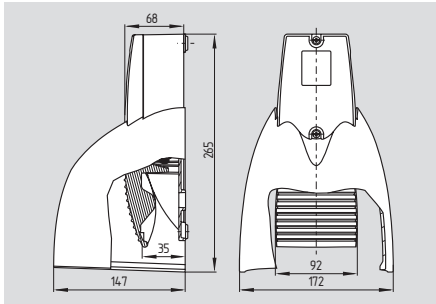


Foot switch

GFI and GFSI



- 4 contacts
- Metal enclosure
- With or without protective shield
- High level of stability
- Low pedal height
- Ergonomic pedal shape
- Wiring compartment
- Cable entry M20 x 1.5
- Ex version available
- Available with mechanical interlock (only for slow action S)
- Available with special finish in RAL colour tones
- Also available as safety foot switch

Technical data

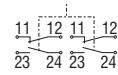
Standards: IEC/EN 60947-5-1
 Enclosure: pressure die cast Al alloy, paint finish RAL 5011
 Pedal: pressure die cast Al alloy, paint finish RAL 5011
 Protective shield: GFI: -
 GFSI: cast aluminium, paint finish, RAL 2004
 Termination: screw terminals for max. 2.5 mm² cables (including conductor ferrules)
 Cable entry: 1 x M20 x 1.5
 Contact material: silver
 Protection class: IP 65 to EN 60529
 Switching system: slow action, double break, positive break NC contacts ⊖
 Contact blocks: 1 NC / 1 NO
 2 NC / 2 NO
 Potentiometer output (-Poti): 1 kΩ, 2 kΩ, 5 kΩ, 10 kΩ, 50 kΩ
 Analog output (-HS): 0...10 VDC, 0...20 mA DC, 4...20 mA DC
 2-level switching (1ÖS D 1ÖS): 1 NC / 1NO
 pressure point 1 NC / 1 NO
 latching (-RE): 1 NC / 1 NO with latching
 Utilisation category: AC-15
 I_e/U_e: slow action: ES 60 GF: 16 A / 400 VAC
 snap action: insert ZS 232: 4 A / 230 VAC
 2.5 A / 400 VAC
 1 A / 500 VAC
 Switching voltage: max. 400 VAC
 Max. fuse rating: insert ES 60 GF: 16 A (slow blow)
 insert ZS 232: 4 A (slow blow)
 Ambient temperature: - 25 °C ... + 80 °C
 Mechanical life: > 1 million operations

Contact variants

1 NO / 1 NC



2 NO / 2 NC



Approvals



Ordering details

GF1I2 ③

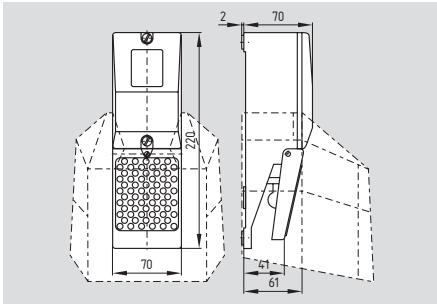
No.	Replace	Description
①		Without protective shield
	S	With protective shield
②		Slow action
	M	Snap action
③		per pedal:
	1Ö/1S	1 NO/1 NC
	2Ö/2S	2 NO/2 NC

Note

Other contact configurations available on request (Max. 4 contacts per pedal).

Foot switch

GF and GFS



- Max. 4 contacts
- Metal enclosure
- With or without protective shield
- High level of stability
- Wide opening in shield
- Low pedal height
- Cable entry M20 x 1.5
- Ex version available
- Available with mechanical interlock (only for slow action S)
- Available with special finish in RAL colour tones
- Special versions, see page 3-9
- Also available as safety foot switch

Technical data

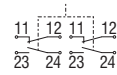
Standards: IEC/EN 60947-5-1
 VDE 0113 part 1
 Enclosure: cast aluminium, enamel finish, RAL 5011
 Cover: GF: glass-fibre reinforced thermoplastic
 GFS: -
 Pedal: GF: glass-fibre reinforced thermoplastic, free of silicone
 GFS: glass-fibre reinforced thermoplastic
 Protective shield: GF: -
 GFS: cast aluminium, paint finish, RAL 5011
 Cable entry: GF/GFS: M20 x 1,5
 GF2/GFS2: M25 x 1,5
 GF3/GFS3: 2 x M25 x 1,5
 Protection class: IP 65 to EN 60529
 Switching system: slow or snap action
 Utilisation category: AC-15, DC-13
 I_e/U_e: slow action:
 4 contacts:
 insert ES 40 GF:
 6 A / 400 VAC
 2 contacts:
 insert ES 60 GF:
 16 A / 400 VAC
 snap action:
 insert ZS 232:
 4 A / 230 VAC
 2.5 A / 400 VAC
 1 A / 500 VAC
 Max. fuse rating: insert ES 40 GF:
 6 A
 insert ES 60 GF:
 16 A
 insert ZS 232:
 4 A (slow blow)
 Ambient temperature: - 25 °C ... + 80 °C
 Mechanical life: > 1 million operations

Contact variants

1 NO / 1 NC



2 NO / 2 NC



Approvals



Ordering details

GF^{①②③}

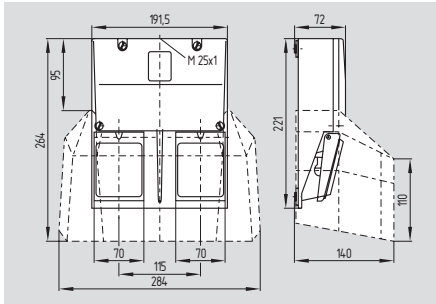
No.	Replace	Description
①		Without protective shield
	S	With protective shield
②		Slow action
	M	Snap action
③		per pedal:
	1Ö/1S	1 NO/1 NC
	2Ö/2S	2 NO/2 NC

Note

Other contact configurations available on request (Max. 4 contacts per pedal).

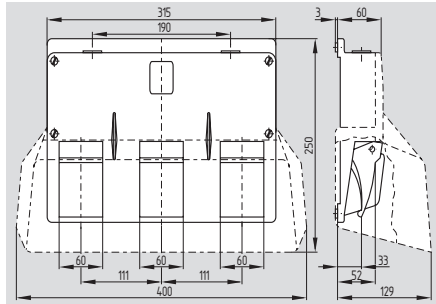
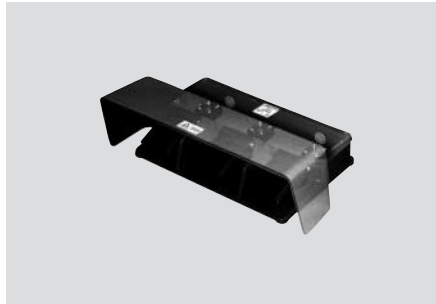
Foot switch

GF 2 and GFS 2



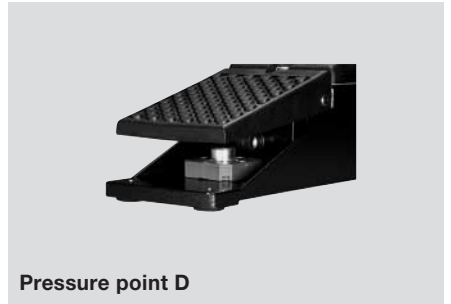
- Double-pedal type
- Max. 4 contacts per pedal
- Various pedal function available
- Cable entry M25 x 1.5

GF 3 and GFS 3



- Triple-pedal types
- Max. 4 contacts per pedal
- Various pedal function available
- 2 cable entries M25 x 1.5

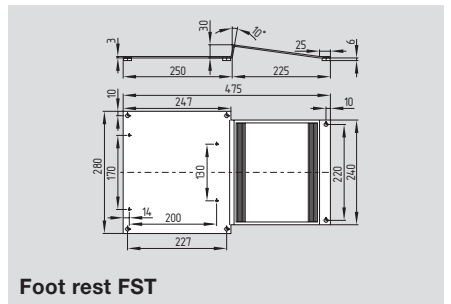
System components



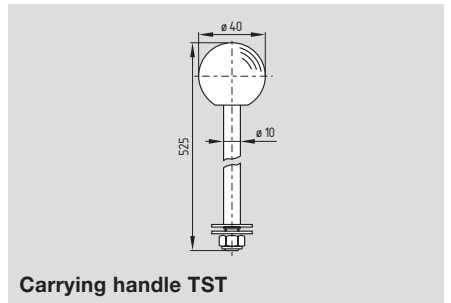
Pressure point D



Pedal cover K



Foot rest FST



Carrying handle TST

Approvals



Approvals



Ordering details

GF①② 2 ③ / ④

No.	Replace	Description
①		Without protective shield
	S	With protective shield
②		Slow action
	M	Snap action
③		Left pedal:
	1ÖS	1 NO/1 NC
	2ÖS	2 NO/2 NC
④		Right pedal:
	1ÖS	1 NO/1 NC
	2ÖS	2 NO/2 NC

Ordering details

GF①② 3 ③ / ④ / ⑤

No.	Replace	Description
①		Without protective shield
	S	With protective shield
②		Slow action
	M	Snap action
③		Left pedal:
	1ÖS	1 NO/1 NC
	2ÖS	2 NO/2 NC
④		Central pedal:
	1ÖS	1 NO/1 NC
	2ÖS	2 NO/2 NC
⑤		Right pedal:
	1ÖS	1 NO/1 NC
	2ÖS	2 NO/2 NC

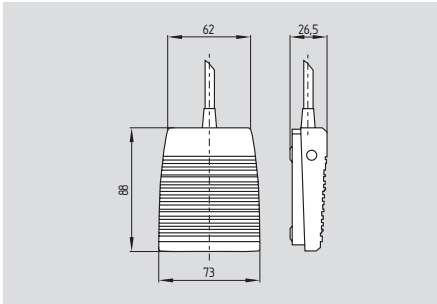
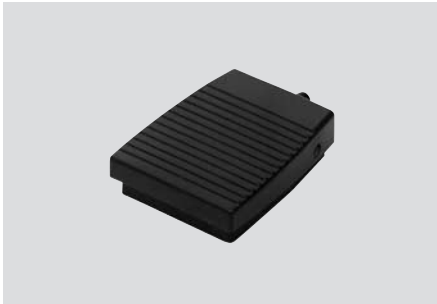
Ordering details

Pressure point	ordering suffix D
Pedal cover	ordering suffix K
Foot rest	FST
Carrying handle	TST

Only FST foot support can be retro-fitted.

Foot switch

LKF



- Thermoplastic enclosure
- Small flat design
- Micro-break switches for switching currents up to 5 A
- 1 or 2 pole change-over contact
- With or without pre-wired cable available
- Pre-wired cable available, cable length 2 m

Technical data

Standards: IEC/EN 60947-5-1
VDE 0113 part 1

Enclosure: shockproof thermoplastic

Pedal: shockproof thermoplastic

Termination: Customer-specific wiring with appropriate cable (with 1 PW: dmax. = 6.5 mm, with 2 PW: dmax. = 8.5 mm)

Ordering suffix -2m: permanent die-cast wiring cable, 3 x 0.5 mm² or 6 x 0.5 mm², 2 m long

Protection class: IP 65 with cable, IP 43 without cable to EN 60529

Switching system: snap action

Max. fuse rating: 5 A (slow blow)

Switching voltage: 250 VAC/DC

Max. making current: micro-break switches: 5 A

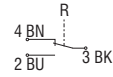
Max. switching capacity: micro-break switches: 1250 VA

Ambient temperature: - 10 °C ... + 70 °C

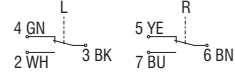
Mechanical life: > 1 million operations

Contact variants

1-pole change-over contact



2-pole change-over contact



Approvals



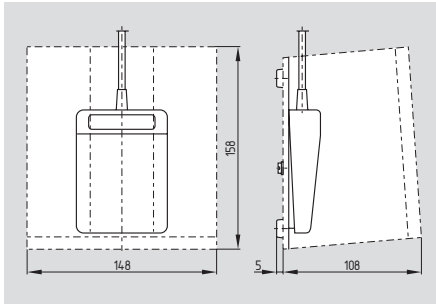
Ordering details

LKF ①-②

No.	Replace	Description
①	1PW	1-pole change-over contact
	2PW	2-pole change-over contact
②		Without cable
	2m	Cable length 2m

Foot switch

KF and KFS



- 2 contacts
- Thermoplastic enclosure
- Protective metal shield
- Small flat design
- With or without protective shield
- Reed contacts for low switching currents from 1 mA to 1 A
- Micro-break switches for switching currents up to 5 A
- Pre-wired cable available, cable length 2 m
- Hall sensors available giving analogue output signal proportional to pedal deflection
- Execution with pressure point (2-stage switch) possible
- Plug-in connection possible
- Other cable types/lengths possible
- Available with special finish in RAL colour tones

Technical data

Standards: IEC/EN 60947-5-1
VDE 0113 part 1

Enclosure: nylon 66, glass-fibre reinforced, self-extinguishing

Pedal: glass-fibre reinforced thermoplastic (Nylon 66)

Protective shield: KF: -
KFS: stainless-steel casing, enamelled

Termination: cable H03W-F, length 2 m

Cable section: 0.5 mm²

Protection class: IP 65 to EN 60529

Switching system: reed contacts or snap action, change-over contact

Switching voltage: reed contacts: 12 ... 250 VAC/DC

Max. making current: reed contacts: 1 A
micro-break switches: 5 A

Max. switching capacity: reed contacts: 30 VA
micro-break switches: 1250 VA

Ambient temperature: -10 °C ... +70 °C

Mechanical life: > 1 million operations

Contact variants

1 NO
BN BK

2 NO
BK BK
BN BU

Change-over contact
1 2 BU
BN 3 BK

1 NO PNP
K OUT WH

1 NO NPN
K + BN
OUT WH

Approvals



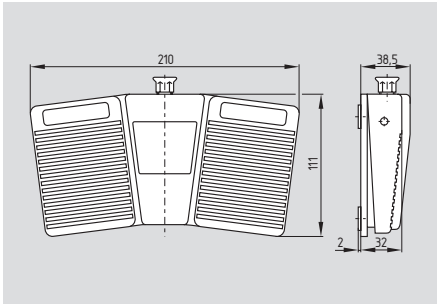
Ordering details

KF^① ②

No.	Replace	Description
①	S	Without protective shield With protective shield
②	1S	Reed contacts: 1 NO contact
	2S	2 NO contacts
	1W	1 change-over contact
		Micro switches:
	1PW	1 change-over contact
	1S PNP	1 PNP NO contact
	1S NPN	1 NPN NO contact

Foot switch

KF 2



- Max. 2 contacts per pedal
- Thermoplastic enclosure
- Small flat design
- Reed contacts for low switching currents from 1 mA to 1 A
- Micro-break switches for switching currents up to 5 A
- Pre-wired cable available, cable length 2 m
- Hall sensors available giving analogue output signal proportional to pedal deflection
- Available without pre-wired cable
- Plug-in connection possible
- Other cable types/lengths possible
- Available with special finish in RAL colour tones

Technical data

Standards: IEC/EN 60947-5-1
VDE 0113 part 1

Enclosure: nylon 66, glass-fibre reinforced, self-extinguishing

Pedal: glass-fibre reinforced thermoplastic (Nylon 66)

Termination: cable H03VV-F, 2 m long or bell-mouth cable gland Pg 7

Cable section: 0.5 mm²

Protection class: IP 65 to EN 60529

Switching system: reed contacts or snap action, change-over contact

Switching voltage: reed contacts: 12 ... 250 VAC/DC

Max. making current: reed contacts: 1 A
micro-break switches: 5 A

Max. switching capacity: reed contacts: 30 VA
micro-break switches: 1250 VA

Ambient temperature: -10 °C ... +70 °C

Mechanical life: > 1 million operations

Contact variants

1 NO

6 BN L 5 BU 4 BK R 3 BK

2 NO

8 WH L 7 YE 2 PK R 1 BK
6 GN 5 VT 4 BN 3 BU

Change-over contact (Reed contacts)

5 WH L 4 BU R
7 GN 6 YE 2 BK 3 BN

Change-over contact (Micro switches)

7 GN L 8 YE 2 BK R
5 WH 4 BU 3 BN

Approvals



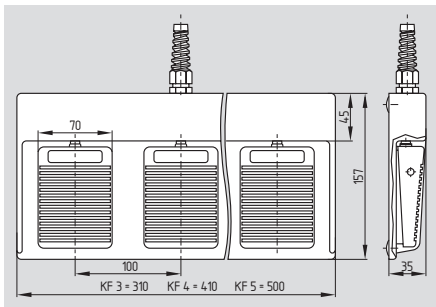
Ordering details

KF 2 ① / ②

No.	Replace	Description
①		Left pedal:
	1S	1 NO contact
	2S	2 NO contacts
	1W	1 change-over contact
②	1PW	Micro switches: 1 change-over contact
		Right pedal:
	1S	1 NO contact
	2S	2 NO contacts
	1W	1 change-over contact
	1PW	Micro switches: 1 change-over contact

Foot switch

KF 3, KF 4 and KF 5



- Max. 2 contacts per pedal
- Thermoplastic enclosure
- Small flat design
- Reed contacts for low switching currents from 1 mA to 1 A
- Micro-break switches for switching currents up to 5 A
- Pre-wired cable available, cable length 2 m
- Hall sensors available giving analogue output signal proportional to pedal deflection
- Available without pre-wired cable
- Available with plug-in connection
- Other cable types/lengths possible
- Other contact configurations available on request
- Available with special finish in RAL colour tones

Technical data

Standards: IEC/EN 60947-5-1
VDE 0113 part 1

Enclosure: nylon 66, glass-fibre reinforced, self-extinguishing

Baseplate: anodized aluminium

Pedal: glass-fibre reinforced thermoplastic (Nylon 66)

Termination: cable H03W-F, length 2 m

Cable section: 0.5 mm²

Protection class: IP 65 with cable, IP 30 without cable to EN 60529

Switching system: reed contacts or snap action, change-over contact

Switching voltage: reed contacts: 12 ... 250 VAC/DC

Max. making current: reed contacts: 1 A
micro-break switches: 5 A

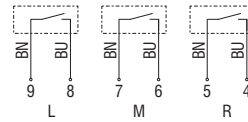
Max. switching capacity: reed contacts: 30 VA
micro-break switches: 1250 VA

Ambient temperature: -10 °C ... +70 °C

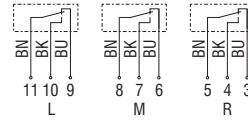
Mechanical life: > 1 million operations

Contact variants

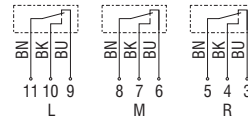
1 NO



Change-over contact (Reed contacts)



Change-over contact (Micro switches)



Approvals



Ordering details

KF ① ② / ② / ② / ② / ②

No.	Replace	Description
①	3	triple-pedal types
	4	four-pedal type
	5	quintuple-pedal types
②		per pedal:
	1S	1 NO contact
	1W	1 change-over contact
	1PW	1 change-over contact