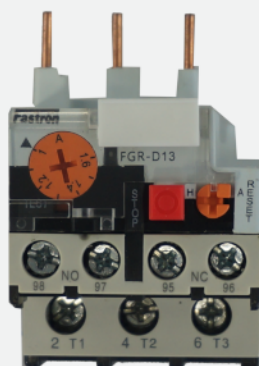


FGR2-D Series




Thermal Relay

Technical data


Type	FGR2-D13, FGR2-D23, FGR2-D33, FGR2-D150, FGR2-D200, FGR2-D400, FGR2-D630, FGR2-F53, FGR2-&73
Standard	IEC60947-4-1
Approvals	CE, CB, TUV
Tripping class	10A
Rated insulation voltage Ui(V)	690/1000
Rated impulse withstand voltage Uimp(kV)	6/8
Signalling	Trip indicator
Tightening torque(N.m)	0.8
Degree of protection	IP20
Ambient air temperature(°C)	-5 to+40,max.95%humidity
Storage temperature(°C)	-40~+75
Maximum operating altitude (meters)	2000
Flame resistance	V1
Mounting	Directly under the contactor




Selection and ordering data FGR2-D thermal relay matched with contactor FGC1-D

	Rated frame current (A)	Rated working current of thermal relay	Rated current (A)	Current setting range (A)	Matched fuse type aM (A)	gG (A)	Matched AC contactor
	25	FGR2-D 1301	0.16	0.10~0.16	0.25	2	FGC1/FGP1
		FGR2-D 1302	0.25	0.16~0.25	0.5	2	FGC1/FGP1
		FGR2-D 1303	0.40	0.25~0.40	1	2	FGC1/FGP1
		FGR2-D 1304	0.63	0.40~0.63	1	2	FGC1/FGP1
		FGR2-D 1305	1.0	0.63~1.0	2	4	FGC1/FGP1
		FGR2-D 1306	1.6	1.0~1.6	2	4	FGC1/FGP1
		FGR2-D 1306X	2.0	1.25~2.0	4	6	FGC1/FGP1
		FGR2-D 1307	2.5	1.6~2.5	4	6	FGC1/FGP1
		FGR2-D 1308	4.0	2.5~4.0	6	10	FGC1/FGP1
		FGR2-D 1310	6.0	4.0~6.0	8	16	FGC1/FGP1
		FGR2-D 1312	8.0	5.5~8.0	12	20	FGC1/FGP1
		FGR2-D 1314	10	7~10	12	20	FGC1/FGP1
		FGR2-D 1316	13	9~13	16	25	FGC1/FGP1
		FGR2-D 1321	18	12~18	20	35	FGC1/FGP1
FGR2-D 1322	25	17~25	25	50	FGC1/FGP1		
	36	FGR2-D 2353	32	23~32	40	63	FGC1/FGP1
		FGR2-D 2355	40	30~40	40	80	FGC1/FGP1
	93	FGR2-D 3353	32	23~32	40	63	FGC1/FGP1
		FGR2-D 3355	40	30~40	40	100	FGC1/FGP1
		FGR2-D 3357	50	37~50	63	100	FGC1/FGP1
		FGR2-D 3359	65	48~65	63	100	FGC1/FGP1
		FGR2-D 3361	70	55~70	80	125	FGC1/FGP1
		FGR2-D 3363	80	63~80	80	125	FGC1/FGP1
		FGR2-D 3365	93	80~93	100	160	FGC1/FGP1
		FGR2-D 150	150	80~150	160	250	FGC1/FGP1
		FGR2-D 200	200	80~200	200	315	FGC1/FGP1
		FGR2-D 400	400	160~400	400	630	FGC1/FGP1
FGR2-D 630	630	315~630	630	800	FGC1/FGP1		

FGR2-F thermal relay matched with contactor FGC1-F

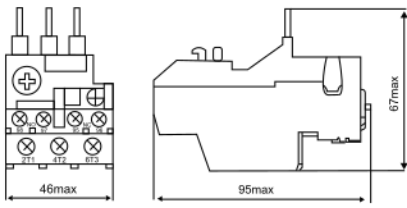
	Type code	Current setting range	Matched fuse type		Matched AC contactor
			aM Type (A)	gG Type (A)	
	FGR2-F53/50	30-50	50	80	FGC1-F115-F185
	FGR2-F53/80	48-80	80	125	FGC1-F115-F185
	FGR2-F53/100	60-100	100	200	FGC1-F115-F185
	FGR2-F53/150	90-150	160	250	FGC1-F115-F185
	FGR2-F53/220	132-220	250	315	FGC1-F225-F265
	SGC1-F73/330	200-330	400	500	FGC1-F225-F500
	SGC1-F73/500	300-500	500	800	FGC1-F225-F500
	SGC1-F73/630	380-630	630	800	FGC1-F400-F630

Selection and ordering data
MR28 thermal relay matched with contactor FGC1-K (miniature)

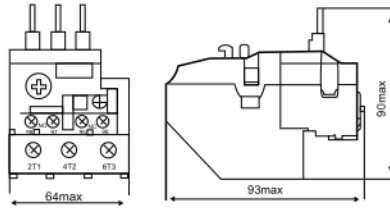
Rated frame current (A)	Rated working current of thermal relay	Rated current (A)	Current setting range (A)	Matched fuse type aM (A)	Matched fuse type gG (A)	Matched AC contactor
	12 Amp	FR28 0.10A-0.16A	0.16	0.10~0.16	0.25	2 FGC1-K12004(DC)
	FR28 0.16A-0.25A	0.25	0.16~0.25	0.5	2	FGC1-K12004(DC)
	FR28 0.25A-0.40A	0.40	0.25~0.40	1	2	FGC1-K12004(DC)
	FR28 0.40A-0.63A	0.63	0.40~0.63	1	2	FGC1-K12004(DC)
	FR28 0.63A-1A	1.0	0.63~1.0	2	4	FGC1-K12004(DC)
	FR28 1A-1.25A	1.25	1.0~1.25	2	4	FGC1-K12004(DC)
	FR28 1.25A-1.6A	1.6	1.25~1.6	4	6	FGC1-K12004(DC)
	FR28 1.6A-2.5A	2.5	1.6-2.5	4	4	FGC1-K12004(DC)
	FR28 2.5A-4.0A	4.0	2.5-4.0	4	6	FGC1-K12004(DC)
	FR28 4.0A-6.0A	6.0	4.0-6.0	6	6	FGC1-K12004(DC)
	FR28 5.5A-8A	8.0	5.5-8.0	8	10	FGC1-K12004(DC)
	FR28 7A-10A	10.0	7.0-10.0	8	16	FGC1-K12004(DC)
	FR28 9A-13A	13.0	9.0-13.0	12	20	FGC1-K12004(DC)



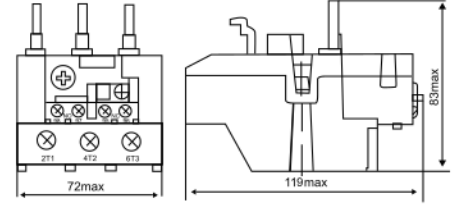
1. Overall and mounting dimensions (FGR21-D / FGR2-F Series)



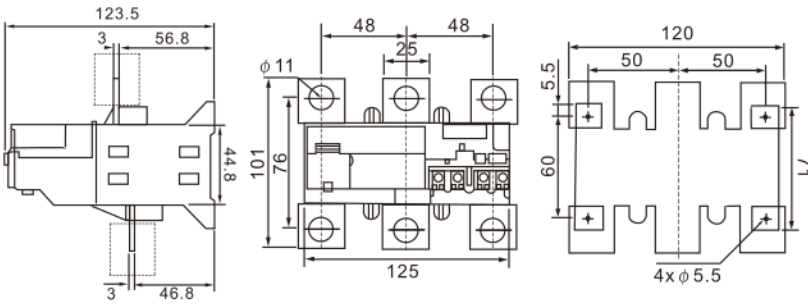
FGR2-D23



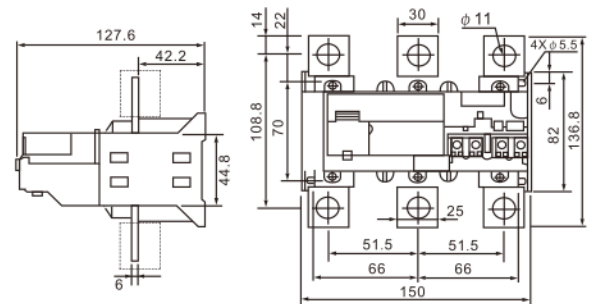
FGR2-D23



FGR2-D33



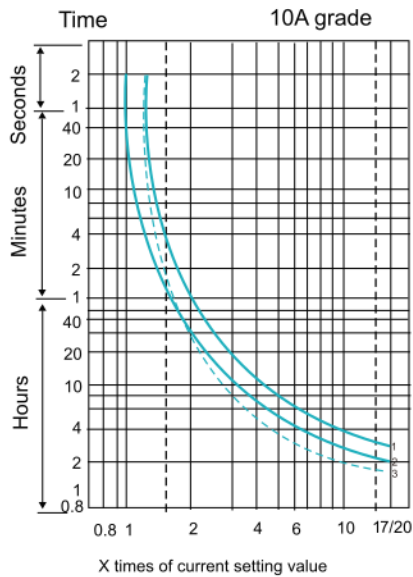
FGR2-F53/220



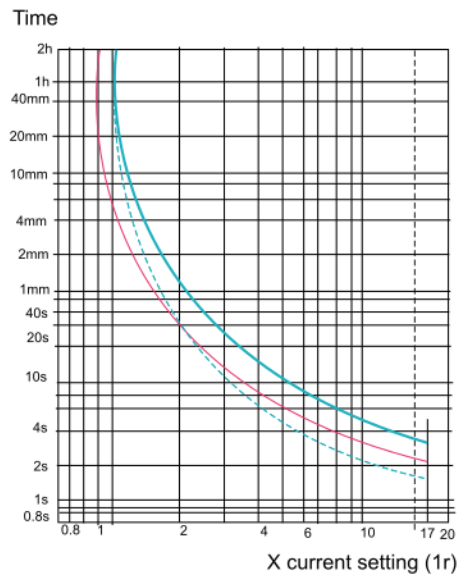
FGR2-F73/630

2. Tripping curve for thermal relay

FGR2-D



FGR2-F



1. Equilibrium running, 3phase, start form cold state
2. Equilibrium running, 2phase, start form cold state
3. Equilibrium running, 3phase, after long period of setting current (hot state)