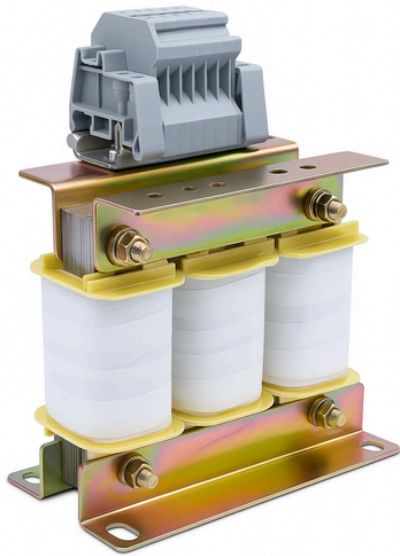



Features:

- Converts the rectangular PWM output voltage of motor drives into a smooth sinewave with low residual ripple.
- Elimination of premature motor damage caused by high DV/DT, over voltages, cable ringing, and motor overheating.
- Improves bearing life time because of bearing currents caused by circulating currents.

Applications:

- HVAC Applications.
- Pumps,Conveyors,Compressors,Elevators&Cranes.
- Medium voltage applications, deployed in front of the step-up transformer.
- Motor drive with long motor cables.
- Motor drive with multiple motors in parallel.

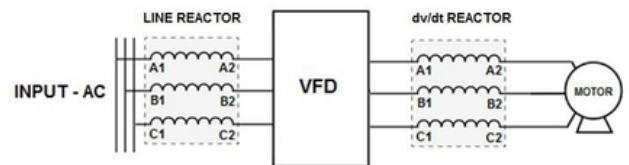
DATASHEET

Three phase DV/DT Reactor-TPQDR3914

These filters are designed to reduce or eliminate undesirable harmonic distortions, which can adversely affect equipment performance, efficiency, and lifespan. Harmonics in the electrical grid typically arise from non-linear loads such as variable speed drives, computers, and power converters, which introduce distortions in the supply voltage and current waveforms

Technical Specifications:

Maximum Continuous Operating Voltage	: 3x480 VAC
Operating Current	: 4A to 500A@40°C
Operating frequency	: 50/60 Hz
Switching frequency	: 2 to 16 kHz
Impedance	: 0.8% at 400VAC, 50Hz and rated current
High Potential test voltage	: 3000VAC for 2 sec
Overload Capability	: 1.5 times of rated current for 1 Min, every hour
Design Corresponding to	: EN 61558-2-20,EN 60076-6
Temperature range	: -25°C to +85°C
Climatic Category	: 25/85/21
Type of Cooling	: Natural Cooling AN
Protection Category	: IP 00
Insulation Class	: Class F

Type Circuit Diagram:


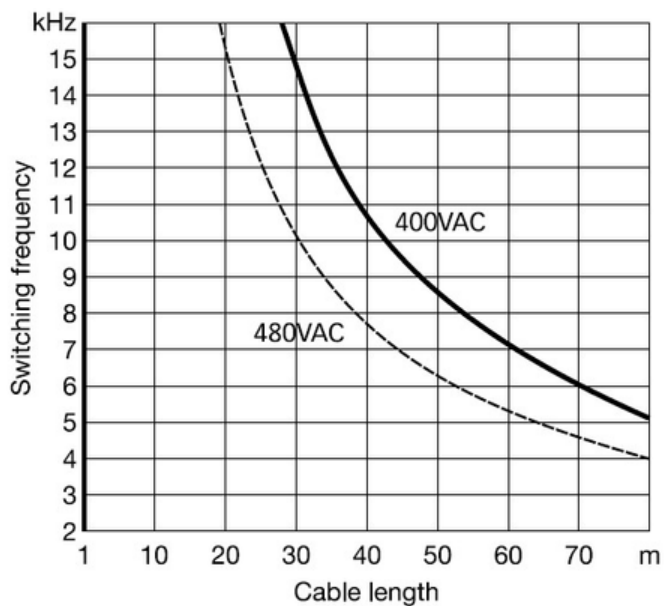
Ordering Information

Model Number	Part Number	Rated Current@ (A)	Typical motor power Rating (kW)	Nominal Inductance (mH)	Min. weight (Kg)
TPQDR3914-4-2	E103013-1	4	1.5	1.47	1.3
TPQDR3914-8-2	E103014-1	8	3	0.75	1.5
TPQDR3914-10-2	E103015-1	10	4	0.6	1.5
TPQDR3914-14-2	E103016-1	14	5.5	0.42	1.5
TPQDR3914-17-2	E103017-1	17	7.5	0.35	1.7
TPQDR3914-24-2	E103018-1	24	11	0.25	1.9
TPQDR3914-32-2	E103019-1	32	15	0.184	1.9
TPQDR3914-45-5	E103020-1	45	22	0.131	5.5
TPQDR3914-60-5	E103021-1	60	30	0.098	5.5
TPQDR3914-72-5	E103022-1	72	37	0.082	5.7
TPQDR3914-90-5	E103023-1	90	45	0.065	5.7
TPQDR3914-110-3	E103024-1	110	55	0.053	6.4
TPQDR3914-124-3	E103025-1	124	55	0.047	9
TPQDR3914-143-3	E103026-1	143	75	0.041	11
TPQDR3914-156-3	E103027-1	156	75	0.038	11
TPQDR3914-170-3	E103028-1	170	90	0.035	12
TPQDR3914-182-3	E103029-1	182	90	0.032	16
TPQDR3914-230-3	E103030-1	230	132	0.026	18
TPQDR3914-280-3	E103031-1	280	160	0.021	20
TPQDR3914-330-3	E103032-1	330	160	0.018	20
TPQDR3914-400-3	E103033-1	400	200	0.015	20
TPQDR3914-500-3	E103034-1	500	250	0.012	20

*General purpose four-pole (1500 r/min) AC induction motor rated 400 V/50 Hz.

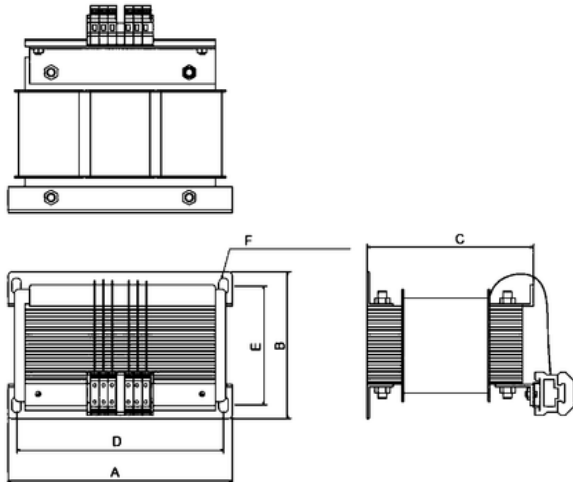
Reactor derating Curve

The longest allowed motor cable length mainly depends on the switching frequency and the drive output voltage. The correct value for each application can be seen in the derating curve below

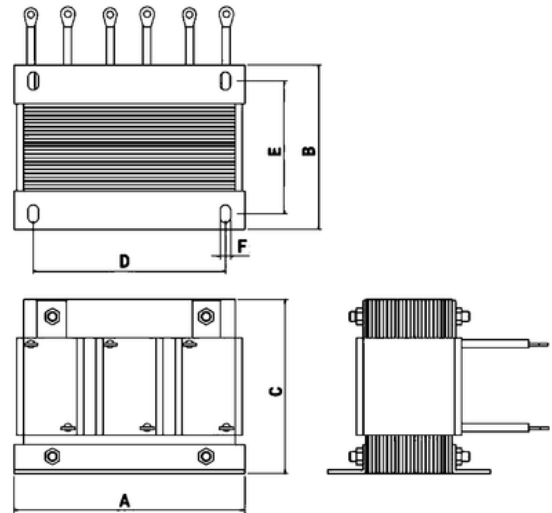


Mechanical Drawings

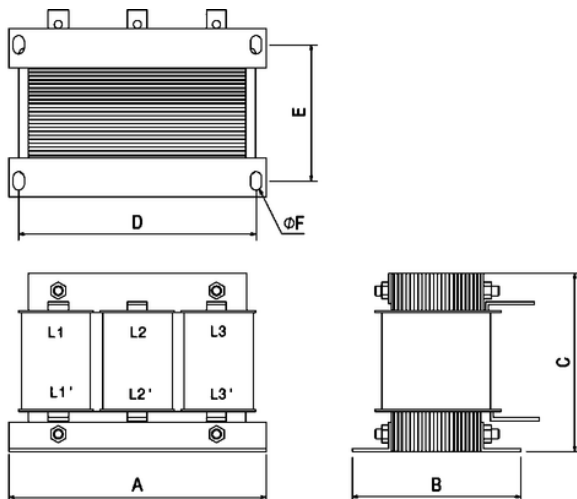
4A to 32A



45A to 90A

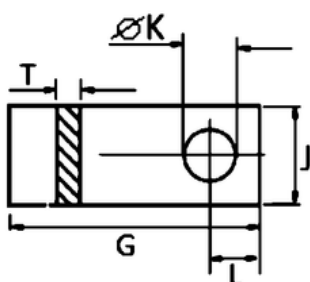


110A to 500A

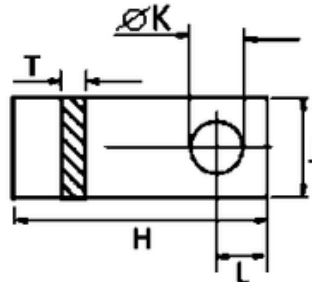


Busbar Drawings

Top Busbar



Bottom Busbar



Mechanical dimensions:

A±5	B±5	C±5	D±5	E±5	F±5	G±5	H	J	T	L	ØK
124	70	110	109	50	12x6	-	-	-	-	-	-
124	70	110	109	50	12x6	-	-	-	-	-	-
124	70	110	109	50	12x6	-	-	-	-	-	-
140	70	110	124	50	12x6	-	-	-	-	-	-
140	70	110	124	50	12x6	-	-	-	-	-	-
140	70	110	124	50	12x6	-	-	-	-	-	-
140	75	110	124	55	12x6	-	-	-	-	-	-
145	96	135	129	76	12x6	-	-	-	-	-	-
145	96	135	129	76	12x6	-	-	-	-	-	-
200	80	165	186	60	15x8.5	-	-	-	-	-	-
200	80	165	186	60	15x8.5	-	-	-	-	-	-
200	90	165	186	70	15x8.5	-	-	-	-	-	-
200	102	165	186	82	15x8.5	-	-	-	-	-	-
200	115	165	186	95	15x8.5	-	-	-	-	-	-
200	115	165	186	95	15x8.5	-	-	-	-	-	-
200	115	165	186	95	15x8.5	-	-	-	-	-	-
250	111	190	210	81	10x16	-	-	-	-	-	-
250	124	190	210	94	10x16	60	40	30	5	15	10
250	136	190	210	106	10x16	60	40	40	5	20	12
250	136	190	210	106	10x16	60	40	40	5	20	12
300	111	200	250	81	10x16	60	40	50	5	20	12
300	111	200	250	81	10x16	60	40	50	5	20	12

Note:
1) All dimensions are in mm. Tolerances are applicable .
2) Above dimensions are provided approximate and for reference only subject to change without notice. Kindly contact factory to confirm the specifications.

Termination Details

Connector				
Rated Current (A)	mm ²	Wire Range	Stripping Length (mm)	Tightening Torque (Nm)
4A to 10A	2.5	22 to 12AWG	8	0.4
14A & 17A	4	22 to 10AWG	8	0.5
24A & 32A	6	22 to 8AWG	9	0.8

Cable Lugs			
Rated Current (A)	mm ²	Hole Ø (mm)	Termination Lead Length (mm)
45A	16	8.2	100
60A to 124A	35	10.2	100
143A to 182A	50	10.2	100

Filter installation

In order to ensure sufficient air flow, keep a clearance between the device, wall and other components of minimum 150mm above, 100mm on the side and for floor mounted ones 150mm below the filter. Additional work to access the device, caused by not respected clearance distances, will be accounted separately. It must be ensured that the environmental temperature is kept below the maximum allowed temperature with appropriate thermal management (e.g. cabinet cooling).

