

FSD - 12000 Series

Three Phase Flame Proof Electrical Actuator

Technical Data

Series	Basic Model	Output Motion	Rated Torque	Tripping Torque Range	Output Speed	Supply	Item Code
			NM	NM	RPM		
Three Phase Flame Proof Electrical Actuator 12000 Series	FSD12000	Multiturn	30	06-30	10-365	Three Phase 380 / 415 / 460 / 580 VAC, 50 HZ	FSD-12000-03
			60	15-60	10-365		FSD-12000-06
			80	20-80	10-365		FSD-12000-08
			100	25-100	10-120		FSD-12000-10
			120	25-120	10-120		FSD-12000-12
			200	60-200	10-120		FSD-12000-20
			300	90-300	10-140		FSD-12000-30
			500	250-500	16-100		FSD-12000-50
			1000	320-500	16-100		FSD-12000-100
			Multiturn	180	54-180		3.5-132
		400		120-400	3.5-132		FSD-12000-20-SG2.75
		650		240-650	2.5-31		FSD-12000-20-SG04
		800		300-800	2.2-31		FSD-12000-20-SG4.5
		1000		360-1000	1.6-22.5		FSD-12000-20-SG6.25
		1300		480-1300	1-1.1		FSD-12000-20-SG10
		1700		600-1700	0.8-11.66		FSD-12000-20SG-12
		2000		720-2000	0.7-10		FSD-12000-20-SG-14
		2500		920-2500	0.55-7.77		FSD-12000-20-SG-18
		3600		1180-3600	0.4-5.6		FSD-12000-20-SG-25
		Multiturn	140	40-140	3.33-46.67		FSD-12000-06-BG03
			300	90-300	3.33-66.67		FSD-12000-12-BG03
			500	150-500	3.33-46.67		FSD-12000-20-BG-03
			700	210-700	2.22-31.11		FSD-12000-20-BG-4.5
			950	285-950	1.67-23.33		FSD-12000-20-BG-06
			1200	360-1200	1.67-23.33		FSD-12000-20-BG-30
		Quarter-turn	600	180-600	0.25-3		FSD-12000-08-WG-40
			1200	360-1200	0.16-2.33		FSD-12000-08-WG-40
			1800	540-1800	0.16-2		FSD-12000-12-WG-60
			2400	720-2400	0.125-1.75		FSD-12000-12-WG-80
			3600	960-3600	0.125-1.75		FSD-12000-20-WG-80
			4700	1200-4700	0.053-1.433		FSD-12000-20-WG-187
			6000	1800-6000	0.05-0.717		FSD-12000-20-WG-195
			8500	2250-8500	0.038-0.538		FSD-12000-20-WG-260
			12000	3600-12000	0.04-0.62		FSD-12000-20-WG-225
			15000	4500-15000	0.03-0.47		FSD-12000-20-WG-300
			20000	6000-20000	0.03-0.37		FSD-12000-20-WG-375
			30000	9000-30000	0.02-0.25		FSD-12000-20-WG-557
			42000	12600-42000	0.01-0.13		FSD-12000-20-WG-960
			61500	18450-61500	0.01-0.13		FSD-12000-20-WG-960
		72250	21675-72250	0.009-0.107	FSD-12000-20-WG-1120		
		102000	30600-102000	0.009-0.107	FSD-12000-20-WG-1844		
		Linear	Thrust Kg	Tripping Range / Stroke (Kg) / MM	Speed mm/Sec.		
			650	200-650 / 40	0.50-7		FSD-12000-03-650
			1200	360-1200 / 60	0.83-11.66		FSD-12000-03-1200
			2000	600-2000 / 75	0.83-11.66		FSD-12000-08-2000
			2600	780-2600 / 75	0.83-11.66		FSD-12000-10-2600
			3000	900-3000 / 90	0.83-10		FSD-12000-12-3000
		Thruster	5000	1500-5000 / 110	0.83-10		FSD-12000-20-5000
			200	60-200 / 300	2.0-75		FSD-12000-03-200-300
			500	150-500 / 300	2.0-75		FSD-12000-03-500-300
			750	225-750 / 600	3.0-50		FSD-12000-06-750-600
			1000	300-1000 / 1000	3.0-90		FSD-12000-10-1000-1000
			2000	600-2000 / 1200	3.0-75		FSD-12000-20-2000-1200
			3000	900-3000 / 1500	3.0-50		FSD-12000-30-2000-1500
		5000	1500-5000 / 3000	3.0-50	FSD-12000-50-5000-3000		

- Output bore & mounting dimensions as per standards
- Accessories will be supplied as per client demand

Technical Specification of Three Phase Flame Proof Electrical Actuator

Model No. FSD-12000-MT/QT/LIN/THR

for explosive gas atmospheres-Flameproof enclosures "d" (Group: IIC).

[Complies to Standard:- IS/IEC 60079-0:2004 General requirement
IS/IEC 60079-1:2007 Flame Proof]

Over Pressure test Conducted at our manufacturing Work at 10kg/cm².

Cast-Iron Grade-FG260, Pattern Casting.

Composition of Cast-Iron Grade-FG260.

C%	:	3.1 to 3.3
Si%	:	1.6 to 1.9
Mn%	:	0.6 to 0.8
P%	:	0.14 Max.
Cr%	:	0.1 to 0.2

Cast-Iron Grade-FG260 of Mechanical Properties:-

Tensile Strength in kg/mm ²	:	26.00Kg/mm ²
Hardness in BHN	:	180 to 230 BHN

BOLT DETAIL:-

<u>DISCRIPTION</u>	<u>TENSILE STRESS</u>	<u>MATERIAL</u>
M8 ALLEN BOLT	360 N/mm ²	SS304

Thread Standard as per ISO 965 :-

Internal Thread Tolerance: 6H.

External Thread Tolerance: 6g.

Note:- Minimum Wall thickness is 3mm after riveting.

Three Phase Flame Proof Electrical Actuator Details:-

1.Basic Model	: FSD-12000
2.Out Put motion	: Multi turn/Quarter Turn / Linear
3.Basic output range	: Rotary - up to 200 Nm Quarter turn - up to 500 Nm Linear - Up to 50000 Nm
4.Effective output range with Supplementary Gear box	: Rotary - up to 3600 Nm Quarter turn - up to 102000 Nm Linear - Up to 50000 Nm

5.Output Speed	: Rotary - 10-365 RPM Linear - 0.5-75 mm/Sec
6.Manual over-ride	: Provided-Hand wheel with auto declutching arrangement.
7.Travel Limit Switches	: Qty : 2+2 nos., Contacts : 1NO+1NC/2NO+2NC Rating: 5A-250 VAC/0.46A- 250VDC.
8.Torque Limit Switches	: Qty : 2 nos., Contacts : 1NO+1NC/2NO+2NC Rating: 5A-250 VAC/0.46A-50VDC.
9.Local Position Indicator	: Provided Continuous type.
10.Duty	: ON-OFF / Inching / Regulating

MOTOR DETAILS:-

1.Type.	: Induction Motor.
2.Supply	: 380 / 415 V AC 50/60 Hz 3 Phase
3. Insulation Class	: F
4. Rating (Hp/Kw)	: 0.5-5 Hp 0.37-3.70 Kw
5. Nos of Pole	: 4, 2 Nos.
6. Motor speed	: 1500/3000 rpm

OPTIONAL ACCESSORIES IF REQUIRED WILL BE FITTED INSIDE / OUTSIDE OF ACTUATORS:-

1.Feedback Potentiometer	: Provided
2.Two Wire Transmitter	: Provided
3.Inter face card -Valve Positioner	: Provided
4. Integral Starter	: Provided