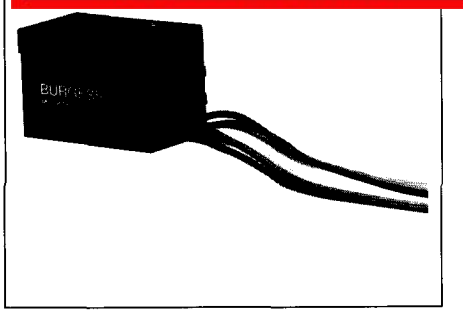
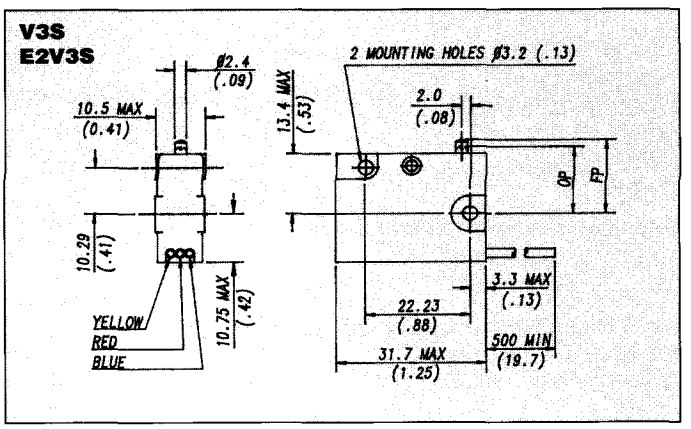
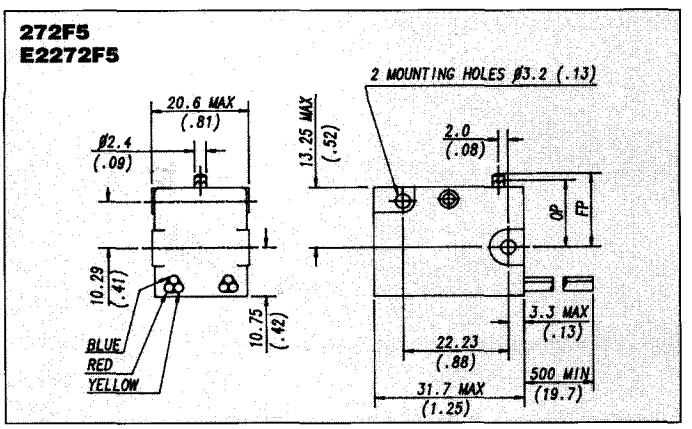
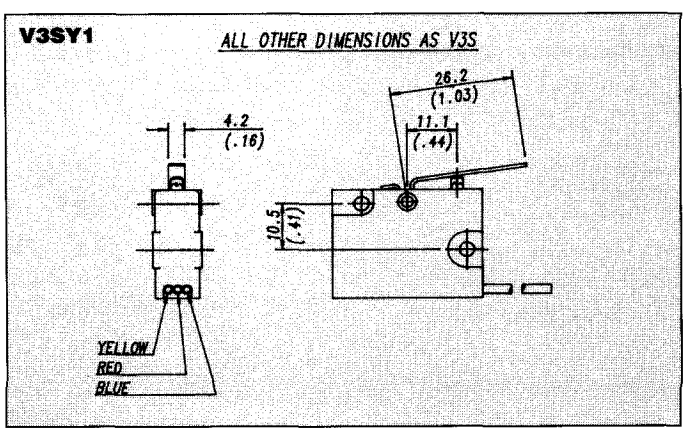


Single and Multi-Pole Sealed Miniature Micro Switches V3S and E2V3S Series 272F5 and E2272F5 Series







A range of single and double pole sealed miniature switches. The mechanisms are totally enclosed to IEC Code IP67 (NEMA type 6).

Switches are supplied complete with 0.5m (19.7in) flying leads. A variety of integral actuators are available. The V3S/1670 is suitable for use in low temperature applications.

BASEEFA approved versions are identified by the prefix E2. These are suitable for use in Zone 2 hazardous areas (non-mining) as units with type of protection N (E2V3S) and d and N (E2272F5). They are also suitable for use in all gases in Group II and their temperature classification is T6.

Specifications

Housing:
Glass fibre reinforced polyamide (PA6.6)

Plunger:
V3S Series
Plain plunger versions – Stainless steel
Lever versions – Polyacetal (POM)
272F5 Series
Stainless steel

Mechanism:
V3S Series
Single pole changeover
272F5 Series
Double pole changeover
(Poles electrically isolated)

Contacts:
Fine silver

Cables:
PVC 0.5m (19.7in) long
(V3S/1670 silicone rubber) 0.65m (25.6in) long

Cowl:
Synthetic rubber
(V3S/1670 silicone rubber)

Temperature range:
–10°C to +85°C
E2 series
–10°C to +40°C
V3S/1670
–40°C to +85°C

Mechanical life:
Plunger types 10^7 cycles minimum
Lever types 10^6 cycles minimum
(Impact free actuation)

Type of protection:
IP67 (NEMA type 6)

Mounting:
Side mounting to a flat surface

Actuators:
Levers – Stainless steel
Rollers – Polyamide (PA6.6)

Approvals:
BASEEFA

V3S/E2V3S

Recommended Max. Electrical Ratings		
Voltage	Resistive load	Inductive load
AC	A	A
up to 250	5	5

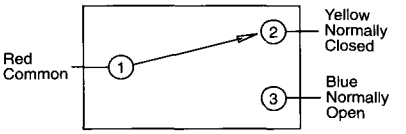
Recommended Max. Electrical Ratings		
Voltage	Resistive load	Inductive load
DC	A	A
up to 30	5	3
50	1	1
75	0.75	0.25

272F5/E2272F5

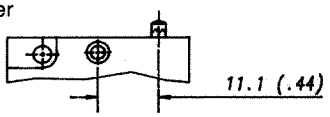
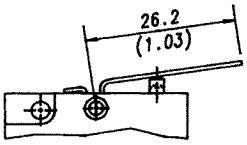
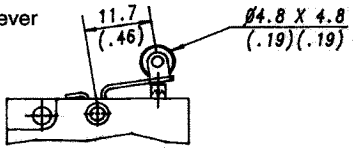
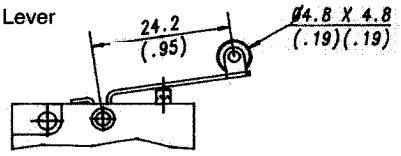
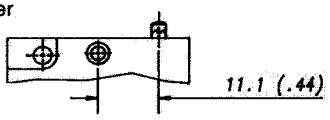
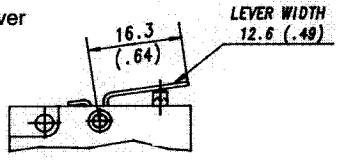
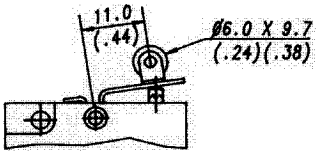
Recommended Max. Electrical Ratings		
Voltage	Resistive load	Inductive load
AC	A	A
up to 250	2	1

Recommended Max. Electrical Ratings		
Voltage	Resistive load	Inductive load
DC	A	A
up to 30	2	2
50	0.5	0.5
75	0.25	0.25

Circuit diagram



Product Range
Operating Characteristics

Actuator Operating characteristics are specified from mounting holes	Reference	Actuating Force Maximum N (ozf)	Release Force Minimum N (ozf)	Free Position Maximum mm (in)	Operating Position mm (in)	Movement Differential Maximum mm (in)	Over Travel
Plunger 	**V3S** **V3S/1670** **E2V3S**	3.9 (14)	1.1 (4)	15.9 (.63)	14.5 (.57) ± 0.5 (.02)	0.4 (.016)	
Y1 Lever 	**V3SY1**	1.65 (7.5)	0.42 (1.5)	18.1 (.71)	14.9 (.55) ± 0.1 (.04)	1.0 (.04)	
RY Lever 	**V3SYR**	3.9 (14)	1.1 (4)	22.1 (.87)	20.4 (.8) ± 0.64 (.025)	0.4 (.016)	
YR1 Lever 	**V3SYR1**	2.3 (8.26)	0.4 (1.44)	24.8 (.98)	22.0 (.86) ± 1.2 (.047)	1.0 (.04)	Depress to case
Plunger 	**272F5** **E2272F5**	4.0 (14.5)	1.0 (3.5)	15.5 (.61)	14.0 (.55) ± 0.4 (.016)	0.3 (.012) per switch	
Y1 Lever 	**272F5Y1** **E2272F5Y1**	4.0 (14.5)	1.0 (3.5)	16.5 (.65)	14.7 (.58) ± 0.45 (.018)	0.3 (.012) per switch	
YR1 	**272F5YR1** **E2272F5YR1**	4.0 (14.5)	1.0 (3.5)	23.8 (.94)	22.1 (.87) ± 0.6 (.024)	0.3 (.012) per switch	

Ordering References

V3S

Switch range: **V3S**

E2 = Explosion proof Zone 2 hazardous areas

V3S = Single pole changeover

Actuators:
No symbol = Plain plunger
Y1 = Plain lever 26.2mm (1.03in)
YR = Roller lever 11.7mm (0.46in)
YR1 = Roller lever 24.2mm (0.95in)

Cowl and Cables:
No symbol = Neoprene synthetic rubber cowl and PVC insulated cables
1670 = Silicone rubber cowl and silicone rubber insulated cables

272F5

Switch range: **272F5**

E2 = Explosion proof Zone 2 hazardous areas

272F5 = Double-pole changeover (Poles electrically isolated)

Actuators:
No symbol = Plain plunger
Y1 = Plain lever 16.3mm (0.64in)
YR1 = Roller lever 11.0mm (0.44in)