

# FILTERKREISDROSSELN DETUNED REACTORS



# Filter Reactors

## MATRIX SERIES

In today's industry, power and frequency converters are being abundantly used on the mains. This causes harmonic oscillations, which elevates losses, especially inside reactive power compensation capacitors.

Using MATRIX detuned reactors reduces the risk of resonant overcurrent to a minimum and offers adequate protection of capacitors used, as well as an improvement of voltage quality.



### REACTOR FOR PFC HARMONIC FILTERING

- Iron core. High quality materials
- Air gaps – multiple gaps. Design optimised to reduce total losses, low noises
- Terminal – Copper bar connection. Small mechanical size
- Complete with over temperature, bi-metal 145°C, normally closed thermostat

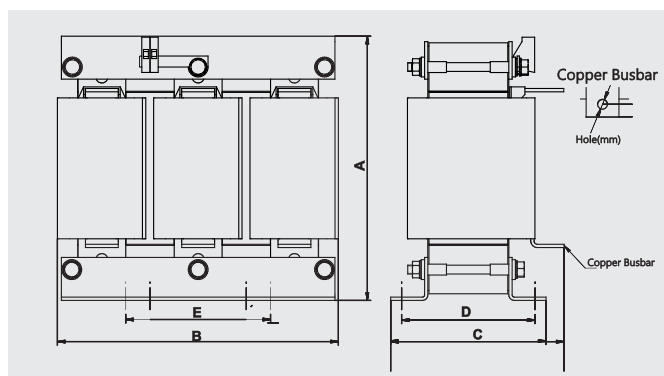
### Technical specifications

Standards	IEC60289, IEC60076 EN61558-2-20, CE
Design	Ironcore multiple airgap, low loss core
Tolerance, Inductance	-3/+3% 3-phase average
Linearity/%	1,75 x In 95% inductance
Insulation level	3 kVac
Insulation temperature class	Class H - 180 °C
Cooling	Natural cooling

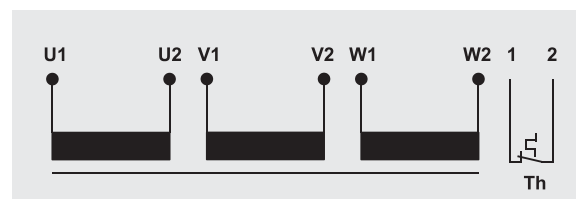
Ambient temperature	- 20 ... +60 °C T60
Protection class	IP00
Installation	Screw fastening
Color	Light brown or black
Noise level	Max. 50 dB with rated harmonics currents at 1 m distance

Optional	<ul style="list-style-type: none"> <li>• Temperature switch 145 °C + -5%, 250 Vac (&lt;6,3A)..500 Vac (&lt;2A)</li> <li>• Stranded wire outputs (flexible cable 110 °C)</li> <li>• Lateral mounting</li> </ul>
----------	--

### Drawing & Dimension



### Connection diagram



### Terminals

Type	Terminals	Clamp size	Tightening torque / Nm
10-25	Busbar/Blocks/ Cable Lugs	M6	10
30-50	Busbar	M8	10
60-100	Busbar	M10	10/16

Capacitor 230V Qc/V	Matrix Series Ordering Code	Ith ( A )	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	Holes (ømm)	Pw ( W )	Terminal Type	kg (-5/ +10%)
P = 7% - 189Hz, System 3 Phase 200/210Vac 50Hz											
10	AFR-0307008V200	29.6	205	210	115	75	116	10	45	Blocks/ Cable Lugs	9
15	AFR-0307013V200	44.4	205	235	135	82	116	10	65	Blocks/ Cable Lugs	11
20	AFR-0307017V200	59.2	220	240	145	87	116	10	70	Busbar	15
25	AFR-0307020V200	74.0	220	240	150	96	136	10	80	Busbar	17
30	AFR-0307025V200	88.8	220	240	155	100	136	10	90	Busbar	20
40	AFR-0307033V200	118.5	230	285	170	114	136	10	110	Busbar	24
50	AFR-0307040V200	148.1	265	295	170	122	170	10	125	Busbar	26
60	AFR-0307049V200	177.7	265	352	245	122	170	10	155	Busbar	37
75	AFR-0307061V200	221.0	280	352	245	168	300	16	170	Busbar	40
80	AFR-0307065V200	236.9	280	352	255	168	300	16	170	Busbar	42
90	AFR-0307073V200	266.4	280	355	265	180	300	16	180	Busbar	45
100	AFR-0307082V200	296.0	280	355	265	180	300	16	190	Busbar	45
Capacitor 440V Qc/V	Matrix Series Ordering Code	Ith ( A )	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	Holes (ømm)	Pw ( W )	Terminal Type	kg (-5/ +10%)
P = 7% - 189Hz, Systsem 3 Phase 400Vac 50Hz											
10	AFR-0307009V400	15.4	205	210	115	75	116	10	45	Blocks/ Cable Lugs	9
15	AFR-0307013V400	23.1	205	210	135	82	116	10	65	Blocks/ Cable Lugs	11
20	AFR-0307017V400	30.8	220	240	140	87	116	10	70	Busbar	15
25	AFR-0307022V400	38.5	220	240	150	96	136	10	80	Busbar	17
30	AFR-0307026V400	46.2	220	240	155	100	136	10	90	Busbar	20
40	AFR-0307035V400	61.7	220	240	170	114	136	10	110	Busbar	24
50	AFR-0307044V400	77.1	265	240	175	122	136	10	125	Busbar	26
60	AFR-0307053V400	92.5	265	240	170	122	136	10	155	Busbar	37
75	AFR-0307067V400	115.5	280	305	185	145	170	16	170	Busbar	40
80	AFR-0307071V400	123.3	280	305	185	145	170	16	170	Busbar	42
90	AFR-0307080V400	138.6	280	305	195	145	170	16	180	Busbar	45
100	AFR-0307089V400	154.1	280	305	200	145	170	16	190	Busbar	45
Capacitor 525V Qc/V	Matrix Series Ordering Code	Ith ( A )	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	Holes (ømm)	Pw ( W )	Terminal Type	kg (-5/ +10%)
P = 7% - 189Hz, System 3 Phase 400Vac 50Hz											
10	AFR-0307010V525	10.8	225	210	130	67	116	10	45	Blocks/ Cable Lugs	9
15	AFR-0307015V525	16.2	225	210	135	74	116	10	55	Blocks/ Cable Lugs	11
20	AFR-0307020V525	21.7	195	210	135	78	116	10	65	Busbar	11.5
25	AFR-0307025V525	25.9	195	210	140	88	116	10	70	Busbar	15
30	AFR-0307030V525	32.5	220	240	145	94	136	10	80	Busbar	17
40	AFR-0307040V525	43.3	220	240	150	97	136	10	90	Busbar	20
50	AFR-0307050V525	54.1	220	240	165	110	136	10	110	Busbar	23
60	AFR-0307060V525	65.0	220	240	170	124	136	10	125	Busbar	25
75	AFR-0307075V525	77.7	270	305	170	124	170	10	155	Busbar	36
80	AFR-0307080V525	86.6	270	305	175	130	170	10	170	Busbar	36
90	AFR-0307090V525	97.5	270	305	175	130	170	10	175	Busbar	41
100	AFR-0307100V525	108.3	270	305	175	130	170	10	175	Busbar	41
Capacitor 525V Qc/V	Matrix Series Ordering Code	Ith ( A )	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	Holes (ømm)	Pw ( W )	Terminal Type	kg (-5/ +10%)
P =14% -134Hz, System 3 Phase 400Vac 50Hz											
10	AFR-0314010V525	11.2	185	210	135	67	116	10	84	Blocks/ Cable Lugs	10
15	AFR-0314015V525	16.8	195	240	135	74	116	10	96	Blocks/ Cable Lugs	13.5
20	AFR-0314020V525	22.4	210	240	150	78	136	10	115	Busbar	16.5
25	AFR-0314025V525	25.9	210	240	165	88	136	10	122	Busbar	18
30	AFR-0314030V525	33.6	210	240	175	94	136	10	132	Busbar	21.5
40	AFR-0314040V525	44.8	245	240	185	97	136	10	165	Busbar	25
50	AFR-0314050V525	56.0	265	310	190	110	170	10	205	Busbar	33
60	AFR-0314060V525	67.2	265	310	195	124	170	10	205	Busbar	36.5
75	AFR-0314075V525	84.0	300	310	220	124	170	10	275	Busbar	45
80	AFR-0314080V525	89.6	300	310	228	130	170	10	285	Busbar	47
90	AFR-0314090V525	100.8	340	370	250	130	300	16	305	Busbar	52
100	AFR-0314100V525	112.0	340	370	250	130	300	16	320	Busbar	54

\* Dimension subject to change without prior notice

\* Other specification available upon request





**AUTHORISED DISTRIBUTOR**