

DMA Actuator drives for

- Motorised Butterfly Valve DMK
- Motorised throttle DML

11.20

DUNGS®
Combustion Controls



Technical description

Various actuator drives are available for the Dungs DMK motorised butterfly valves and DML motorised throttle:

- Actuators with cams
- Electronic actuators with analog output signal

The DMA...P/Q/A actuator is distinguished by:

- continuously adjustable cams
- a mechanical position indicator readable from the outside
- a freely selectable mounting position
- maintenance-free operation
- switchover between Automatic and Manual (option)
- position feedback (option)

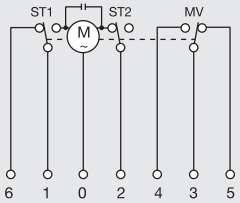
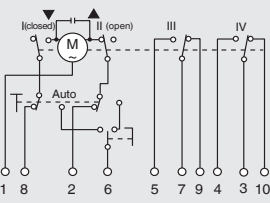
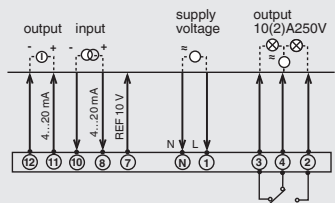
The selection of the actuator drive depends on the type of application.

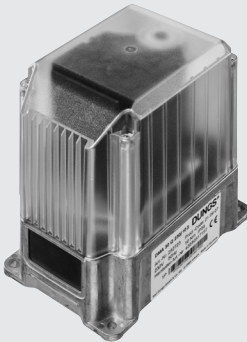
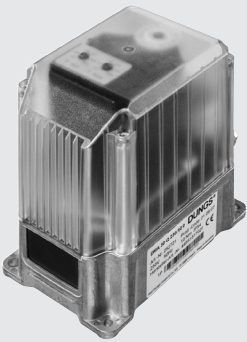
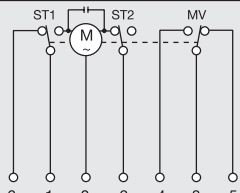
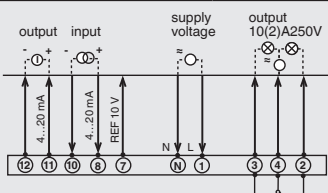
Application

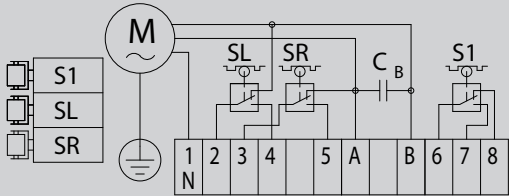
The actuator drives, which guarantee a precise rotation between 0 and 90 °C, are used in combination with the DUNGS DMK motorised butterfly valve and DML motorised throttle to control the gas supply or the air supply to gas-burning appliances e.g. gas burners.

Approvals

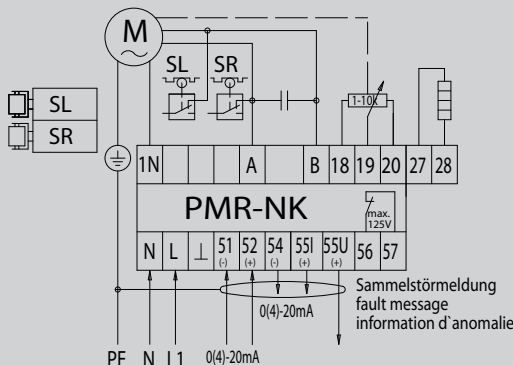
The actuator drives comply with the basic requirements of the EMC and low-voltage guideline.

Actuator drives Technical data			
Type	DMA 40 P 230/02 3 L	DMA 40 P 230/02 4 L	DMA 30 P 230/03 0 L
Order No.	226 240	238 810	226 239
Operating time for 90 °	40 s	40 s	30 s
Switch-on duration ED Motor/relay	25 % / 100 %	25 % / 100 %	25 % / 100 %
Voltage/frequency	~(AC) 230 V 50 Hz	~(AC) 230 V 50 Hz	~(AC) 230 V 50 Hz
Ambient temperature	0 °C to 60 °C	0 °C to 60 °C	0 °C to 50 °C
Weight	approx. 0.4 kg	approx. 0.5 kg	approx. 0.5 kg
Power consumption	max. 3 VA	max. 3 VA	max. 3 VA
Operating mode	automatic	automatic / manual	automatic / manual
Rotation angle adjustment	3 cams	4 cams	3 cams
Function, colours - min. - max. - potential-free, travelling	yellow red blue	yellow red 2 x blue	red yellow yellow
			y _{min.} y _{max.} -
Adjustment by	Lever	Lever	Lever
Potentiometer	-	optionally retrofittable	yes
Control	~(AC) 230 V 50 Hz	~(AC) 230 V 50 Hz	4 to 20 mA
Output	-	-	4 to 20 mA
Separate power output	-	-	10 V
Direction of rotation of the shaft closed → open	left	left	left
Cable entry	1 x PG9	1 x PG9	2 x PG9
Nominal torque	200 Ncm	200 Ncm	300 Ncm
Static holding torque	200 Ncm	200 Ncm	200 Ncm
Permissible lateral force on the shaft	max. 60 N	max. 60 N	max. 60 N
Shaft diameter	8 _{h8} mm	8 _{h8} mm	8 _{h8} mm
Shaft flat area	1 x 16 mm	1 x 16 mm	1 x 16 mm
Degree of protection (DIN 40050)	IP 40	IP 40	IP 40
Protection class EN 50178	2	2	2
Diagram			

Actuator drives Technical data		
Type	DMA 30 Q 230/10 3 L	DMA 30 Q 230/10 0 L
Order No.	252 723	252 721
Operating time for 90 °	30 s	30 s
Switch-on duration ED Motor/relay	25 % / 100 %	25 % / 100 %
Voltage/frequency	~(AC) 230 V 50 Hz	~(AC) 230 V 50 Hz
Ambient temperature	0 °C to 60 °C	0 °C to 50 °C
Weight	approx. 1.6 kg	approx. 1.7 kg
Power consumption	max. 3 VA	max. 3 VA
Operating mode	automatic	automatic / manual
Rotation angle adjustment	3 cams	3 cams Potentiometer
Function, colours - min. - max. - potential-free, travelling	yellow red blue	red yellow yellow y _{min.} y _{max.} -
Adjustment by	Lever	Lever Adjustment screw
Potentiometer	-	yes
Control	~(AC) 230 V 50 Hz	4 to 20 mA
Output	-	4 to 20 mA
Separate power output	-	10 V
Direction of rotation of the shaft closed → open	left	left
Cable entry	1 x M16 x 1,5 mm	2 x M16 x 1,5 mm
Nominal torque	1000 Ncm	1000 Ncm
Static holding torque	500 Ncm	500 Ncm
Permissible lateral force on the shaft	max. 100 N	max. 100 N
Shaft diameter	10 _{h8} mm	10 _{h8} mm
Shaft flat area	1,5 x 22 mm	1,5 x 22 mm
Degree of protection (DIN 40050)	IP 54	IP 54
Protection class EN 50178	1	1
Diagram		

Actuator drives Technical data			
Type	DMA 30 A 230/10 3 LR	DMA 30 A 115/10 3 LR	DMA 30 A 24/10 3 LR
Order No.	255 039	255 041	255 482
Operating time for 90 °	30 s (25 s*)	30 s (25 s*)	30 s (± 10 % as a function of load)
Switch-on duration ED Motor/relay	100 % / 100 %	100 % / 100 %	100 % / 100 %
Voltage/frequency	~(AC) 230 V 50 (60) Hz	~(AC) 115 V 50 (60) Hz	=(DC) 24 V
Ambient temperature	-15 °C to 60 °C	-15 °C to 60 °C	-15 °C to 60 °C
Weight	2.3 kg	2.3 kg	2.3 kg
Power consumption	max. 7 VA	max. 7 VA	5 W
Operating mode	automatic	automatic	automatic
Rotation angle adjustment	3 cams	3 cams	3 cams
Function	- min. - max. - potential-free, travelling	- min. - max. - potential-free, travelling	- min. - max. - potential-free, travelling
Adjustment by	Hand	Hand	Hand
Potentiometer	optionally retrofittable	optionally retrofittable	optionally retrofittable
Control	(AC) 230 V 50 (60) Hz	(AC) 115 V 50 (60) Hz	(DC) 24 V
Output	-	-	-
Separate power output	-	-	-
Direction of rotation of the shaft closed → open	left / right	left / right	left / right
Cable entry	1 x M20 x 1,5 / 1 x M16 x 1,5	1 x M20 x 1,5 / 1 x M16 x 1,5	1 x M20 x 1,5 / 1 x M16 x 1,5
Nominal torque	1000 Ncm	1000 Ncm	1000 Ncm
Static holding torque	1600 Ncm	1600 Ncm	1600 Ncm
Permissible lateral force on the shaft	max. 500 N	max. 500 N	max. 500 N
Shaft diameter	10 mm	10 mm	10 mm
Shaft flat area	2 x 25 mm	2 x 25 mm	2 x 25 mm
Degree of protection (DIN 40050)	IP 65	IP 65	IP 65
Protection class EN 50178	1	1	1
Approval	UL certified components	UL certified components	UL certified components
Diagram			

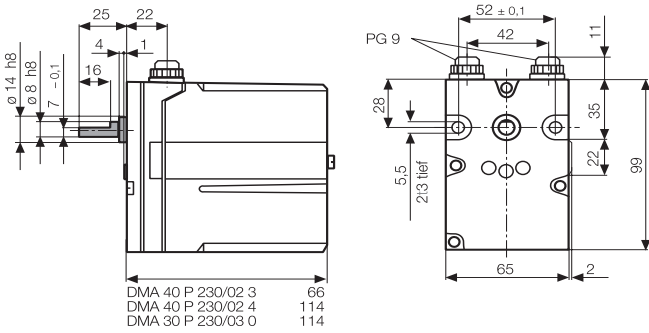
*) Runtime at 60 Hz

Actuator drives					
Technical data					
Type	DMA 30 A 230/10 0 LR		DMA 30 A 115/10 0 LR		
Order No.	255 042		255 044		
Operating time for 90 °	30 s (25 s*)		30 s (25 s*)		
Switch-on duration ED Motor/relay	100 % / 100 %		100 % / 100 %		
Voltage/frequency	~(AC) 230 V 50 (60) Hz		~(AC) 115 V 50 (60) Hz		
Ambient temperature	-10 °C to 60 °C		-10 °C to 60 °C		
Weight	2.5 kg		2.5 kg		
Power consumption	max. 7 VA		max. 7 VA		
Operating mode	automatic / manual		automatic / manual		
Rotation angle adjustment	2 cams	Potentiometer	2 cams	Potentiometer	
Function	Safety limit min. max.	y _{min.} y _{max.}	Safety limit min. max.	y _{min.} y _{max.}	
Adjustment by	Hand	Friction clutch	Hand	Friction clutch	
Potentiometer	yes		yes		
Control	4 to 20 mA		4 to 20 mA		
Output	4 to 20 mA		4 to 20 mA		
Separate power output	no		no		
Direction of rotation of the shaft closed → open	left / right		left / right		
Cable entry	1 x M20 x 1,5 / 1 x M16 x 1,5		1 x M20 x 1,5 / 1 x M16 x 1,5		
Nominal torque	1000 Ncm		1000 Ncm		
Static holding torque	1600 Ncm		1600 Ncm		
Permissible lateral force on the shaft	max. 500 N		max. 500 N		
Shaft diameter	10 mm		10 mm		
Shaft flat area	2 x 25 mm		1,5 x 22 mm		
Degree of protection (DIN 40050)	IP 65		IP 65		
Protection class EN 50178	1		1		
Approval	UL certified components		UL certified components		
Diagram					

*) Runtime at 60 Hz

Dimensions [mm]

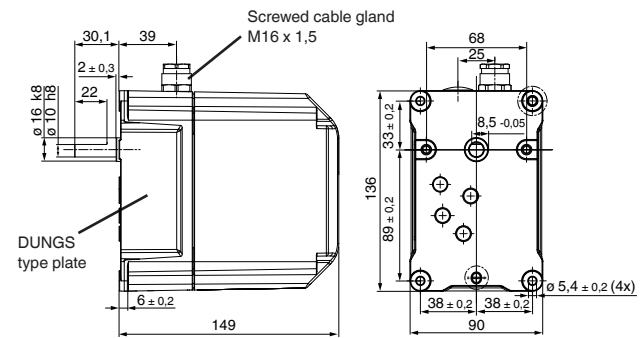
DMA...P



Installation: direct mounting to DMK...-P / DML by customer possible

Dimensions [mm]

DMA...Q



Installation: direct mounting to DMK...-Q by customer possible

Actuator drives Type	Degree of protection	Ø _{Shaft}	Comment	Order No.
DMA 40 P 230/02 3 L	IP 40	8		226 240
DMA 40 P 230/02 4 L	IP 40	8		238 810
DMA 30 P 230/03 0 L	IP 40	8		226 239
DMA 30 Q 230/10 3 L	IP 54	10		252 723
DMA 30 Q 230/10 0 L	IP 54	10		252 721
Please state the motorised flap when ordering!				

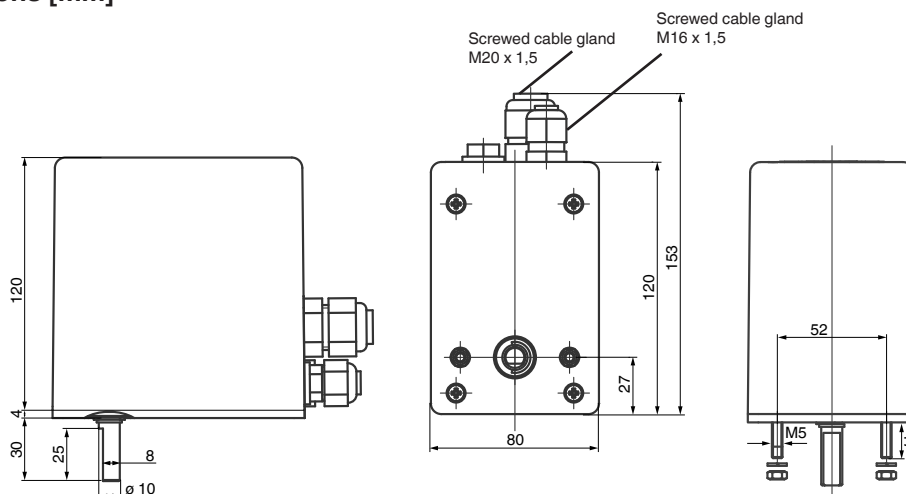
Accessories	Order No.
Potentiometer retrofitting kit 1 kΩ	DMA 40 P 230/02 4 L 240 498

DMA Actuator drives for
- Motorised Butterfly Valve DMK
- Motorised Throttle DML



Dimensions [mm]

DMA...A



Installation: direct mounting to DMK...-Q by customer possible

Actuator drives Type	Degree of protection	Ø Welle	Comment	Order No.
DMA 30 A 230/103 LR	P 65	10		255 039
DMA 30 A 115/103 LR	IP 65	10		255 041
DMA 30 A 24/103 LR	IP 65	10		255 482
DMA 30 A 230/100 LR	IP 65	10		255 042
DMA 30 A 115/100 LR	IP 65	10		255 044

Please state the motorised flap when ordering!

Accessories/Options				Order No.
Service switch for Manual/Automatic	IP 65		DMA 30 A.../103	on request
Model for -40°C of ambient temperature			DMA 30 A.../103	on request

We reserve the right to make any changes in the interest of technical progress.

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- Motorised Throttle DML



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