Mechanically Operated Signal Device With Housing

Microswitch

The microswitch-module converts the mechanical end or middle positions of the actuator into electrical signals.
The microswitch is commonly used when there are limited specifications and when the user should be free in the choice of the working voltage.
The compact design of the microswitch is suited to the dimensions of the housing. When used as potential free change over contacts the user is free to choose the method of control.
The spring coupling compensates for any irregularities in the mounting bracket and guarantees a positive location in the actuator shaft. An additional yellow arrow position indicator displays the position of the actuator visually. The fully adjustable serrated cams are locked together to ensure that the adjusted setting is secured against any vibration.

ADVANTAGES

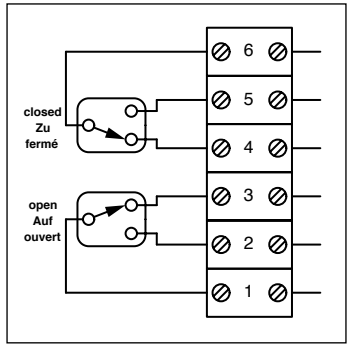
- safe to operate through flexible wiring
- easy service through screwed components
- safe assembly through symmetric design.

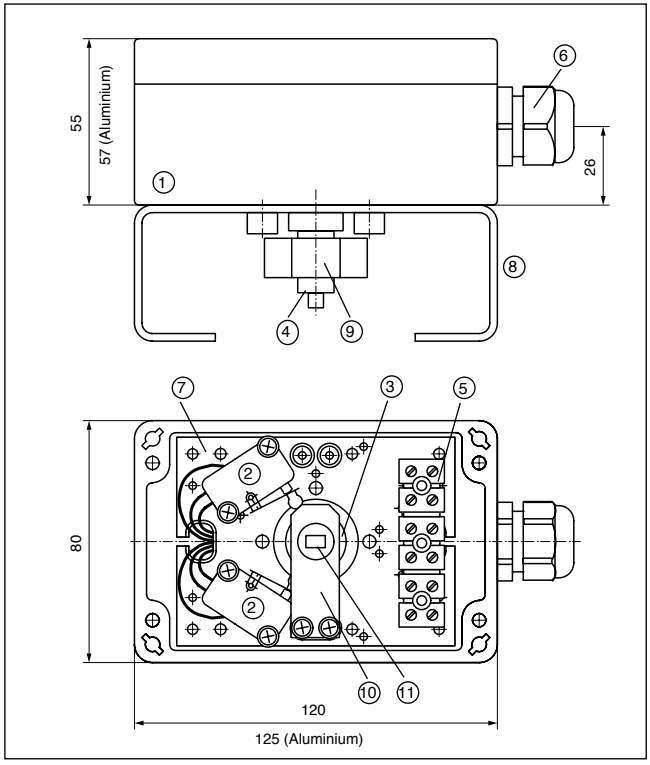
TECHNICAL DATA

Manufacturer:	Crouzet		Crouzet
Type:	83 161 301	83161801	
Switched load: acc. UL + CSA	16 A, 250 V ~		0.1 A, 250 V ~
Contacts:	silver-nickel		gold alloy
Mechanical life:	2 x 10^7 operations		5 x 10^7 operations
Ingress protection: acc. IEC 529 / DIN 40 050	IP 65		IP 65
Switching precision:	1.5°		1.5°
Cable gland:	M20 x 1.5		M 20x 1.5
Temp. range:	- 20 to + 125 °C		- 20 to + 125 °C
Housing:	Makrolon, light grey (polycarbonate with clear cover) Vestamid, black (strike proof polyamide 6.6) alternative with polycarbonate window Aluminium, industrial grey (GD AL SI 12)		
Sealing (housing):	silicon (alternative neoprene)		

CE

WIRING DIAGRAM





Pos.	Pcs.	Description	Material
1	1	Housing	optional
2	2	Microswitch	-
3	1	Switch cam	POM
4	1	Coupling standard	A2
5	1	Terminal block, 6 poles	-
6	1	Cable gland	-
7	1	Mounting plate	PA 6
8	1	Bracket, size 1-4	A2 or PA
9	1	Position indicator	PE
10	1	Plate, short	Steel nickel p.
11	1	Axis, short	PE

Brackets chapter A5

Ordering information

ET-Modul with microswitch (without bracket)

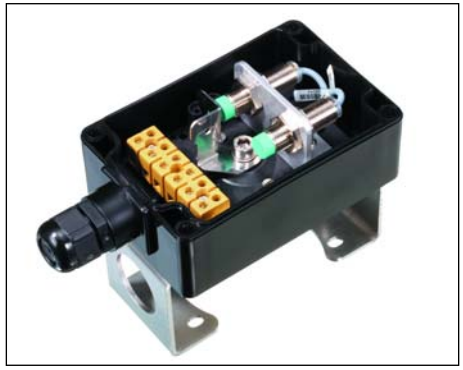
CR 3 M AZ

- Display : A = Open, Z = Closed
- Body material : M = Makrolon, A = Aluminium, V = Vestamid, VF = Vestamid with window
- Type : 3 = 83.161.301, 8 = 83.161.801
- Make: Crouzet

Contact Free Operated Signal Device ET-Housing

3-Wire-Contact Free Sensor

The ET-module with 3-wire proximity sensor converts the mechanical end or middle positions of the actuator into electrical signals.
In many european countries the proximity signal device is used for NON-Ex applications.
It is extra secure in its switching performance, because it possesses a negligible residual current at blocked state, and a minimal potential drop at switched state.
The coupling of the modul balances possible bumps of the bracket and guarantees a full transmission at the the actuators shaft.



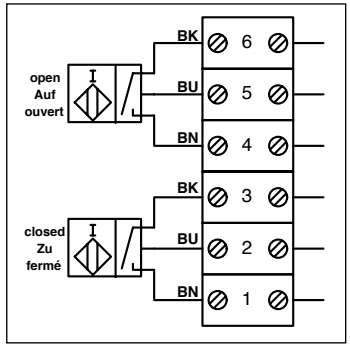
ADVANTAGES

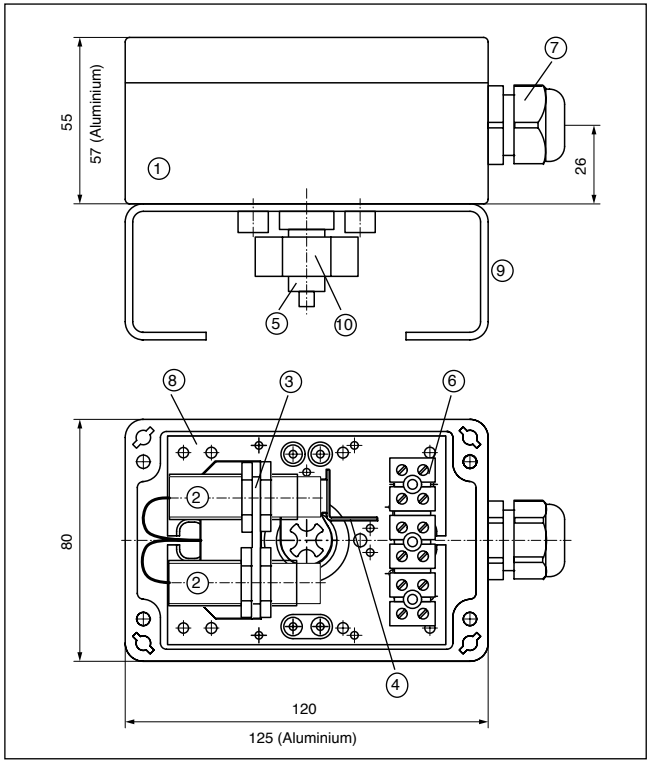
- easy and precise adjusting of the end positions
- secure control through a stainless steel flag
- symetrical design, easy to mount

TECHNICAL DATA

Manufacturer:	**Pepperl + Fuchs**
Type:	**NBN 4-12GM50-E2**
	induktiv, NO, DC PNP
Switch distance:	4 mm
Nom. voltage:	10 - 30 V DC
Continous current:	200 mA
Open circuit current:	≤ 15 mA
Output:	short circuit proof, reverse polarity prot.
	undamped ≤ 0,3 V, damped ≥ U_S - 3 V
Display:	LED, yellow
Temperature range:	-25 ... +70 °C
Housing:	Makrolon, grey with clear cover
	(Polycarbonat)
	Vestamid, black (shock-proof Polyamid 6.6)
	alternative with window material Polycarbonat
	Aluminium, industry grey (GD AL SI 12)
Sealing:	Silicon (alternative Neoprene)
Ingress protection:	IP 67 for sensor, IP 65 for housing
acc. IEC 529 / DIN 40 050	
Switching precision	
of unit:	≤ 0,5°
Connection:	M20 x 1,5

WIRING DIAGRAM





Pos.	Pcs.	Description	Material
1	1	Housing	optional
2	2	Proximity sensor	-
3	1	Mounting flag	Alu
4	1	Switch flag	A2
5	1	Axis NJ	A2
6	1	Terminal block, 6 poles	-
7	1	Cable gland	-
8	1	Mounting plate	PA 6
9	1	Bracket, size 1-4	A2 or PA
10	1	Position indicator	PE

Brackets chapter A5

Basically it is possible to mount proximity sensors form different manufacturers into the ET-box.
The max. mounting size of the sensor for the standard box is M18 x 50mm (without cable entry).
Special sizes upon request.

Ordering information

ET-Modul with proximity sensor (without bracket)

PF N412E V AZ

- AZ — Display : A = Open, Z = Closed
- V — Body material : M = Makrolon, A = Aluminium, V = Vestamid, VF = Vestamid with window
- N412E — Type : NBN4-12GM50-E2
- PF — Make : Pepperl + Fuchs

Contact Free Operated Signal Devices With Housing

EExi - Slotted Proximity

The slotted sensor unit converts the end positions or middle positions of the actuator into electrical signals.
The slotted sensor is commonly used in the chemical industry and generally in applications requiring explosion protection. But 2-wire technology is also increasingly applied in mechanical engineering.
The slotted proximity sensor is intrinsically safe because of the low potential. There is no need for an additional explosion protection installation.
The spring coupling compensates for any irregularities in the mount bracket and guarantees a positive location in the actuator shaft.
An additional yellow arrow high visibility position indicator displays the position of the actuator. The fully adjustable serrated cams are locked together to ensure that the adjusted setting is secured against any vibration.

ADVANATGES

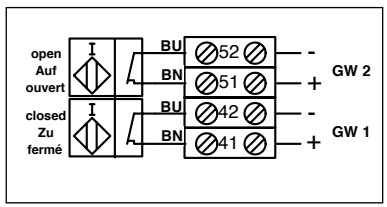
- The end position can be damped or undamped
- high switching precision through a large disc diameter
- switching positions can be adjusted independently.

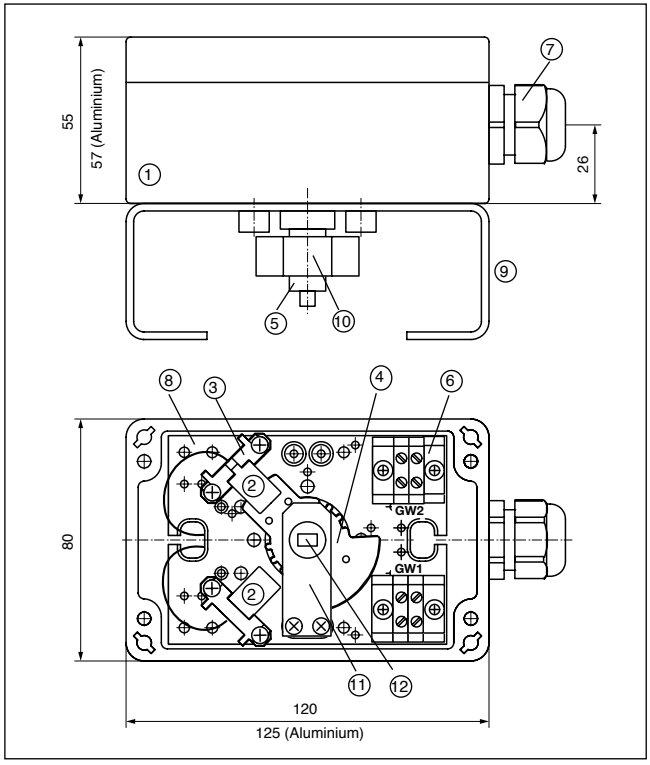
TECHNICAL DATA

Manufacturer:	Pepperl + Fuchs	Pepperl + Fuchs
Type:	SJ 3,5 N	SJ 5 N
	slotted sensor, NC, Namur (DIN 19 234)	
Nom. voltage:	8 V DC	8 V DC
Working voltage:	5 .. 25 V DC	5 .. 25 V DC
Output:	short-circuit proof	
	undamped ≥ 3 mA, damped ≤ 1 mA	
Housing:	Makrolon, light grey	
	(Polycarbonate with clear cover)	
	Vestamid, black (shock proof polyamide 6.6)	
	optional with a window of polycarbonate	
	Aluminium, industrial grey (GD AL SI 12)	
Sealing:	Silicon (optional neoprene)	
Ingress protection:	sensor: IP 67, housing: IP 65	
acc. to IEC 529 / DIN 40 050		
Switching precision:	≤ 0.5°	
Cable gland:	M20 x 1.5	
Temp. range:	- 25 to + 70 °C	

CE

WIRING DIAGRAM





Pos.	Pcs.	Description	Material
1	1	Housing	optional
2	2	Slotted sensor	-
3	2	Plate SJ	PA 6
4	2	Switch cam	A2
5	1	Axis standard	A2
6	2	Terminal block, 2 poles	-
7	1	Cable gland	-
8	1	Mounting plate	PA 6
9	1	Bracket, size 1-4	A2 or PA
10	1	Position indicator	PE
11	1	Plate	Steel, nickel p.
12	1	Axis, long	PE

Brackets chapter A5

Ordering information

ET-module with microswitch (without bracket)

PF 3 N A AZ

Display : A = Open
Z = Closed

Body material : M = Makrolon
A = Aluminium
V = Vestamid
VF = Vestamid with window

Type : N = ... - N
S = ... - SN

Slot size : 3 = 3,5mm
5 = 5mm

Make : PF = Pepperl + Fuchs
TU = Turck