

WINCH MOTORS

DA 75A

Product description

DA 75A are a series of very sturdy winch motors, specially designed for inlet and shutter control in ventilation systems. They are of compact design, with all functions collected in one cabinet.

As standard DA 75A are equipped with two-track wire wheels, but it is possible to dismount a disc in order of having only one track. DA 75A can also be extended to three-track wheels, thus enabling the DA 75A to control up to 3 different shutters/inlets of different pulling lengths and directions. The winch motors are thus suitable also for refurbishing jobs.



DA 75A are equipped with electric open/close switches for manual control. Emergency opening during power failure is controlled mechanically via a battery operated drilling machine and the enclosed connection unit. As the gear is self-locking, it will retain its position.

DA 75A are provided with doubleacting limit switches to secure the system in case of faulty connection. Feedback potentiometer is built-in.

The winch motor design and construction make cleaning easy and permit installation in the livestock building itself. DA 75A are completely maintenance-free.

DA 75A series consist in 6 types, all with the same torque but with different pulling lengths and electrical connections.

- DA 75A-1: 1,2 turns of the wire wheel:
- DA 75A-3: 2,4 turns of the wire wheel:
- DA 75A-6: 4,8 turns of the wire wheel:

All three types are relay controlled and are available in both 24 V DC with ON/OFF control and in 230 V AC.

DA 75 230V can be used with all SKOV environment controllers. DA 75A 24V should be used with the DOL 34H or the DOL 36 environment computers. These solutions include automatic emergency control in case of high temperature, power failure and failure of automatic units.



Selection of type, pull

The pulling force depends on the required pulling length. The longer pulling length, the smaller pulling force.

DA 75A-1 is primarily used for minor tasks involving pulling lengths between 24 and 55 cm. DA 75A-3 is designed for pulling lengths between 54 and 104 cm, whereas DA 75A-6 is designed for pulling lengths between 119 cm and 197 cm. DA 75A-3 and DA 75A-6 are thus suitable for all work involving gearing and great pulling force.

Via special pulley fittings the pulling length of the winch motor can be reduced by 2 or 4 times. At the same time the pulling force will be almost doubled or quadrupled.

The relation between the pulling force and the pulling length appears from the below table.

DA 75A-1							
No of wire windings	Pulling length mm	Slacking length mm	Measure to periphery before pull/slack	One-way pull		Balanced	
				Pulling force (N)	Moment (Nm)	Pulling force (N)	Moment (Nm)
1	237	-	48	1794	56	2384	75
2	260	232	45	1748	60	2170	75
3	284	256	42	1702	64	1992	75
4	307	279	39	1656	68	1840	75
5	331	303	36	1610	71	1710	75
6	354	326	33	1564	74	1597	75
7	377	349	30	1498	75	1498	75
8	401	373	27	1411	75	1411	75
9	424	396	24	1379	75	1333	75
10	447	419	21	1333	75	1263	75
11	471	443	17	1263	75	1201	75
12	494	466	14	1201	75	1144	75
13	517	489	11	1144	75	1092	75
14	541	-	8	1092	75	1045	75
DA 75A-3							
1	502	-	48	1767	59	2251	75
2	549	-	45	1721	63	2059	75
3	596	484	42	1674	66	1898	75
4	642	530	39	1628	69	1760	75
5	689	577	36	1582	72	1640	75
6	736	624	33	1536	75	1536	75
7	783	670	30	1445	75	1445	75
8	829	717	27	1379	75	1363	75
9	876	764	24	1363	75	1290	75
10	923	811	21	1290	75	1225	75
11	969	857	17	1225	75	1166	75
12	1016	904	14	1166	75	1112	75
13	1063	951	11	1112	75	1064	75
14	-	-	8	1064	75	1019	75
DA 75A-6							
1	1117	-	48	1711	64	2025	75
2	1210	-	45	1665	67	1868	75
3	1303	-	42	1619	70	1735	75
4	1397	-	39	1573	73	1618	75
5	1490	-	36	1517	75	1517	75
6	1584	1135	33	1427	75	1427	75
7	1677	1229	30	1379	75	1348	75
8	1771	1322	27	1348	75	1277	75
9	1864	1416	24	1277	75	1213	75
10	1958	1509	21	1213	75	1155	75
11	2051	1603	17	1155	75	1102	75
12	-	1696	14	1102	75	1054	75
13	-	1789	11	1054	75	1010	75
14	-	-	8	1010	75	970	75



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Selection of type, electrical

DA 75A, 24V for 24V DC is controlled steplessly by means of open/close relays in the climate controller, e.g. DOL 34H. Together with DOL 78 Emergency Opening Control and DOL 34H the winch motors can be emergency opened in case of power failure and certain technical failures. The winch motor can also be controlled ON/OFF by means of one make contact relay, for instance for emergency opening of a window in a livestock house with diffuse air outlet. The potentiometer on the winch motor sends a signal to the control computer informing it of the actual winch motor position.

DA 75A for 230 V AC is controlled by an automatic unit with open/close relays, e.g. DOL 71, DOL 76, DOL 91, DOL 92, DOL 34H and DOL 36 from the range of automatic SKOV units. The feedback potentiometer currently informs the control unit of the actual position.

Connection/installation

DA 75A 24V is connected to the automatic control computer via one lead, giving 24V DC supply voltage, open/close and the potentiometer feedback signal. The supply voltage is necessary for the manual electrical operation.

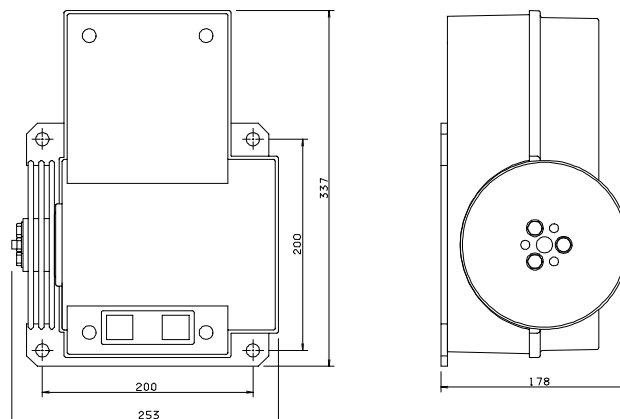
DA 75A 230V is connected to the control unit via two cables, one with 230V and open/close function, and one for the potentiometer. A fixed supply voltage is necessary for the manual electrical operation and to prevent condensed water in the cabinet.

DA 75A can be installed in both vertical and horizontal position on the wall. The mounting fitting has 4 holes and it is recommended to use 10 mm through bolts to secure the unit. The wire lead to the shutters and inlets should be made as straight as possible.

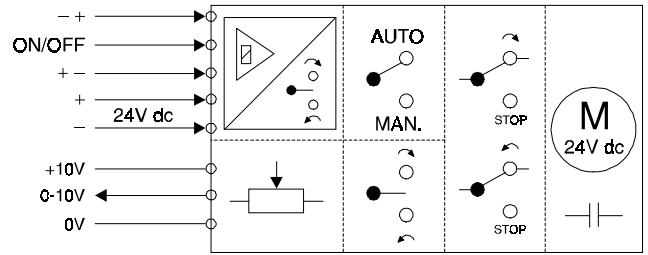
Sufficient space should be left free above the winch motor to secure manual emergency opening through a battery operated drilling machine.

The required pulling length is obtained by winding a certain number of wire layers around the wire wheel. Pull or slack is selectable and depends on the winding direction on the wire wheel.

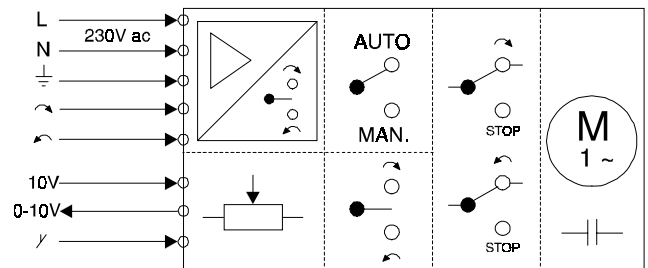
Dimensional sketch (dimensions in mm)



DA 75A 24V



DA 75A 230V



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Technical data

DA 75A 230V

	DA 75A-1	DA 75A-3	DA 75A-6
Motor data	230 V AC \pm 15%	230 V AC \pm 15%	230 V AC \pm 15%
Power consumption	35 Watt, 0,36 amp	35 Watt, 0,36 amp	35 Watt, 0,36 amp
Max. continuous running time	30 min	30 min.	30 min.
Max. torque	75 Nm	75 Nm	75 Nm
Number of wire wheel turns	1,2	2,4	4,8
Running time between limit stops	2,5 to 3,5 min.	2,5 to 3,5 min.	5 to 7 min.
Number of wire tracks and width	2 pcs. 5 mm	2 pcs. 5 mm	2 pcs. 5 mm
Wire	2 pcs. \varnothing 4 mm ss	2 pcs. \varnothing 4 mm ss	2 pcs. \varnothing 4 mm ss
Wire length	10 meter	10 meter	10 meter
Pulling length and force, min.	25 cm/1771 N	53 cm/1743 N	116 cm/1688 N
Pulling length and force, max.	55 cm/1026 N	107 cm/1053 N	203 cm/1110 N
Shipping weight	16,2 kg	17 kg	16,8 kg
Shipping dimensions, LxWxH (mm)	415x315x175 mm	415x315x175 mm	415x315x175 mm
Protection class	IP 54	IP 54	IP 54
Potentiometer	10 k Ω	10 k Ω	10 k Ω
Potentiometer, closed position	0,2% of max.	0,2% of max.	0,2% of max.
Potentiometer, open position	90-95% of max.	90-95% of max.	90-95% of max.
Item no.	432032	432033	432034

DA 75A 24V

	DA 75A-1	DA 75A-3	DA 75A-6
Operating voltage	24 V DC \pm 15%	24 V DC \pm 15%	24 V DC \pm 15%
Power consumption	1,3A	1,6A	1,6A
Max. continuous running time	∞	60 min.	60 min.
Max. torque	75 Nm	75 Nm	75 Nm
Number of wire wheel turns	1,2	2,4	4,8
Running time between end stops	2,5 to 3,5 min.	2,5 to 3,5 min	5 to 7 min.
Number of wire tracks and width	2 pcs. 5 mm	2 pcs. 5 mm	2 pcs. 5 mm
Wire	2 pcs. \varnothing 4 mm ss	2 pcs. \varnothing 4 mm ss	2 pcs. \varnothing 4 mm ss
Wire length	10 meter	10 meter	10 meter
Pulling length and force, min.	25 cm/1771 N	53 cm/1743 N	116 cm/1688 N
Pulling length and force, max.	55 cm/1026 N	107 cm/1053 N	203 cm/1110 N
Shipping weight	14,6 kg	15,4 kg	15,2 kg
Shipping dimensions, LxWxH (mm)	415x315x175 mm	415x315x175 mm	415x315x175 mm
Protection class	IP 54	IP 54	IP 54
Control signal stepless	2 potent. free c/o contact	2 potent. free c/o contact	2 potent. free c/o contact
Control signal ON/OFF-emerg. op.	1 potent. free break contact	1 potent. free break contact	1 potent. free break contact
Potentiometer	10 k Ω	10 k Ω	10 k Ω
Potentiometer position closed	0,4% of max.	0,4% of max.	0,4% of max.
Potentiometer position open	90-95% of max.	90-95% of max.	90-95% of max.
Max. cable length at 1,5 mm ²	\leq 30 meter	\leq 30 meter	\leq 30 meter
Max. cable length at 2,5 mm ²	\leq 50 meter	\leq 50 meter	\leq 50 meter
Item no.	432035	432036	432037



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