

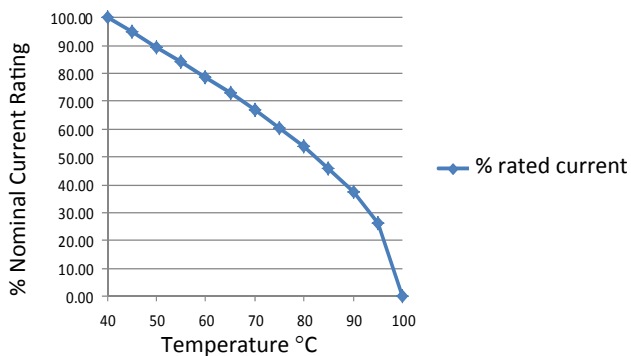
# RES90 Chassis Mounted Filter

## Very High Differential and Common Mode

Roxburgh's RES90 series is a multi-stage EMC filter with very high differential and common mode attenuation. Featuring excellent attenuation performance this series is suitable for noisy applications where increased filter performance is required.



Temperature Derating Curve for EMC Filters  
Rated at 40°C Ambient and 100°C Maximum



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### Features:

- Multi-stage
- Very high differential and common mode attenuation
- Excellent attenuation performance
- UL approved E191581
- For use from DC to 400Hz
- 1 Amp to 30 Amp

### Benefits:

- Compact size for rated current
- Fast-on, screw or wire terminations
- Quick and easy mounting
- Available from UK stock

### Application Examples:

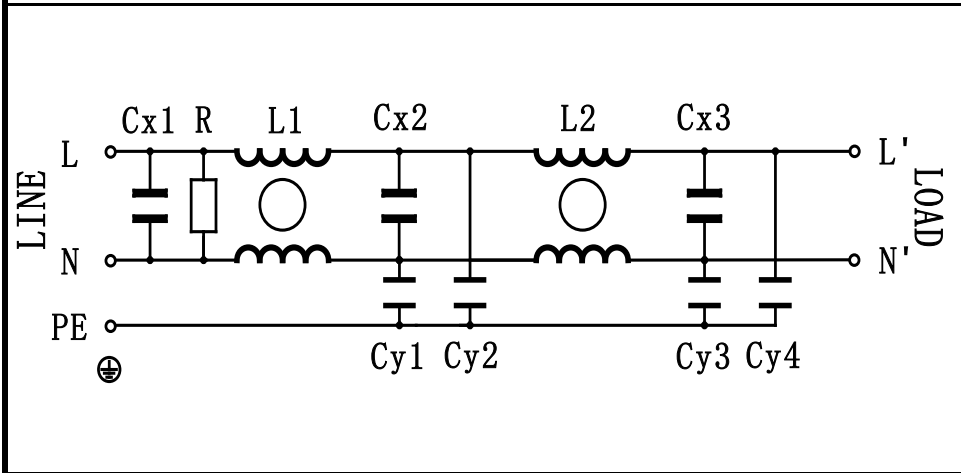
- Lighting
- Drives
- Electrical and electronic equipment
- Consumer goods
- Household equipment
- Building automation
- Machinery
- Electronic data/communication processing equipment
- Office automation

**Full technical specification on page 2**

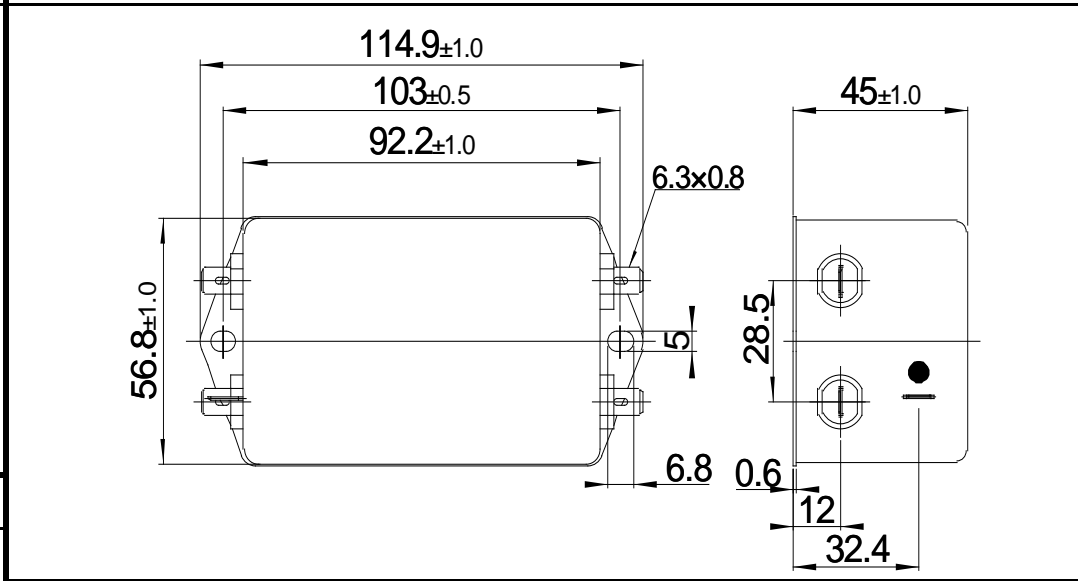
**Performance curves on page 3**

**Other options in this range on page 4**

**Circuit diagram:**



**Dimensions(mm):**



**Electrical parameters:**

Rated Voltage:	120/250VAC
Rated Current at an ambient temp:	16A@40°C
Operating Frequency:	50/60Hz
Climatic Class(IEC60068-1):	25/100/21
Operational Leakage current: (at 250VAC/50Hz and Total C +/-20%)	1.12mA max (RES90F16-M 0mA)
Operational Leakage current: (at 120VAC/60Hz and Total C +/-20%)	0.65mA max (RES90F16-M 0mA)
Test Voltage(100%)for 2 sec:	
L-N:	1100VDC/20mA
L/N-PE:	2250VDC/20mA

**Filter parameters:**

Total Inductance(L-L'/N-N'):	8mH +50%,-35%
Total Capacitance(L-N/L'-N'):	3uF +/-20%
Total Capacitance(L/N-PE) (RES90F16-M):	22nF +/-20% (0nF)
Total Resistance(L-N/L'-N'):	220KΩ +/-10%
Weight(Approximate):	490g

**Safety certification**      **Technical Specification**

UL	<input checked="" type="checkbox"/>	CSA	<input checked="" type="checkbox"/>	compiled by	Jay Zhang	2020-8-5
ENEC	<input checked="" type="checkbox"/>	CQC	<input type="checkbox"/>	reviewed by	Pallas Wang	2020-8-5
CE	<input checked="" type="checkbox"/>	VDE	<input type="checkbox"/>	approved by	Henry Huang	2020-8-5

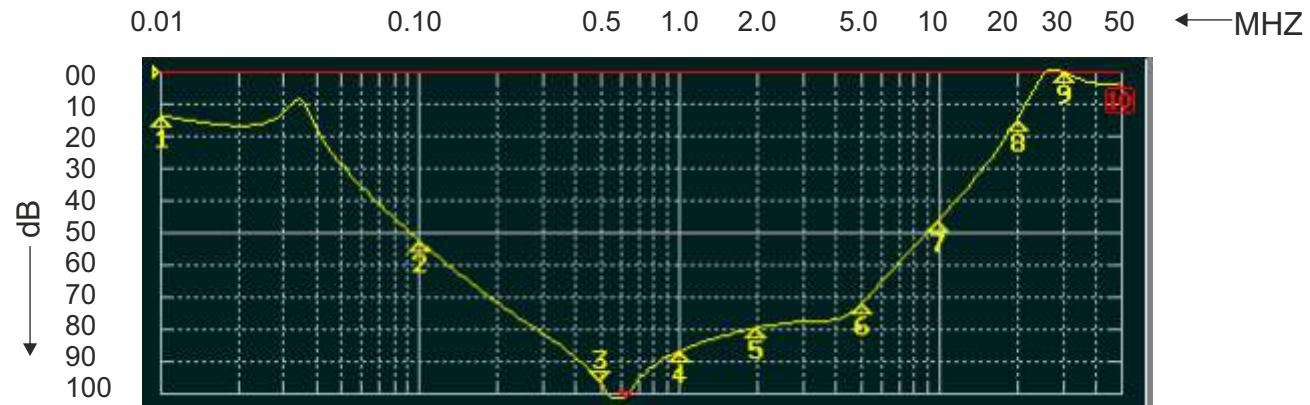
**ROXBURGH EMC**  +44 (0)1724 273200  
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www.dem-uk.com/roxburgh

Part **RES90F16**  
Number (Alternate RES90F16-M - no Y caps)

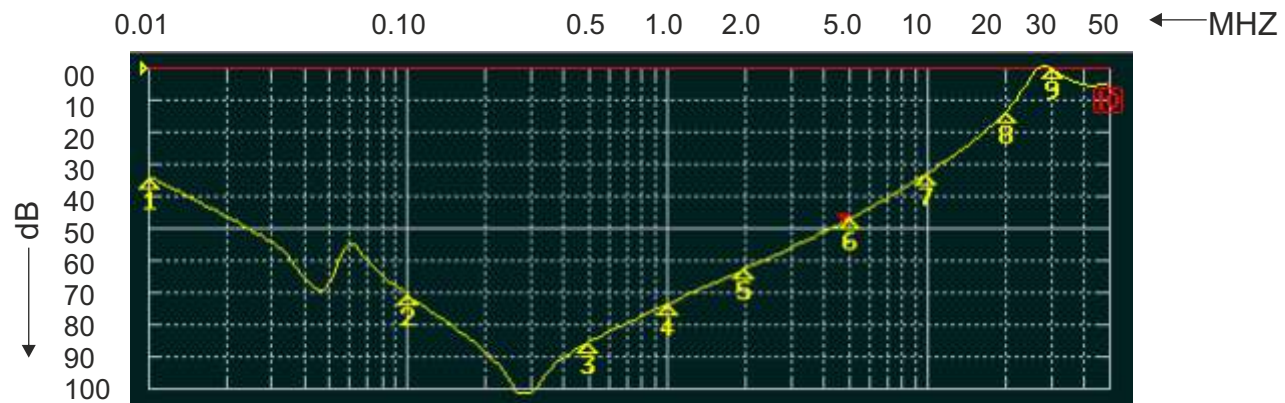
single-phase emc filter  
stage marker      V1.03

**ROXBURGH EMC**  
FILTER INSERTION LOSS CHARACTERISTICS  
CISPR 17 - 50 OHM METHOD

**RES90F16**



COMMON MODE






DIFFERENTIAL MODE



# RES90 Chassis Mounted Filter

## Very High Differential and Common Mode

### Options Available:

Part Number	Rated Current @40°C A	Leakage Current @ 230V/50Hz mA	Inductance $\Sigma L$ mH	Capacitance $\Sigma Cx$ uF	Capacitance $\Sigma Cy$ nF	Resistance $\Sigma R$ K $\Omega$	Connection Type		
									
RES90F01	1	0.5	40	0.66	6.4	680	F	W	
RES90F03	3	0.5	28	0.99	6.4	470	F	W	
RES90F06	6	0.67	16	1.41	8.6	330	F	W	
RES90F10	10	0.67	16	1.41	8.6	330	F	W	
RES90F16	16	1.02	08	3.00	22	220	F	W	
RES90F20	20	1.02	5.4	3.00	22	220	F		
RES90S20	20	1.02	5.4	3.00	22	220			S
RES90S30	30	1.02	3.0	3.00	22	220			S

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