Chapter 64

TOGGLE SWITCHES, A.M. TYPE AS10512 SERIES

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LEADING PARTICULARS

*Toggle switches, A.M. Type AS*10512 *series*	*Ref. No. see Tables* 1 *and* 2
*Toggle switches, A.S.*10512 *series (interchangeability with* 1260*Y series)*	*Ref. No. see fig.* 8, 9 *and* 10
Normal operating voltage	28*V. d.c. or* 115*V a.c. and* 208*V a.c.* 400*c/s.*
Current rating	15*A non-inductive at* 28*V d.c.* or 10*A non-inductive at* 115*V a.c. or* 208*V a.c.* 400*c/s*
Contact arrangement	*Large variety of combination for all ranges of switches*
Electrical connections ...	*Terminal screws, No.* 6 *UN.C—*32 *T.P.I.*
Cable entry grommet	*Moulded synthetic rubber*
Mounting attitude	*Unrestricted*
Ambient temperature range	—65 *to* 70 *deg. C.*
Max. operating altitude	70,000 *ft.*
Weight (oz.)	
Single pole	1·5
Double-pole	1·9
Three-pole	2·75
Four-pole	3·5
Anticipated life	50,000 *cycles of operation at* 15*A contact set (resistive load)*

Introduction

1. This range of Air Ministry toggle switches Type AS10512 is designed to a new international standard specification AS105/12/1/60. The development of this new range provides a sealed switch of small dimensions, with single hole fixing.

2. These A.M. switches are similar in design to the Dowty 1260Y range and from this range a series of AS10512 switches have been selected to provide the optimum number that would be considered necessary for all aircraft requirements.

3. The AS10512 series of multi-pole switches are single-hole fixing, sealed, and are suitable for use on 28V d.c., or 115V. a.c. and 208V. a.c., 400c/s aircraft systems.

4. The mounting arrangements of the standard A.M. range are such that any individual switch in this range will replace either of the two different mountings specified by the manufacturers for the 1260Y range, e.g. switch type AS10512A-2 will interchange with Dowty Type 1260.1.N.1 "A" or "B".

5. The suffix letter following the A.M. number indicates the group of switches to which a particular switch belongs, e.g. AS10512 "A" means Single-pole, AS10512 "B" single pole, with lever lock, the suffix number following the letter e.g. AS10512A/1 signifies the contact arrangement and spring return action if any.

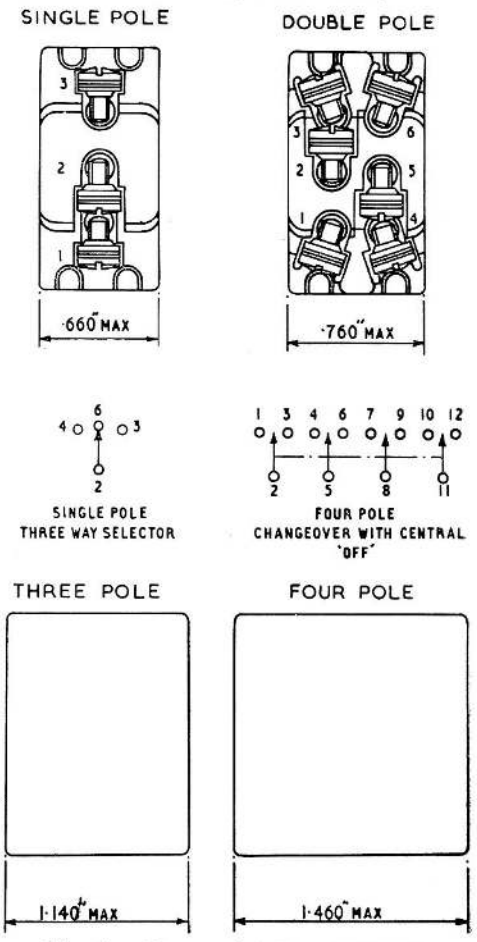


Fig. 1. Types of A.M., AS10512 multi-pole switches

DESCRIPTION

6. The AS10512 switch is a miniature lever, toggle switch, which is designed for single-hole mounting and is fitted with heavy duty contacts, capable of carrying a 15A. resistive load at 28V. d.c. and of switching under load when connected to either 115V. a.c. or 208V. a.c. 400c/s, see Fig. 2 and 3.

7. The switch is operated by a dolly which can have three positions, up, central and down, or, two positions only, the latter being any pair of the three positions. With the majority of the three-position versions, the central position is "OFF", but a three-way, single pole selector is available in a double pole case.

8. Normally the dolly will remain at the setting at which it is released, but it can be fitted with a "spring return to central", this will operate from either side, or from both sides. A further variation to the lever movement is the fitment of a dolly and index, which will lock the switch at the selected setting, until the dolly is raised and held

TABLE 1

Contact arrangement and spring return action

	TYPE No.	TOGGLE LEVER POSITION			LEVER LOCK POSITION	A.M. REF. No.
		KEYWAY SIDE TERMINALS MADE	CENTRAL TERMINALS MADE	OPPOSITE SIDE TERMINALS MADE		
SINGLE POLE	AS 10512 A – 1	2-3 ⟵	OPEN	⟵ 2-1		5CW/9234
	2	2-3	NO POSITION	2-1		9235
	3	NO POSITION	OPEN	2-1		9236
	4	2-3	OPEN	2-1		9237
	5	2-3 ⟵	OPEN	2-1		9238
	6	NO POSITION	OPEN	⟵ 2-1		9239
	7	2-3 ⟵	2-1	NO POSITION		9240
	AS 10512 B – 1	2-3 ⟵	OPEN	⟵ 2-1		5CW/9241
	2	2-3	NO POSITION	2-1		9242
	3	2-3	NO POSITION	2-1		9243
	4	NO POSITION	OPEN	2-1		9244
	5	2-3	OPEN	NO POSITION		9245
	6	2-3	OPEN	2-1		9246
	7	2-3	OPEN	2-1		9247
	8	2-3	OPEN	2-1		9248
	9	2-3 ⟵	OPEN	2-1		9249
	10	2-3	OPEN	⟵ 2-1		9250
	11	2-3 ⟵	OPEN	NO POSITION		9251
	12	2-3 ⟵	2-1	NO POSITION		9252
	13	NO POSITION	OPEN	2-1		9253
DOUBLE POLE	AS 10512 C – 1	2-3 5-6	NO POSITION	2-1 5-4		5CW/9255
	2	NO POSITION	OPEN	2-1 5-4		9256
	3	2-3 5-6	OPEN	2-1 5-4		9257
	4	2-3 5-6 ⟵	OPEN	2-1 5-4		9258
	5	2-3 5-6 ⟵	OPEN	⟵ 2-1 5-4		9259
	6	2-3 5-6 ⟵	OPEN	NO POSITION		9260
	7	2-3 5-6 ⟵	2-1 5-4	NO POSITION		9261
	AS 10512 D – 1	2-3 5-6	NO POSITION	2-1 5-4		5CW/9262
	2	2-3 5-6	NO POSITION	2-1 5-4		9263
	3	NO POSITION	OPEN	2-1 5-4		9264
	4	2-3 5-6	OPEN	NO POSITION		9265
	5	2-3 5-6	OPEN	2-1 5-4		9266
	6	2-3 5-6	OPEN	2-1 5-4		9267
	7	2-3. 5-6	OPEN	2-1 5-4		9268
	8	2-3 5-6 ⟵	OPEN	2-1 5-4		9269
	9	2-3 5-6 ⟵	OPEN	2-1 5-4		9270
	10	2-3 5-6 ⟵	OPEN	⟵ 2-1 5-4		9271
	11	2-3 5-6 ⟵	OPEN	NO POSITION		9272
	12	2-3 5-6 ⟵	2-1 5-4	NO POSITION		9273
	13	NO POSITION	OPEN	2-1 5-4		9274

⟵ ⟵ DENOTES SPRING RETURN TO CENTRAL POSITION.

Fig. 2. A.M. toggle switches, AS10512 series (contact arrangement)

TABLE 2

Contact arrangement and spring return action

	TYPE No.	TOGGLE LEVER POSITION: KEYWAY SIDE TERMINALS MADE	CENTRAL TERMINALS MADE	OPPOSITE SIDE TERMINALS MADE	LEVER LOCK POSITION	A.M. REF. No.
THREE WAY SINGLE AND DOUBLE POLE	AS 10512 E — 1	* 2-3	2 - 6	2 - 4		5CW/9275
	2	* 2-3 ⟵	2 - 6	⟵ 2 - 4		9276
	3	* 2-3 ⟵	2 - 6	2 - 4		9277
	4	2-3 5-6	2-1 5-6	2-1 5-4		9278
	AS 10512 F — 1	* 2-3	2 - 6	2 - 4		5CW/9279
	2	* 2-3	2 - 6	2 - 4		9280
	3	* 2-3	2 - 6	2 - 4		9281
	4	* 2-3 ⟵	2 - 6	⟵ 2 - 4		9282
	5	* 2-3 ⟵	2 - 6	2 - 4		9283
	6	* 2-3 ⟵	2 - 6	2 - 4		9284
	7	2-3 5-6	2-1 5-6	2-1 5-4		9285
	8	2-3 5-6	2-1 5-6	2-1 5-4		9286
	9	2-3 5-6	2-1 5-6	2-1 5-4		9287
THREE POLE	AS 10512 G — 1	2-3 5-6 8-9	OPEN	2-1 5-4 8-7		
	2	2-3 5-6 8-9	NO POSITION	2-1 5-4 8-7		
	AS 10512 H — 1	2-3 5-6 8-9	OPEN	2-1 5-4 8-7		
	2	2-3 5-6 8-9	OPEN	2-1 5-4 8-7		
	3	2-3 5-6 8-9	OPEN	2-1 5-4 8-7		
	4	2-3 5-6 8-9	NO POSITION	2-1 5-4 8-7		
	5	2-3 5-6 8-9	NO POSITION	2-1 5-4 8-7		
FOUR POLE	AS 10512 J — 1	2-3 5-6 8-9 11-12	OPEN	NO POSITION		
	AS 10512 K — 1	2-3 5-6 8-9 11-12	OPEN	NO POSITION		
	2	2-3 5-6 8-9 11-12	OPEN	NO POSITION		

⟵ ⟵ DENOTES SPRING RETURN TO CENTRAL POSITION

* THESE SWITCHES ARE FITTED WITH AN EXTERNAL LINK BETWEEN TERMINALS No.1 AND No.5 WHICH MUST NOT BE REMOVED

Fig. 3. A.M. Toggle switches, AS10512 series (contact arrangement)

against its loaded spring, this takes a pull of approximately 3 lb. The locking action can be applied to any one, two or three settings of any switch. Synthetic rubber seals around the base of the dolly shaft, seal the interior of the switch against the entry of moisture and foreign matter.

9. The switch mechanism has a firm detent and operates with a decisive snap action. If the dolly is operated slowly, the contact pressures will remain at maximum until the dolly reaches its critical point, when this is reached, a further movement of one degree will cause the contacts to open instantaneously. The mechanism includes a positive drive which is capable of breaking a light weld-in.

10. These switches which are fitted with a spring-return, the snapping back of the dolly over its full travel, will not cause overrun, with the possible closing of the next set of contacts. Due to its design and method of sealing, the switch is flameproof.

Electrical connections

11. The electrical connections to the switch are made via shrouded terminal screws, placed at the back of the switch body; the recesses in the terminal block for the screw heads being suitable for 0·22 in. dia. crimped tags. The electrical connections are protected from moisture and foreign matter by a moulded synthetic rubber cable entry grommet.

Switch identification code

12. A selected range of standard A.M. Type AS10512 switches, together with their contact arrangement and lever lock positions is shown in fig. 2 and 3. A list showing the interchangeability between the A.M. standard range and standardized switches within the Dowty range is shown in Fig. 8, 9 and 10. Non-standardized Dowty Switches, which are already in service in aircraft are shown in fig. 11. As the A.M. range of switches are identical in design to the Dowty range, except for mounting details, it is necessary to retain the 1260Y identification code.

13. Possible contact combinations and spring-return actions of the Dowty 1260Y range of switches are detailed in Fig. 5, Table 3, the various types of locking facilities in Table 4, while Table 5 depicts the standard type of

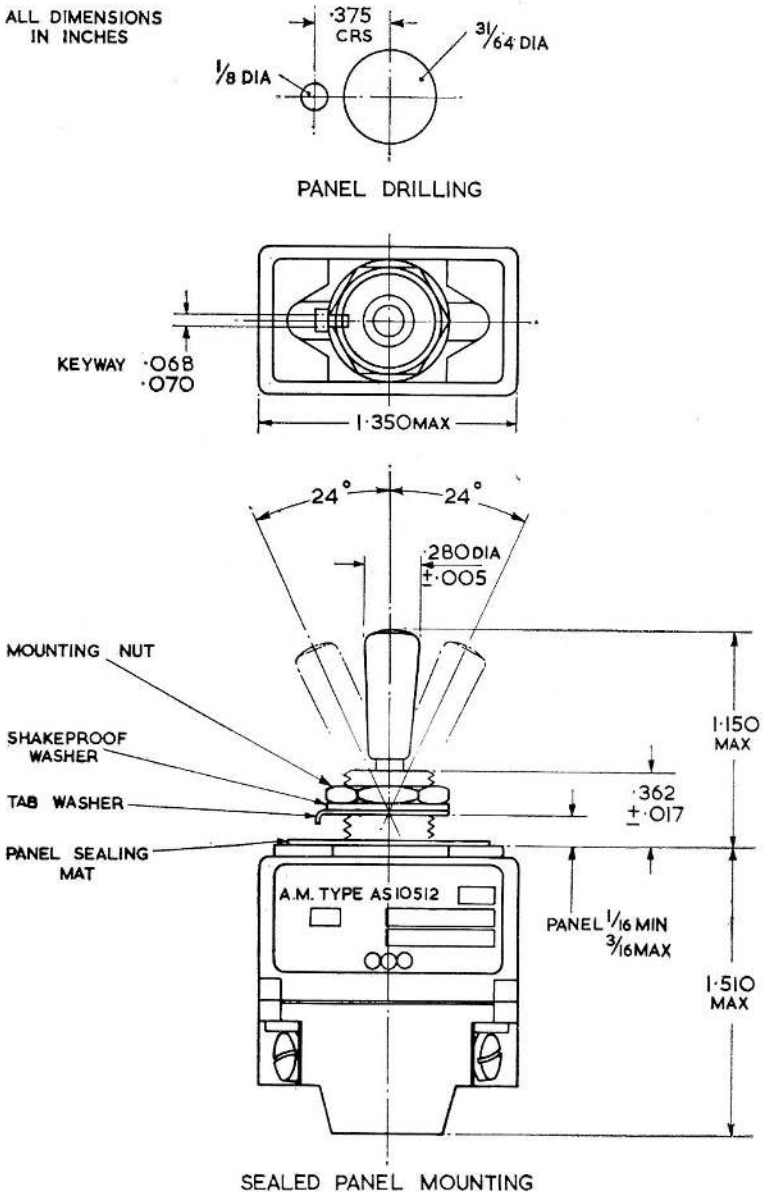


Fig. 4. Installation details, AS10512 series

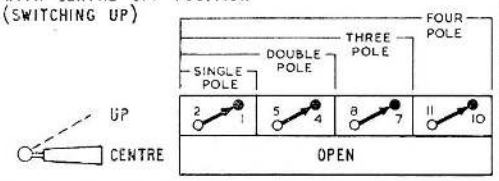
nylon dolly, either locking or non-locking, as denoted by suffixes in Table 4. The A.M. range of switches are designed for single hole mounting, Fig. 4, and replace both the 1260 Type "A" and "B" mountings as detailed in the explanatory notes on switch interchangeability shown in Fig. 8, para. 1.

14. With this switch interchangeability, it is necessary to retain the 1260Y identification tables, in order to align them with the corresponding type of A.M., AS10512 range of switches given in Fig. 8, 9 and 10.

TABLE 3

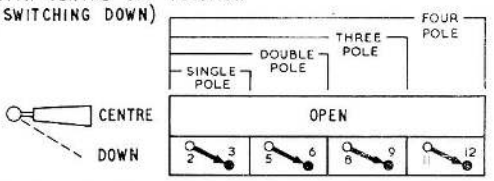
Contact arrangement and spring return action

ON / OFF SWITCHES
WITH CENTRE OFF POSITION
(SWITCHING UP)



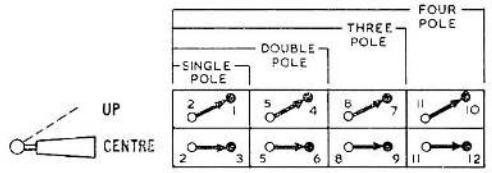
SUFFIX A	WITHOUT SPRING RETURN ACTION
B	WITH SPRING RETURN FROM UP TO CENTRE

ON / OFF SWITCHES
WITH CENTRE OFF POSITION
(SWITCHING DOWN)



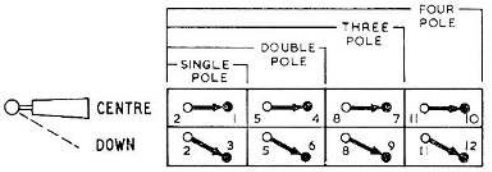
SUFFIX C	WITHOUT SPRING RETURN ACTION
D	WITH SPRING RETURN FROM DOWN TO CENTRE

CHANGEOVER SWITCHES
(SWITCHING UP)



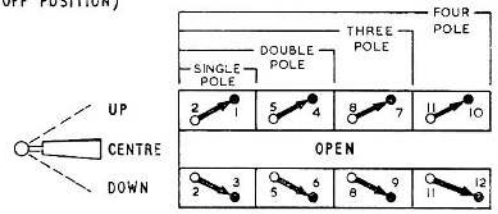
SUFFIX E	WITHOUT SPRING RETURN ACTION
F	WITH SPRING RETURN FROM UP TO CENTRE

CHANGEOVER SWITCHES
(SWITCHING DOWN)



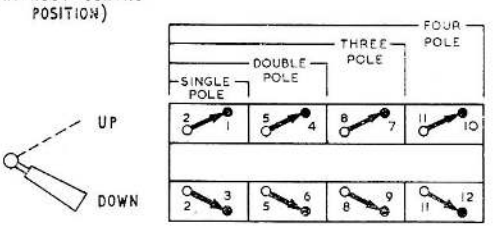
SUFFIX G	WITHOUT SPRING RETURN ACTION
H	WITH SPRING RETURN FROM DOWN TO CENTRE

CHANGEOVER SWITCHES
(WITH CENTRE
OFF POSITION)



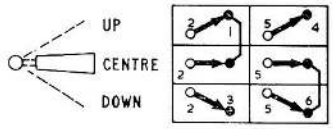
SUFFIX J	WITHOUT SPRING RETURN ACTION
K	WITH SPRING RETURN FROM UP TO CENTRE
L	WITH SPRING RETURN FROM DOWN TO CENTRE
M	WITH SPRING RETURN FROM BOTH SIDES TO CENTRE

CHANGEOVER SWITCHES
(WITHOUT CENTRE
POSITION)



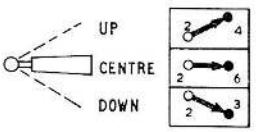
SUFFIX N	WITHOUT SPRING RETURN ACTION

DOUBLE POLE THREE WAY SWITCHES



SUFFIX P	WITHOUT SPRING RETURN ACTION
R	WITH SPRING RETURN FROM UP TO CENTRE
S	WITH SPRING RETURN FROM DOWN TO CENTRE
T	WITH SPRING RETURN FROM BOTH SIDES TO CENTRE

SINGLE POLE THREE WAY SWITCHES



SUFFIX U	WITHOUT SPRING RETURN ACTION
V	WITH SPRING RETURN FROM UP TO CENTRE
W	WITH SPRING RETURN FROM DOWN TO CENTRE
X	WITH SPRING RETURN FROM BOTH SIDES TO CENTRE

Fig. 5. Dowty toggle switches 1260Y series (contact arrangement)

15. Individual 1260Y switches are identified by a series of suffixes to allow for individual requirements, these suffixes are added to the basic number (1260) as follows:—

(1) The first suffix (number) indicates the basic type of switch

(a)	Single-pole	1260–1
(b)	Double-pole and three-way single	1260–2
(c)	Three-pole	1260–3
(d)	Four-pole	1260–4

(2) The second suffix (letter) indicates the type of contact arrangement and spring-return action; the application of this suffix letter is given in Fig. 5, Table 3.

(3) The third suffix (number) indicates the type of dolly, locking arrangement, the application of this suffix number is given in Table 4.

(4) The fourth suffix (number) indicates the dolly style; the application of this suffix number is given in Table 5.

(5) The fifth suffix "A" or "B" indicates the type of mounting required as illustrated in Fig. 6 and 7.

16. To resolve the switch code identification for a double pole, change-over switch, with centre "off" position, without spring-return action, locking in the "up" position only, standard grey locking dolly, and fitted with Type "A" mounting.

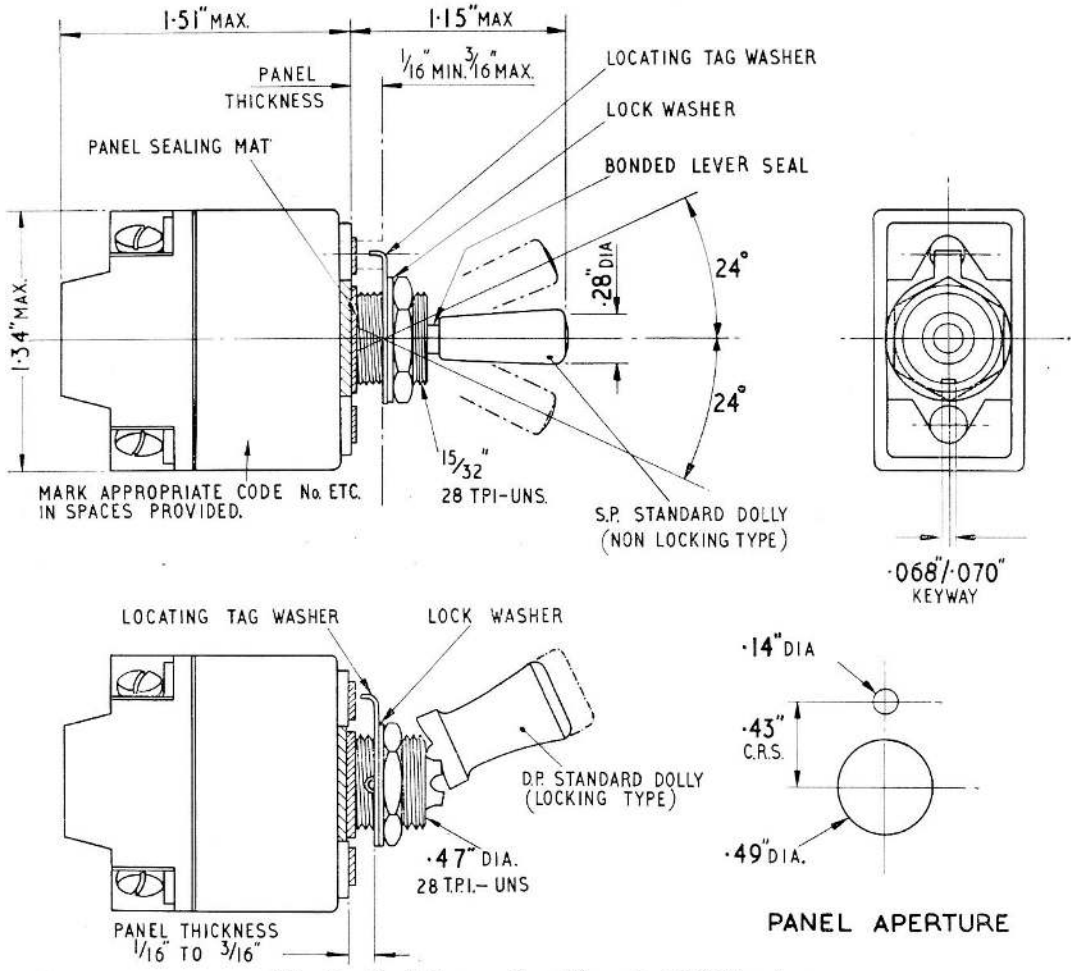


Fig. 6. Sealed mounting, Type A, 1260Y series

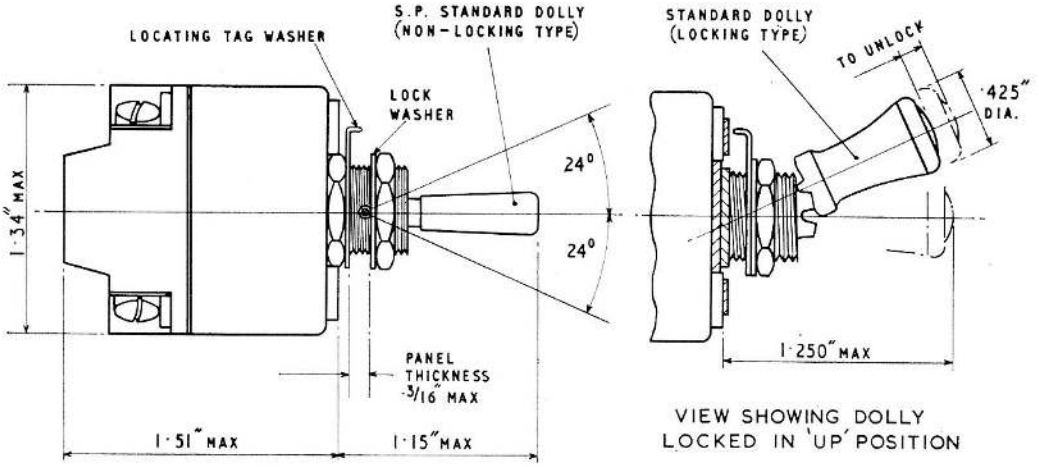


Fig. 7. Back nut mounting, Type B, 1260Y series

17. The code, resolved from Fig. 1, Fig. 5 (Table 3), Table 4 and 5 and Fig. 6 or 7 would be as follows:—

(1)	Basic type of switch	double-pole	Add suffix 2 (fig. 1) 1260–(2)
(2)	Contact arrangement and spring return action	change-over with centre "off" position without spring-return	Add suffix J (fig. 5, Table 3) 1260–2(J)
(3)	Dolly locking	locking in "up" position only	Add suffix 3 (Table 4) 1260–2.J.(3)
(4)	Dolly style	standard grey locking dolly	Add suffix 1 (Table 5) 1260–2.J.3.(1)
(5)	Type of mounting	Type "A" or "B"	Add suffix 'A' 1260–2. J.3.1.(A)

The switch as identified from the code is 1260–2.J.3.1.A.

TABLE 4

Dolly locking arrangement

Suffix No.	Type of locking arrangement
1	Non-locking
2	Lock-in "centre" position
3	Lock in "up" position
4	Lock in "down" position
5	Lock in "centre" and "up" positions
6	Lock in "centre" and "down" positions
7	Lock in "up" and "down" positions
8	Lock in all three positions.

TABLE 5

Dolly style

Suffix 1	Suffix 2
Standard nylon dolly, either locking or non-locking as denoted by suffixes in 4.	As Suffix 1
Colour, light grey	Colour, black

INSTALLATION

18. The A.M. Type AS10512 range of switches are designed for single hole mounting fixing and are interchangeable with either of the 1260Y Type "A" or "B" mountings. Installation details for the A.M. range are shown

in Fig. 4, and the 1260Y Type "A" and "B" mountings are in Fig. 6 and 7.

19. Attention is drawn to Fig. 8, para. (3) of explanatory notes and Fig. 11 which details the simple modification to the mounting panel, thus allowing standard and non-standard switches to be interchangeable on installation.

20. The switches are of compact size and economy of space is afforded on installation.

SERVICING

21. The switch is sealed and should not be be dismantled for further servicing at user units. Routine servicing is therefore restricted to examination for security of connections, panel mounting, deterioration of cables and signs of corrosion.

TESTING

22. The switch should be tested for correct operation, when connected in its relevant circuit, or series of circuits.

Insulation resistance test

23. Measure the insulation resistance, using a 500V. d.c. insulation resistance tester, Type A or equivalent, connected between all normally open circuit terminals, also between all terminals and any part of the switch frame; the insulation resistance must not be less than 5 megohms.

Millivolt drop test

24. Using a suitable millivoltmeter, measure the millivolt per contact set for a maximum current of 15 amperes, this figure should not exceed 100 millivolts.

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EXPLANATORY NOTES ON LIST OF A.M. STANDARD RA

(1) Column 5 requires the allocation of new reference numbers against the M.O.A. type numbers qu such that any individual switch in the range will replace either of two different mountings interchange with either Dowty Type No.1260 I.N.I.I."A" or 1260 I.N.I.I."B".

(2) For maintenance backing on the Wessex, Wasp and Scout Aircraft therefore switches should be action should be taken to amend the relevant Appendices A to quote the standard A.S. numbers far advanced the list of Dowty switches quoted by the firm for Shackleton Mods. No. 1059 and numbers.

(3) At the end of the standard range of switches we list a number of variants which have unfortu propose that these should be perpetuated for any aircraft other than those listed since in s from the standard range a switch which performs the same functions electrically, but would r at 180° to that used for the non-standard switch. In the interests of standardisation it r quoted in which case the standard alternative could also be provisioned for maintenance back

(4) Column 4. The Suffix Letter indicates the group of switches to which a particular switch b

STANDARD A.M. RANGE OF

SWITCHES, TOGGLE SINGLE HOLE

Description	Spring Return Action	Lever Lock Position	M.O.A. Type No.	A.M.
Single Pole			Col.4	Col
Changeover with Centre off Position	From both sides	-	AS10512A-1	5CW/
Changeover without Centre Position	-	-	AS10512A-2	5CW/
On/Off, Centre Off A.C.	-	-	AS10512A-3	5CW/
Changeover with Centre off Position	-	-	AS10512A-4	5CW/
Changeover with Centre off Position K & L	From one side	-	AS10512A-5	5CW/
On/Off, Centre off B & D	From on Position	-	AS10512A-6	5CW/
Changeover, Centre and one Side F & H	From one side	-	AS10512A-7	5CW/
Single Pole (With Lever Lock)				
Changeover with Centre off Position	From both sides	Off Position	AS10512B-1	5CW/
Changeover without Centre Position	-	One side	AS10512B-2	5CW/
Changeover without Centre Position	-	Both sides	AS10512B-3	5CW/
On/Off, Centre off	-	Off Position	AS10512B-4	5CW/
On/Off, Centre off	-	On Position	AS10512B-5	5CW/
Changeover with Centre off Position	-	Off Position	AS10512B-6	5CW/
Changeover with Centre off Position	-	One side	AS10512B-7	5CW/

Fig.8 Standard A.M. range of toggle swi

PP9258 3322/372471 5/64 C & P

TORY NOTES ON LIST OF A.M. STANDARD RANGE OF TOGGLE SWITCHES

ers against the M.O.A. type numbers quoted in Column 4. The mounting arrangements of the standard A.M. range are ace either of two different mountings specified by Dowty Electric Ltd. For instance switch type AS10512A-2 will or 1260 I.N.I.I."B".

Aircraft therefore switches should be ordered against the M.O.A. type number and new reference number, and s A to quote the standard A.S. numbers. Since on Shackleton Mk.3 aircraft the provisioning aspect is not so firm for Shackleton Mods. No. 1059 and 1060 should be amended to again call for M.O.A. type and reference

number of variants which have unfortunately already been adopted and fitted in Wessex and Wasp aircraft. We do not aft other than those listed since in all but two cases it is possible, in any future applications, to select me functions electrically, but would merely necessitate drilling in the panel a 1/8" dia. hole in a position the interests of standardisation it might even be worth while doing this as a modification on the aircraft so be provisioned for maintenance backing purposes.

witches to which a particular switch belongs, and the suffix number indicates the individual switch.

STANDARD A.M. RANGE OF

SWITCHES, TOGGLE SINGLE HOLE FIXING

r Lock Position	M.O.A. Type No.	A.M. Ref.No.	Interchangeable With Dowty Type Nos	Allocated A.M. Ref. No.	Used On Aircraft	Qty. per Aircraft
	Col.4	Col. 5				
-	AS10512A-1	5CW/9234	1260.1.M.1.1.B.	5CW/8767	(Shackleton Mk.3 (Wessex 2	11 2
-	AS10512A-2	5CW/9235	(1260.1.N.1.1.A. (1260.1.N.1.1.B.	5CW/9094 5CW/8768	Wasp H.A.S. Mk.1 (Shackleton Mk.3 (Wessex 2	11 5 6
-	AS10512A-3	5CW/9236	1260.1.A.1.1.B.	5CW/8761	(Shackleton Mk.3 (Wessex 2 (Vulcan B Mk.2 Mod.1320	28 18 1
-	AS10512A-4	5CW/9237	1260.1.J.1.1.B.	5CW/8764	(Shackleton Mk.3 (Wessex 2	2 5
-	AS10512A-5	5CW/9238	(1260.1.L.1.1.B. ((1260.1.L.1.1.A.	5CW/8766 5CW/9097	(Shackleton Mk.3 (Wessex 2 Wasp H.A.S. Mk.1	3 1 1
-	AS10512A-6	5CW/9239	1260.1.B.1.1.B.		Shackleton Mk.3	12
-	AS10512A-7	5CW/9240	1260.1.H.1.1.A.	5CW/9095	Wasp H.A.S. Mk.1	1
f Position	AS10512B-1	5CW/9241	1260.1.M.2.1.B.	5CW/	Shackleton Mk.3	2
e side	AS10512B-2	5CW/9242	(1260.1.N.4.1.A. (1260.1.N.4.1.B.	5CW/9098 5CW/8770	Wasp H.A.S. Mk.1 Wessex 2	1 2
th sides	AS10512B-3	5CW/9243	1260.1.N.7.1.B.	-	Shackleton Mk.3	2
f Position	AS10512B-4	5CW/9244	1260.1.A.2.1.B.	5CW/8762	(Wessex 2 (Shackleton Mk.3	3
Position	AS10512B-5	5CW/9245	-	-		
f Position	AS10512B-6	5CW/9246	-	-		
e side	AS10512B-7	5CW/9247	-	-		

d A.M. range of toggle switches

Fig.8

Description	Spring Return Action	Lever Lock Position	M.O.A. Type No.	A
Single Pole (with lever lock) cont'd			Col. 4	
Changeover with Centre off Position	-	All Positions	AS10512B-8	
Changeover with Centre off Position	From one side	Off Position	AS10512B-9	
Changeover with Centre off Position	From one side	Opposite side	AS10512B-10	
On/Off Centre off	From on Position	Off Position	AS10512B-11	
Changeover, Centre and One side	From one side	Centre Position	AS10512B-12	
On/Off Centre off	-	Both sides	AS10512B-13	
Adaptor Plate	-	-	AS10512L-1	
Double Pole				
Changeover without Centre Position	-	-	AS10512C-1	
On/Off, Centre off	-	-	AS10512C-2	
Changeover with Centre off Position	-	-	AS10512C-3	
Changeover with Centre off Position	From one side	-	AS10512C-4	
Changeover with Centre off Position	From both sides	-	AS10512C-5	
On/Off, Centre off	From on Position	-	AS10512C-6	
Changeover, Centre and One Side	From one side	-	AS10512C-7	
Double Pole (With Lever Lock)				
Changeover without Centre Position	-	One side	AS10512D-1	
Changeover without Centre Position	-	Both sides	AS10512D-2	
On/Off, Centre off	-	Off Position	AS10512D-3	
On/Off, Centre off	-	On Position	AS10512D-4	
Changeover with Centre off Position	-	Off Position	AS10512D-5	
Changeover with Centre off Position	-	One side	AS10512D-6	
Changeover with Centre off Position	-	All Positions	AS10512D-7	
Changeover with Centre off Position	From one side	Off Position	AS10512D-8	

Fig.9

Standard A.M. range of toggle swi

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er Lock Position	M.O.A. Type No.	A.M. Ref. No.	Interchangeable With Dowty Type Nos.	Allocated A.M. Ref. No.	Used on Aircraft	Qty. per Aircraft
	Col. 4	Col. 5				
ll Positions	AS10512B-8	5CW/9248	-	-		
ff Position	AS10512B-9	5CW/9249	-	-		
pposite side	AS10512B-10	5CW/9250	1260.1.K.4.1.B.	5CW/8765	Wessex 2 Shackleton Mk.3	2 3
ff Position	AS10512B-11	5CW/9251	1260.1.D.2.1.A.	5CW/9096	Wasp H.A.S. Mk.1	1
entre Position	AS10512B-12	5CW/9252	-	-		
oth sides	AS10512B-13	5CW/9253	1260.1.A.5.1.B.	5CW/8763	Wessex 2	3
-	AS10512L-1	5CW/8815			Shackleton Mk.3	20
-	AS10512C-1	5CW/9255	1260.2.N.1.1.A.	5CW/9105	Wasp H.A.S. Mk.1	1
			1260.2.N.1.1.B.	5CW/8777	Belfast Wessex 2 Shackleton Mk.3	1 1 10
-	AS10512C-2	5CW/9256	1260.2.A.1.1.B.	5CW/8772	Wessex Shackleton Mk.3	1 10
-	AS10512C-3	5CW/9257	1260.2.J.1.1.B.	5CW/8774	Wessex 2 Shackleton Mk.3	3 4
-	AS10512C-4	5CW/9258	1260.2.L.1.1.A.	5CW/9104	Wasp H.A.S. Mk.1 Shackleton Mk.3	2 11
-	AS10512C-5	5CW/9259	1260.2M.1.1.B.	5CW/8776	Wessex 2 Shackleton Mk.3	1 8
-	AS10512C-6	5CW/9260	-	-		
-	AS10512C-7	5CW/9261	1260.2.H.1.1.B.	-	Shackleton Mk.3	8
e side	AS10512D-1	5CW/9262	1260.2.N.4.1.A.	5CW/9102	Wasp H.A.S. Mk.1	1
th sides	AS10512D-2	5CW/9263	1260.2.N.7.1.A.	5CW/8975	Wasp H.A.S Mk.1 Scout A.H. Mk.1	4
			1260.2.N.7.1.B.	5CW/9088	Shackleton Mk.3 Wessex 2	2 1
f Position	AS10512D-3	5CW/9264	1260.2.A.2.1.B.	5CW/8990	Shackleton Mk.3 Wessex 2	3 1
Position	AS10512D-4	5CW/9265	-	-		
f Position	AS10512D-5	5CW/9266	1260.2.J.2.1.A. 1260.2.J.2.1.B.	5CW/9099 5CW/	Wasp H.A.S. Mk.1 Shackleton Mk.3	1 1
e side	AS10512D-6	5CW/9267	-	-		
l Positions	AS10512D-7	5CW/9268	1260.2.J.8.1.A. 1260.2.J.8.1.B.	5CW/9101 5CW/8775	Wasp H.A.S. Mk.1 Wessex 2 Shackleton Mk.3	1 1 20
f Position	AS10512D-8	5CW/9269	-	-		

d A.M. range of toggle switches (continued)

Fig.9

Description	Spring Return Action	Lever Lock Position	M.O.A. Type No.
Double Pole (with lever lock) cont'd			Col. 4
Changeover with Centre off Position	From one side	Opposite side	AS10512D-9
Changeover with Centre off Position	From both sides	Off Position	AS10512D-10
On/Off, Centre off	From on Position	Off Position	AS10512D-11
Changeover, Centre and one Side	From one side	Centre Position	AS10512D-12
On/Off, Centre off	-	Both sides	AS10512D-13
Single and Double Pole - 3 Way			
Single Pole - 3 Way	-	-	AS10512E-1
Single Pole - 3 Way	From both sides	-	AS10512E-2
Single Pole - 3 Way	From one side	-	AS10512E-3
Double Pole - 3 Way	-	-	AS10512E-4
Single and Double Pole - 3 Way (With Lever Lock)			
Single Pole - 3 Way	-	Centre Position	AS10512F-1
Single Pole - 3 Way	-	One side	AS10512F-2
Single Pole - 3 Way	-	All Positions	AS10512F-3
Single Pole - 3 Way	From both sides	Centre Position	AS10512F-4
Single Pole - 3 Way	From one side	Centre Position	AS10512F-5
Single Pole - 3 Way	From one side	Opposite side	AS10512F-6
Double Pole - 3 Way	-	Centre Position	AS10512F-7
Double Pole - 3 Way	-	One side	AS10512F-8
Double Pole - 3 Way	-	All Positions	AS10512F-9
Adaptor Plate	-	-	AS10512L-2

Fig.10 Standard A.M. range of togg

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Lever Lock Position	M.O.A. Type No.	A.M. Ref. No.	Interchangeable With Dowty Type Nos.	Allocated A.M. Ref. No.	Used on Aircraft	Qty. per Aircraft
	Col. 4	Col. 5				
Opposite side	AS10512D-9	5CW/9270	-	-		
Off Position	AS10512D-10	5CW/9271	-	-		
Off Position	AS10512D-11	5CW/9272	-	-		
Centre Position	AS10512D-12	5CW/9273	-	-		
Both sides	AS10512D-13	5CW/9274	1260.2.A.5.1.B.	5CW/8773	(Wessex 2 (Shackleton Mk.3	3 19
-	AS10512E-1	5CW/9275	1260.2.U.1.1.B.	5CW/8778	Wessex 2 Shackleton Mk.3	2 3
-	AS10512E-2	5CW/9276	-	-		
-	AS10512E-3	5CW/9277	-	-		
-	AS10512E-4	5CW/9278	-	-		
Centre Position	AS10512F-1	5CW/9279	-	-		
One side	AS10512F-2	5CW/9280	-	-		
All Positions	AS10512F-3	5CW/9281	-	-		
Centre Position	AS10512F-4	5CW/9282	-	-		
Centre Position	AS10512F-5	5CW/9283	-	-		
Opposite side	AS10512F-6	5CW/9284	-	-		
Centre Position	AS10512F-7	5CW/9285	-	-	Shackleton Mk.3	1
One side	AS10512F-8	5CW/9286	-	-		
All Positions	AS10512F-9	5CW/9287	-	-		
-	AS10512L-2	5CW/9288	-	-		

tandard A.M. range of toggle switches (continued) Fig.10

STANDARD ALTERNATIVE WHICH MUST BE USED FOR ANY FUTURE INSTALLATIONS ON OTHER AIRCRAFT AND PENALTY ENTAILED IF USE IS ENVISAGED ON AIRCRAFT LISTED

M.O.A. Type AS10512C-7 1/8" dia. hole needs drilling 180° from existing hole

No equivalent of Lever Lock arrangement in standard range

" " " " " " " " "

M.O.A. Type AS10512A-5 1/8" dia. hole needs drilling 180° from existing hole

M.O.A. Type AS10512B-2 " " " " " " " " "

M.O.A. Type AS10512D-1 " " " " " " " " "

" " B-11 " " " " " " " " "

" " A-2 48° DOLLY THROW INSTEAD OF 24°

" " B-2 " " " " " "

" " A-7 1/8" dia. hole needs drilling 180° from existing hole

" " A-5 " " " " " " " " "

No equivalent of lever lock arrangement in standard range

" " C1 48° DOLLY THROW INSTEAD OF 24°

" " D-1 " " " " " "

Fig.11 Alternative installation details and non-

RE INSTALLATIONS ON S ENVISAGED	Dowty Type Nos.	Allocated A.M. Ref. No.	Used on Aircraft	Qty. per Aircraft
	LIST OF DOWTY SWITCHES WHICH ARE NOT STANDARDISED AND ARE NOT TO BE INCLUDED IN UNIVERSAL MASTER SCHEDULE. THEIR APPLICATION IS RESTRICTED TO THE AIRCRAFT TYPES SHOWN			
0° from existing hole	1260.2.F.1.1.A.	5CW/9100	(Wasp H.A.S. Mk.1	2
			(Shackleton Mk.3	2
ge	1260.2.L.5.1.A.	5CW/9103	Wasp H.A.S. Mk 1	1
"	1260.2.T.2.1.A.	5CW/9106	Wasp H.A.S. Mk.1	1
0° from existing hole	1260.1.K.1.1.B.	5CW/8771	Wessex 2	1
" " "	1260.1.N.3.1.B.	5CW/8769	(Wessex 2	1
			(Argosy C. Mk.1	4
			(Lightning F.3 and	1
			(T.4	
" " "	1260.2.N.3.1.B.	5CW/8991	(Wessex 2	1
			(Vulcan B2 Mod.1320	3
" " "	1260.1.B.2.1.A.		Shackleton Mk.3	2
	1260.1.E.1.1.A.		" "	19
	1260.1.E.2.1.A.		" "	1
0° from existing hole	1260.1.F.1.1.A.		" "	6
" " " "	1260.1,K,1.1.A.		" "	2
ngement in standard range	1260.1.K.6.1.A.		" "	2
	1260.2.E.1.1.A.		" "	1
	1260.2.E.2.1.A.		" "	1

nstallation details and non-standardised Dowty switches Fig.11