

Xpole Industrial Feeder and Branch Circuit Breaker



Xpole Industrial, the logical continuation of the development of installation products for industrial applications. From protective switches to modular installation devices to surge protection, everything matches, and the complete range combines all the benefits.



Xpole Industrial Product Information

Feeder and Branch Circuit Breaker
FAZ-NA
FAZ-RT (Ring Tonque Connection)

MOELLER

An Eaton Brand

Optimum and Efficient Protection for Every Application



10 kA | UL 489, C22.2 No.5

15 kA | IEC 60947-2

When it comes to protection and switching, industries in many countries rely on Moeller products.

Optimum product quality, tested reliability and safety stand for best protection of personnel, installations and plant. Approvals in many countries confirm Moeller builds its products to comply with the latest national and international Regulations.

Powerful offering for machine and system builders

The Xpole Industrial FAZ-NA, FAZ-RT is available with C and D characteristic in accordance with UL 489, CSA C22.2 No.5; UL 1077, CSA C22.2 No.235 and IEC 60947-2

Typical Applications

Feeder and Branch Circuit Protection

- Convenience receptacle circuits (internal/external)
- Motors (internal/external)
- Load circuits leaving the equipment (external)
- HACR Equipment (Heating, Air Conditioning, Refrigeration) (internal/external)

Supplementary Protection FAZ, FAZ-NA and FAZ-RT

- Additional protection for: sensitive equipment, electronic components (e.g. computers)
- Motor control circuits without transformers

Features

- Current limiting
- SWD (switching duty) – suitable for switching fluorescent lighting loads ($I_n \leq 20 \text{ A}$)
- Fulfill UL 489, CSA C22.2 No. 5 and also IEC 60947-2 Standard
- For use in application for which UL 1077 or CSA C22.2 No.235 are also allowed
- Shunt trip release and auxiliary switch for subsequent mounting
- Separate Version for Ring Tongue Connection (Type FAZ-....-RT), terminal screws can be removed (on both sides)
- Module width of only 17,7 mm (per pole)
- Contact Position Indicator (red/green)
- Easy installation on DIN rail
- Possibility for sealing the toggle in on- or off-position



FAZ-NA



FAZ-RT



FAZ-RT



FAZ complies with the latest national and international Standards

Standards – Feeder and Branch Circuit Protection

- **UL 489**

Standard for molded case circuit breakers (MCCB) for feeder and branch circuit protection.

Products meet the requirements of the National Electrical Code (NEC).



- **CSA C22.2 No.5**

Standard for molded case circuit breakers (MCCB) for feeder and branch circuit protection (corresponds closely to UL 489 Standard).

Products meet the requirements of the Canadian Electrical Code (CEC)



Standards – Supplementary Protection

- **UL 1077**

Standard for molded case circuit breakers (MCCB) for supplementary protection of sensitive electronic equipment or equipment that requires unique or specific overcurrent protection.

Products meet the requirements of the National Electrical Code (NEC).



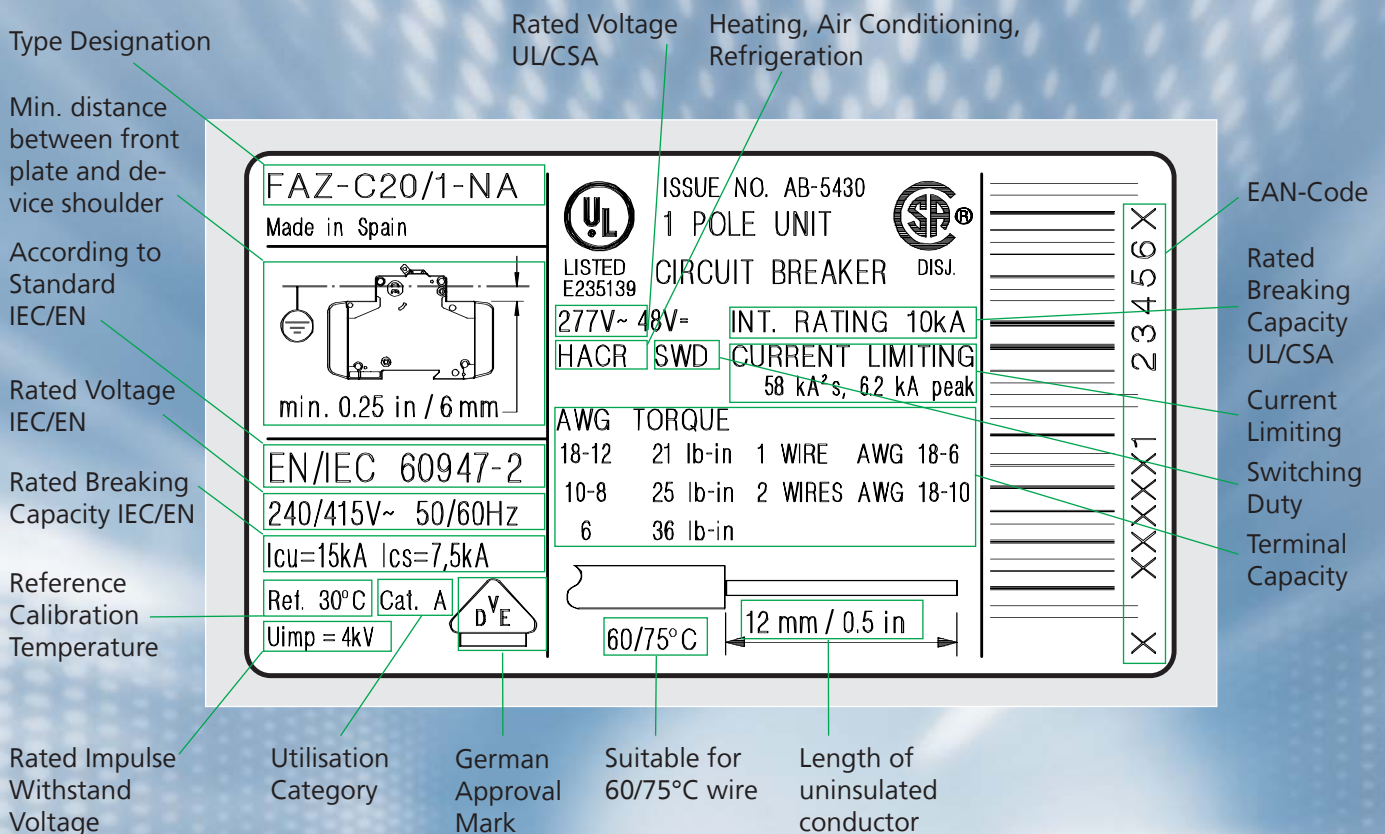
- **CSA C22.2 No.235**

Equivalent to the UL 1077 Standard.

Products meet the requirements of the Canadian Electrical Code (CEC).



Device Printing on front and side



SG11805



SG12105



SG12205



Miniature Circuit Breakers FAZ-NA

15 kA IEC; 10 kA UL/CSA, Characteristic C

Rated current I_n (A)	Type Designation	Article No.	Units per package
1-pole			
0.5	FAZ-C0,5/1-NA	102077	2 / 80
1	FAZ-C1/1-NA	102078	2 / 80
1.5	FAZ-C1,5/1-NA	102079	2 / 80
2	FAZ-C2/1-NA	102080	2 / 80
3	FAZ-C3/1-NA	102081	2 / 80
4	FAZ-C4/1-NA	102082	2 / 80
5	FAZ-C5/1-NA	102083	2 / 80
6	FAZ-C6/1-NA	102084	2 / 80
7	FAZ-C7/1-NA	102085	2 / 80
8	FAZ-C8/1-NA	102086	2 / 80
10	FAZ-C10/1-NA	102087	2 / 80
13	FAZ-C13/1-NA	102088	2 / 80
15	FAZ-C15/1-NA	102089	2 / 80
16	FAZ-C16/1-NA	102090	2 / 80
20	FAZ-C20/1-NA	102091	2 / 80
25	FAZ-C25/1-NA	102092	2 / 80
30	FAZ-C30/1-NA	102093	2 / 80
32	FAZ-C32/1-NA	102094	2 / 80
35	FAZ-C35/1-NA	102095	2 / 80
40	FAZ-C40/1-NA	102096	2 / 80
2-pole			
0.5	FAZ-C0,5/2-NA	102157	1 / 40
1	FAZ-C1/2-NA	102158	1 / 40
1.5	FAZ-C1,5/2-NA	102159	1 / 40
2	FAZ-C2/2-NA	102160	1 / 40
3	FAZ-C3/2-NA	102161	1 / 40
4	FAZ-C4/2-NA	102162	1 / 40
5	FAZ-C5/2-NA	102163	1 / 40
6	FAZ-C6/2-NA	102164	1 / 40
7	FAZ-C7/2-NA	102165	1 / 40
8	FAZ-C8/2-NA	102166	1 / 40
10	FAZ-C10/2-NA	102167	1 / 40
13	FAZ-C13/2-NA	102168	1 / 40
15	FAZ-C15/2-NA	102169	1 / 40
16	FAZ-C16/2-NA	102170	1 / 40
20	FAZ-C20/2-NA	102171	1 / 40
25	FAZ-C25/2-NA	102172	1 / 40
30	FAZ-C30/2-NA	102173	1 / 40
32	FAZ-C32/2-NA	102174	1 / 40
35	FAZ-C35/2-NA	102175	1 / 40
40	FAZ-C40/2-NA	102176	1 / 40
3-pole			
0.5	FAZ-C0,5/3-NA	102237	1 / 28
1	FAZ-C1/3-NA	102238	1 / 28
1.5	FAZ-C1,5/3-NA	102239	1 / 28
2	FAZ-C2/3-NA	102240	1 / 28
3	FAZ-C3/3-NA	102241	1 / 28
4	FAZ-C4/3-NA	102242	1 / 28
5	FAZ-C5/3-NA	102243	1 / 28
6	FAZ-C6/3-NA	102244	1 / 28
7	FAZ-C7/3-NA	102245	1 / 28
8	FAZ-C8/3-NA	102246	1 / 28
10	FAZ-C10/3-NA	102247	1 / 28
13	FAZ-C13/3-NA	102248	1 / 28
15	FAZ-C15/3-NA	102249	1 / 28
16	FAZ-C16/3-NA	102250	1 / 28
20	FAZ-C20/3-NA	102251	1 / 28
25	FAZ-C25/3-NA	102252	1 / 28
30	FAZ-C30/3-NA	102253	1 / 28
32	FAZ-C32/3-NA	102254	1 / 28
35	FAZ-C35/3-NA	102255	1 / 28
40	FAZ-C40/3-NA	102256	1 / 28

SG11805



SG12105



SG12205



Miniature Circuit Breakers FAZ-NA

15 kA IEC; 10 kA UL/CSA, Characteristic D

Rated current I_n (A)	Type Designation	Article No.	Units per package
1-pole			
0.5	FAZ-D0,5/1-NA	102097	2 / 80
1	FAZ-D1/1-NA	102098	2 / 80
1.5	FAZ-D1,5/1-NA	102099	2 / 80
2	FAZ-D2/1-NA	102100	2 / 80
3	FAZ-D3/1-NA	102101	2 / 80
4	FAZ-D4/1-NA	102102	2 / 80
5	FAZ-D5/1-NA	102103	2 / 80
6	FAZ-D6/1-NA	102104	2 / 80
7	FAZ-D7/1-NA	102105	2 / 80
8	FAZ-D8/1-NA	102106	2 / 80
10	FAZ-D10/1-NA	102107	2 / 80
13	FAZ-D13/1-NA	102108	2 / 80
15	FAZ-D15/1-NA	102109	2 / 80
16	FAZ-D16/1-NA	102110	2 / 80
20	FAZ-D20/1-NA	102111	2 / 80
25	FAZ-D25/1-NA	102112	2 / 80
30	FAZ-D30/1-NA	102113	2 / 80
32	FAZ-D32/1-NA	102114	2 / 80
35	FAZ-D35/1-NA	102115	2 / 80
40	FAZ-D40/1-NA	102116	2 / 80
2-pole			
0.5	FAZ-D0,5/2-NA	102177	1 / 40
1	FAZ-D1/2-NA	102178	1 / 40
1.5	FAZ-D1,5/2-NA	102179	1 / 40
2	FAZ-D2/2-NA	102180	1 / 40
3	FAZ-D3/2-NA	102181	1 / 40
4	FAZ-D4/2-NA	102182	1 / 40
5	FAZ-D5/2-NA	102183	1 / 40
6	FAZ-D6/2-NA	102184	1 / 40
7	FAZ-D7/2-NA	102185	1 / 40
8	FAZ-D8/2-NA	102186	1 / 40
10	FAZ-D10/2-NA	102187	1 / 40
13	FAZ-D13/2-NA	102188	1 / 40
15	FAZ-D15/2-NA	102189	1 / 40
16	FAZ-D16/2-NA	102190	1 / 40
20	FAZ-D20/2-NA	102191	1 / 40
25	FAZ-D25/2-NA	102192	1 / 40
30	FAZ-D30/2-NA	102193	1 / 40
32	FAZ-D32/2-NA	102194	1 / 40
35	FAZ-D35/2-NA	102195	1 / 40
40	FAZ-D40/2-NA	102196	1 / 40
3-pole			
0.5	FAZ-D0,5/3-NA	102257	1 / 28
1	FAZ-D1/3-NA	102258	1 / 28
1.5	FAZ-D1,5/3-NA	102259	1 / 28
2	FAZ-D2/3-NA	102260	1 / 28
3	FAZ-D3/3-NA	102261	1 / 28
4	FAZ-D4/3-NA	102262	1 / 28
5	FAZ-D5/3-NA	102263	1 / 28
6	FAZ-D6/3-NA	102264	1 / 28
7	FAZ-D7/3-NA	102265	1 / 28
8	FAZ-D8/3-NA	102266	1 / 28
10	FAZ-D10/3-NA	102267	1 / 28
13	FAZ-D13/3-NA	102268	1 / 28
15	FAZ-D15/3-NA	102269	1 / 28
16	FAZ-D16/3-NA	102270	1 / 28
20	FAZ-D20/3-NA	102271	1 / 28
25	FAZ-D25/3-NA	102272	1 / 28
30	FAZ-D30/3-NA	102273	1 / 28
32	FAZ-D32/3-NA	102274	1 / 28
35	FAZ-D35/3-NA	102275	1 / 28
40	FAZ-D40/3-NA	102276	1 / 28

FAZ-NA-DC

SG11905



Miniature Circuit Breakers FAZ-NA-DC
125 V DC; 10 kA UL489A, Characteristic C

Rated current I _n (A)	Type Designation	Article No.	Units per package
1-pole			
2	FAZ-C2/1-NA-DC	113752	2 / 80
3	FAZ-C3/1-NA-DC	113753	2 / 80
4	FAZ-C4/1-NA-DC	113754	2 / 80
5	FAZ-C5/1-NA-DC	113755	2 / 80
6	FAZ-C6/1-NA-DC	113756	2 / 80
7	FAZ-C7/1-NA-DC	113757	2 / 80
8	FAZ-C8/1-NA-DC	113758	2 / 80
10	FAZ-C10/1-NA-DC	113759	2 / 80
13	FAZ-C13/1-NA-DC	113760	2 / 80
15	FAZ-C15/1-NA-DC	113761	2 / 80
16	FAZ-C16/1-NA-DC	113762	2 / 80
20	FAZ-C20/1-NA-DC	113763	2 / 80
25	FAZ-C25/1-NA-DC	113764	2 / 80
30	FAZ-C30/1-NA-DC	113765	2 / 80
32	FAZ-C32/1-NA-DC	113766	2 / 80
35	FAZ-C35/1-NA-DC	113767	2 / 80
40	FAZ-C40/1-NA-DC	113768	2 / 80

SG11905



SG12005



SG12305



Miniature Circuit Breakers FAZ-RT 15 kA IEC; 10 kA UL/CSA, Characteristic C

Rated current I_n (A)	Type Designation	Article No.	Units per package
1-pole			
0.5	FAZ-C0,5/1-RT	102117	2 / 80
1	FAZ-C1/1-RT	102118	2 / 80
1.5	FAZ-C1,5/1-RT	102119	2 / 80
2	FAZ-C2/1-RT	102120	2 / 80
3	FAZ-C3/1-RT	102121	2 / 80
4	FAZ-C4/1-RT	102122	2 / 80
5	FAZ-C5/1-RT	102123	2 / 80
6	FAZ-C6/1-RT	102124	2 / 80
7	FAZ-C7/1-RT	102125	2 / 80
8	FAZ-C8/1-RT	102126	2 / 80
10	FAZ-C10/1-RT	102127	2 / 80
13	FAZ-C13/1-RT	102128	2 / 80
15	FAZ-C15/1-RT	102129	2 / 80
16	FAZ-C16/1-RT	102130	2 / 80
20	FAZ-C20/1-RT	102131	2 / 80
25	FAZ-C25/1-RT	102132	2 / 80
30	FAZ-C30/1-RT	102133	2 / 80
32	FAZ-C32/1-RT	102134	2 / 80
35	FAZ-C35/1-RT	102135	2 / 80
40	FAZ-C40/1-RT	102136	2 / 80
2-pole			
0.5	FAZ-C0,5/2-RT	102197	1 / 40
1	FAZ-C1/2-RT	102198	1 / 40
1.5	FAZ-C1,5/2-RT	102199	1 / 40
2	FAZ-C2/2-RT	102200	1 / 40
3	FAZ-C3/2-RT	102201	1 / 40
4	FAZ-C4/2-RT	102202	1 / 40
5	FAZ-C5/2-RT	102203	1 / 40
6	FAZ-C6/2-RT	102204	1 / 40
7	FAZ-C7/2-RT	102205	1 / 40
8	FAZ-C8/2-RT	102206	1 / 40
10	FAZ-C10/2-RT	102207	1 / 40
13	FAZ-C13/2-RT	102208	1 / 40
15	FAZ-C15/2-RT	102209	1 / 40
16	FAZ-C16/2-RT	102210	1 / 40
20	FAZ-C20/2-RT	102211	1 / 40
25	FAZ-C25/2-RT	102212	1 / 40
30	FAZ-C30/2-RT	102213	1 / 40
32	FAZ-C32/2-RT	102214	1 / 40
35	FAZ-C35/2-RT	102215	1 / 40
40	FAZ-C40/2-RT	102216	1 / 40
3-pole			
0.5	FAZ-C0,5/3-RT	102277	1 / 28
1	FAZ-C1/3-RT	102278	1 / 28
1.5	FAZ-C1,5/3-RT	102279	1 / 28
2	FAZ-C2/3-RT	102280	1 / 28
3	FAZ-C3/3-RT	102281	1 / 28
4	FAZ-C4/3-RT	102282	1 / 28
5	FAZ-C5/3-RT	102283	1 / 28
6	FAZ-C6/3-RT	102284	1 / 28
7	FAZ-C7/3-RT	102285	1 / 28
8	FAZ-C8/3-RT	102286	1 / 28
10	FAZ-C10/3-RT	102287	1 / 28
13	FAZ-C13/3-RT	102288	1 / 28
15	FAZ-C15/3-RT	102289	1 / 28
16	FAZ-C16/3-RT	102290	1 / 28
20	FAZ-C20/3-RT	102291	1 / 28
25	FAZ-C25/3-RT	102292	1 / 28
30	FAZ-C30/3-RT	102293	1 / 28
32	FAZ-C32/3-RT	102294	1 / 28
35	FAZ-C35/3-RT	102295	1 / 28
40	FAZ-C40/3-RT	102296	1 / 28

FAZ-RT (with Ring Tongue Connection)

SG11905



SG12005



SG12305



Miniature Circuit Breakers FAZ-RT 15 kA IEC; 10 kA UL/CSA, Characteristic D

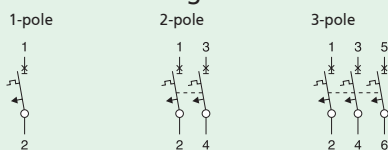
Rated current I_n (A)	Type Designation	Article No.	Units per package
1-pole			
0.5	FAZ-D0,5/1-RT	102137	2 / 80
1	FAZ-D1/1-RT	102138	2 / 80
1.5	FAZ-D1,5/1-RT	102139	2 / 80
2	FAZ-D2/1-RT	102140	2 / 80
3	FAZ-D3/1-RT	102141	2 / 80
4	FAZ-D4/1-RT	102142	2 / 80
5	FAZ-D5/1-RT	102143	2 / 80
6	FAZ-D6/1-RT	102144	2 / 80
7	FAZ-D7/1-RT	102145	2 / 80
8	FAZ-D8/1-RT	102146	2 / 80
10	FAZ-D10/1-RT	102147	2 / 80
13	FAZ-D13/1-RT	102148	2 / 80
15	FAZ-D15/1-RT	102149	2 / 80
16	FAZ-D16/1-RT	102150	2 / 80
20	FAZ-D20/1-RT	102151	2 / 80
25	FAZ-D25/1-RT	102152	2 / 80
30	FAZ-D30/1-RT	102153	2 / 80
32	FAZ-D32/1-RT	102154	2 / 80
35	FAZ-D35/1-RT	102155	2 / 80
40	FAZ-D40/1-RT	102156	2 / 80
2-pole			
0.5	FAZ-D0,5/2-RT	102217	1 / 40
1	FAZ-D1/2-RT	102218	1 / 40
1.5	FAZ-D1,5/2-RT	102219	1 / 40
2	FAZ-D2/2-RT	102220	1 / 40
3	FAZ-D3/2-RT	102221	1 / 40
4	FAZ-D4/2-RT	102222	1 / 40
5	FAZ-D5/2-RT	102223	1 / 40
6	FAZ-D6/2-RT	102224	1 / 40
7	FAZ-D7/2-RT	102225	1 / 40
8	FAZ-D8/2-RT	102226	1 / 40
10	FAZ-D10/2-RT	102227	1 / 40
13	FAZ-D13/2-RT	102228	1 / 40
15	FAZ-D15/2-RT	102229	1 / 40
16	FAZ-D16/2-RT	102230	1 / 40
20	FAZ-D20/2-RT	102231	1 / 40
25	FAZ-D25/2-RT	102232	1 / 40
30	FAZ-D30/2-RT	102233	1 / 40
32	FAZ-D32/2-RT	102234	1 / 40
35	FAZ-D35/2-RT	102235	1 / 40
40	FAZ-D40/2-RT	102236	1 / 40
3-pole			
0.5	FAZ-D0,5/3-RT	102297	1 / 28
1	FAZ-D1/3-RT	102298	1 / 28
1.5	FAZ-D1,5/3-RT	102299	1 / 28
2	FAZ-D2/3-RT	102300	1 / 28
3	FAZ-D3/3-RT	102301	1 / 28
4	FAZ-D4/3-RT	102302	1 / 28
5	FAZ-D5/3-RT	102303	1 / 28
6	FAZ-D6/3-RT	102304	1 / 28
7	FAZ-D7/3-RT	102305	1 / 28
8	FAZ-D8/3-RT	102306	1 / 28
10	FAZ-D10/3-RT	102307	1 / 28
13	FAZ-D13/3-RT	102308	1 / 28
15	FAZ-D15/3-RT	102309	1 / 28
16	FAZ-D16/3-RT	102310	1 / 28
20	FAZ-D20/3-RT	102311	1 / 28
25	FAZ-D25/3-RT	102312	1 / 28
30	FAZ-D30/3-RT	102313	1 / 28
32	FAZ-D32/3-RT	102314	1 / 28
35	FAZ-D35/3-RT	102315	1 / 28
40	FAZ-D40/3-RT	102316	1 / 28

Miniature Circuit Breakers FAZ-NA, FAZ-RT

Accessories:

Tripping signal switch for subsequent installation	Z-NHK
Shunt trip release	FAZ-XAA-NA
Busbar-System	Z-SV/UL-16/

Connection diagrams



Technical Data

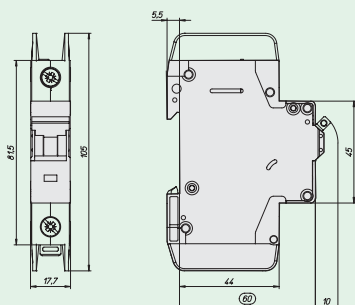
Electrical

Design according to	UL 489, CSA C22.2 No.5, IEC 60947-2
Rated voltage	
UL/CSA 0.5 - 25 A	277/480Y VAC
UL/CSA 32 - 40 A	240 VAC
UL/CSA (per pole)	48 VDC
IEC	240/415 VAC
Rated frequency	50/60 Hz
Rated breaking capacity	
UL/CSA	10 kA
IEC	15 kA
Characteristic	C, D
Endurance	≥ 20,000 operations
Line voltage connection	optional suitable for reverse feed

Mechanical

Frame size	45 mm
Device height	105 mm
Device width	17.7 mm per pole
Mounting	quick fastening with 2 lock-in positions on IEC/EN 60715
Upper and lower terminals	open mouth/lift terminals
Terminal capacity	1 Wire AWG 18-6 2 Wires AWG 18-10
Terminal fastening torque	AWG 18-21: 21 lb-in AWG 10-8: 25 lb-in AWG 6: 36 lb-in
Mounting	independent of position
Calibration temperature	
UL 489, CSA C22.2 No.5	40°C
IEC 60947-2	30°C

Dimensions (mm)



Power loss at I_n

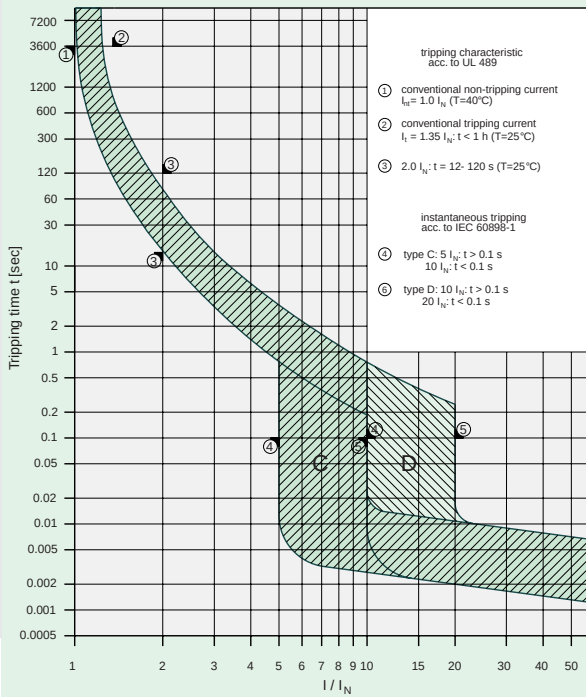
Characteristic C

	1p	2p	3p
I_n [A]	P [W]	P [W]	P [W]
0.5	1.6	3.2	4.7
1	1.1	2.2	3.4
1.5	1.3	2.6	3.9
2	1.4	2.8	4.3
3	1.2	2.4	3.6
4	1.4	2.9	4.3
5	1.9	3.7	5.6
6	1.2	2.3	3.5
7	1.4	2.8	4.3
8	1.4	2.8	4.2
10	1.8	3.6	5.3
13	2.4	4.7	7.1
15	1.9	3.8	5.6
16	2.1	4.3	6.4
20	2.9	5.8	8.7
25	3.1	6.2	9.3
30	3.0	6.0	9.0
32	3.4	6.8	10.2
35	3.7	7.4	11.0
40	4.0	8.1	12.1

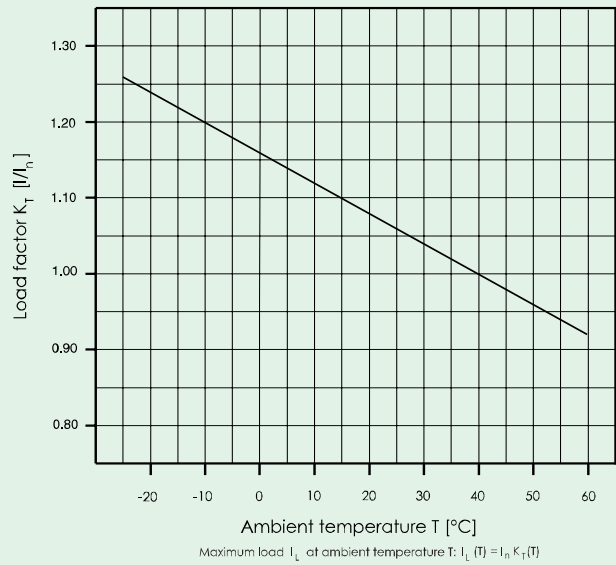
Characteristic D

	1p	2p	3p
I_n [A]	P [W]	P [W]	P [W]
0.5	1.6	3.2	4.8
1	0.8	1.5	2.3
1.5	1.0	2.1	3.1
2	1.0	2.1	3.1
3	1.2	2.4	3.6
4	1.4	2.9	4.3
5	1.5	2.9	4.4
6	1.2	2.3	3.5
7	1.4	2.8	4.3
8	1.2	2.4	3.7
10	1.5	3.0	4.5
13	2.0	4.1	6.1
15	1.5	3.1	4.6
16	1.7	3.5	5.2
20	1.8	3.7	5.5
25	2.6	5.1	7.7
30	2.7	5.4	8.1
32	3.1	6.2	9.3
35	3.8	7.6	11.3
40	3.9	7.8	11.6

Tripping Characteristics

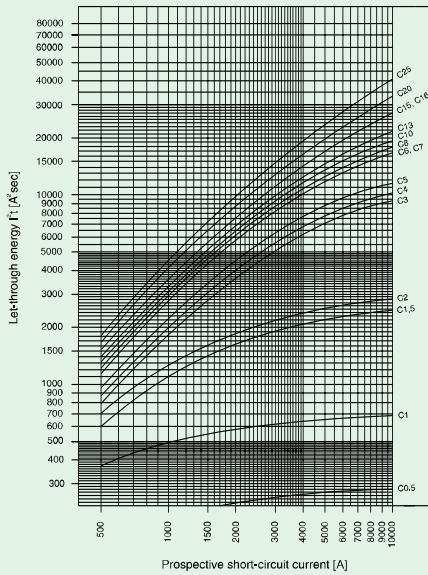


Influence of ambient temperature T on load carrying capacity

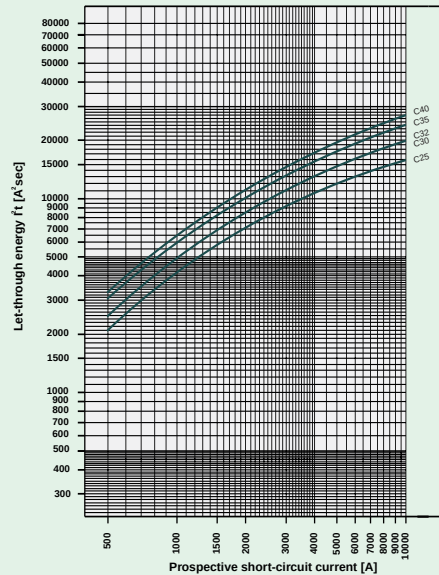


Let-through Energy

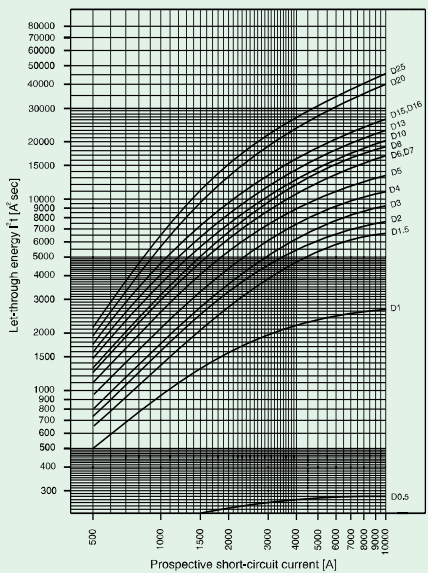
Characteristic C (0.5-20A), 277V



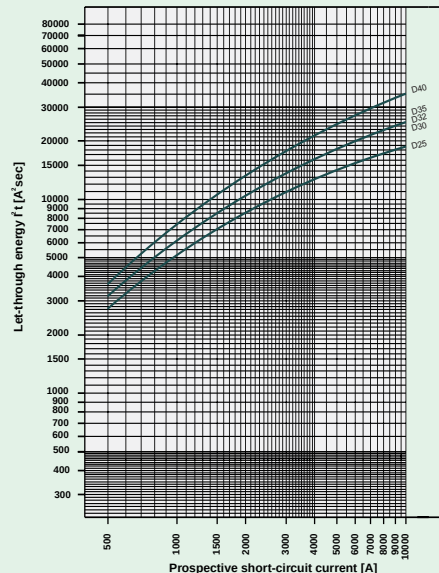
Characteristic C (25-40A), 240V

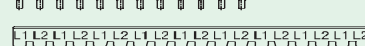
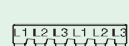
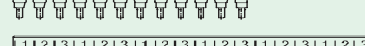


Characteristic D (0.5-20A), 277V



Characteristic D (25-40A), 240V

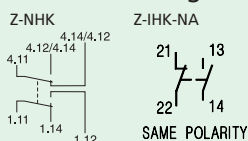


		Accessories			
		Type Designation	Article No.	Units per package	
	SG12002	Tripping signal switch	Z-NHK	248434	4 / 120
	SG02008	Auxiliary Switch	Z-IHK-NA	113895	2 / 240
	sg02208	Shunt trip release 110-415VAC	FAZ-XAA-NA110-415VAC	102036	1
		Shunt trip release 12-110VAC	FAZ-XAA-NA12-110VAC	102037	1
		Description	Type Designation	Article No.	Units per package
	Busbar block UL489 (Pin), Z-SV/UL-16/ for FAZ-NA, FAZ-RT				
	• Do not cut!  16 mm² • Rated current 80 A				
	1-phase, 6MU		Z-SV/UL-16/1P-1TE/6	104892	10 / 200
	1-phase, 12MU		Z-SV/UL-16/1P-1TE/12	104893	10 / 200
	1-phase, 18MU		Z-SV/UL-16/1P-1TE/18	104894	10 / 40
	2-phases, 6MU		Z-SV/UL-16/2P-2TE/6	104895	10 / 200
	2-phases, 12MU		Z-SV/UL-16/2P-2TE/12	104896	10 / 200
	2-phases, 18MU		Z-SV/UL-16/2P-2TE/18	104897	10 / 40
	3-phases, 6MU		Z-SV/UL-16/3P-3TE/6	104898	10 / 200
	3-phases, 12MU		Z-SV/UL-16/3P-3TE/12	104899	10 / 200
3-phases, 18MU		Z-SV/UL-16/3P-3TE/18	104900	10 / 40	
Devices to busbar		Pcs. of the devices	Type		
1-phase					
	x6		Z-SV/UL-16/1P-1TE/6		
	x12		Z-SV/UL-16/1P-1TE/12		
	x18		Z-SV/UL-16/1P-1TE/18		
2-phases					
	x3		Z-SV/UL-16/2P-2TE/6		
	x6		Z-SV/UL-16/2P-2TE/12		
	x9		Z-SV/UL-16/2P-2TE/18		
3-phases					
	x2		Z-SV/UL-16/3P-3TE/6		
	x4		Z-SV/UL-16/3P-3TE/12		
	x6		Z-SV/UL-16/3P-3TE/18		
Accessories					
		Description	Type Designation	Article No.	Units per package
	SG07506	Extension Terminal 35 mm² UL489, Z-EK/35/UL			
		2.5-35mm ² , AWG 14-2	Z-EK/35/UL	104901	3 / 180
	SG07706	Busbar Tag Shrouds UL489, ZV-BS-UL			
		for 3 pins	ZV-BS-UL	104904	10 / 600

Tripping Signal Switch Z-NHK, Z-IHK-NA

- Design according to IEC/EN 60947-5-1, IEC/EN 62019
- Can be mounted subsequently (screws)
- The specified minimum voltages are per contact
Take into account particularly in case of series connection!
- Contact function with relative movement (self-cleaning contacts)
- Contact material and design particularly suitable for extra low voltage
- **Z-NHK:** The function of one of the two change-over contacts can be switched from "auxiliary switch" to "tripping signal switch"
- **Z-IHK-NA:** will allow for FAZ-NA > 480Y/277 VAC rating
- Tripping signal contact transmits message of electric tripping, not mechanical switch-off
- Test key for contact function "electrical tripping"

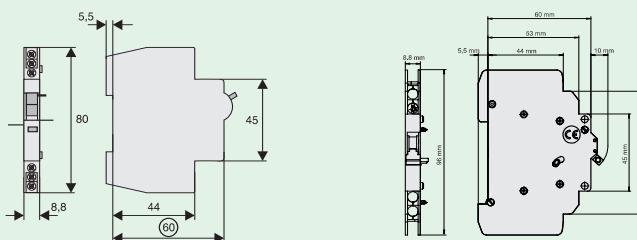
Connection diagram



Technical Data

	Z-NHK	Z-IHK-NA
Electrical		
Can be mounted from the left onto	FAZ-NA, FAZ-RT, FAZ-XAA-NA	
Contact function	2CO	1NO + 1NC
Rated voltage	230 V	250 V
Frequency	50/60 Hz	50/60 Hz
Rated current	2 A	6 A
Rated thermal current I_{th}	2 A	6 A
Utilisation category AC13		
Rated operational current I_e	3A/250V AC	3A/250V AC
Utilisation category AC15		
Rated operational current I_e	2A/250V AC	2A/250V AC
Utilisation category DC12		
Rated operational current I_e	0.5A/110V DC	0.5A/110V DC 0.25A/220V DC
Rated insulation voltage U_i	250 V AC	250 V AC
Minimum operational voltage per contact U_{min}	5 V DC	5 V DC
Minimum operational current I_{min}	10 mA DC	10 mA AC/DC
Rated peak withstand voltage U_{imp} (1.2/50μ)	2.5 kV	4 kV
Conditional short circuit current I_k with back-up fuse 6A	1 kA	1 kA
Max. back-up fuse, overload and short circuit	6 A gL	
Mechanical		
Tripping indicator "electrical tripping"	blue/white	-
Frame size	45 mm	45 mm
Device height	80 mm	80 mm
Device width	8.8 mm (0.5MU)	8.8 mm (0.5MU)
Mounting	onto switching dev.	
Degree of protection, built-in	IP40	IP40
Terminal protection	finger and hand touch safe according to BGV A3, ÖVE-EN 6	finger and hand touch safe according to BGV A3, ÖVE-EN 6
Terminals	lift terminals	lift terminals
Terminal capacity	20-14 AWG	0.5-2.5 mm ²
Terminal screws	M3 (Pozidrive Z0)	M3 (Pozidrive Z0)
Fastening torque of terminal screws	7 lb-in	max. 1.2 Nm

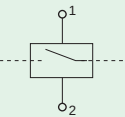
The voltage of the FAZ-... Circuit Breaker is limited to 300 V with this Auxiliary Switch installed.



Shunt Trip Release FAZ-XAA-NA

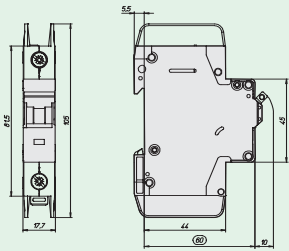
- Remote release for subsequent mounting onto FAZ-NA and FAZ-RT
- Module width 1MU
- Additional installation of standard auxiliary switch is possible
- Position indicator red - green

Connection diagram



Technical Data

	FAZ-XAA-NA12-110VAC	FAZ-XAA-NA110-415VAC
Electrical		
Can be mounted onto	FAZ-NA, FAZ-RT	FAZ-NA, FAZ-RT
Operational voltage range	12-110V AC 12-60V DC	110-415V AC 110-230V DC
Frequency	50/60 Hz	50/60 Hz
Possible standard auxiliary switch	Z-NHK	Z-NHK
Mechanical		
Frame size	45 mm	45 mm
Device height	105 mm	105 mm
Device width	17.5 mm (1MU)	17.5 mm (1MU)
Mounting	quick fastening with 2 lock-in positions on DIN rail EN 50022	
Degree of protection, built-in	IP40	IP40
Terminal protection	finger and hand touch safe according to BGV A3, ÖVE-EN 6	
Terminals	open mouthed/lift	open mouthed/lift
Terminal capacity 1 and 2 Wires	AWG 18-10	AWG 18-10

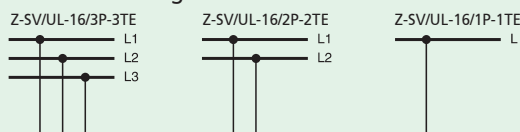


Busbar Block UL489 (Pin), Z-SV/UL-16/

for FAZ-NA, FAZ-RT

- Tested according to UL489
- Do not cut 
- Extension terminal 35 mm² Z-EK/35/UL for copper conductors
- For covering of not used pins use busbar tag shrouds ZV-BS-UL

Connection diagram



Technical Data

UL489

IEC/EN60947-2

Electrical

Rated operational voltage	480/277 VAC
	96 VDC
Rated frequency	50/60 Hz
Rated voltage	–
Overvoltage category	–
Rated impulse withstand voltage U_{imp}	–
Rated current	80 A
Rated conditional short-circuit current AC with 350 A gG	–
Short-circuit current	10 kA

	690 VAC
	III
	9.5 kV
	80 A
	15 kA
	–

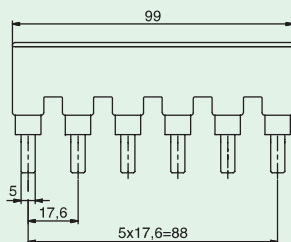
Mechanical

Busbar cross section	–
Flame class acc. to UL94	V0
Pollution degree	–
Comparative tracking index	–
Minimum clearance (intern/extern)	–
Minimum creepage distance (intern/extern)	–
Resistance to climatic conditions	–

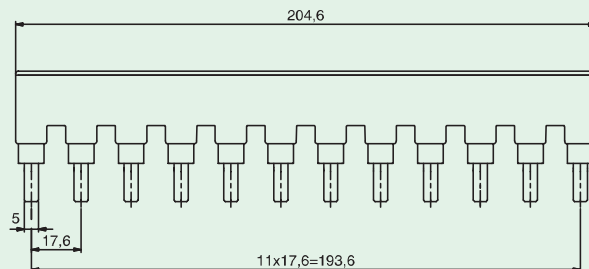
	16 mm ² Cu
	2
	CTI 600
	> 9.5 / 25.4 mm
	> 12.7 / 50.8 mm
	acc. to DIN/EN60068

Dimensions (mm)

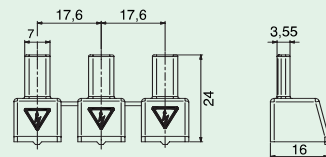
Z-SV/UL-16/TE/6



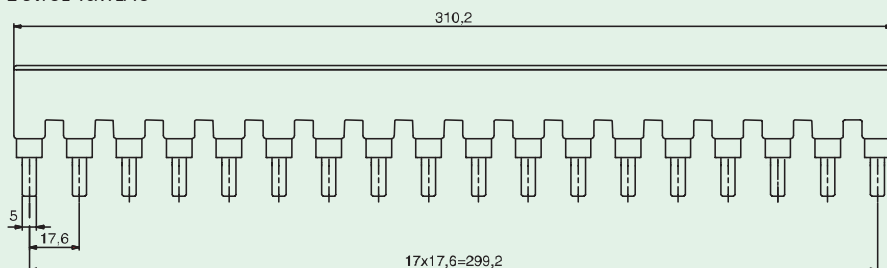
Z-SV/UL-16/TE/12



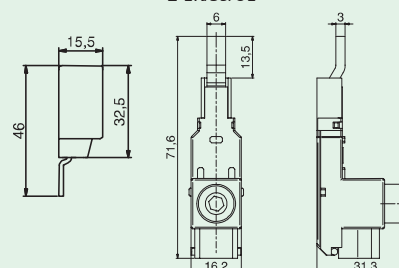
ZV-BS-UL



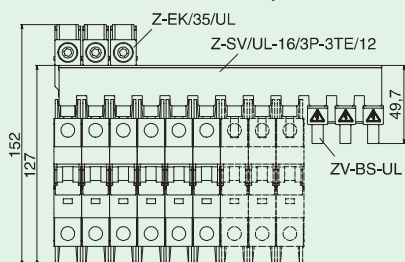
Z-SV/UL-16/TE/18



Z-EK/35/UL



Busbar Connection Example



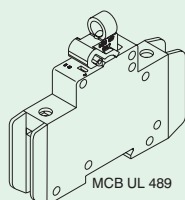
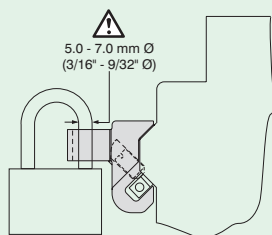
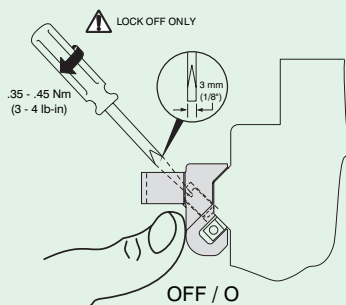
Z-EK/35/UL

	UL489	IEC/EN60947-2
	# 2-14 AWG 60/75°C Cu	2.5-35 mm ² Cu
	0.56 in	14 mm

tested acc. to		Tightening torque of terminal screws
UL486A	# 14 AWG	≥ 2.3 Nm
UL486B	# 8-12 AWG	≥ 2.8 Nm
UL486E	# 6-1 AWG	4 Nm

Lockout Attachment

IS/SPE-1TE



Device Market Current Rating in (A) @ 40° C	In (A) at higher Ambient Temperature							
	15° C	20° C	25° C	30° C	40° C	50° C	55° C	60° C
0.5	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.5
1.0	1.1	1.1	1.1	1.0	1.0	1.0	0.9	0.9
1.5	1.7	1.6	1.6	1.6	1.5	1.4	1.4	1.4
2.0	2.2	2.2	2.1	2.1	2.0	1.9	1.9	1.8
3.0	3.3	3.2	3.2	3.1	3.0	2.9	2.9	2.8
4.0	4.4	4.3	4.2	4.2	4.0	3.8	3.8	3.7
5.0	5.5	5.4	5.3	5.2	5.0	4.8	4.7	4.6
6.0	6.6	6.5	6.4	6.2	6.0	5.8	5.6	5.5
7.0	7.7	7.6	7.4	7.3	7.0	6.7	6.6	6.4
8.0	8.8	8.6	8.5	8.3	8.0	7.7	7.5	7.4
10.0	11.0	10.8	10.6	10.4	10.0	9.6	9.4	9.2
13.0	14.3	14.0	13.8	13.5	13.0	12.5	12.5	12.0
15.0	16.5	16.2	15.9	15.6	15.0	14.4	14.1	13.8
16.0	17.6	17.3	17.0	16.6	16.0	15.4	15.0	14.7
20.0	22.0	21.6	21.2	20.8	20.0	19.2	18.8	18.4
25.0	27.5	27.0	26.5	26.0	25.0	24.0	23.3	23.0
30.0	33.0	32.4	31.8	31.2	30.0	28.8	28.2	27.6
32.0	35.2	34.6	33.9	33.3	32.0	30.7	30.1	29.4
40.0	44.0	43.2	42.4	41.6	40.0	38.4	37.6	36.8

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Subject to alterations
Printed in Austria (09/08)
Layout: SRA
Print: Druckerei Rabl, Schrems
W0207+0075-7577GB
Article No. 104825



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