

## LINHA NP20

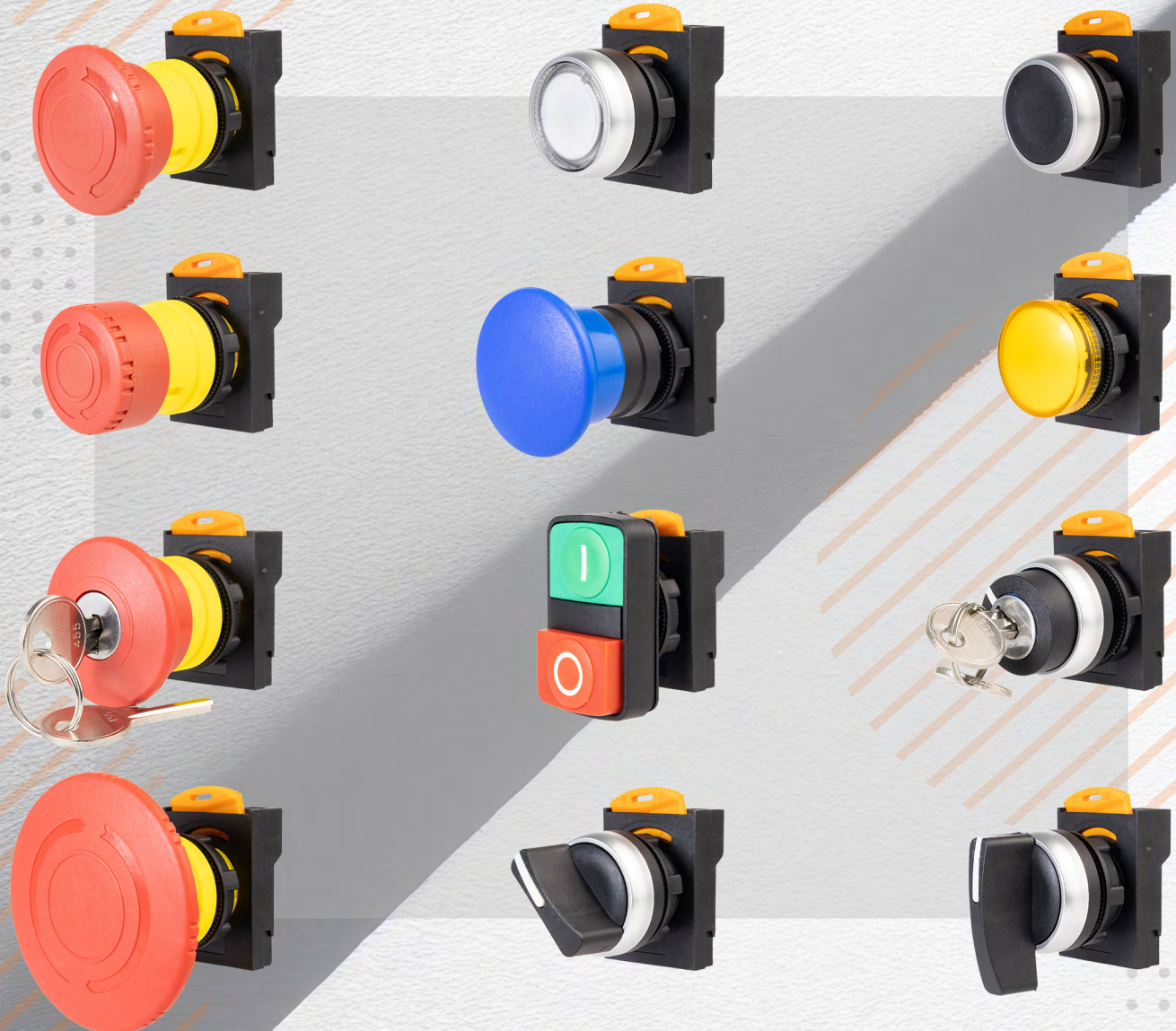
NP20 SERIES

# BOTÕES DE COMANDO MODULARES 22 mm

22 mm MODULAR PUSH BUTTONS

## ESPECIFICAÇÕES TÉCNICAS

TECHNICAL SPECIFICATIONS



## PRINCIPAIS CARACTERÍSTICAS

- Botão de comando modular para painel com furação de Ø22 mm;
- Corpo termoplástico autoextinguível com alta resistência mecânica e ao calor;
- Montagem fácil e rápida através de encaixe;
- Grau de proteção IP40 ou IP65;
- De acordo com a norma IEC 60947-5-1;
- Certificado TÜV e CE;
- Diversos acessórios incluindo identificadores, tapa furos, adaptadores de furo, lâmpadas e etc (vendidos separadamente);



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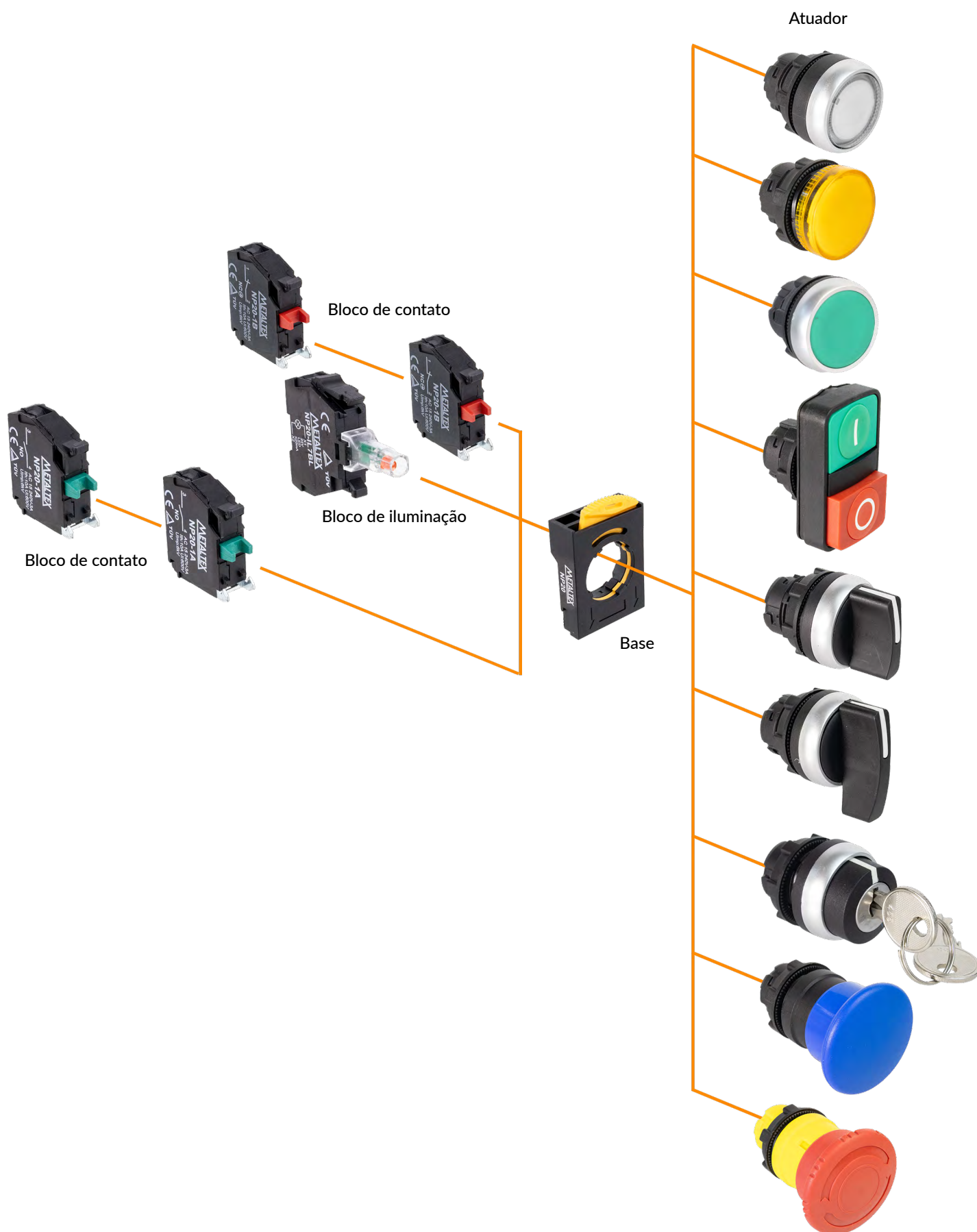


## ESPECIFICAÇÕES GERAIS

Botões de comando e chaves seletoras		
Grau de proteção	IP40 e IP65	
Material do corpo	Termoplástico V0, autoextinguível	
Vida elétrica	1.000.000 operações	
Umidade	45% ~ 85% sem condensação	
Temperatura	-5 ~ 40 °C	
Altitude	< 2000 m	
Grau de poluição	Nível 3	
Normas	IEC 60947-5-1	
Certificações	TÜV / CE	
Diâmetro de montagem	22mm	
Bloco de contato		
Modelo	NP20-1A	NP20-1B
Tipo de contato	1NA	1NF
Grau de proteção	IP20	
Material do contato	AgNi	
Tensão de operação Ue	380 V	
Tensão de isolamento Ui	660 V	
Tensão de impulso		
Corrente nominal Ie	AC-15 (A600): 3 A / 240 V; 6 A / 120 V; 1,2 A / 600 V DC-13 (Q600): 0,1 A / 600 V; 0,27 A / 250 V; 0,55 A / 125 V	
Corrente térmica Ith	10 A	
Proteção contra curto-circuito	Fusível tipo cartucho 10 A, tipo gG	
Contato inicial	< 50 mΩ	
Resistência de vida elétrica	500.000 operações	
Bloco de iluminação		
Tipo de sinalização	Contínua	
Consumo de corrente	12 VCC/VCA	≤ 20 mA
	24 VCC/VCA	
	110 VCC/VCA	
	220 VCC/VCA	

# COMPOSIÇÃO DO BOTÃO MODULAR


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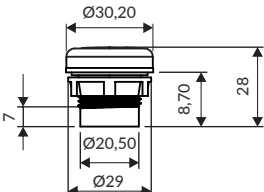
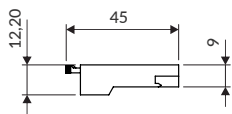
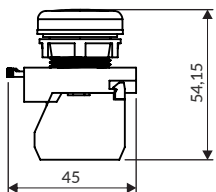
Botão vendido por módulos:

- A base acompanha os atuadores
- Os blocos de contato e bloco de iluminação são vendidos separados
- Possível adicionar 1 bloco de iluminação e 4 blocos de contato em botões iluminados e de 4 a 6 blocos de contato nos modelos não iluminados dependendo de sua função


## BOTÕES PULSADORES MOMENTÂNEOS



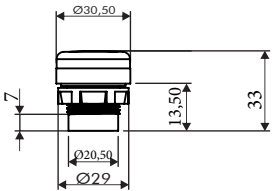
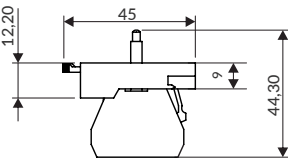
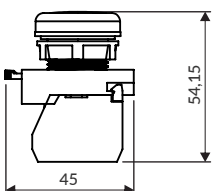
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Grau de proteção	Cor	Código
IP65	Amarelo	NP20AF-Y
	Azul	NP20AF-BL
	Branco	NP20AF-W
	Preto	NP20AF-B
	Vermelho	NP20AF-R
	Verde	NP20AF-G
Dimensão (mm)		
		


## BOTÕES PULSADORES ILUMINADOS



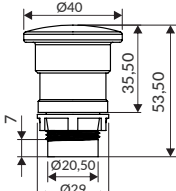
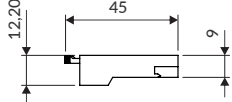
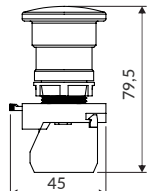
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Grau de proteção	Cor	Código
IP65	Amarelo	NP20IG-Y
	Azul	NP20IG-BL
	Branco	NP20IG-W
	Vermelho	NP20IG-R
	Verde	NP20IG-G
Dimensão (mm)		
		

## BOTÕES PULSADORES COGUMELO



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Grau de proteção	Cor	Código
IP40	Amarelo	NP20AM-Y
	Azul	NP20AM-BL
	Branco	NP20AM-W
	Preto	NP20AM-B
	Vermelho	NP20AM-R
	Verde	NP20AM-G
Dimensão (mm)		
		

**BOTÃO DUPLO**



Grau de proteção	Cor	Código
IP40	Verde e vermelho	NP20AP
Dimensão (mm)		

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**BOTÃO DUPLO ILUMINADO**



Grau de proteção	Cor	Código
IP40	Verde e vermelho	NP20ID
Dimensão (mm)		


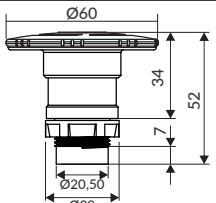
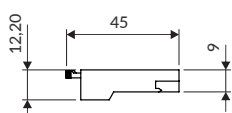
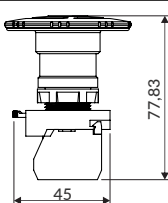
**BOTÕES DE EMERGÊNCIA COGUMELO**


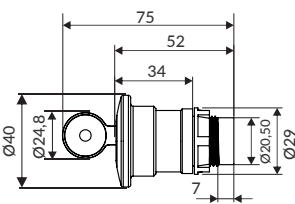
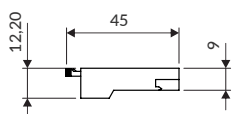
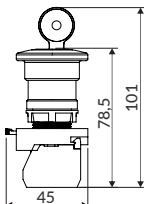


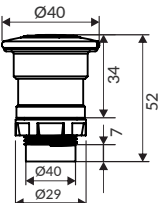
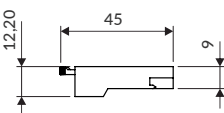
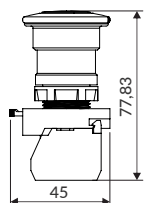
Empurra para travar e gira para destravar - Ø40 mm		
Grau de proteção	Cor	Código
IP65	Amarelo	NP20AK-Y
	Vermelho	NP20AK-R
Dimensão (mm)		





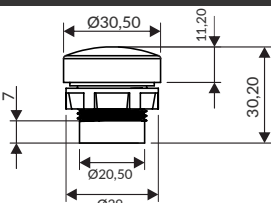
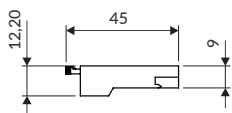
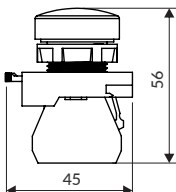
Empurra para travar e gira para destravar - Ø30 mm		
Grau de proteção	Cor	Código
IP65	Vermelho	NP20AX-R
Dimensão (mm)		

Empurra para travar e gira para destravar- Ø60 mm			
	Grau de proteção	Cor	Código
	IP65	Vermelho	NP20BY-R
	Dimensão (mm)		
			
			





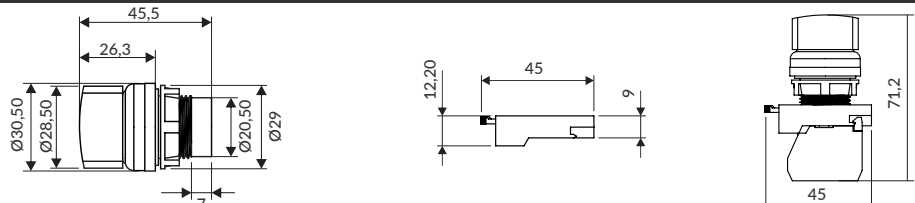
Empurra para travar e chave para destravar- Ø40 mm			
	Grau de proteção	Cor	Código
	IP40	Vermelho	NP20AC-R
	Dimensão (mm)		
			
			





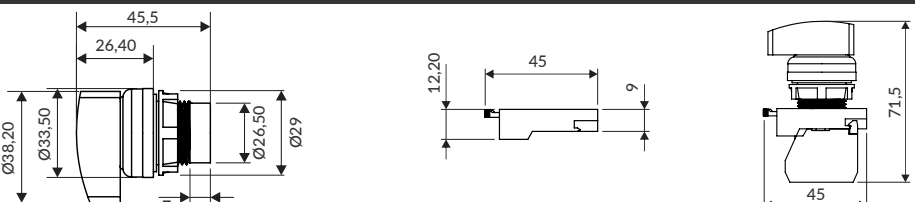
Trava e puxa para destravar - Ø40 mm			
<p>Em breve</p>	Grau de proteção	Cor	Código
	IP65	Vermelho	NP20BE-R
	Dimensão (mm)		
			
			






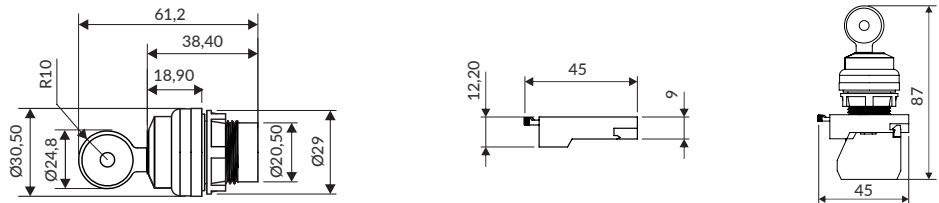
SINALIZADORES

 	Grau de proteção	Cor	Código
	IP40	Amarelo	NP20PR-Y
		Azul	NP20PR-BL
		Branco	NP20PR-W
		Vermelho	NP20PR-R
		Verde	NP20PR-G
Dimensão (mm)			
			
			

CHAVES SELETORAS

Knob curto				
	Grau de proteção	Posições	Código	
	IP40	2 posições fixas 90°		NP20SC2-B
		3 posições fixas 45°		NP20SC4-B
		3 posições retorno direita, esquerda 45°		NP20SC7-B
Dimensão (mm)				
				





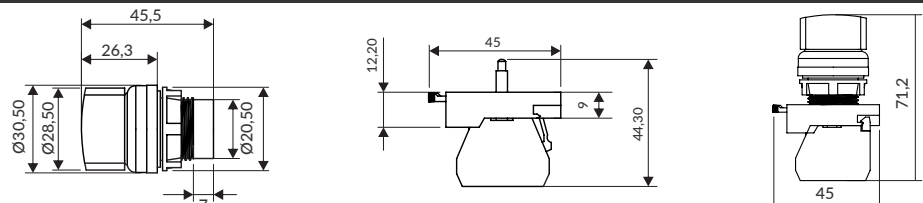
Knob longo				
	Grau de proteção	Posições	Código	
	IP40	2 posições fixas 90°		NP20SL2-B
		3 posições fixas 45°		NP20SL4-B
		3 posições retorno direita, esquerda 45°		NP20SL7-B
Dimensão (mm)				
				

Seletora com chave				
	Grau de proteção	Posições	Código	
	IP40	2 posições fixas 90°		NP20KN2-B
		2 posições com retorno 90°		NP20KN3-B
		3 posições fixas 45°		NP20KN5-B
3 posições retorno direita, esquerda 45°			NP20KN7-B	
Dimensão (mm)				
				

OBS.: As chaves só podem ser retiradas na posição 0 (zero)

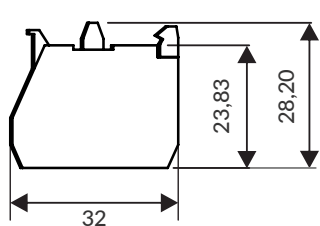



CHAVES SELETORAS ILUMINADA

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Knob curto					
	Grau de proteção	Posições	Cor	Código	
	IP40	2 posições fixas 90° 	Amarelo	NP20IC2-Y	
			Azul	NP20IC2-BL	
			Branco	NP20IC2-W	
			3 posições fixas 45° 	Amarelo	NP20IC4-Y
		Azul		NP20IC4-BL	
		Branco		NP20IC4-W	
			3 posições retorno direita, esquerda 45° 	Vermelho	NP20IC4-R
		Verde		NP20IC4-G	
		Amarelo		NP20IC7-Y	
				Azul	NP20IC7-BL
				Branco	NP20IC7-W
				Vermelho	NP20IC7-R
			Verde	NP20IC7-G	
Dimensão (mm)					
					


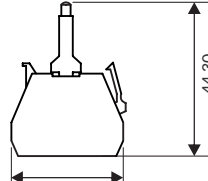


BLOCO DE CONTATO

Dimensão (mm)	Modelo	Arranjo de contato	Código
		1NA	NP20-1A
		1NF  Ruptura positiva	NP20-1B

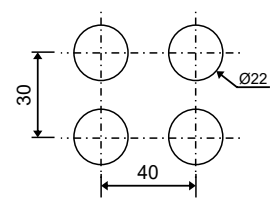
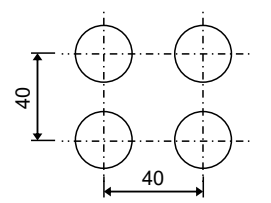
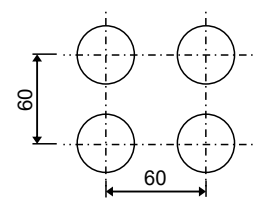
## BLOCO DE ILUMINAÇÃO

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	Tensão de alimentação	Cor	Código
	110 VCA/VCC	Amarelo	NP20-IL1Y
Azul		NP20-IL1BL	
Branco		NP20-IL1W	
Vermelho		NP20-IL1R	
Verde		NP20-IL1G	
220 VCA/VCC	Amarelo	NP20-IL2Y	
	Azul	NP20-IL2BL	
	Branco	NP20-IL2W	
	Vermelho	NP20-IL2R	
	Verde	NP20-IL2G	
24 VCA/VCC	Amarelo	NP20-IL7Y	
	Azul	NP20-IL7BL	
	Branco	NP20-IL7W	
	Vermelho	NP20-IL7R	
	Verde	NP20-IL7G	
12 VCA/VCC	Amarelo	NP20-IL9Y	
	Azul	NP20-IL9BL	
	Branco	NP20-IL9W	
	Vermelho	NP20-IL9R	
	Verde	NP20-IL9G	
<b>Dimensão (mm)</b>			
			



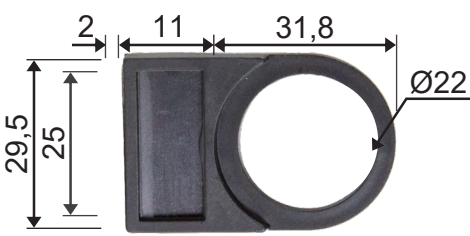
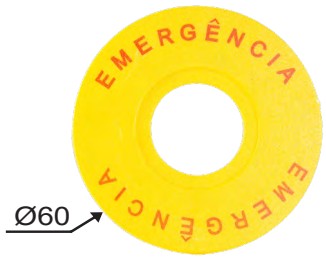
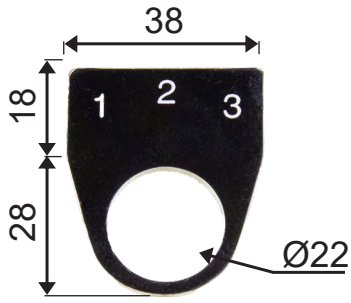
## INSTALAÇÃO

 <p>Exceto botão cogumelo &gt; Ø30 mm</p>	 <p>Botão cogumelo Ø40 mm</p>	 <p>Botão cogumelo Ø60 mm</p>
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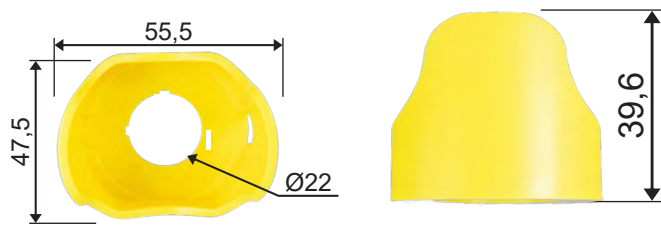
ACESSÓRIOS

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Identificadores

<p>P20-ID</p>  <p>Identificador com porta etiqueta</p>	<p>P20-IDEM</p>  <p>Identificador de emergência Amarelo com gravação vermelha</p>	<p>P20-ID123</p>  <p>Identificador para chave seletora 3 posições Preto com gravação branca</p>
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<p>Tapa furo Ø22 mm P20-TF</p>  <p>Tapa furo Ø22 mm</p>	<p>Adaptador para furo Ø30 mm P20-ADP30</p>  <p>Usado em pares</p>
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<p>Protetor plástico P20-PA</p>  <p>Protetor plástico (PA66) amarelo para botão de emergência</p>
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# MAIN CHARACTERISTICS

- Modular push button for panel mounting with Ø22 mm hole;
- Self-extinguishing thermoplastic body with high mechanical and heat resistance;
- Easy and quick assembly through snap-in;
- IP40 or IP65 protection degree;
- According to IEC 60947-5-1;
- TÜV approval;
- Various accessories including identifiers, hole closer, hoje adapter, bulbs and etc (sold separately);



EN



# GENERAL SPECIFICATIONS

## Command buttons and selector switches

Protection degree	IP40 and IP65
Body material	Thermoplastic VO, self-extinguishing
Electrical life	1.000.000 operations
Humidity	45% ~ 85% non-condensing
Temperature	-5 ~ 40 °C
Altitude	< 2000 m
Pollution degree	Level 3
Norms	IEC 60947-5-1
Certifications	TÜV / CE
Mounting diameter	22mm

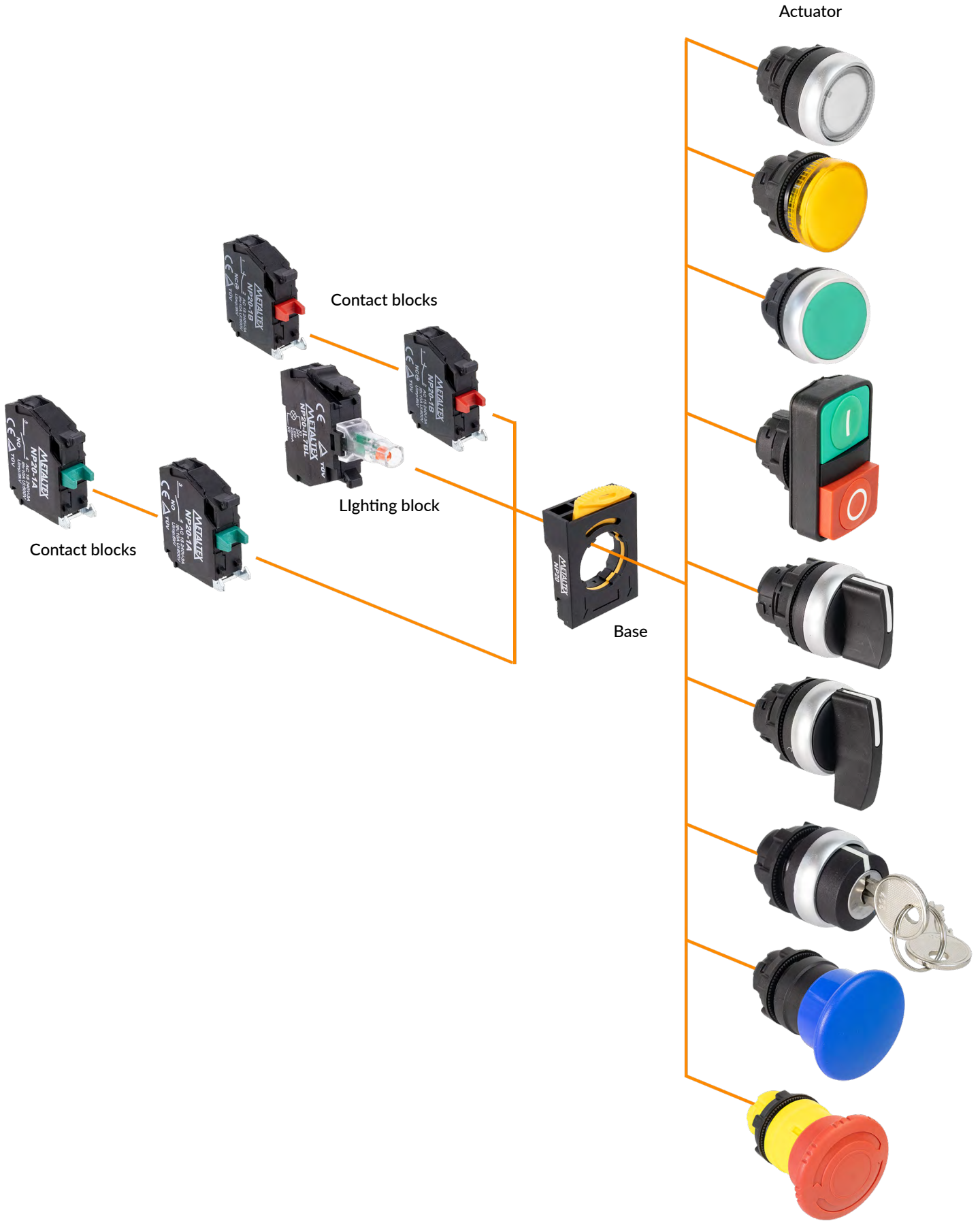
## Contact blocks

Model	NP20-1A	NP20-1B
Type of contact	1NA	1NF
Protection degree	IP20	
Contact material	AgNi	
Operation voltage Ue	380 V	
Insulation voltage Ui	660 V	
Impulse voltage		
Nominal current Ie	AC-15 (A600): 3 A / 240 V; 6 A / 120 V; 1,2 A / 600 V DC-13 (Q600): 0,1 A / 600 V; 0,27 A / 250 V; 0,55 A / 125 V	
Thermal current Ith	10 A	
Short-circuit protection	10 A cartridge fuse type gG	
Initial contact resistance	< 50 mΩ	
Electrical life	500.000 operations	

## Lighting block

Type of signage		Continuous
Current consumption	12 VDC/VAC	≤ 20 mA
	24 VDC/VAC	
	110 VDC/VAC	
	220 VDC/VAC	

MODULAR PUSH BUTTON COMPOSITION




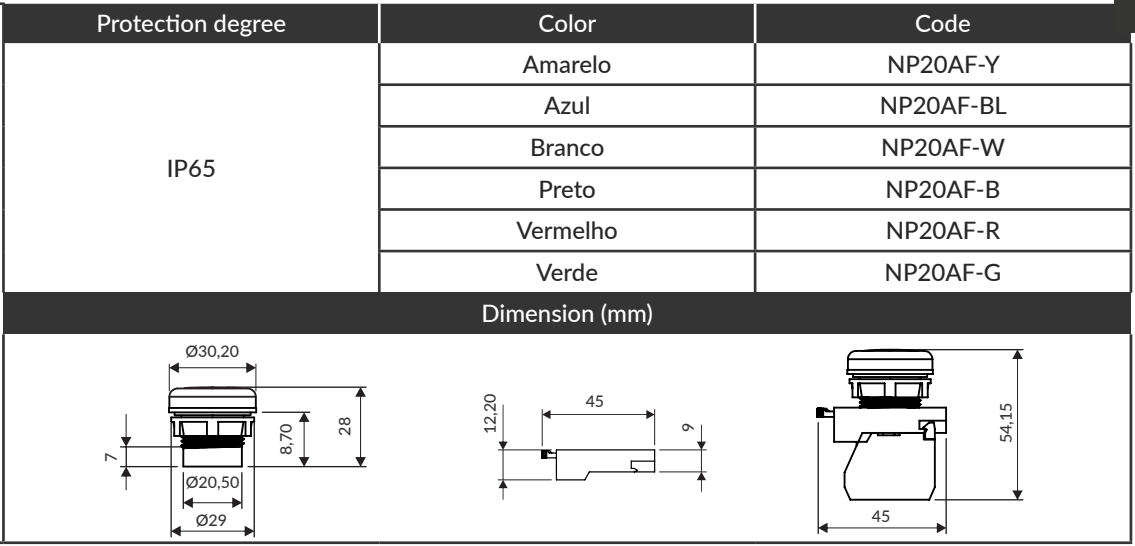
Button sold in modules:

- The base comes with the actuators.
- The contact blocks and lighting block are sold separately.
- It is possible to add 1 lighting block and 4 contact blocks in illuminated buttons, and 4 to 6 contact blocks in non-illuminated models depending on their function.


MOMENTARY PUSH BUTTON

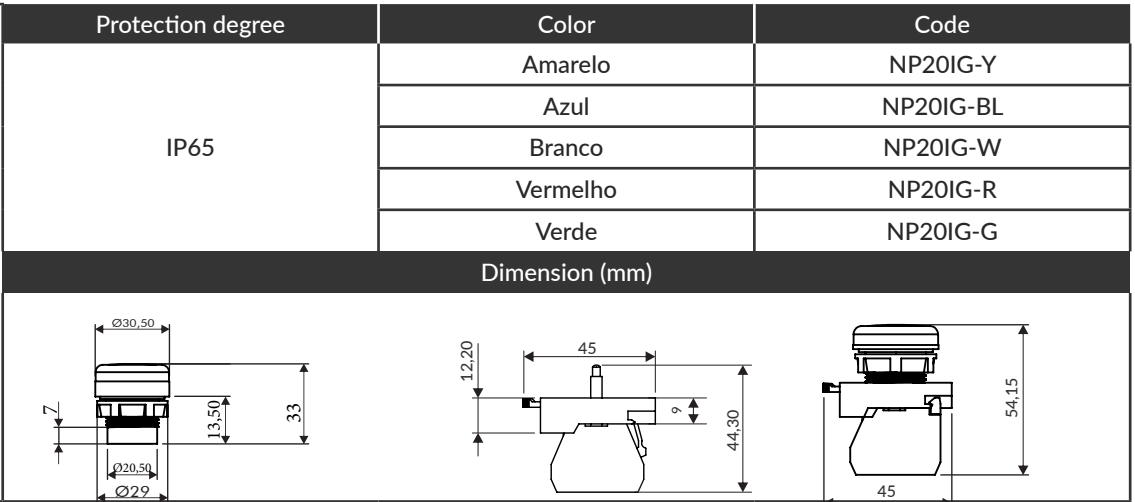
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Protection degree	Color	Code
IP65	Amarelo	NP20AF-Y
	Azul	NP20AF-BL
	Branco	NP20AF-W
	Preto	NP20AF-B
	Vermelho	NP20AF-R
	Verde	NP20AF-G
Dimension (mm)		
		

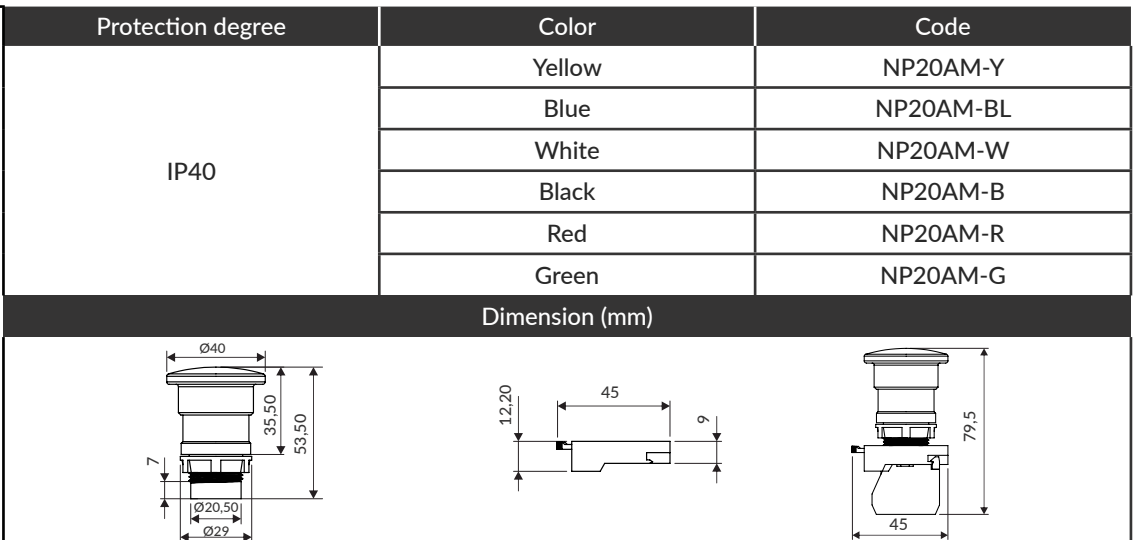
ILLUMINATED PUSH BUTTON




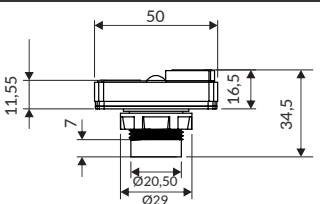
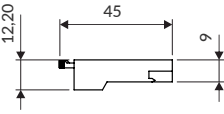
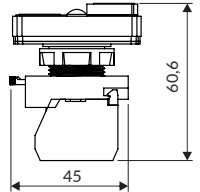
Protection degree	Color	Code
IP65	Amarelo	NP20IG-Y
	Azul	NP20IG-BL
	Branco	NP20IG-W
	Vermelho	NP20IG-R
	Verde	NP20IG-G
Dimension (mm)		
		

MUSHROOM PULSATOR PUSH BUTTON


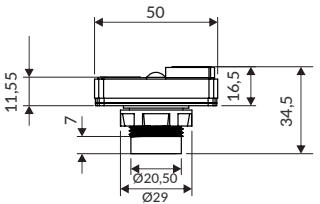
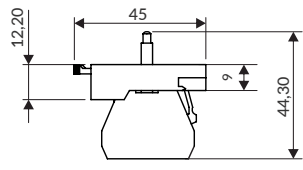
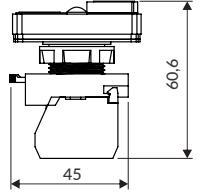


Protection degree	Color	Code
IP40	Yellow	NP20AM-Y
	Blue	NP20AM-BL
	White	NP20AM-W
	Black	NP20AM-B
	Red	NP20AM-R
	Green	NP20AM-G
Dimension (mm)		
		


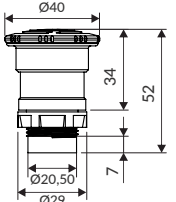
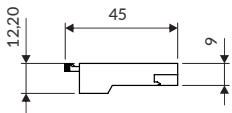
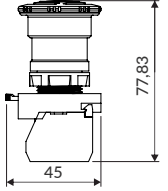
TWIN BUTTON


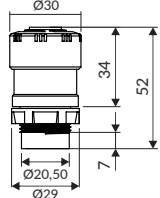
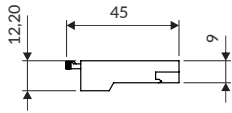
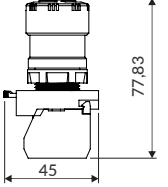
	Protection degree	Color	Code	EN
	IP40	Verde e vermelho	NP20AP	
	Dimension (mm)			
				


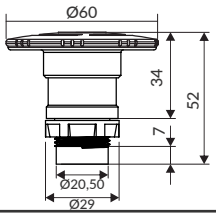
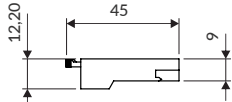
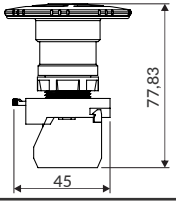
ILLUMINATED TWIN PUSH BUTTON


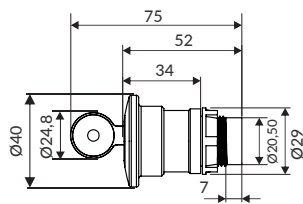
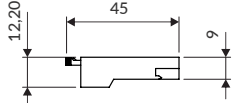
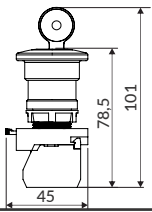
	Protection degree	Color	Code
	IP40	Verde e vermelho	NP20ID
	Dimension (mm)		
			

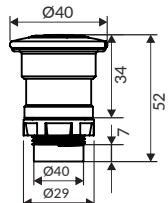
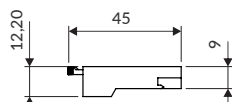
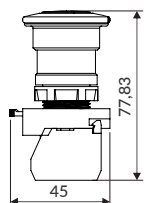
MUSHROOM EMERGENCY PUSH BUTTON

Push to lock and turn to unlock- Ø40mm				
	Protection degree	Color	Code	
	IP65	Yellow	NP20AK-Y	
		Red	NP20AK-R	
	Dimension (mm)			
				



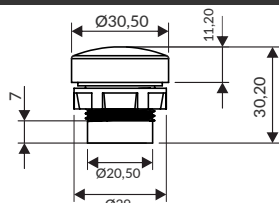
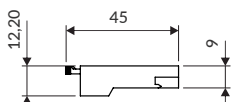
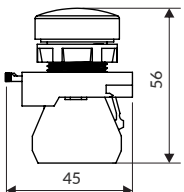
Push to lock and turn to unlock. - Ø30mm				
	Protection degree	Color	Code	
	IP65	Vermelho	NP20AX-R	
	Dimension (mm)			
				

Push to lock and turn to unlock. - Ø60mm			
	Protection degree	Color	Code
	IP65	Vermelho	NP20BY-R
	Dimension (mm)		
			

Push to lock and turn to unlock. - Ø40mm			
	Protection degree	Color	Code
	IP40	Vermelho	NP20AC-R
	Dimension (mm)		
			




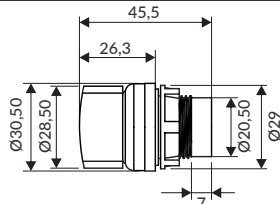
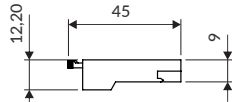
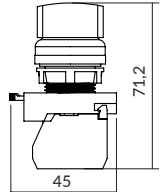
Push - lock and pull-to- release - Ø40 mm			
<p>Soon</p>	Protection degree	Color	Code
	IP65	Vermelho	NP20BE-R
	Dimension (mm)		
			




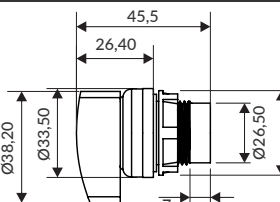
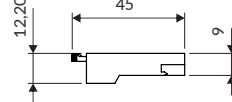
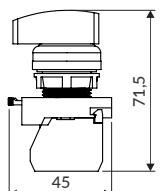
INDICATOR





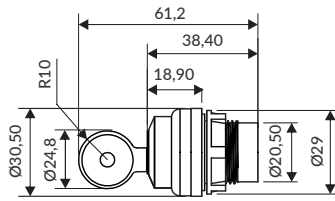
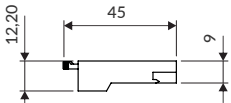
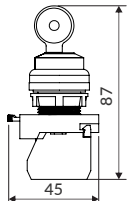
 	Protection degree	Color	Code
	IP40	Amarelo	NP20PR-Y
		Azul	NP20PR-BL
		Branco	NP20PR-W
		Vermelho	NP20PR-R
		Verde	NP20PR-G
Dimension (mm)			
			

SELECTOR SWITCHES

EN

Short knob			
Protection degree	Position	Code	
IP40	2 positions fixed 90° 	NP20SC2-B	
	3 positions fixed 45° 	NP20SC4-B	
	3 right and left return positions 45° 	NP20SC7-B	
Dimension (mm)			
			





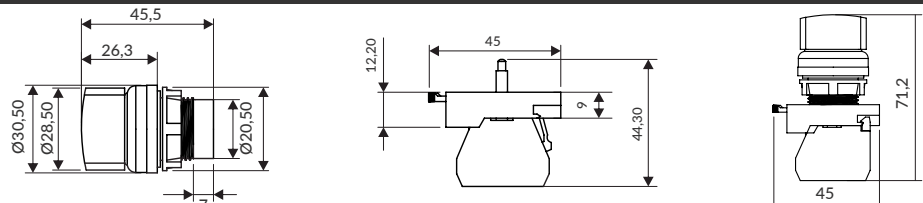
Long knob			
Protection degree	Position	Code	
IP40	2 positions fixed 90° 	NP20SL2-B	
	3 positions fixed 45° 	NP20SL4-B	
	3 right and left return positions 45° 	NP20SL7-B	
Dimension (mm)			
			

Selector with key			
Protection degree	Position	Code	
IP40	2 positions fixed 90° 	NP20KN2-B	
	2 positions return 90° 	NP20KN3-B	
	3 positions fixed 45° 	NP20KN5-B	
	3 right and left return positions 45° 	NP20KN7-B	
Dimension (mm)			
			

OBS.: The keys can only be removed in position 0 (zero)

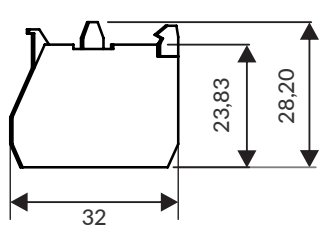


ILLUMINATED SELECTOR SWITCHES

EN

Short knob					
	Protection degree	Position	Color	Code	
	IP40	2 positions fixed 90°		Yellow	NP20IC2-Y
				Blue	NP20IC2-BL
				White	NP20IC2-W
				Red	NP20IC2-R
				Green	NP20IC2-G
		3 positions fixed 45°		Yellow	NP20IC4-Y
				Blue	NP20IC4-BL
				White	NP20IC4-W
				Red	NP20IC4-R
	3 right and left return positions 45°		Green	NP20IC4-G	
			Yellow	NP20IC7-Y	
			Blue	NP20IC7-BL	
White			NP20IC7-W		
			Red	NP20IC7-R	
			Green	NP20IC7-G	
Dimension (mm)					
					


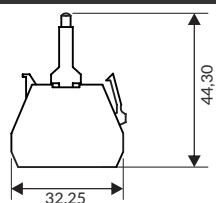


CONTACT BLOCKS

Dimension (mm)	Model	Contact arrangement	Code
		1NO	NP20-1A
		1NC ⊕ Positive break	NP20-1B

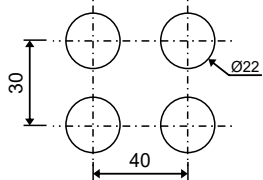
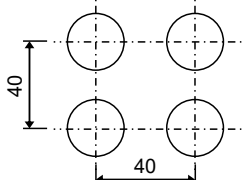
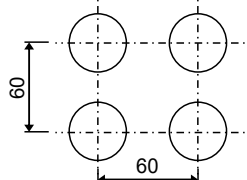
LIGHTING BLOCKS

EN

	Power supply	Color	Code
	110 VDC/VAC	Yellow	NP20-IL1Y
Blue		NP20-IL1BL	
White		NP20-IL1W	
Red		NP20-IL1R	
Green		NP20-IL1G	
220 VDC/VAC	Yellow	NP20-IL2Y	
	Blue	NP20-IL2BL	
	White	NP20-IL2W	
	Red	NP20-IL2R	
	Green	NP20-IL2G	
24 VDC/VAC	Yellow	NP20-IL7Y	
	Blue	NP20-IL7BL	
	White	NP20-IL7W	
	Red	NP20-IL7R	
	Green	NP20-IL7G	
12 VDC/VAC	Yellow	NP20-IL9Y	
	Blue	NP20-IL9BL	
	White	NP20-IL9W	
	Red	NP20-IL9R	
	Green	NP20-IL9G	
<b>Dimension (mm)</b>			
			

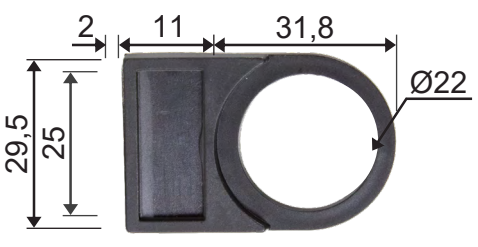
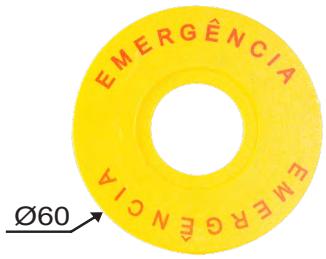
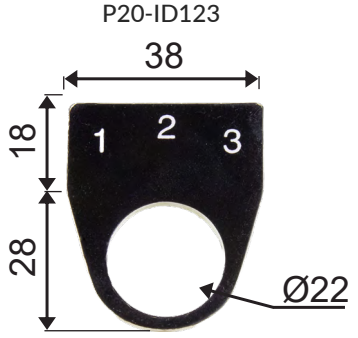




INSTALLATION

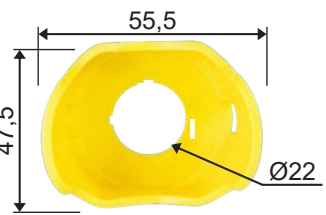

 <p>Except mushroom button &gt; <math>\varnothing 30\text{mm}</math></p>	 <p>Mushroom button <math>\varnothing 40\text{mm}</math></p>	 <p>Mushroom button <math>\varnothing 60\text{mm}</math></p>
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ACCESSORIES

EN

Identifiers		
<p>P20-ID</p>  <p>Identifier with label holder</p>	<p>P20-IDEM</p>  <p>Emergency identifier Yellow with red writing</p>	<p>P20-ID123</p>  <p>Identifier for 3 positions selector switch Black with white writing</p>

<p>Hole closer Ø22mm</p> <p>P20-TF</p>  <p>Ø22mm hole closer</p>	<p>Ø30mm hole adaptor</p> <p>P20-ADP30</p>  <p>Used in pairs</p>
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Plastic protector	
<p>P20-PA</p>	
	
<p>Yellow plastic protector (PA66) for emergency button</p>	