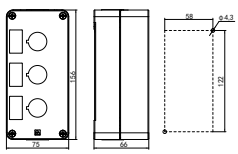
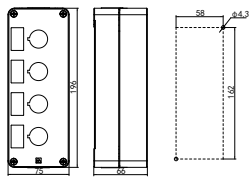
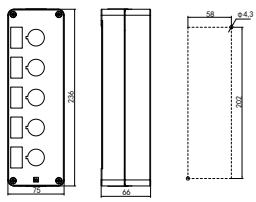
Accessories

	Description	Color	Type	Item no.	Dimensions (mm)
	NO contact module (N/O contact)	-	PHT22-PT10	1108991	
	NC contact module (N/C contact)	-	PHT22-PT01	1108992	
	LED module (24 V ... 240 V AC/DC input voltage)	○	PHT22-LED-WH	1108998	
		●	PHT22-LED-GN	1108999	
		●	PHT22-LED-BU	1109000	
		●	PHT22-LED-YE	1109001	
		●	PHT22-LED-RD	1109002	
	Module holder	-	PHT22-FRAME	1109007	

Accessories

Accessories					
	Description	**Color**	**Type**	**Item no.**	**Dimensions (mm)**
	Protection cover for flat push button heads	-	PHT22-CPHT	1109008	
	Protection cover for flat push button heads (180°)	○	PHT22-CPH-180	1561834	
	Protective cover for emergency stop buttons	●	PHT22-CES	1109009	
	Protective cover for mushroom push buttons	●	PHT22-CES-C	1561835	
	Mounting wrench	●	PHT22-WRENCH	1109011	
	Marker carrier	●	CARRIER-EMLP 22 (27X8)	0828984	
	Marker carrier	●	CARRIER-EMLP 22 (27X15)	0828986	
	Anti-rotation protection	-	PHT22-ARR	1108845	
	Fixing of anti-rotation protection	-	PHT22-ARR/FIX	1108847	

Empty enclosures

Empty enclosures					
	Number of buttons, switches, or indicator lights that can be mounted	Color	Type	Item no.	Dimensions (mm)
	1		PHT22-EN1-YE	1635887	
	1		PHT22-EN1-GY	1635885	
	2		PHT22-EN2-GY	1635888	
	3		PHT22-EN3-GY	1635889	
	4		PHT22-EN4-GY	1635890	
	5		PHT22-EN5-GY	1635891	

Product information for buttons and switches

Product information for buttons and switches		
Norms and standards	IEC 60947-5-1, GB/T 14048.5 IEC 60947-5-5, GB/T 14048.14 UL 60947-5-1, UL 60947-5-5	
Mechanical durability	5 million actuations of the push button with spring reset 1 million actuations of the self-locking push button 1 million actuations of the selector switch 500,000 actuations of the key switch head 300,000 actuations of the emergency stop button 500,000 actuations of the mushroom push button	
Electrical load capacity	100,000 processes	
Frequency of switching (max.)	Push buttons with spring return, mushroom push buttons with spring return: 3,600 times/hour Self-locking push buttons, selector switches, key switches: 1,800 times/hour Emergency stop buttons: 600 times/hour	
Shock resistance IEC 60068-2-27	Half-sine wave 11 ms, 50g	
Vibration resistance IEC 60068-2-6	5g (5 Hz ... 500 Hz, 0.35 mm)	
Degree of protection (IP) IEC 60529	After installation, front: IP66, contact modules: IP20	
Conductor cross-section range	2 x 0.5 mm² ... 1.5 mm², AWG: 20 ... 16	
Use of the utilization category	AC-15 / DC-13	
Ambient conditions during operation in accordance with EN 60721	3K6, 3C3, 3S2, 3M6	
Operating temperature	-25°C ... 70°C	
Storage temperature	-30°C ... 85°C	
Ambient humidity (operation)	≤ 95% (inside, 25°C) non-condensing	
Approvals	CCC, CE, TUV, UL	
Rated insulation voltage	600 V	
Rated impulse withstand voltage	6 kV	
Overvoltage category	III	
Pollution degree	3	
Thermal current	10 A	
Rated operating current	A600 / Q600	
	AC-15	DC-13
	120 V / 8 A	24 V / 5 A
	230 V / 6 A	110 V / 1.1 A
	400 V / 4 A	220 V / 0.5 A
	600 V / 2 A	-

Product information for indicator lights and buzzers

Product information for indicator lights	
Norms and standards	IEC 60947-5-1, GB/T 14048.5, UL 60947-5-1
Typical operating time	≥ 50,000 h
Shock resistance IEC 60068-2-27	Half-sine waves 11 ms, 50g
Vibration resistance IEC 60068-2-6	5g (5 Hz … 500 Hz, 0.35 mm)
Degree of protection (IP) IEC 60529	After installation, front: IP66, contact modules: IP20
Conductor cross-section range	2 x 0.5 mm² … 1.5 mm² / AWG: 20 … 16
Ambient conditions during operation in accordance with EN 60721	3K6, 3C3, 3S2, 3M6
Operating temperature	-25°C … 70°C
Storage temperature	-30°C … 85°C
Ambient humidity (operation)	≤ 95% (inside, 25°C) non-condensing
Approvals	CCC, CE, TUV, UL
Rated insulation voltage	300 V
Rated impulse withstand voltage	4 kV
Overvoltage category	III
Pollution degree	3
Rated operating voltage	24 V … 240 V AC/DC
Voltage fluctuation	±10%
Operating current	≤ 25 mA

Product information for buzzers			
Norms and standards	IEC 60947-5-1, GB/T 14048.5 UL 60947-5-1	**Approvals**	CCC, CE, TUV, UL
Electrical load capacity	20,000 h	**Rated insulation voltage**	300 V
Shock resistance IEC 60068-2-27	Half-sine wave 11 ms, 50g	**Rated impulse withstand voltage**	4 kV
Vibration resistance IEC 60068-2-6	5g (5 Hz … 500 Hz, 0.35 mm)	**Overvoltage category**	III
Degree of protection (IP) IEC 60529	After installation, front: IP40, connection side: IP20	**Pollution degree**	3
Conductor cross-section range	2 x 0.5 mm² … 1.5 mm², AWG: 20 … 16	**Rated operating voltage**	24 V … 240 V AC/DC
Ambient conditions during operation in accordance with EN 60721	3K6, 3C3, 3S2, 3M6	**Voltage fluctuation**	±10%
Operating temperature	-25°C … 70°C	**Operating current**	≤ 80 mA
Storage temperature	-30°C … 85°C	**Tone type**	Continuous operation / intermittent operation
Ambient humidity (operation)	≤ 95% (inside, 25°C) non-condensing	**Volume**	80 dB / 10 cm

Product information for LED modules and empty enclosures

Product information for LED modules			
Norms and standards	IEC 60947-5-1, GB/T 14048.5, UL 60947-5-1	**Ambient humidity (operation)**	≤ 95% (inside, 25°C) non-condensing
Typical operating time	≥ 50,000 h	**Approvals**	CCC, CE, TUV, UL
Shock resistance IEC 60068-2-27	Half-sine waves 11 ms, 50g	**Rated insulation voltage**	300 V
Vibration resistance IEC 60068-2-6	5g (5 Hz ... 500 Hz, 0.35 mm)	**Rated impulse withstand voltage**	6 kV
Degree of protection (IP) IEC 60529	IP20	**Overvoltage category**	III
Conductor cross-section range	2 x 0.5 mm² ... 1.5 mm² AWG: 20 ... 16	**Pollution degree**	3
Ambient conditions during operation in accordance with EN 60721	3K6, 3C3, 3S2, 3M6	**Rated operating voltage**	24 V ... 240 V AC/DC
Operating temperature	-25°C ... 70°C	**Voltage fluctuation**	±10%
Storage temperature	-30°C ... 85°C	**Operating current**	≤ 25 mA

Product information for empty enclosures			
Norms and standards	IEC 60947-5-1, GB/T 14048.5	**Approvals**	CCC, CE
Degree of protection (IP)	IP66	**Material**	PC
Flammability rating	UL-94 V0	**Shock resistance IEC 60068-2-27**	Half-sine waves 11 ms, 50g
Operating temperature	-25°C ... 70°C	**Vibration resistance IEC 60068-2-6**	5g (5 Hz ... 500 Hz, 0.35 mm)
Storage temperature	-30°C ... 85°C	**Cable entry opening**	Pg13.5 or M20
Ambient humidity (operation)	≤ 95%		

Safety information and application notes

Safety notes

- Before installing, removing, wiring, maintaining, and checking the product, disconnect the power supply to avoid the risk of electric shock or fire
- When wiring, use conductors that meet the requirements for the applied voltage and current
- Before switching on the device, check that the conductors are firmly connected to the terminal block. Do not use the device while conductors are loose as this can lead to electric shocks or fire hazards
- Installation and maintenance of the product must be carried out by a professional electrician or trained personnel in accordance with the relevant safety regulations
- Follow the installation instructions and observe the applicable regulations and safety rules (including national safety regulations) as well as generally recognized technical regulations when installing and operating the device.

Precautions for use

Mounting the actuating element

- When inserting the actuating head into the mounting holes from the front of the control panel, place the rubber seal in front of the control panel and keep it flat to avoid compromising the IP level
- When mounting accessories such as label holders, protective covers, emergency stop label (D60), etc., fit these between the actuating head and the control panel
- To mount the fastening nut from the back of the control panel, use a fixing wrench (1109011 PHT22-WRENCH, available separately) with a tightening torque of 1.0 to 1.2 Nm
- For selector switches, key switches, emergency stop buttons with twist release, actuating push buttons with markings, etc., the use of anti-rotation protection or fastening elements is recommended to prevent the actuating head from twisting
- Anti-rotation rings must be used when drilling round holes (1108845 PHT22-ARR, available separately)
- If keyways are drilled, use anti-rotation rings (1108847 PHT22-ARR/FIX, available separately)
- Mount the anti-rotation protection or fastening elements in front of the plate and the fastening nut, ensuring that the corner of the anti-rotation protection or fastening elements is tilted toward the panel
- A panel thickness of 1 to 6 mm can be mounted. When using accessories such as marking slots, protective covers, rotor stoppers, etc., their thickness must also be taken into account

Wiring and removal

- Rigid wires or soft wires with a cold-pressed head can be inserted directly into the terminal blocks. When using flexible wires, select a standard ferrule that meets the specifications of the wire
- Stripping length: 8 mm
- To release the wires, press on the orange push button with a screwdriver and pull out the conductor
- To avoid damaging the product, do not pull on the conductor while it is locked

Using the test holes

- Do not insert any wires into the test holes
- To check the switch-on status of the contact module, use a multimeter sensor (Φ2.0 or less) inserted directly into the test hole or use the PHOENIX MPS-MT test plug (0201744) to support testing

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Phoenix Contact is a global market leader based in Germany. We are known for producing forward-thinking products and solutions for the comprehensive electrification, networking, and automation of all sectors of the economy and infrastructure. With a global network, we maintain close relationships with our customers, something we believe is essential for our common success.

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