



PT

EN

LINHA FS93

FS93 SERIES

CHAVES FIM DE CURSO DE SEGURANÇA

SAFETY LIMIT SWITCHES

ESPECIFICAÇÕES TÉCNICAS

TECHNICAL SPECIFICATIONS



PRINCIPAIS CARACTERÍSTICAS

- Certificado TÜV - IEC/EN 60947-5-1;
- Duplo isolamento que torna desnecessário terminal de aterramento;
- Oito posições possíveis para a entrada do atuador, facilitando a instalação;
- Diversos tipos de atuadores e alavancas adequados para aplicações de segurança;
- Grau de proteção IP65;
- Opção de conexão por parafuso ou conector M12 (opcional).



CÓDIGO DE COMPRA

CHAVE FIM DE CURSO

FS93 - 1A1B

Arranjo do contato	
1A1B	1NA + 1NF (ação rápida)
2B1A	2NF + 1NA (ação lenta)

ATUADOR

FS93 - C1

Tipo do atuador	
C1	Plano
C2	90 graus
C3	Ajuste duplo
C4	Ajuste simples

MODELOS



FS93-1A1B



FS93-2B1A



FS93-C1



FS93-C2



FS93-C3



FS93-C4

ESPECIFICAÇÕES GERAIS

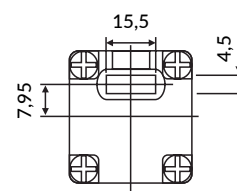
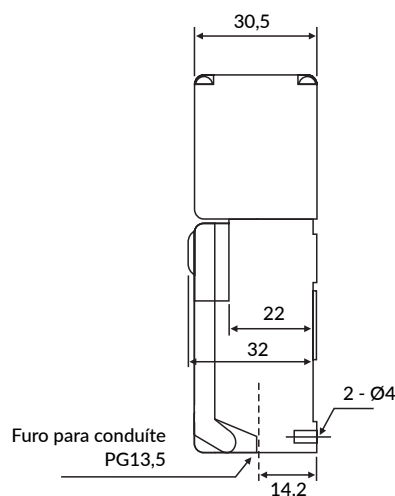
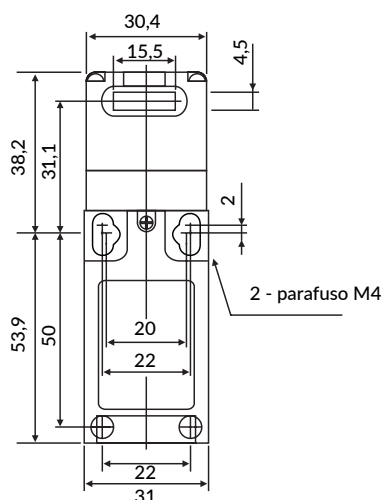
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Modelos	FS93-1A1B	FS93-2B1A
Arranjo dos contatos	1 NA + 1 NF (ação rápida)	2 NF + 1 NA (ação lenta)
Norma	EN60947-5-1, UL508, EN50047, EN1088	
Ruptura positiva	Contato NF	
Capacidade dos contatos	AC-15 3 A - 240 VCA carga resistiva	
Corrente de condução (Ith)	10 A	
Tensão de isolamento Ui	600 V	
Vida mecânica (mín.)	10.000.000 operações	
Vida elétrica (mín.)	150.000 operações	
Frequência de operação (máx.)	2 operações por segundo	
Resistência de contato (máx.)	25 mΩ (inicial)	
Resistência de isolamento (mín.)	100 MΩ (a 500 VCC)	
Rigidez dielétrica	2.500 VCA - 1 minuto	
Proteção contra choque elétrico	Classe II - dupla isolamento	
Vibração	10 ~ 55 Hz	
Temperatura de operação	-25° a 80 °C	
Grau de proteção	IP65	
Grau de poluição	3	
Material do corpo	Poliéster com fibra de vidro	
Material do atuador	Aço inoxidável	
Prensa cabo	PG13,5*	

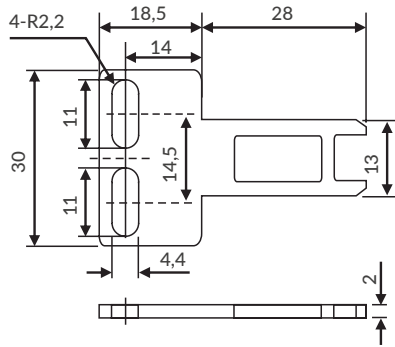
*Indicamos nosso prensa cabo CH-PG13.5-12-P

DIMENSÕES (mm)

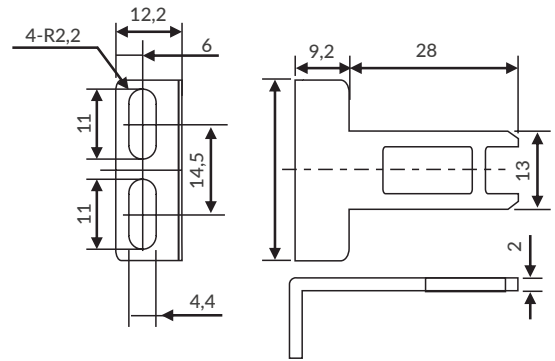
FS93-1A1B / FS93-2B1A



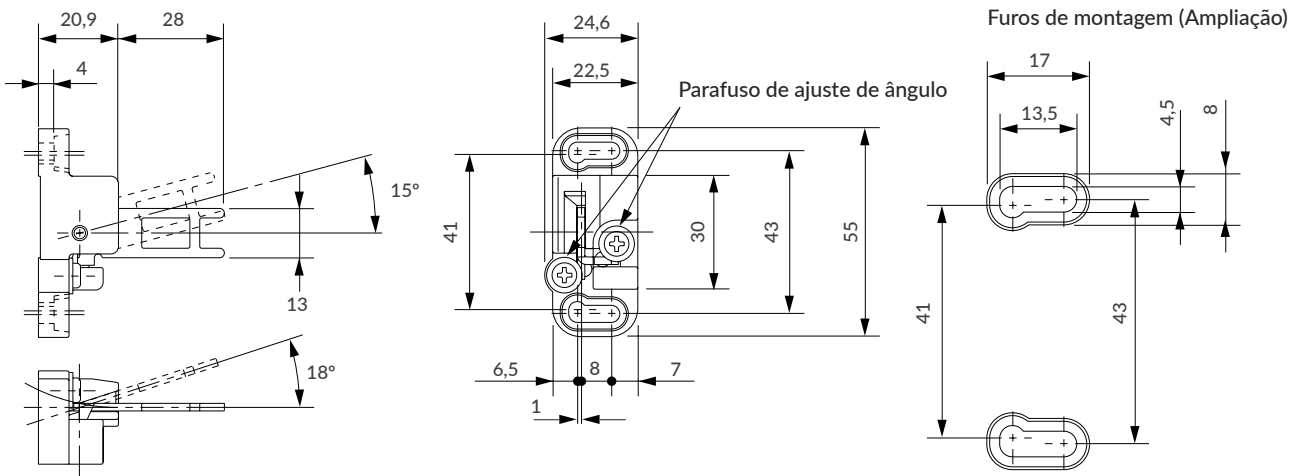
FS93-C1



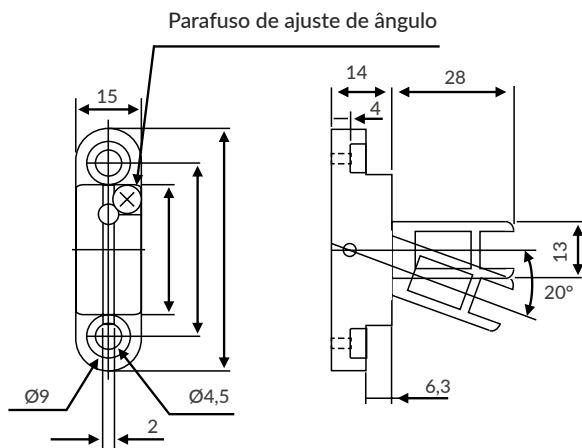
FS93-C2



FS93-C3



FS93-C4



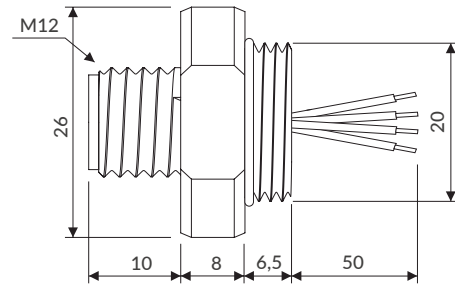
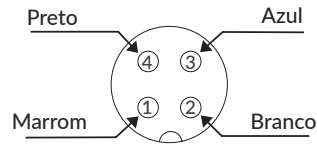
Tolerância não indicada $\pm 0,50$ mm

ACESSÓRIOS

PT

FS-K4

Conector para chave fim de curso de segurança



FEATURES

- TÜV certified - IEC/EN 60947-5-1;
- Double insulation makes ground terminal unnecessary;
- Eight possible actuator entry positions, facilitating installation;
- A wide range of actuator heads and levers suitable for safety applications.
- IP65 protection degree;
- Screws or M12 connector (option).



EN

HOW TO ORDER

SAFETY LIMIT SWITCHES

FS93 - 1A1B

Contact arrangement	
1A1B	1NO + 1NC (quick-action)
2B1A	2NC + 1NO (slow-action)

ACTUATOR

FS93 - C1

Actuator type	
C1	Flat
C2	90 degrees
C3	Double adjustment
C4	Single adjustment

MODELS



FS93-1A1B



FS93-2B1A



FS93-C1



FS93-C2



FS93-C3



FS93-C4

GENERAL SPECIFICATIONS

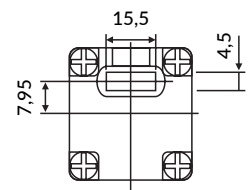
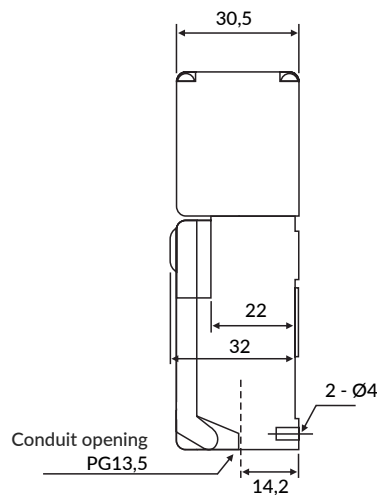
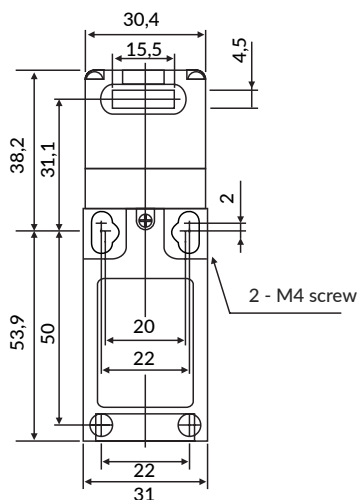
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Models	FS93-1A1B	FS93-2B1A
Contacts arrangement	1 NO + 1 NC (quick-action)	2 NC + 1 NO (slow-action)
Standard	EN 60947-5-1, UL 508, EN 50047, EN 1088	
Positive opening	NC contact	
Contact capacity	AC-15 3 A - 240 VAC resistive load	
Carrying current (I _{th})	10 A	
Insulation voltage U _i	600 V	
Mechanical life (min.)	10,000,000 operations	
Electrical life (min.)	150,000 operations	
Operating frequency (max.)	2 operations per second	
Contact resistance (max.)	25 mΩ (initial)	
Insulation resistance (min.)	100 MΩ (at 500 VDC)	
Dielectric strength	2,500 VAC - 1 minute	
Protection against electric shock	Class II - double insulation	
Vibration	10 ~ 55 Hz	
Operate temperature range	-25° ~ 80 °C	
Protection degree	IP65	
Pollution degree	3	
Enclosure material	Polyester with fiberglass	
Actuator material	Stainless steel	
Cable gland	PG13,5*	

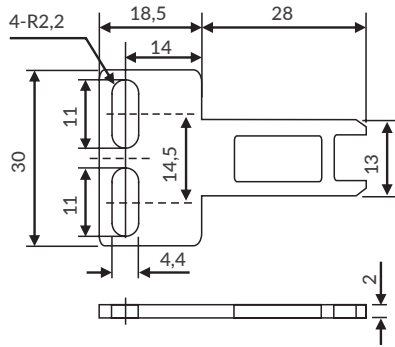
*We suggest our CH-PG13.5-12-P cable gland

DIMENSIONS (mm)

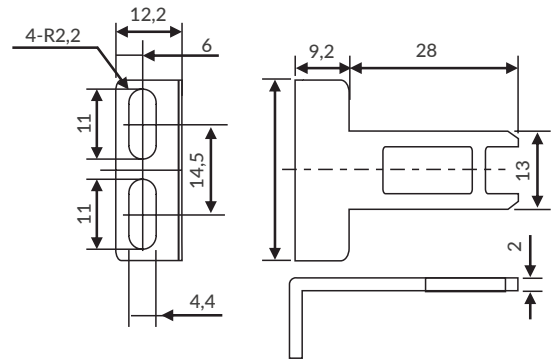
FS93-1A1B / FS93-2B1A



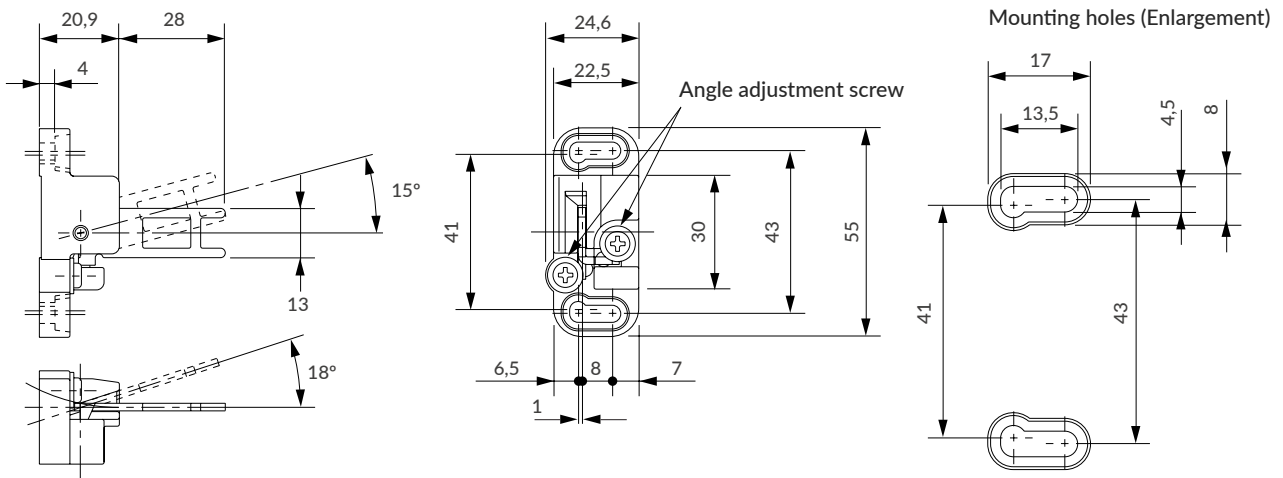
FS93-C1



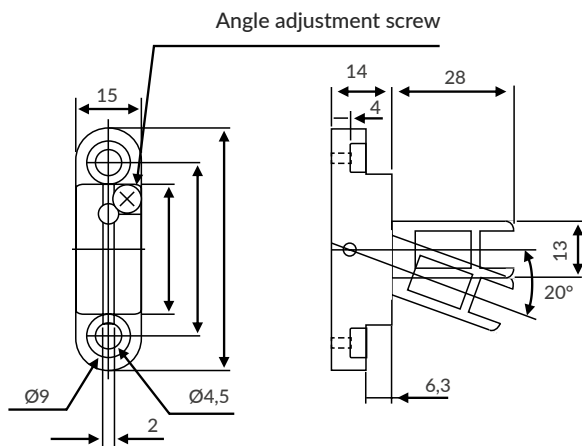
FS93-C2



FS93-C3



FS93-C4



Not indicated tolerance ± 0.50 mm

ACCESSORIES

EN

FS-K4
Connector for safety limit switch

