

LINHA P16

P16 SERIES

BOTÕES DE COMANDO E SINALIZADORES PLÁSTICOS 16mm

16mm PLASTIC PUSH BUTTONS AND INDICATORS

ESPECIFICAÇÕES TÉCNICAS

TECHNICAL SPECIFICATIONS



PRINCIPAIS CARACTERÍSTICAS / MAIN CHARACTERISTICS

- Botão de comando para painel com furação de Ø16mm;
Push button switches for panels with Ø16mm holes;
- Diversas cores e modelos;
Various colors and types;
- Grau de proteção IP40;
IP40 protection degree;
- Modelos iluminados com LED;
Illuminated types with LED;
- Diversos acessórios incluindo identificador de emergência, soquete e lâmpadas de led (vendidos separadamente);
Various accessories including emergency identifier, socket and LED lamps (sold separately);



ESPECIFICAÇÕES GERAIS / GENERAL SPECIFICATIONS

Temperatura de operação / Operating temperature	-5 ~ 40 °C
Umidade de operação / Operating humidity	45% ~ 85% (Não condensável / No condensation)
Rigidez dielétrica / Dielectric strength	2000V, 1min.
Resistência de contato inicial / Initial contact resistance	<20 mΩ
Vida mecânica / Mechanical life	Momentâneo: 1.000.000 operações / Momentary: 10 ⁶ operations Retenção: 100.00 operações / Alternate: 5×10 ⁵ operations
Vida elétrica / Electrical life	Momentâneo: AC: 500.00, DC: 250.000 / Momentary: AC: 5×10 ⁵ , DC: 2,5×10 ⁵ Retenção: 100.00 / Alternate: 10 ⁵
Grau de proteção / Protection degree	IP40
Tensão de isolamento / Rated insulation voltage	250 V (Ui)
Corrente máxima no contato / Maximum contact current	3 A (Ith)
Consumo da lâmpada / Bulb consumption	<20 mA
Faixa de corrente operacional / Rated operational current	AC12: 1 A-110 V; 0,5 A-220 V AC15: 0,7 A-110 V; 0,5 A-220 V DC12: 1 A-24 V; 0,2 A-110 V DC15: 0,7 A-24 V; 0,2 A-110 V

CÓDIGO DE COMPRA / HOW TO ORDER

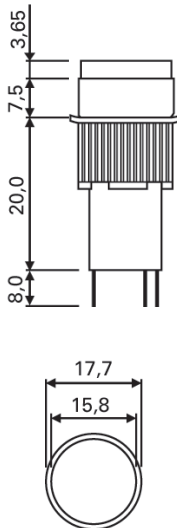
Tipo / Type		Contatos / Contacts	
B	Botão pulsador momentâneo / Momentary push button	1	1 Rev. / SPDT
I	Botão pulsador alternado / Alternate push button	2	2 Rev. / SPDT
P	Sinaleiro (alimentação direta) / Indicator light (direct supply)	Cor / Color	
L2	Chave seletora 2 posições fixas 90° <i>Keyswitch 2 fixed positions 90°</i>	B	Preto / Black
L3	Chave seletora 3 posições fixas 45° <i>Keyswitch 3 fixed positions 45°</i>	R	Vermelho / Red
K2	Chave seletora com chave 2 posições fixas 90° <i>Keyswitch with key 2 fixed positions 90°</i>	G	Verde / Green
K3	Chave seletora com chave 3 posições fixas <i>Keyswitch with key 3 fixed positions 45°</i>	BL	Azul / Blue
M	Botão cogumelo / Mushroom button	Y	Amarelo / Yellow
E	Botão emergência com trava e gira para destravar <i>Emergency lock button and turn to unlock</i>	W	Branco / White
Formato / Shape		O	Laranja / Orange
R	Redondo / Round	Tensão da lâmpada / Lamp voltage (Para botão pulsador / For push button)	
L	Retangular / Rectangular	Em branco / Nil	Sem iluminação / No lamp
S	Quadrado / Square	9	12 VCA/VCC / VAC/VDC (Sob encomenda / On order)
		7	24 VCA/VCC / VAC/VDC
		2	220 VCA/VCC / VAC/VDC
		1	110 VCA/VCC / VAC/VDC (Sob encomenda / On order)

BOTÕES PULSADORES ILUMINADOS MOMENTÂNEOS

MOMENTARY ILLUMINATED PUSH BUTTONS

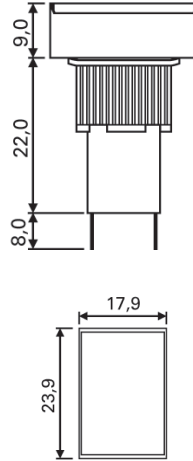
Redondo / Round



Botão / Button	Dimensão / Dimension (mm)	Cor / Color	Contato / Contact	Tensão / Voltage	Código / Code
 		Azul / Blue	2 REV	220 VCA/VCC / VAC/VDC	P16-BR2-BL2
			1 REV	24 VCA/VCC / VAC/VDC	P16-BR7-BL1
			2 REV		P16-BR7-BL2
		Branco / White	2 REV	220 VCA/VCC / VAC/VDC	P16-BR2-W2
				24 VCA/VCC / VAC/VDC	P16-BR7-W2
		Laranja / Orange	2 REV	220 VCA/VCC / VAC/VDC	P16-BR2-O2
				24 VCA/VCC / VAC/VDC	P16-BR7-O2
		Verde / Green	1 REV	220 VCA/VCC / VAC/VDC	P16-BR2-G1
			2 REV		P16-BR2-G2
			1 REV	24 VCA/VCC / VAC/VDC	P16-BR7-G1
			2 REV		P16-BR7-G2
		Vermelho / Red	1 REV	220 VCA/VCC / VAC/VDC	P16-BR2-R1
			2 REV		P16-BR2-R2
			1 REV	24 VCA/VCC / VAC/VDC	P16-BR7-R1
			2 REV		P16-BR7-R2

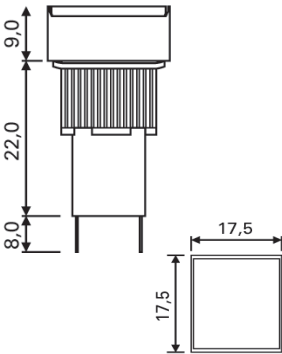
Retangular / Rectangular



Botão / Button	Dimensão / Dimension (mm)	Cor / Color	Contato / Contact	Tensão / Voltage	Código / Code
 		Azul / Blue	2 REV	220 VCA/VCC / VAC/VDC	P16-BL2-BL2
				24 VCA/VCC / VAC/VDC	P16-BL7-BL2
		Branco / White	2 REV	220 VCA/VCC / VAC/VDC	P16-BL2-W2
				24 VCA/VCC / VAC/VDC	P16-BL7-W2
		Laranja / Orange	2 REV	220 VCA/VCC / VAC/VDC	P16-BL2-O2
				24 VCA/VCC / VAC/VDC	P16-BL7-O2
		Verde / Green	1 REV	220 VCA/VCC / VAC/VDC	P16-BL2-G1
			2 REV		P16-BL2-G2
			1 REV	24 VCA/VCC / VAC/VDC	P16-BL7-G1
			2 REV		P16-BL7-G2
		Vermelho / Red	1 REV	220 VCA/VCC / VAC/VDC	P16-BL2-R1
			2 REV		P16-BL2-R2
			1 REV	24 VCA/VCC / VAC/VDC	P16-BL7-R1
			2 REV		P16-BL7-R2

Quadrado / Square

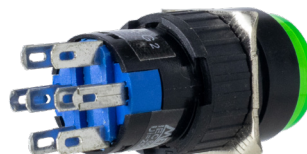


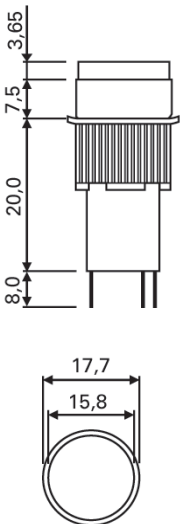
Botão / Button	Dimensão / Dimension (mm)	Cor / Color	Contato / Contact	Tensão / Voltage	Código / Code
 		Azul / Blue	2 REV	220 VCA/VCC / VAC/VDC	P16-BS2-BL2
				24 VCA/VCC / VAC/VDC	P16-BS7-BL2
		Branco / White	2 REV	220 VCA/VCC / VAC/VDC	P16-BS2-W2
				24 VCA/VCC / VAC/VDC	P16-BS7-W2
		Laranja / Orange	2 REV	220 VCA/VCC / VAC/VDC	P16-BS2-O2
				24 VCA/VCC / VAC/VDC	P16-BS7-O2
		Verde / Green	2 REV	220 VCA/VCC / VAC/VDC	P16-BS2-G2
				24 VCA/VCC / VAC/VDC	P16-BS7-G2
		Vermelho / Red	2 REV	220 VCA/VCC / VAC/VDC	P16-BS2-R2
				24 VCA/VCC / VAC/VDC	P16-BS7-R2

BOTÕES PULSADORES ILUMINADOS COM RETENÇÃO

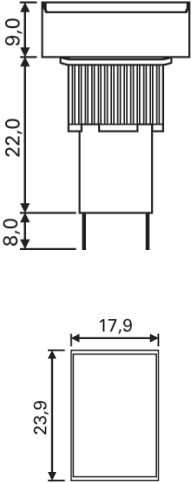
ALTERNATING ILLUMINATED PUSH BUTTONS

Redondo / Round

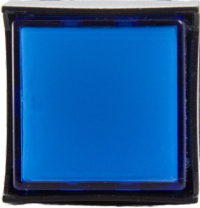
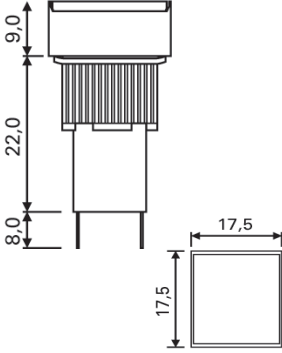


Botão / Button	Dimensão / Dimension (mm)	Cor / Color	Contato / Contact	Tensão / Voltage	Código / Code
 		Azul / Blue	1 REV	220 VCA/VCC / VAC/VDC	P16-IR2-BL2
			2 REV	24 VCA/VCC / VAC/VDC	P16-IR7-BL2
		Branco / White	2 REV	220 VCA/VCC / VAC/VDC	P16-IR2-W2
				24 VCA/VCC / VAC/VDC	P16-IR7-W2
		Laranja / Orange	2 REV	220 VCA/VCC / VAC/VDC	P16-IR2-O2
				24 VCA/VCC / VAC/VDC	P16-IR7-O2
		Verde / Green	1 REV	220 VCA/VCC / VAC/VDC	P16-IR2-G1
			2 REV		P16-IR2-G2
			1 REV	24 VCA/VCC / VAC/VDC	P16-IR7-G1
			2 REV		P16-IR7-G2
		Vermelho / Red	1 REV	220 VCA/VCC / VAC/VDC	P16-IR2-R1
			2 REV		P16-IR2-R2
			1 REV	24 VCA/VCC / VAC/VDC	P16-IR7-R1
			2 REV		P16-IR7-R2

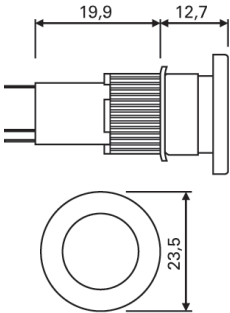


Botão / Button	Dimensão / Dimension (mm)	Cor / Color	Contato Contact	Tensão / Voltage	Código / Code
 		Azul / Blue	2 REV	220 VCA/VCC / VAC/VDC	P16-IL2-BL2
				24 VCA/VCC / VAC/VDC	P16-IL7-BL2
		Branco / White	2 REV	220 VCA/VCC / VAC/VDC	P16-IL2-W2
				24 VCA/VCC / VAC/VDC	P16-IL7-W2
		Laranja / Orange	2 REV	220 VCA/VCC / VAC/VDC	P16-IL2-O2
				24 VCA/VCC / VAC/VDC	P16-IL7-O2
		Verde / Green	1 REV	220 VCA/VCC / VAC/VDC	P16-IL2-G1
			2 REV		P16-IL2-G2
			1 REV	24 VCA/VCC / VAC/VDC	P16-IL7-G1
			2 REV		P16-IL7-G2
		Vermelho / Red	1 REV	220 VCA/VCC / VAC/VDC	P16-IL2-R1
			2 REV		P16-IL2-R2
			1 REV	24 VCA/VCC / VAC/VDC	P16-IL7-R1
			2 REV		P16-IL7-R2

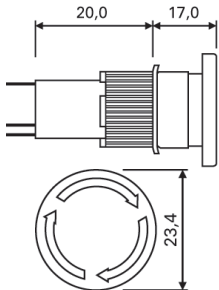


Botão / Button	Dimensão / Dimension (mm)	Cor / Color	Contato / Contact	Tensão / Voltage	Código / Code
 		Azul / Blue	2 REV	220 VCA/VCC / VAC/VDC	P16-IS2-BL2
				24 VCA/VCC / VAC/VDC	P16-IS7-BL2
		Branco / White	2 REV	220 VCA/VCC / VAC/VDC	P16-IS2-W2
				24 VCA/VCC / VAC/VDC	P16-IS7-W2
		Laranja / Orange	2 REV	220 VCA/VCC / VAC/VDC	P16-IS2-O2
				24 VCA/VCC / VAC/VDC	P16-IS7-O2
		Verde / Green	2 REV	220 VCA/VCC / VAC/VDC	P16-IS2-G2
				24 VCA/VCC / VAC/VDC	P16-IS7-G2
		Vermelho / Red	2 REV	220 VCA/VCC / VAC/VDC	P16-IS2-R2
				24 VCA/VCC / VAC/VDC	P16-IS7-R2

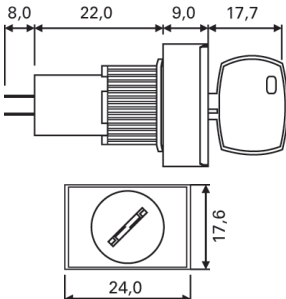
BOTÃO COGUMELO PULSADOR / MUSHROOM PUSH BUTTON

				
Botão / Button	Dimensão / Dimension (mm)	Cor / Color	Contato / Contact	Código / Code
		Verde / Green	1 REV	P16-MR-G1
		Vermelho / Red		P16-MR-R1

BOTÃO DE EMERGÊNCIA COGUMELO / MUSHROOM EMERGENCY PUSH BUTTON

				
Botão / Button	Dimensão / Dimension (mm)	Cor / Color	Contato / Contact	Código / Code
		Vermelho / Red	1 REV	P16-ER-R1
			2 REV	P16-ER-R2

CHAVE SELETORA / SELECTOR SWITCHES

Retangular com chave / Rectangular with key				
			Remoção da chave em todas as posições Key removable in all positions	
Botão / Button	Dimensão / Dimension (mm)	Posição / Position	Contato / Contact	Código / Code
		2 posições fixas 90° 2 fixed positions 90° 	2 REV	P16-K2L-B2
		3 posições fixas 45° 2 fixed positions 45° 		P16-K3L-B2

Redondo com chave / Round with key



Remoção da chave em todas as posições
Key removable in all positions

Botão / Button	Dimensão / Dimension (mm)	Posição / Position	Contato / Contact	Código / Code
		2 posições fixas 90° 2 fixed positions 90° 	2 REV	P16-K2R-B2
		3 posições fixas 45° 2 fixed positions 45° 		P16-K3R-B2

Retangular/ Rectangular



Botão / Button	Dimensão / Dimension (mm)	Posição / Position	Contato / Contact	Código / Code
		2 posições fixas 90° 2 fixed positions 90° 	2 REV	P16-L2L-B2
		3 posições fixas 45° 2 fixed positions 45° 		P16-L3L-B2

Redondo / Round

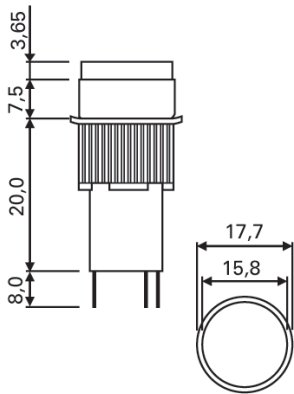


Botão / Button	Dimensão / Dimension (mm)	Posição / Position	Contato / Contact	Código / Code
		2 posições fixas 90° 2 fixed positions 90° 	2 REV	P16-L2R-B2
		3 posições fixas 45° 2 fixed positions 45° 		P16-L3R-B2

SINALIZADORES / INDICATOR

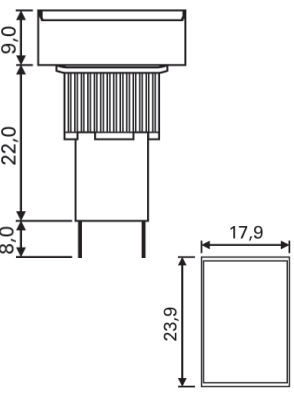
Redondo / Round



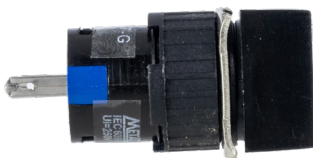
Botão / Button	Dimensão / Dimension (mm)	Cor / Color	Tensão / Voltage	Código / Code
 		Azul / Blue	220 VCA/VCC / VAC/VDC	P16-PR2-BL
			24 VCA/VCC / VAC/VDC	P16-PR7-BL
		Branco / White	220 VCA/VCC / VAC/VDC	P16-PR2-W
			24 VCA/VCC / VAC/VDC	P16-PR7-W
		Laranja / Orange	220 VCA/VCC / VAC/VDC	P16-PR2-O
			24 VCA/VCC / VAC/VDC	P16-PR7-O
		Verde / Green	220 VCA/VCC / VAC/VDC	P16-PR2-G
			24 VCA/VCC / VAC/VDC	P16-PR7-G
		Vermelho / Red	220 VCA/VCC / VAC/VDC	P16-PR2-R
			24 VCA/VCC / VAC/VDC	P16-PR7-R

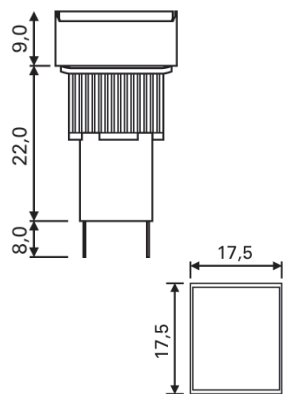
Retangular / Rectangular



Botão / Button	Dimensão / Dimension (mm)	Cor / Color	Tensão / Voltage	Código / Code
 		Azul / Blue	220 VCA/VCC / VAC/VDC	P16-PL2-BL
			24 VCA/VCC / VAC/VDC	P16-PL7-BL
		Branco / White	220 VCA/VCC / VAC/VDC	P16-PL2-W
			24 VCA/VCC / VAC/VDC	P16-PL7-W
		Laranja / Orange	220 VCA/VCC / VAC/VDC	P16-PL2-O
			24 VCA/VCC / VAC/VDC	P16-PL7-O
		Verde / Green	220 VCA/VCC / VAC/VDC	P16-PL2-G
			24 VCA/VCC / VAC/VDC	P16-PL7-G
		Vermelho / Red	220 VCA/VCC / VAC/VDC	P16-PL2-R
			24 VCA/VCC / VAC/VDC	P16-PL7-R

Quadrado / Square



Botão / Button	Dimensão / Dimension (mm)	Cor / Color	Tensão / Voltage	Código / Code
 		Azul / Blue	220 VCA/VCC / VAC/VDC	P16-PS2-BL
			24 VCA/VCC / VAC/VDC	P16-PS7-BL
		Branco / White	220 VCA/VCC / VAC/VDC	P16-PS2-W
			24 VCA/VCC / VAC/VDC	P16-PS7-W
		Laranja / Orange	220 VCA/VCC / VAC/VDC	P16-PS2-O
			24 VCA/VCC / VAC/VDC	P16-PS7-O
		Verde / Green	220 VCA/VCC / VAC/VDC	P16-PS2-G
			24 VCA/VCC / VAC/VDC	P16-PS7-G
		Vermelho / Red	220 VCA/VCC / VAC/VDC	P16-PS2-R
			24 VCA/VCC / VAC/VDC	P16-PS7-R

DIAGRAMAS / DIAGRAMS

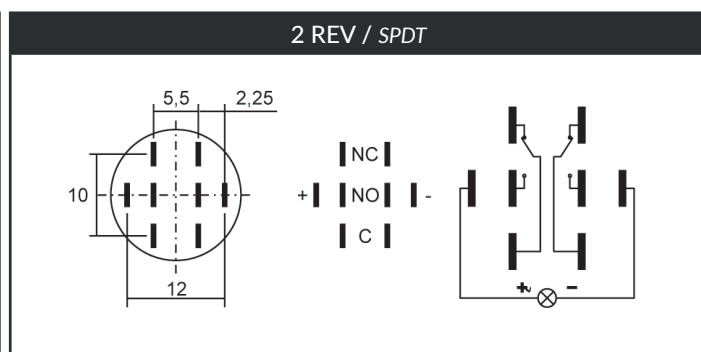
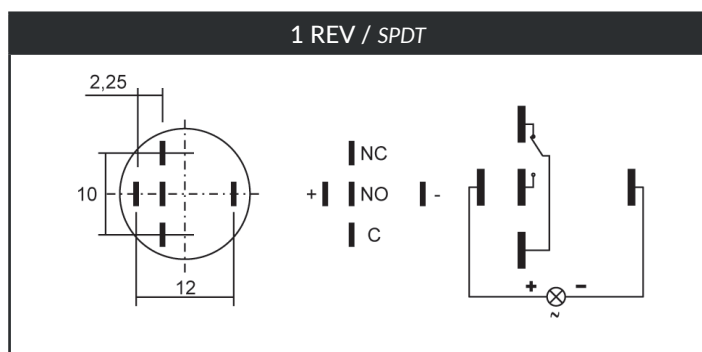
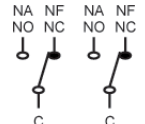
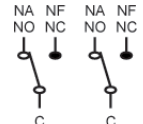
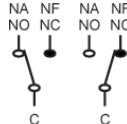
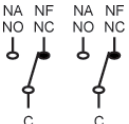
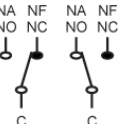


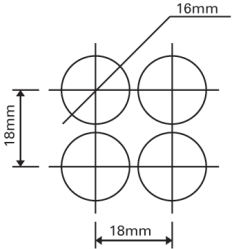
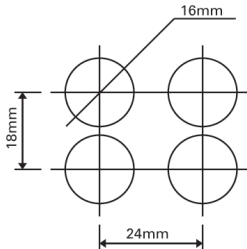
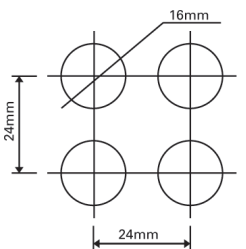
Diagrama de contatos para chaves seletoras / Key switch selection diagram

Posições / Positions	Contato / Contact	Esquerda / Left	Direita / Right
K2 / L2 90° 2 posições 90° 2 positions E / L D / R	1 REV / SPDT		
	2 REV / SPDT		

Posições / Positions	Contato / Contact	Esquerda / Left	Centro / Center	Direita / Right
K3 / L3 45° 3 posições 45° 3 positions E / L C D / R	2 REV / SPDT			

Temperatura e tempo máximo para soldagem nos terminais: 260°C/3s. Não exerça força externa no terminal e não toque na carcaça exterior.
 Temperature and maximum terminal soldering time: 260°C/3sec. Do not apply force on the terminal and do not touch it's body.

INSTALAÇÃO / INSTALLATION

Quadrado ou redondo <i>Square or round</i>	Retangular <i>Rectangular</i>	Cogumelo <i>Mushroom</i>
		

A espessura do painel deve ser de 0,5 a 6mm. Para o diâmetro do furo e mínima distância entre os furos, veja a figura acima.
Panel thickness is 0.5 ~ 6mm. For hole diameter and the minimum hole distance refer to the picture above.

ACESSÓRIOS / ACCESSORIES

Lampada LED/ LED Lamp	Cor / Color	Tensão / Voltage	Código / Code
 	Amarelo/ Yellow	220 VCA/VCC / VAC/VDC	P16-RL2-Y
		24 VCA/VCC / VAC/VDC	P16-RL7-Y
		12 VCA/VCC / VAC/VDC	P16-RL9-Y
	Azul / Blue	220 VCA/VCC / VAC/VDC	P16-RL2-BL
		24 VCA/VCC / VAC/VDC	P16-RL7-BL
		12 VCA/VCC / VAC/VDC	P16-RL9-BL
	Branco / White	220 VCA/VCC / VAC/VDC	P16-RL2-W
		24 VCA/VCC / VAC/VDC	P16-RL7-W
		12 VCA/VCC / VAC/VDC	P16-RL9-W
	Verde / Green	220 VCA/VCC / VAC/VDC	P16-RL2-G
		24 VCA/VCC / VAC/VDC	P16-RL7-G
		12 VCA/VCC / VAC/VDC	P16-RL9-G
	Vermelho / Red	220 VCA/VCC / VAC/VDC	P16-RL2-R
		24 VCA/VCC / VAC/VDC	P16-RL7-R
		12 VCA/VCC / VAC/VDC	P16-RL9-R

Identificador de emergência
Emergency identifier

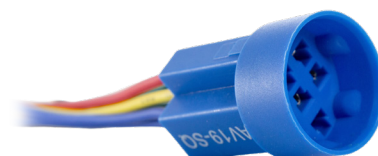
P16-IDEM



Amarelo com gravação vermelha
Yellow with red writing

Soquete
Socket

AV19-SQ



Número de vias / Number of terminals	8
Comprimento do cabo / Cable length	15cm
Bitola do cabo / Wire size	20 AWG
Material do corpo / Body material	PA66
Temperatura / Temperature	-20 ~ 55°C

Visite o site: metaltex.com.br e conheça a linha completa de comando e sinalização.

Visit site: metaltex.com.br and discover the complete line of command and signaling.