

SUBMINIATURE DB Series

Features

- High-precision switch with high repeat accuracy
- Models available for operating temperatures up to 120°C
- Rated for currents up to 10 amp at 250VAC
- Range of auxiliary actuators available (can also be retrofitted); two mounting positions
- Variety of contact materials available to suit your application
- Mechanical life: up to 15 x 10⁶ operations
- Wide variety of terminal types available
- Numerous approvals



Electrical Ratings

Switch Series	EN61058 Rating	UL1054 Rating	Electrical Life at Rated Load	
			According to EN (Min. Operations)	According to UL (Min. Operations)
DB1	6A, 250V~	5A, 125/250VAC	10,000	6,000
DB2	10(1.5)A, 250V~	10.1A, 125/250VAC; 1/4HP, 125VAC	10,000	6,000
DB3	0.1A, 250V~	0.1A, 125/250VAC	50,000	6,000
DB5*	1A, 250V~	1A, 125/250VAC	50,000	6,000
DB6*	6A, 250V~	5A, 125/250VAC	50,000	6,000
DB7*	10(1.5A), 400V~	10.1A, 125/250VAC; 1/4HP, 125VAC	50,000	6,000

*85°C

Specifications

Electrical

Temperature Rating: -40°C to +85°C / +120°C

Flammability Rating: UL94V-O (PBT, PET)
UL94HB (POM)

Materials

Base: PET

Cover: PBT

Actuator: PBT, POM

Auxiliary Actuator: Stainless Steel or Plastic

Terminals: Silver-Plated Copper-Zinc

Contacts: Silver Alloy
Gold Crosspoint

PBT = Polybutyleneterephthalate • PET = Polyethyleneterephthalate • POM = Polyacetal



Dimensions inches (mm)



Terminal Options inches (mm)



Auxiliary Actuator inches (mm)



Contact Ratings at Direct Voltage

Switching Voltage	Switched Current Resistive Load		Inductive Load L/R=3ms	
	DB1	DB2	DB1	DB2
12V	6A	10A	6A	10A
24V	3A	5A	2A	4A
60V	1A	1A	0.5A	0.5A
110V	0.5A	0.5A	0.2A	0.2A
220V	0.25A	0.25A	0.1A	0.1A

Actuator Specifications — Standard Ratio

Actuator Code	Switch Type	Maximum Operating Force (gms.)	Maximum Pre-Travel inches (mm)	Operating Point inches (mm)	Minimum Over-Travel inches (mm)	Max. Movement Differential inches (mm)	Max. Rest Position inches (mm)	Actuation Length inches (mm)	
AA		DB5	70	0.039 (1.0)	0.331±0.012 (8.4±0.3)	0.024 (0.6)	0.004 (0.10)	0.366 (9.3)	—
		DB1/3	150	0.039 (1.0)	0.331±0.012 (8.4±0.3)	0.024 (0.6)	0.004 (0.10)	0.366 (9.3)	—
		DB6	150	0.039 (1.0)	0.331±0.012 (8.4±0.3)	0.024 (0.6)	0.006 (0.15)	0.366 (9.3)	—
		DB2	250	0.039 (1.0)	0.331±0.012 (8.4±0.3)	0.024 (0.6)	0.004 (0.10)	0.366 (9.3)	—
		DB7	280	0.039 (1.0)	0.331±0.012 (8.4±0.3)	0.024 (0.6)	0.006 (0.15)	0.366 (9.3)	—
BA		DB5	70	0.039 (1.0)	0.331±0.012 (8.4±0.3)	0.024 (0.6)	0.004 (0.10)	0.366 (9.3)	—
		DB1/3	150	0.039 (1.0)	0.331±0.012 (8.4±0.3)	0.024 (0.6)	0.004 (0.10)	0.366 (9.3)	—
		DB6	250	0.039 (1.0)	0.331±0.012 (8.4±0.3)	0.024 (0.6)	0.006 (0.15)	0.366 (9.3)	—
		DB2	250	0.039 (1.0)	0.331±0.012 (8.4±0.3)	0.024 (0.6)	0.004 (0.10)	0.366 (9.3)	—
		DB7	280	0.039 (1.0)	0.331±0.012 (8.4±0.3)	0.024 (0.6)	0.006 (0.15)	0.366 (9.3)	—
<i>Auxiliary actuator, rear-mounted (RM)</i>									
LB		DB5	30	0.157 (4.0)	0.421±0.051 (10.7±1.3)	0.079 (2.0)	0.020 (0.5)	0.551 (14.0)	0.189 (4.8)
		DB1/3	60	0.157 (4.0)	0.421±0.051 (10.7±1.3)	0.079 (2.0)	0.020 (0.5)	0.551 (14.0)	0.189 (4.8)
		DB6	60	0.157 (4.0)	0.421±0.051 (10.7±1.3)	0.079 (2.0)	0.030 (0.75)	0.551 (14.0)	0.189 (4.8)
		DB2	100	0.177 (4.5)	0.421±0.063 (10.7±1.6)	0.059 (1.5)	0.028 (0.70)	0.551 (14.0)	0.189 (4.8)
		DB7	115	0.177 (4.5)	0.421±0.063 (10.7±1.6)	0.059 (1.5)	0.030 (0.75)	0.551 (14.0)	0.189 (4.8)
LC		DB5	25	0.177 (4.5)	0.437±0.059 (11.1±1.5)	0.079 (2.0)	0.024 (0.6)	0.591 (15.0)	0.276 (7.0)
		DB1/3	50	0.177 (4.5)	0.437±0.059 (11.1±1.5)	0.079 (2.0)	0.024 (0.6)	0.591 (15.0)	0.276 (7.0)
		DB6	50	0.177 (4.5)	0.437±0.059 (11.1±1.5)	0.079 (2.0)	0.047 (1.2)	0.591 (15.0)	0.276 (7.0)
		DB2	85	0.197 (5.0)	0.437±0.071 (11.1±1.8)	0.059 (1.5)	0.039 (1.0)	0.591 (15.0)	0.276 (7.0)
		DB7	100	0.197 (5.0)	0.437±0.071 (11.1±1.8)	0.059 (1.5)	0.047 (1.2)	0.591 (15.0)	0.276 (7.0)
LD		DB5	9	0.591 (15.0)	0.512±0.138 (13.0±3.5)	0.157 (4.0)	0.177 (4.5)	1.063 (27.0)	1.654 (42.0)
		DB1/3	18	0.591 (15.0)	0.512±0.138 (13.0±3.5)	0.157 (4.0)	0.177 (4.5)	1.063 (27.0)	1.654 (42.0)
		DB6	18	0.591 (15.0)	0.512±0.138 (13.0±3.5)	0.157 (4.0)	0.268 (6.8)	1.063 (27.0)	1.654 (42.0)
		DB2/7	—	—	—	—	—	—	on request
SB		DB5	30	0.157 (4.0)	0.630±0.051 (16.0±1.3)	0.079 (2.0)	0.020 (0.5)	0.748 (19.0)	0.098 (2.5)
		DB1/3	65	0.157 (4.0)	0.630±0.051 (16.0±1.3)	0.079 (2.0)	0.020 (0.5)	0.748 (19.0)	0.098 (2.5)
		DB6	65	0.157 (4.0)	0.630±0.051 (16.0±1.3)	0.079 (2.0)	0.043 (1.1)	0.748 (19.0)	0.098 (2.5)
		DB2	110	0.177 (4.5)	0.630±0.063 (16.0±1.6)	0.059 (1.5)	0.028 (0.7)	0.748 (19.0)	0.098 (2.5)
		DB7	125	0.177 (4.5)	0.630±0.063 (16.0±1.6)	0.059 (1.5)	0.043 (1.1)	0.748 (19.0)	0.098 (2.5)
SC		DB5	25	0.177 (4.5)	0.646±0.059 (16.4±1.5)	0.079 (2.0)	0.024 (0.6)	0.787 (20.0)	0.185 (4.7)
		DB1/3	55	0.177 (4.5)	0.646±0.059 (16.4±1.5)	0.079 (2.0)	0.024 (0.6)	0.787 (20.0)	0.185 (4.7)
		DB6	55	0.177 (4.5)	0.646±0.059 (16.4±1.5)	0.079 (2.0)	0.047 (1.2)	0.787 (20.0)	0.185 (4.7)
		DB2	95	0.197 (5.0)	0.646±0.071 (16.4±1.8)	0.059 (1.5)	0.039 (1.0)	0.787 (20.0)	0.185 (4.7)
		DB7	110	0.197 (5.0)	0.646±0.071 (16.4±1.8)	0.059 (1.5)	0.047 (1.2)	0.787 (20.0)	0.185 (4.7)
SD		DB5	9	0.591 (15.0)	0.720±0.138 (18.3±3.5)	0.157 (4.0)	0.177 (4.5)	1.260 (32.0)	1.563 (39.7)
		DB1/3	20	0.591 (15.0)	0.720±0.138 (18.3±3.5)	0.157 (4.0)	0.177 (4.5)	1.260 (32.0)	1.563 (39.7)
		DB6	20	0.591 (15.0)	0.720±0.138 (18.3±3.5)	0.157 (4.0)	0.268 (6.8)	1.260 (32.0)	1.563 (39.7)
		DB2/7	—	—	—	—	—	—	on request
RB		DB5	30	0.157 (4.0)	0.622±0.051 (15.8±1.3)	0.079 (2.0)	0.020 (0.5)	0.748 (19.0)	0.098 (2.5)
		DB1/3	65	0.157 (4.0)	0.622±0.051 (15.8±1.3)	0.079 (2.0)	0.020 (0.5)	0.748 (19.0)	0.098 (2.5)
		DB6	65	0.157 (4.0)	0.622±0.051 (15.8±1.3)	0.079 (2.0)	0.030 (0.75)	0.748 (19.0)	0.098 (2.5)
		DB2	110	0.177 (4.5)	0.622±0.063 (15.8±1.6)	0.059 (1.5)	0.028 (0.7)	0.748 (19.0)	0.098 (2.5)
		DB7	125	0.177 (4.5)	0.622±0.063 (15.8±1.6)	0.059 (1.5)	0.030 (0.75)	0.748 (19.0)	0.098 (2.5)
RC		DB5	25	0.177 (4.5)	0.638±0.059 (16.2±1.5)	0.079 (2.0)	0.024 (0.6)	0.787 (20.0)	0.185 (4.7)
		DB1/3	55	0.177 (4.5)	0.638±0.059 (16.2±1.5)	0.079 (2.0)	0.024 (0.6)	0.787 (20.0)	0.185 (4.7)
		DB6	55	0.177 (4.5)	0.638±0.059 (16.2±1.5)	0.079 (2.0)	0.047 (1.2)	0.787 (20.0)	0.185 (4.7)
		DB2	95	0.197 (5.0)	0.638±0.071 (16.2±1.8)	0.059 (1.5)	0.039 (1.0)	0.787 (20.0)	0.185 (4.7)
		DB7	110	0.197 (5.0)	0.638±0.071 (16.2±1.8)	0.059 (1.5)	0.047 (1.2)	0.787 (20.0)	0.185 (4.7)
RD		DB5	9	0.591 (15.0)	0.713±0.138 (18.1±3.5)	0.157 (4.0)	0.177 (4.5)	1.260 (32.0)	1.563 (39.7)
		DB1/3	20	0.591 (15.0)	0.713±0.138 (18.1±3.5)	0.157 (4.0)	0.177 (4.5)	1.260 (32.0)	1.563 (39.7)
		DB6	20	0.591 (15.0)	0.713±0.138 (18.1±3.5)	0.157 (4.0)	0.268 (6.8)	1.260 (32.0)	1.563 (39.7)
		DB2/7	—	—	—	—	—	—	on request
WB*		DB5	24	0.177 (4.5)	0.437±0.059 (11.1±1.5)	0.079 (2.0)	0.024 (0.6)	0.591 (15.0)	0.276 (7.0)
		DB1/3	50	0.177 (4.5)	0.437±0.059 (11.1±1.5)	0.079 (2.0)	0.024 (0.6)	0.591 (15.0)	0.276 (7.0)
		DB6	50	0.177 (4.5)	0.437±0.059 (11.1±1.5)	0.079 (2.0)	0.035 (0.9)	0.591 (15.0)	0.276 (7.0)
		DB2	85	0.177 (4.5)	0.437±0.059 (11.1±1.5)	0.079 (2.0)	0.024 (0.6)	0.591 (15.0)	0.276 (7.0)
		DB7	100	0.177 (4.5)	0.437±0.059 (11.1±1.5)	0.079 (2.0)	0.035 (0.9)	0.591 (15.0)	0.276 (7.0)
WC*		DB5	18	0.236 (6.0)	0.480±0.071 (12.2±1.8)	0.118 (3.0)	0.031 (0.8)	0.669 (17.0)	0.551 (14.0)
		DB1/3	38	0.236 (6.0)	0.480±0.071 (12.2±1.8)	0.118 (3.0)	0.031 (0.8)	0.669 (17.0)	0.551 (14.0)
		DB6	38	0.236 (6.0)	0.480±0.071 (12.2±1.8)	0.118 (3.0)	0.047 (1.2)	0.669 (17.0)	0.551 (14.0)
		DB2	63	0.236 (6.0)	0.480±0.071 (12.2±1.8)	0.118 (3.0)	0.031 (0.8)	0.669 (17.0)	0.551 (14.0)
		DB7	75	0.236 (6.0)	0.480±0.071 (12.2±1.8)	0.118 (3.0)	0.047 (1.2)	0.669 (17.0)	0.551 (14.0)
VB*		DB5	25	0.177 (4.5)	0.469±0.055 (11.9±1.4)	0.079 (2.0)	0.024 (0.6)	0.591 (15.0)	0.220 (5.6)
		DB1/3	55	0.177 (4.5)	0.469±0.055 (11.9±1.4)	0.079 (2.0)	0.024 (0.6)	0.591 (15.0)	0.220 (5.6)
		DB6	55	0.177 (4.5)	0.469±0.055 (11.9±1.4)	0.079 (2.0)	0.035 (0.9)	0.591 (15.0)	0.220 (5.6)
		DB2	90	0.177 (4.5)	0.469±0.055 (11.9±1.4)	0.079 (2.0)	0.024 (0.6)	0.591 (15.0)	0.220 (5.6)
		DB7	105	0.177 (4.5)	0.469±0.055 (11.9±1.4)	0.079 (2.0)	0.035 (0.9)	0.591 (15.0)	0.220 (5.6)
ZB*		DB5	25	0.177 (4.5)	0.630±0.055 (16.0±1.4)	0.059 (1.5)	0.024 (0.6)	0.748 (19.0)	0.205 (5.2)
		DB1/3	55	0.177 (4.5)	0.630±0.055 (16.0±1.4)	0.059 (1.5)	0.024 (0.6)	0.748 (19.0)	0.205 (5.2)
		DB6	55	0.177 (4.5)	0.630±0.055 (16.0±1.4)	0.059 (1.5)	0.035 (0.9)	0.748 (19.0)	0.205 (5.2)
		DB2	90	0.177 (4.5)	0.630±0.055 (16.0±1.4)	0.059 (1.5)	0.024 (0.6)	0.748 (19.0)	0.205 (5.2)
		DB7	105	0.177 (4.5)	0.630±0.055 (16.0±1.4)	0.059 (1.5)	0.035 (0.9)	0.748 (19.0)	0.205 (5.2)

*For 85°C only

