

DC Contactors - Standard Size

Features

- Standard non-reversing contactors
- DC Coil
- DIN Rail Mount
- 4 Terminal Coils 9A – 25A for control application flexibility
- Snap on front mounted auxiliary contacts can be installed easily without use of tools
- IP20 Guarded

Product Images

Eg. COS09N012VD



Certifications



Product Details

12VDC

Part No.	V	A	Detail
COS09NO12VDC	12	9	1 x N/O
COS12NO12VDC	12	12	1 x N/O
COS18NO12VDC	12	18	1 x N/O

24VDC

Part No.	V	A	Detail
COS09NO24VDC	24	9	1 x N/O
COS12NO24VDC	24	12	1 x N/O
COS18NO24VDC	24	18	1 x N/O
COS25NO24VDC	24	25	1 x N/O

Technical Specifications

Electrical General	Units	COS09	COS12	COS18	COS25	COS32	COS40	COS65	COS80	
Impedence per pole	MΩ	2.35	2.35	2.41	1.65	1.28	0.95	0.85	0.86	
Power dissipation per pole										
AC - 1	W	1.47	1.47	2.46	3.34	4.6	3.42	10.4	10.4	
AC - 3	W	0.19	0.34	0.78	1.03	1.31	1.52	3.63	5.5	
IEC RATING										
Rated Insulation Voltage, Ui	v	1000								
Rated Impulse voltage withsatnd, Uimp	KV	6	6	6	6	6	6	8	8	
Rated operating voltage, Ue	V	690					1000			
Rated thermal current										
Making Capacity	A	300	300	300	450	550	550	1000	1000	
Breaking Capacity										
ue c 400V	a	250	250	250	350	450	450	920	920	
Ue =500 V	A	250	250	250	350	450	450	920	920	
Ue =690V	a	130	130	130	170	205	780	780	780	
AC-1 Operating Current, Ie										
At 55°C	A	25.0	25.0	45.0	45.0	60.0	60.0	110.0	110.0	
At 70°C	A	20.0	20.0	32.0	32.0	48.0	48.0	88.0	88.0	
AC-3 Operating Current, Ie										
220 ~ 240 V	A	9.0	12.0	18.0	25.0	32.0	40.0	65.0	80.0	
380 ~ 400V	A	9.0	12.0	18.0	25.0	32.0	40.0	65.0	80.0	
415 ~ 440V	A	9.0	12.0	18.0	25.0	32.0	40.0	65.0	80.0	
500V	A	7.5	10.5	14.0	19.0	24.0	32.0	55.0	63.0	
660 ~ 690V	A	7.0	9.0	13.0	15.0	22.0	25.0	44.0	48.0	
AC-3 OPERATING OPERATING POWER, P _e										
220 ~ 240V	Kw	2.2	3.0	4.5	6.5	9.2	11.0	18.5	22.0	
380 ~ 400V	Kw	4.0	5.5	7.5	12.5	15.0	18.5	30.0	40.0	
415 ~ 440V	Kw	4.5	6.5	9.2	12.5	15.0	22.0	37.0	45.0	
500V	Kw	4.5	6.5	10.0	12.5	15.0	25.0	40.0	45.0	
660 ~ 690V	Kw	5.5	7.5	11.0	12.5	18.5	25.0	45.0	45.0	
AC - 4 Operating Current, Ie										
220 ~ 240V	A	7.5	10.0	15.0	20.8	26.7	33.3	54.2	66.7	
380 ~ 400V	A	7.5	10.0	15.0	20.8	26.7	33.3	54.2	66.7	
415 ~ 440V	A	7.5	10.0	15.0	20.8	26.8	33.3	54.2	66.7	
500V	A	6.3	8.8	11.7	15.8	20.0	26.7	45.8	52.5	
660 ~ 690V	A	5.8	7.5	10.8	12.5	18.3	20.8	35.7	40.0	

Technical Specifications cont...

Electrical General	Units	COS09	COS12	COS18	COS25	COS32	COS40	COS65	COS80	
AC-4 Operating Power, Pe										
220 ~ 240V	Kw	1.5	2.2	4.0	5.5	5.5	7.5	15.0	18.5	
330 ~ 400V	Kw	3.0	4.0	5.5	7.5	11.0	15.0	22.0	37.0	
415 ~ 440V	Kw	3.0	4.0	5.5	7.5	11.0	15.0	22.0	37.0	
550V	Kw	3.0	4.0	5.5	7.5	11.0	15.0	30.0	30.0	
660~690V	Kw	4.0	5.5	7.5	7.5	15.0	18.5	30.0	30.0	
AC-4 Operating Current Ie @200,000 Oplions										
220 ~ 240V	A	2.7	3.6	5.5	7.6	9.7	12.1	19.7	24.2	
380 ~ 400V	A	2.7	3.6	5.5	7.6	9.7	12.1	19.7	24.2	
415 ~ 440V	A	2.7	3.6	5.5	7.6	9.7	12.1	19.7	24.2	
500V	A	2.3	3.2	4.2	5.8	7.3	9.7	16.7	19.1	
660 ~ 690V	A	2.1	2.7	3.9	4.5	6.7	7.6	13.3	14.5	
AC-4 Operating Power Pe @ 200,000 Operathlons										
220~240V	kA	0.55	0.75	1.1	1.5	2.2	3.0	4.0	5.5	
380~400V	kA	1.1	1.5	2.2	3.0	4.0	5.5	7.5	11.0	
415 ~ 440V	kA	1.1	1.5	2.2	3.0	4.0	5.5	7.5	11.0	
500V	kA	1.1	1.5	2.2	3.0	4.0	5.5	7.5	11.0	
660 ~ 690V	kA	1.5	1.5	3.0	3.0	5.5	5.5	11.0	11.0	
Short Circuit Coordination										
Short Circuit Current Rating	kA	5					10			
Type "1" gL/gG	A	50	50	63	63	100	125	200	200	
Type "2" gL/gG	A	25	35	35	50	63	80	125	125	
Rate of Short Tlme Current, ICW										
1 Second	A	455	455	570	630	1010	1265	2530	2530	
5 Seconds	A	205	205	254	280	450	450	1130	1130	
10 Seconds	A	144	144	180	200	320	400	800	800	
30 Seconds	A	85	85	104	115	185	230	460	460	
1 minute	A	60	60	74	80	130	165	325	325	
3 minute	A	35	35	45	50	90	100	185	185	
Maximum Electrical Switching Role										
AC - 1	Ops/hr.	1200	1200	1200	1200	1200	1200	1200	1200	
AC - 3	Ops/hr.	1200	1200	1200	1200	1200	1200	1200	1200	
AC - 4	Ops/hr.	360	360	360	360	360	200	200	200	
Electrical Endurance, AC-3 at maximum Rated 3 Phase Operating Power @ 400V	Ops/mill	1.6	1.8	1.3	1.4	1.3	1.3	1.4	1.2	

Technical Specifications cont...

Electrical General	Units	CO509	CO512	CO518	CO525	CO532	CO540	CO565	CO580	
UL Rating										
General Purpose Current Rating	A	25	25	32	32	60	60	110	110	
Rated 1 Phase Operating Current; Ie										
115V	A	9.8	13.8	16.0	24.0	34.0	34.0	56.0	80.0	
230V	A	10.0	12.0	17.0	17.0	28.0	28.0	40.0	50.0	
Rated 1 Phase Operating Power, Pe										
115V	HP	1/2	3/4	1	2	3	3	5	7 1/2	
230V	HP	1 1/2	2	3	3	5	5	10	15	
Rated 3 Phase Operating Current, Ie										
200V	A	11.0	11.0	17.5	25.3	32.2	32.2	62.1	62.1	
230V	A	9.6	9.6	15.2	22.0	28.0	42.0	54.0	68.0	
460V	A	7.6	11.0	17.0	17.0	27.0	27.0	52.0	62.0	
575V	A	9.0	11.0	17.0	17.0	27.0	27.0	52.0	62.0	
Rated 3 Phase Operating Current, Pe										
200V	HP	3.0	3.0	5.0	7 1/2	10.0	10.0	20.0	20.0	
230V	HP	3.0	3.0	5.0	7 1/2	10.0	15.0	20.0	25.0	
460V	HP	5.0	7 1/2	10.0	15.0	20.0	30.0	50.0	50.0	
575V	HP	7 1/2	10.0	15.0	15.0	25.0	25.0	50.0	60.0	
SCCRs										
Standard Fault Test										
Short Circuit Current Rating	kA	5					10			
Maximum Fuse Size	A	30	30	60	60	60	60	125	150	
High fault Test										
Short Circuit Current Rating	kA	100								
Maximum Fuse Size	A	25	25	40	40	50	60	100	125	
Electrical Endurance										
@Maximum rated 3 Phase Operating Power	Ops (mill)	1.8	2.0	1.6	1.6	1.5	1.5	1.8	1.5	
Coil Characteristics										
Rated Insulation Voltage, UI	V	1000								
Operating Limits										
DC Operating	xUc	0.80 ~ 1.10								
Pickup	xUc	0.45 ~ 0.65			0.45 ~ 0.75		0.70 ~ 0.80			
Sealed	xUc	0.15 ~ 0.30			0.15 ~ 0.30		0.40 ~ 0.60			

Technical Specifications cont...

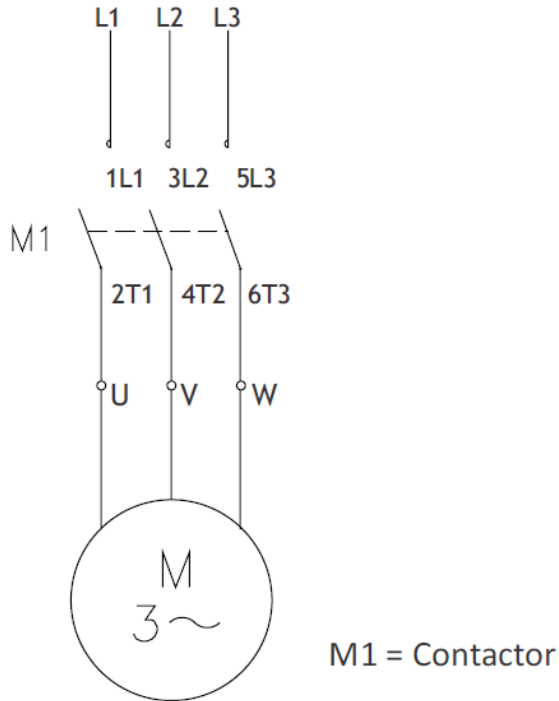
Coil Consumption		COS09	COS12	COS18	COS25	COS32	COS40	COS65	COS80
DC									
Pick - up	W		8.5				10		340
Hold - in	W		8.5				10		6.5
Operating Times									
DC									
Pick - up	msec		35 ~ 45				40 ~ 55		50 ~ 60
Drop - out	msec		7 ~ 12				30 ~ 65		55 ~ 60
Power Dissipation 50Hz, 60Hz, 50/60Hz	W		2.6				4.3		
Power Factor									
Closed	cos+		0.33				0.28		0.26
Open	cos+		0.84				0.73		0.54
Mechanical									
Mechanical Endurance	Ops (mill.)						10		
Maximum Mechanical switching rate	Ops/ hr						9000.0		
Environmental									
Ambient Operating Temperature							-25 to +55C (-13 to -131F)		
Ambient Storage Temperature							-55 to +80C (-67 to +176 F)		
Construction									
Pollution Degree	kA								
Ingress protection							3		
Main Terminals							IP20		IP20*
Coil Terminals							IP20		
Auxiliary Terminals							IP20		
Weight	Kg	0.295	0.295	0.295	0.295	0.52	0.52	1.12	1.13
	Lbs	0.65	0.65	0.65	0.65	1.15	1.19	2.47	2.49
RoHS Compliance							Yes		
Construction Conductor cross sections									
Main Terminal capacity									
Solid stranded without end sleeve	mm ²		2 X 0.5 ~ 6				2 X 1 ~ 14		2 X 1 ~ 34
AWG Wire	AGW		2 X 20 ~ 10				2 X 18 ~ 6		
Recommended Strip length	mm		8.5				10		13
	in								
Tightening Torque	lb*in								
	Nm								

* Note : With conductors connected

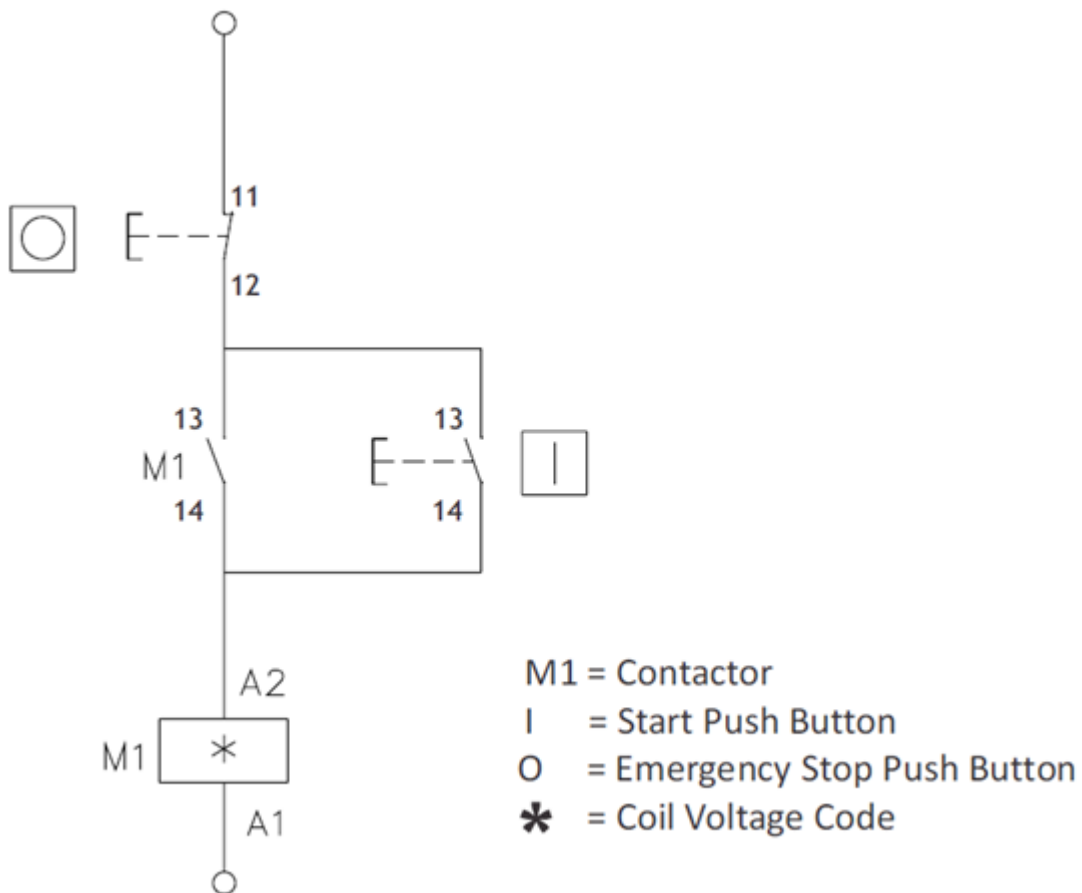
Electrical Specifications

Electrical General	Units	Built in Auxiliary
Minimum Switching Capacity		5mA @ 17V
Electrical Endurance	Ops.(mill.)	1
Mechanical Endurance	Ops.(mill.)	15
Non-Overlap Time	msec.	1.5
Insulation Resistance	m.Ω	>10
IEC Ratings		
Rated Insulation Voltage, Ui	V	1000
Rated Operating Voltage, Ue	V	690
Rated Thermal Current, Ith for Ambient Temperature < 55 °C	A	16
Making Capacity, Ue ≤ 400V, AC - 15		
Ue ≤ 400V 50/60Hz	A	250
Ue ≤ 220V DC	A	250
Breaking Capacity, Ue ≤ 400V, AC - 15		
Ue ≤ 400V 50/60Hz	A	250
Ue ≤ 220V DC	A	2
AC - 15		
110 ~ 120V	A	10
220 ~ 240V	A	10
380 ~ 400V	A	6
415 ~ 440V	A	5
500V	A	4
600 ~ 690V	A	2.5
DC - 13		
24V	A	6
48V	A	4
110V	A	2
220 ~ 240V	A	0.7
440V	A	0.3
Short Circuit Coordination		
gL/gG	A	10
UL Ratings		
Rated Operating Voltage	V	600
Pilot Duty Rating		
AC		A600
DC		P600
Environmental		
Ambient Operating Temperature		-25 to +55 °C
Ambient Storage Temperature		-55 to +80 °C
Construction		
Terminal Capacity		
AWG Wire	AWG	2 X 18 ~ 12 / 1 X 18 ~ 10
Solid, Stranded & Finely Stranded Without End Sleeve	mm ²	2 X 0.8 ~ 2.5 / 1 X 0.8 ~ 6
Tightening Torque	lb*in	10
	Nm	1.13
ROHS Compliance		Yes

Application Diagram

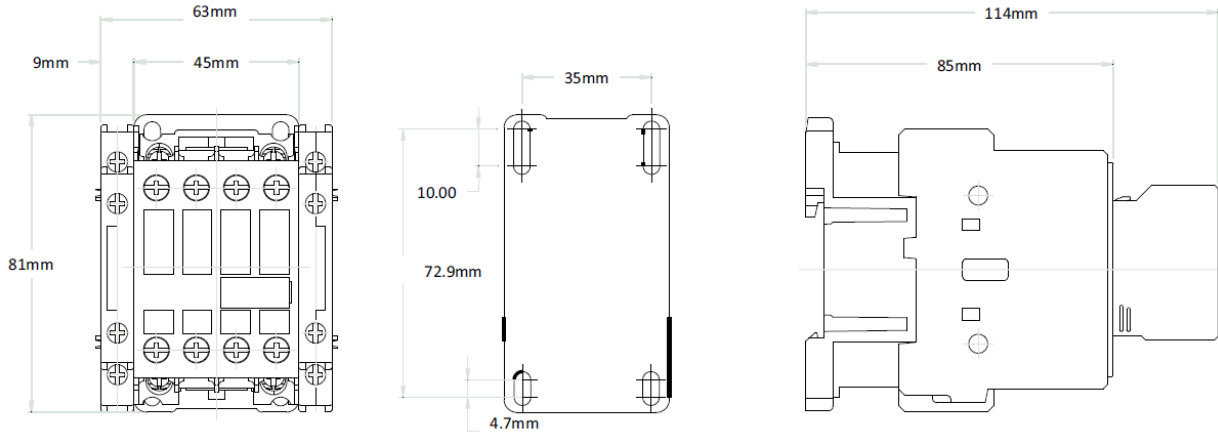


Control Circuit Diagram



Product Dimensions

9 - 25 A



Subject to change without notice