General

WindowMaster products	
Connection	WindowMaster window actuators must only be connected to genuine WindowMaster power supplies. If power supplies other than WindowMaster are used for connection to WindowMaster window actuators then this will invalidate in full any warranty or guarantee for WindowMaster window actuators. WindowMaster take no responsibility for the performance of WindowMaster products or third party products in this instance.
Cleaning	Product surface may be cleaned with a soft damp cloth using a small amount of household cleaner diluted in water.
Maintenance	Power supplies are to be regulary tested. Maintenance of smoke ventilation systems is to be carried out at least once per year, according to the national guidelines. Actuators are to be regulary tested and lubricated, and the window hinges are to be lubricated according to the suppliers maintenance instructions. Sensors are to be regularly tested, cleaned and calibrated every 3 years. All faults, loose parts or other irregularities should immediately be repaired. WindowMaster offers service agreements to secure the long term reliability of the products. Please see separate sheet for further details.
Smoke ventilation	Connectors mounted at the factory must be replaced by ceramic connectors. Always use silicon cables. Smoke ventilation systems are to be tested according to building regulations. WindowMaster offers a service agreement for comfort and smoke ventilation solutions. Please see separate sheet for further details.
Transportation	Protect against humidity during transport, storage and installation.
Packing disposal	The packing can be disposed of together with ordinary household waste and recycled.
Product disposal	Disposal of the product should conform to regulations for electronic waste and not with usual household waste.
Legal notice	WindowMaster claims no responsibility or guarantee for the topicality, correctness or completeness of the accessed information and reserves rights to supply and change the information at any time.

Symbol description		
	**Natural ventilation**	The product is suitable for comfort ventilation.
	**Smoke ventilation**	The product is suitable for smoke ventilation.
	**Smoke ventilation EN 12101-2**	The product is suitable for smoke ventilation accordingly to EN 12101-2. Please contact WindowMaster for further information.
	**Smoke ventilation EN 12101-10**	The product is suitable for smoke ventilation accordingly to EN 12101-10. Please contact WindowMaster for further information.
	**Smoke ventilation B300**	The product is suitable for smoke ventilation accordingly to B300. Please contact WindowMaster for further information.
	**±24V control**	The product is to be connected to a ±24V power supply.
	**Rated voltage**	Symbol for rated voltage 120V, 230V and 230-400V.
	**Maksimal output current**	Symbol for max. 4A, max. 4.8A, max. 20A and max. 60A.
	**MotorLink®**	The product communicates with power supplies with MotorLink® – an intelligent patented digital communication from WindowMaster. This provides millimetre-by-millimetre control of the actuator, 3 open/close speeds, pressure safety function, fully synchronised actuators without external synchonisation module and early fault indication of any potential faults
	**TrueSpeed™**	The product can with the TrueSpeed™ technology slow down the actuator movement (down to 1mm per second), which enables the actuators to run completely silent.
	**VdS approved**	The product is certified in accordance with VdS.
	**KNX product**	The product is KNX certified.
	**BACnet product**	The product is BACnet certified.
	**Modbus product**	The product is Modbus certified.
	**App**	App to create a better indoor climate by opening and closing the motorised windows.
	**io-homecontrol® product**	The product is a io-homecontrol® product
	**UL certification – Controls**	UL certification for USA according to UL325 and for Canada according to CSA C22.2 no.247-14
	**UL certification – Actuators**	UL certification for USA according to UL325 and for Canada according to CSA C22.2 no.247-14
	**UL certification – Actuators**	UL certification for USA according to UL325 and for Canada according to CSA C22.2 no.247-14

Cable dimensions

For the maximum cable length for power supplies in conjuction with standard actuator (taking into consideration the stated cable cross sections) please refer to the following table.

Maximum cable length: always routed from the power supply to the last junction box
Actuator current: sum of all motor currents per group

Note

- do not use green/yellow (ground) wire!
- maximum voltage drop in the cable UL: 2V

$$\text{Max cable length} = \frac{\text{admissible voltage drop (UL) x conductivity of copper (56) x cable cross section (a)}}{\text{total max. actuator current (I) in amps x 2}}$$

Cable specifications is a guide only, overall responsibility resides with the electrical contractor on site.

Max. cable length when actuator is connected to power supply

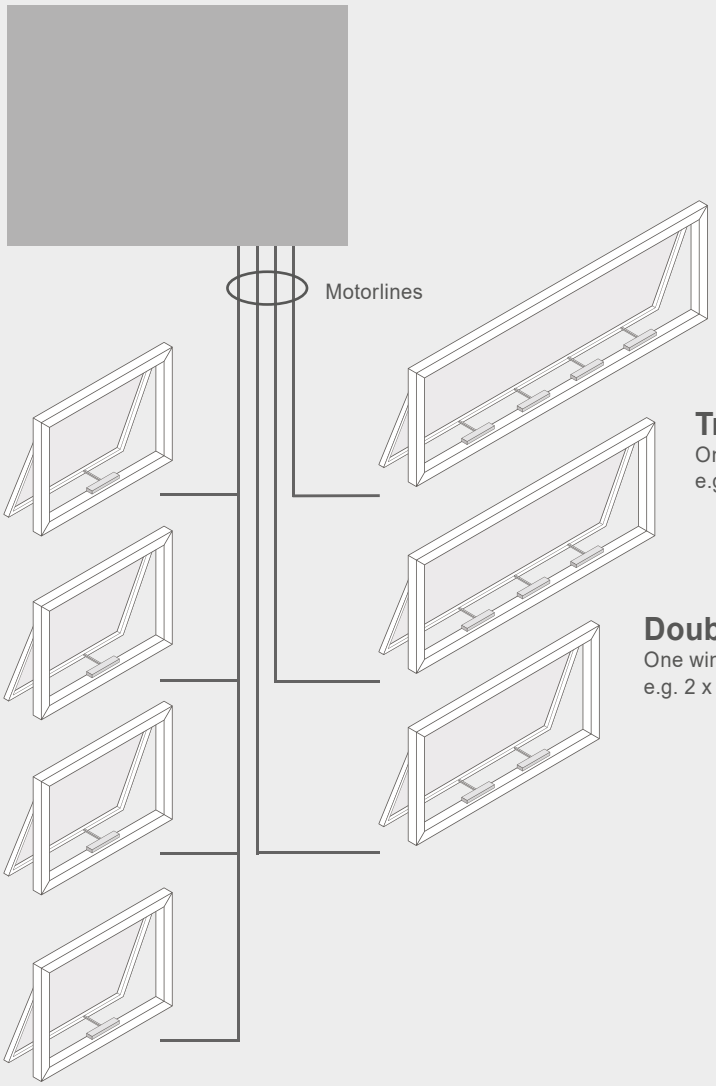
Cable cross section (a) (do not use green/yellow (ground) wire!) / Total actuator current [I]	3 wire 0.75mm²	3 wire 1.50 mm²	3 wire 2.50 mm²	3 wire 4.00 mm²	3 x 6.00 mm²	5 wire 1.50 mm² 2 wire parallel	5 wire 2.50 mm² 2 wire parallel
±24V power supply							
1A	42m	84m	140m	224m	336m	168m	280m
2A	21m	42m	70m	112m	168m	84m	140m
3A	14m	28m	47m	75m	112m	56m	93m
4A	11m	21m	35m	56m	84m	42m	70m
5A	8m	17m	28m	45m	67m	34m	56m
6A	7m	14m	23m	37m	56m	28m	47m
7A	6m	12m	20m	32m	48m	24m	40m
8A	5m	11m	18m	28m	42m	21m	35m
9A	N/A	9m	15m	25m	37m	18m	31m
10A		8m	14m	22m	34m	16m	28m
20A		4m	7m	11m	17m	8m	14m
MotorLink® power supply							
1A	42m	50m	50m	50m	50m	50m	50m
2A	21m	40m					
3A	14m	28m	47m				
4A	11m	21m	35m			42m	
5A	8m	17m	28m	45m		34m	
6A	7m	14m	23m	37m		28m	47m
7A	6m	12m	20m	32m	48m	24m	40m
8A	5m	11m	18m	28m	42m	21m	35m
9A	N/A	9m	15m	25m	37m	18m	31m
10A		8m	14m	22m	34m	16m	28m
20A		4m	7m	11m	17m	8m	14m

General

Actuator variants on one MotorLink® motorline

1. When connecting window actuators one should pay attention to:
   - the max current load of the MotorControllers: the max load on the MotorController is 10A per motorline (simultaneously load). The simultaneously max current consumption of all motorlines must not exceed max 20A.
   - the cable length and cross section: the max distance between the MotorController and the window actuators is 50m (164’ 1/2”), however with a max voltage drop of 2V in the cable

2. Aside from window actuators; espagnolettes type WMB 81x-n (one single or two double actuators), can be connected to the window. When connecting an espagnolette each window must have its own motorline



Quad actuators
One window with four quad window actuators
e.g. 4 x WMX 804-4.

Triple actuators
One window with three triple window actuators
e.g. 3 x WMX 804-3.

Double actuators
One window with two double window actuators
e.g. 2 x WMX 804-2.

Single actuator
One window with one single window actuator
e.g. 1 x WMX 804-1.
Up to four windows with each one window actuator
e.g. 4 x WMX 804-1 can be connected.