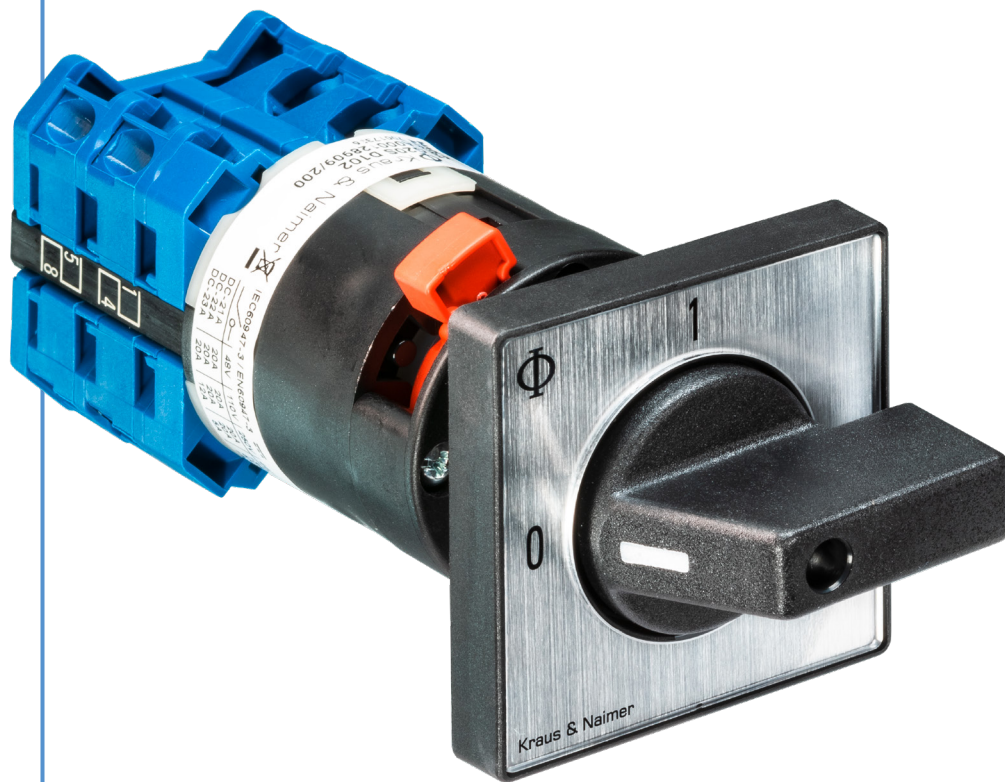




DC-Switch
with knife contacts

G20S/G20



G20S/G20

DC-Switch with knife contacts

CONTENT

< For direct link click on the page number >

The most important technical data	3
Electrical data of G20S/G20 ON/OFF-Switches	4
Electrical data of G20S/G20 Change-Over Switches	5
Pre-configured Main Switches G20	6
Dimensions Pre-configured Main Switches G20	9
Dimensions G20S/G20	10

G20S/G20

DC-Switch with knife contacts

Ideal solution for DC applications

The G20S and G20 switch disconnectors of the Kraus & Naimer G-series are compact, robust, and perfectly suited for direct current (DC) applications, as well as for low voltages and low currents.

The G20S switches are manually operated, have a switching capacity of 1000 V/20A (DC-22A), and a high short-circuit resistance.

The directly operated G20 switches fulfill all the characteristics of a main switch according to IEC/EN 60204¹.

The G20 switches are the ideal solution not only for DC applications but also for AC applications with high short-circuit resistance, as well as for systems operating at low voltage and currents.

In compliance with EN 50274², the IP20 finger-safe terminals prevent accidental unintentional contact with live parts.

In accordance with IEC/EN 60947-3³ our G20 and G20S switch disconnectors ensure the reliable operation of contacts when opening and closing. For details, please see the table on the right.

Of course, the G-series can also be flexibly combined with many Kraus & Naimer extras, e. g. padlock devices.

¹ IEC/EN 60204 – European standard for electrical, electronic and programmable electronic equipment and systems.

² EN 50274 – European standard for low-voltage switchgear and controlgear assemblies for protection against electric shock and against unintentional direct contact with hazardous live parts.

³ IEC/EN 60947-3 – European standard for switches, disconnectors, switch disconnectors and fuse-combination units to be used in distribution circuits and motor circuits of which the rated voltage does not exceed 1000 V AC or 1500 V DC.



The most important technical data, according to IEC/EN 60947-3

Rated Insulation Voltage	U_i	690 V AC
Rated Insulation Voltage	U_i	500 V DC
Rated Insulation Voltage	U_i	1000 V AC*
Rated Thermal Current	I_{th}/I_n	20 A

* DC possible with series connection

Maximum permissible wire gage	mm ²	AWG
Single-core or stranded wire	2x2,5	12
Flexible wire	2x2,5	12
with sleeving in according with DIN 46228	2x2,5	–

Ambient Temperature

between –5 °C and +40 °C

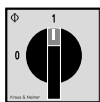
General Use	G20S
150 V DC	20 A
300 V AC Pilot Duty	10 A B 300



ELECTRICAL DATA OF ON/OFF-SWITCHES

Rated Utilization Category	Contacts in series Permissible Voltage						Rated Operational Current I_n /A	
	1	2	3	4	5	6	G20S	G20
DC-21 A	60	120	180	240	300	360	20	20
	110	220	330	440	550	660	20	15
	160	320	480	640	800	960	20	13
	250	500	750	1000	–	–	20	8
	330	660	990	–	–	–	20	6
	440	880	–	–	–	–	13	4
DC-22 A	60	120	180	240	300	360	20	20
	110	220	330	440	550	660	20	7
	160	320	480	640	800	960	20	4
	250	500	750	1000	–	–	20	2
	330	660	990	–	–	–	10	1
	440	880	–	–	–	–	5	0,5
DC-23	24	48	72	96	120	144	20	20
	48	96	144	192	240	288	20	12
	60	120	180	240	300	360	15	5
	110	220	330	440	550	660	12	3
	160	320	480	640	800	960	8	2
	250	500	750	1000	–	–	5	1
	330	660	990	–	–	–	3	0,5
	440	880	–	–	–	–	1	0,25
DC-PV2*	–	500	750	1000	–	–	20	–

* Ratings applicable for Switch Disconnectors in Photovoltaic



G20S/G20 ON/OFF-Switches 0-1

Switches						Switch Disconnectors				
Pole	Contacts in series	G20		G20S		G20		G20S		Stages
		Name	Art. no.	Name	Art. no.	Name	Art. no.	Name	Art. no.	
1	1	G20.D101.E	70017313	G20S.D101.E	70017332	G20.TD3101.E	70095358	G20S.TD3101.E	70031783	1
1	2	G20.D201.E	70095558	G20S.D201.E	70017369	G20.TD3201.E	70095366	G20S.TD3201.E	70017384	2
1	2+1	G20.D351.E	70095564	G20S.D351.E	70095584	G20.TD3351.E	70095374	G20S.TD3351.E	70009912	3
1	3	G20.D301.E	70095568	G20S.D301.E	70095593	G20.TD3301.E	70095399	G20S.TD3301.E	70100076	3
1	4	G20.D401.E	70017328	G20S.D401.E	70017379	G20.TD3401.E	70017331	G20S.TD3401.E	70017396	4
2	1	G20.D102.E	70017314	G20S.D102.E	70017334	G20.TD3102.E	70095359	G20S.TD3102.E	70009899	2
2	2	G20.D202.E	70095559	G20S.D202.E	70017370	G20.TD3202.E	70095367	G20S.TD3202.E	70009394	4
2	2+1	G20.D352.E	70095565	G20S.D352.E	70095586	G20.TD3352.E	70095391	G20S.TD3352.E	70009913	6
2	3	G20.D302.E	70095569	G20S.D302.E	70028968	G20.TD3302.E	70095551	G20S.TD3302.E	70055212	6
2	4	G20.D402.E	70095574	G20S.D402.E	70040897	G20.TD3402.E	70095554	G20S.TD3402.E	70100078	8
3	1	G20.D103.E	70095556	G20S.D103.E	70017339	G20.TD3103.E	70095361	G20S.TD3103.E	70100079	3
3	2	G20.D203.E	70095560	G20S.D203.E	70095576	G20.TD3203.E	70095369	G20S.TD3203.E	70100080	6
3	2+1	G20.D353.E	70095566	G20S.D353.E	70095587	G20.TD3353.E	70095397	G20S.TD3353.E	70009501	9
3	3	G20.D303.E	70095570	G20S.D303.E	70095594	G20.TD3303.E	70095552	G20S.TD3303.E	70100081	9
3	4	G20.D403.E	70095575	G20S.D403.E	70095683	G20.TD3403.E	70095555	G20S.TD3403.E	70100082	12
4	1	G20.D104.E	70095557	G20S.D104.E	70017342	G20.TD3104.E	70095362	G20S.TD3104.E	70009900	4
4	2	G20.D204.E	70095561	G20S.D204.E	70095580	G20.TD3204.E	70095370	G20S.TD3204.E	70009914	8
4	2+1	G20.D354.E	70095567	G20S.D354.E	70095589	G20.TD3354.E	70095398	G20S.TD3354.E	70100083	12
4	3	G20.D304.E	70095571	G20S.D304.E	70095595	G20.TD3304.E	70095553	G20S.TD3304.E	70100084	12
5	1	G20.D105.E	70068225	G20S.D105.E	70017346	G20.TD3105.E	70095363	G20S.TD3105.E	70100085	5
5	2	G20.D205.E	70095562	G20S.D205.E	70095581	G20.TD3205.E	70095371	G20S.TD3205.E	70100086	10
6	1	G20.D106.E	70017318	G20S.D106.E	70017348	G20.TD3106.E	70095364	G20S.TD3106.E	70009901	6
6	2	G20.D206.E	70095563	G20S.D206.E	70095583	G20.TD3206.E	70095372	G20S.TD3206.E	70009502	12

Customized contact developments are up on request. Please be so kind and advise the nominal current, voltage and utilization category as well as required terminal lugs.

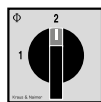
ELECTRICAL DATA OF CHANGE OVER SWITCHES

Rated Utilization Category	Contacts in series Permissible Voltage						Rated Operational Current I _e /A	
	1	2	3	4	5	6	G20S	G20
DC-21 A	160	320	480	640	800	960	20	*
	250	500	750	1000	–	–	7	*
	330	660	990	–	–	–	2	*
	440	880	–	–	–	–	1	*
DC-22 A	110	220	330	440	550	660	20	*
	160	320	480	640	800	960	8	*
	250	500	750	1000	–	–	3	*
	330	660	990	–	–	–	1	*
DC-23 A	48	96	144	192	240	288	20	*
	60	120	180	240	300	360	15	*
	110	220	330	440	550	660	6	*
	160	320	480	640	800	960	3	*
	250	500	750	1000	–	–	1	*

* Electrical data on request

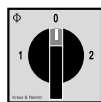
< to the dimensions >

< Back to the table of contents >



G20S/G20 Change-Over-Switches 1-2

Switches						
Pole	Contacts in series	G20		G20S		Stages
		Name	Art. no.	Name	Art. no.	
1	1	G20.D111.E	70017320	G20S.D111.E	70017350	1
1	2	G20.D211.E	70095684	G20S.D211.E	70017371	2
2	1	G20.D112.E	70024917	G20S.D112.E	70017352	2
2	2	G20.D212.E	70053279	G20S.D212.E	70009940	4
3	1	G20.D113.E	70017322	G20S.D113.E	70017355	3
3	2	G20.D213.E	70095685	G20S.D213.E	70017372	6
4	1	G20.D114.E	70069004	G20S.D114.E	70017357	4

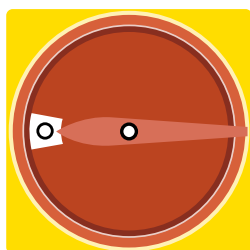


G20S/G20 Change-Over-Switches with 0 position 1-0-2

Switches						Switch Disconnectors				
Pole	Contacts in series	G20		G20S		G20		G20S		Stages
		Name	Art. no.	Name	Art. no.	Name	Art. no.	Name	Art. no.	
1	1	G20.D121.E	70095687	G20S.D121.E	70017361	G20.TD9121.E	70099364	G20S.TD9121.E	70017397	2
1	2	G20.D221.E	70095688	G20S.D221.E	70017374	G20.TD9221.E	70099368	G20S.TD9221.E	70095711	4
1	3	G20.D321.E	70095703	G20S.D321.E	70095709	G20.TD9321.E	70099373	G20S.TD9321.E	70048004	6
1	4	G20.D421.E	70095705	G20S.D421.E	70095712	G20.TD9421.E	70099375	G20S.TD9421.E	70048001	8
2	1	G20.D122.E	70017324	G20S.D122.E	70017363	G20.TD9122.E	70099366	G20S.TD9122.E	70069625	4
2	2	G20.D222.E	70095689	G20S.D222.E	70017375	G20.TD9222.E	70099369	G20S.TD9222.E	70062122	8
2	3	G20.D322.E	70095704	G20S.D322.E	70017378	G20.TD9322.E	70099374	G20S.TD9322.E	70048005	12
3	1	G20.D123.E	70017327	G20S.D123.E	70095708	G20.TD9123.E	70099367	G20S.TD9123.E	70017398	6
3	2	G20.D223.E	70095690	G20S.D223.E	70028281	G20.TD9223.E	70099371	G20S.TD9223.E	70025000	12
4	1	G20.D124.E	70010138	G20S.D124.E	70010139	G20.TD9124.E	70095706	G20S.TD9124.E	70010140	8

Customized contact developments are up on request. Please be so kind and advise the nominal current, voltage and utilization category as well as required terminal lugs.

PRE-CONFIGURED MAIN SWITCHES G20



48 x 48 mm

Rated Utilization Category	Contacts in series Permissible Voltage				Rated Operational Current I_n /A G20
DC-23 A	1	2	3	4	
	24	48	72	96	20
	48	96	144	192	12
	60	120	180	240	5
	110	220	330	440	3
	160	320	480	640	2
	250	500	750	1000	1

< to the dimensions >

1
Contacts in series
max. 250 V

Pole	 Name	Art. no.	 Name	Art. no.	Stages
1	G20.TD1101/01.E	70069845	G20.TD2101/01.E	70085669	1
2	G20.TD1102/01.E	70052903	G20.TD2102/01.E	70054977	2
3	G20.TD1103/01.E	70069852	G20.TD2103/01.E	70028249	3
4	G20.TD1104/01.E	70025221	G20.TD2104/01.E	70085673	4
5	G20.TD1105/01.E	70085625	G20.TD2105/01.E	70085678	5
6	G20.TD1106/01.E	70085628	G20.TD2106/01.E	70080031	6

2
Contacts in series
max. 500 V

Pole	 Name	Art. no.	 Name	Art. no.	Stages
1	G20.TD1201/01.E	70085630	G20.TD2201/01.E	70085682	2
2	G20.TD1202/01.E	70085632	G20.TD2202/01.E	70085689	4
3	G20.TD1203/01.E	70085635	G20.TD2203/01.E	70085690	6
4	G20.TD1204/01.E	70071700	G20.TD2204/01.E	70071704	8
5	G20.TD1205/01.E	70085637	G20.TD2205/01.E	70085695	10
6	G20.TD1206/01.E	70071702	G20.TD2206/01.E	70085699	12

3
Contacts in series
max. 750 V

Pole	 Name	Art. no.	 Name	Art. no.	Stages
1	G20.TD1301/01.E	70085642	G20.TD2301/01.E	70085701	3
2	G20.TD1302/01.E	70085646	G20.TD2302/01.E	70070071	6
3	G20.TD1303/01.E	70085648	G20.TD2303/01.E	70070066	9
4	G20.TD1304/01.E	70085650	G20.TD2304/01.E	70085705	12
1	G20.TD1351/01.E	70085653	G20.TD2351/01.E	70085707	3
2	G20.TD1352/01.E	70085658	G20.TD2352/01.E	70085713	6
3	G20.TD1353/01.E	70085660	G20.TD2353/01.E	70085716	9
4	G20.TD1354/01.E	70085662	G20.TD2354/01.E	70085718	12

4
Contacts in series
max. 1000 V

Pole	 Name	Art. no.	 Name	Art. no.	Stages
1	G20.TD1401/01.E	70071703	G20.TD2401/01.E	70085720	4
2	G20.TD1402/01.E	70085666	G20.TD2402/01.E	70085722	8
3	G20.TD1403/01.E	70085668	G20.TD2403/01.E	70071708	12

< Back to the table of contents >

PRE-CONFIGURED MAIN SWITCHES G20

Rated Utilization Category	Contacts in series Permissible Voltage				Rated Operational Current I_e /A G20
DC-23 A	1	2	3	4	
	24	48	72	96	20
	48	96	144	192	12
	60	120	180	240	5
	110	220	330	440	3
	160	320	480	640	2
	250	500	750	1000	1

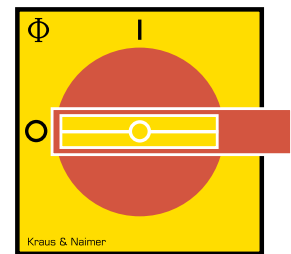
< to the dimensions >

Pole	 Name	Art. no.	 Name	Art. no.	Stages
1	G20.TD1101/04.FT2	70071697	G20.TD2101/04.FT2	70085670	1
2	G20.TD1102/04.FT2	70071698	G20.TD2102/04.FT2	70020764	2
3	G20.TD1103/04.FT2	70049666	G20.TD2103/04.FT2	70085672	3
4	G20.TD1104/04.FT2	70071699	G20.TD2104/04.FT2	70085674	4
5	G20.TD1105/04.FT2	70085627	G20.TD2105/04.FT2	70085680	5
6	G20.TD1106/04.FT2	70085629	G20.TD2106/04.FT2	70080113	6

1
Contacts in series
max. 250 V

Pole	 Name	Art. no.	 Name	Art. no.	Stages
1	G20.TD1201/04.FT2	70085631	G20.TD2201/04.FT2	70085684	2
2	G20.TD1202/04.FT2	70085633	G20.TD2202/04.FT2	70033916	4
3	G20.TD1203/04.FT2	70085636	G20.TD2203/04.FT2	70085693	6
4	G20.TD1204/04.FT2	70071701	G20.TD2204/04.FT2	70071705	8
5	G20.TD1205/04.FT2	70085639	G20.TD2205/04.FT2	70085698	10
6	G20.TD1206/04.FT2	70085640	G20.TD2206/04.FT2	70085700	12

2
Contacts in series
max. 500 V



48 x 48 mm

Pole	 Name	Art. no.	 Name	Art. no.	Stages
1	G20.TD1301/04.FT2	70085645	G20.TD2301/04.FT2	70085702	3
2	G20.TD1302/04.FT2	70085647	G20.TD2302/04.FT2	70085703	6
3	G20.TD1303/04.FT2	70085649	G20.TD2303/04.FT2	70085704	9
4	G20.TD1304/04.FT2	70085651	G20.TD2304/04.FT2	70085706	12
1	G20.TD1351/04.FT2	70085655	G20.TD2351/04.FT2	70085708	3
2	G20.TD1352/04.FT2	70085659	G20.TD2352/04.FT2	70085714	6
3	G20.TD1353/04.FT2	70085661	G20.TD2353/04.FT2	70085717	9
4	G20.TD1354/04.FT2	70085663	G20.TD2354/04.FT2	70085719	12

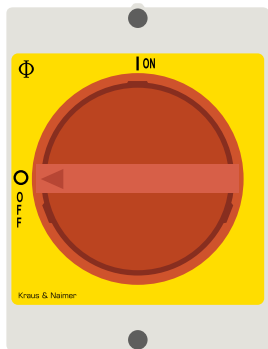
3
Contacts in series
max. 750 V

Pole	 Name	Art. no.	 Name	Art. no.	Stages
1	G20.TD1401/04.FT2	70085665	G20.TD2401/04.FT2	70085721	4
2	G20.TD1402/04.FT2	70085667	G20.TD2402/04.FT2	70071706	8
3	G20.TD1403/04.FT2	70046249	G20.TD2403/04.FT2	70085723	12

4
Contacts in series
max. 1000 V

< Back to the table of contents >

PRE-CONFIGURED MAIN SWITCHES G20



Height: 90 mm

Rated Utilization Category	Contacts in series Permissible Voltage		Rated Operational Current I _e /A G20
DC-23 A	1	2	
	24	48	20
	48	96	12
	60	120	5
	110	220	3
	160	320	2
	250	500	1

< to the dimensions >

1
Contacts in series
max. 250 V

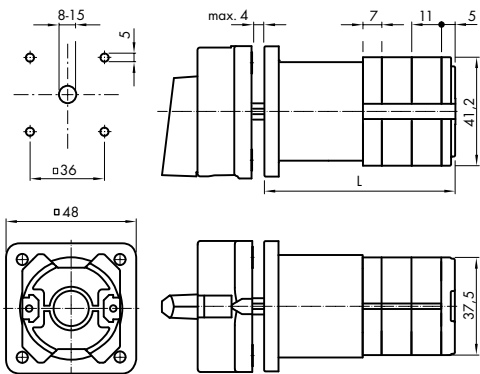
Pole	 Name	Art. no.	 Name	Art. no.
2	G20.TD1102/33.KS51V	70024002	G20.TD2102/33.KS51V	70023740
3	G20.TD1103/33.KS51V	70085624	G20.TD2103/33.KS51V	70009481

2
Contacts in series
max. 500 V

Pole	 Name	Art. no.	 Name	Art. no.
1	G20.TD1201/33.KS51V	70087829	G20.TD2201/33.KS51V	70087832

Four Hole Panel Mounting – lockable handle disk

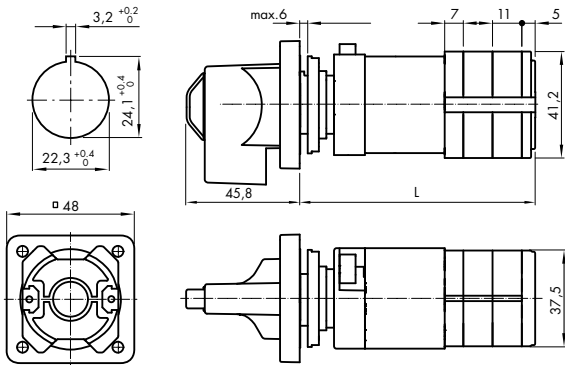
G20 E



L	1	2	3	4	5	6	7	8	9	10	11	12
Stages	1	2	3	4	5	6	7	8	9	10	11	12
mm	42	53	64	75	86	97	108	119	130	141	152	163

Single Hole Mounting – handle with lock bar

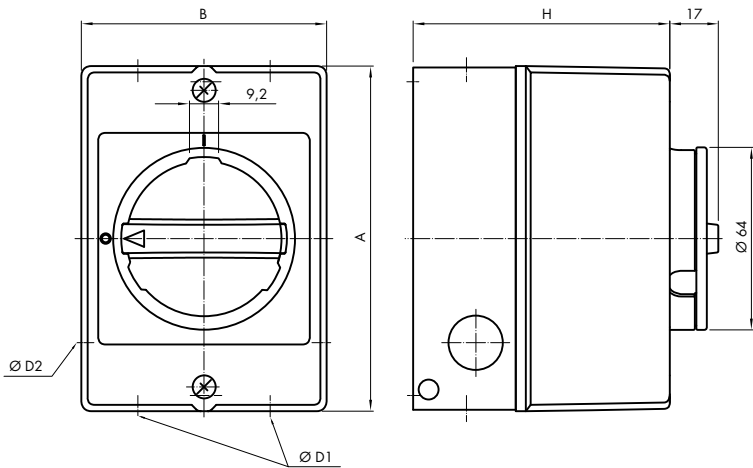
G20 FT2



L	1	2	3	4	5	6	7	8	9	10	11	12
Stages	1	2	3	4	5	6	7	8	9	10	11	12
mm	59,8	70,8	81,8	92,8	103,8	114,8	125,8	136,8	147,8	158,8	169,8	180,8

Enclosure

G20 KS51V

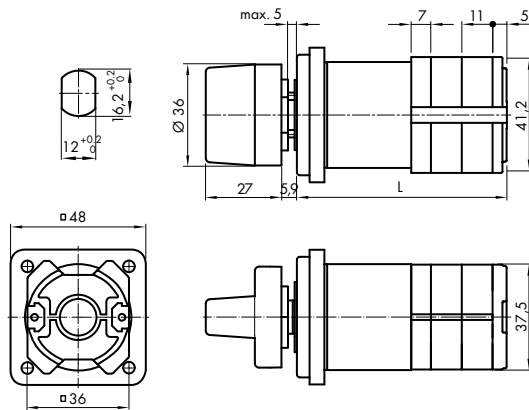


	A	B	D1	D2	H
mm	121	86	M20/M25	M20	90

DIMENSIONS G20S/G20

Four Hole Panel Mounting

G20S/G20 FT16

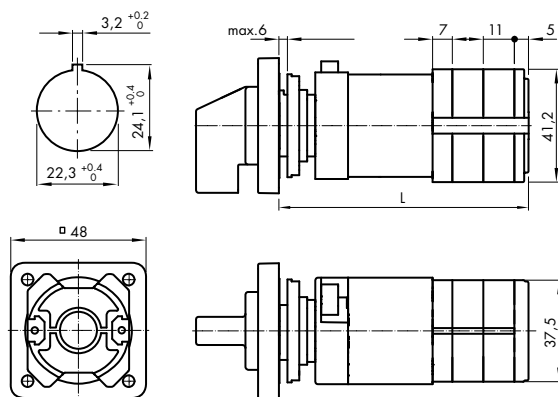


G20S												
L	1	2	3	4	5	6	7	8	9	10	11	12
Stages	63,8	74,8	85,8	96,8	107,8	118,8	129,8	140,8	151,8	162,8	173,8	184,8
mm												

G20												
L	1	2	3	4	5	6	7	8	9	10	11	12
Stages	46,5	57,5	68,5	79,5	90,5	101,5	112,5	123,5	134,5	145,5	156,5	167,5
mm												

Single Hole Mounting

G20S/G20 FT2

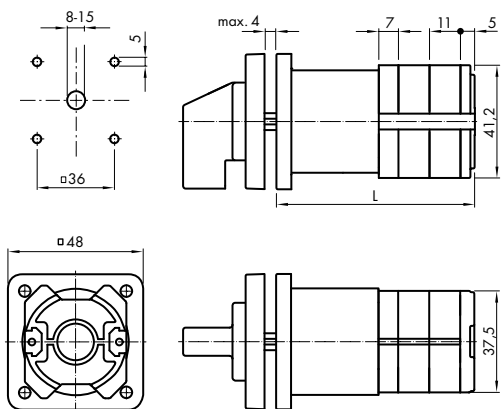


G20S												
L	1	2	3	4	5	6	7	8	9	10	11	12
Stages	77,3	88,3	99,3	110,3	121,3	132,3	143,3	154,3	165,3	176,3	187,3	198,3
mm												

G20												
L	1	2	3	4	5	6	7	8	9	10	11	12
Stages	59,8	70,8	81,8	92,8	103,8	114,8	125,8	136,8	147,8	158,8	169,8	180,8
mm												

Four Hole Panel Mounting

G20S/G20 E



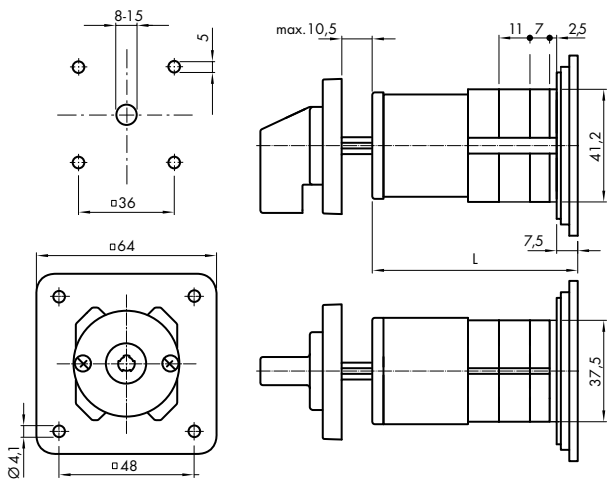
G20S												
L	1	2	3	4	5	6	7	8	9	10	11	12
Stages	1	2	3	4	5	6	7	8	9	10	11	12
mm	59,3	70,3	81,3	92,3	103,3	114,3	125,3	136,3	147,3	158,3	169,3	180,3

G20												
L	1	2	3	4	5	6	7	8	9	10	11	12
Stages	1	2	3	4	5	6	7	8	9	10	11	12
mm	42	53	64	75	86	97	108	119	130	141	152	163

< Back to the table of contents >

Base Mounting – Four Hole Mounting

G20S/G20 VE



G20S												
L	1	2	3	4	5	6	7	8	9	10	11	12
Stages	1	2	3	4	5	6	7	8	9	10	11	12
mm	62	73	84	95	106	117	128	139	150	161	172	183

G20												
L	1	2	3	4	5	6	7	8	9	10	11	12
Stages	1	2	3	4	5	6	7	8	9	10	11	12
mm	44,5	55,5	66,5	77,5	88,5	99,5	110,5	121,5	132,5	143,5	154,5	165,5



www.krausnaimer.com

© Kraus & Naimer, October 2024