



ペ ン ト ン
PENTON
 カ ラ ム ス ピ ー カ ー
COLUMN Loudspeaker

ペントンでは全部で5種類のカラムスピーカーを製造しています。全ての製品がアルミダイキャストの筐体で強靱なエンクロージャーでできています。

100V または 70V の定電圧伝送(ハイ・インピーダンス)に対応しています。ロー・インピーダンスで使いたい場合にはトランスを外してください。4段階の入力タップを用意しています。

MCS シリーズは、IP33 (直径 2.5 以上の外来固形物の浸入に対して保護されている。鉛直から 60 度以内の噴霧水によって有害な影響を受けない。) の耐塵/防水規格を備えており、屋外の音響設備として使用することができます。気温が 70℃から-25℃、湿度が 95%以下の環境で使うことができます。

MUS シリーズは、低域性能が優れているので音楽再生用の音響設備として使うことができます。

全てのカラムスピーカーの仕上げは RAL9016(ごく薄い灰色)になっています。

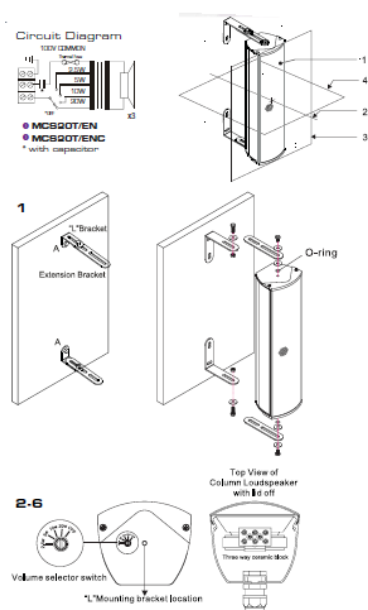
MCS シリーズ

製品型番と写真		MCS20T/EN MCS20T/ENC	MCS40T/EN MCS40T/ENC	MCS80T/EN MCS80T/ENC
				
定格入力		20	40	80
周波数特性 (Hz)		170 – 17,000	170 – 18,000	180 – 18,000
指向角度 (度) (1K/2K Hz)	水平	180/150	180/140	200/70
	垂直	110/60	60/30	140/40
耐塵/防水規格		IP33	IP33	IP33
寸法 (mm)	高さ	368	615	970
	幅	98	98	98
	奥行	90	90	90
質量 (kg)		2.5	3.8	6.0
取り付け金具		L 型ブラケットを同梱 PEN1066 自在ブラケットは別売		
備考		MCSXXT/ENC には直流電流をカットするコンデンサーが付いています		

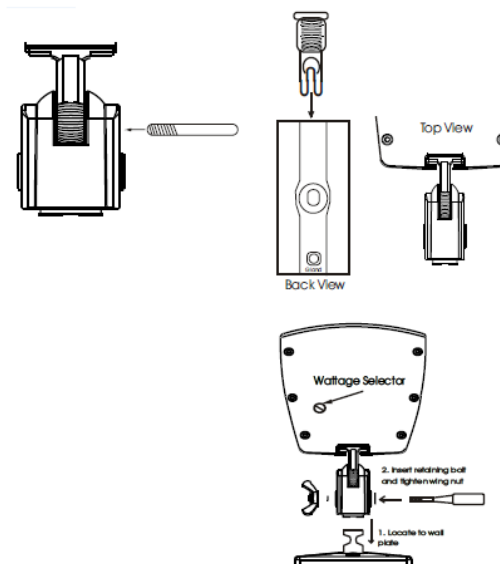
MUS シリーズ

製品型番と写真		MUS20/TC	MUS40/TC
			
定格入力		20	40
周波数特性 (Hz)		100 – 10,000	100 – 10,000
指向角度 (度) (1K/2K Hz)	水平	170/120	180/140
	垂直	80/40	40/30
寸法 (mm)	高さ	350	670
	幅	142	142
	奥行	164	164
質量 (kg)		4.7 ブラケット 0.56	8.2 ブラケット 0.56
取り付け金具		メタルダイキャスト製自在金具付き	

取り付け方法



MCS シリーズ



MUS シリーズ

詳細については添付したデータシートをご覧ください。

予告なく仕様変更をすることがあります。1309

METAL COLUMN LOUDSPEAKER

➤ **MCS20T/EN**

➤ **MCS20T/ENC**

EN54-24



TECHNICAL SPECIFICATIONS

EN54-24:2008

Certificate No: 0359-CPD-0165 TYPE B

ELECTRICAL

Rated power, Watts	20
Tappings 100 volt line, Watts	20/10/5/2.5
Transformer Impedance, Ohms 100V	500/1k/2k/4k
Tappings 70.7 volt line, Watts	10/5/2.5/1.25
Driver impedance, Ohms	2
Effective Frequency Range, Hz (BSEN60268-5)	170 - 17k
S.P.L. @ 4m, 1watt, dB, 1/3 Octave, 1KHz	67
S.P.L. @ 1m, 1watt, dB, Test Signal Bandwidth 100Hz-10kHz	92
S.P.L. @ 4m, Full power, dB, 1/3 Octave 1KHz	82
S.P.L. @ 1m, Full power, Test Signal Bandwidth 100Hz-10kHz	105
Dispersion at 1k/2k Hz, Degrees	180/150 (horizontal) 110/60 (vertical)

ENVIRONMENTAL

IP-Rating	33
Max/Min Amb Temp	70°/-25°C
Relative Humidity	≤95%

MECHANICAL

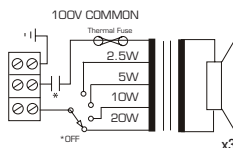
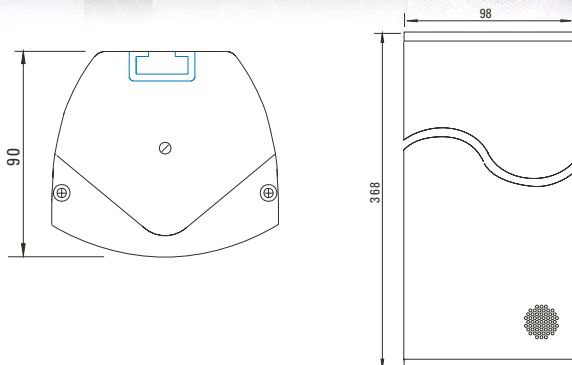
Dimensions, height, front and depth, mm	368 x 98 x 90
Net Weight, Kgs	2.5
Colour (Unless Specified)	RAL9016
Material	Aluminium
Mounting	Steel L bracket, optional swivel bracket PEN1066

➤ MCS20T/ENC is supplied with capacitor for DC line monitoring

MCS20T/EN

MCS20T/ENC

METAL COLUMN LOUDSPEAKERS



MCS20T/EN
MCS20T/ENC
*with capacitor

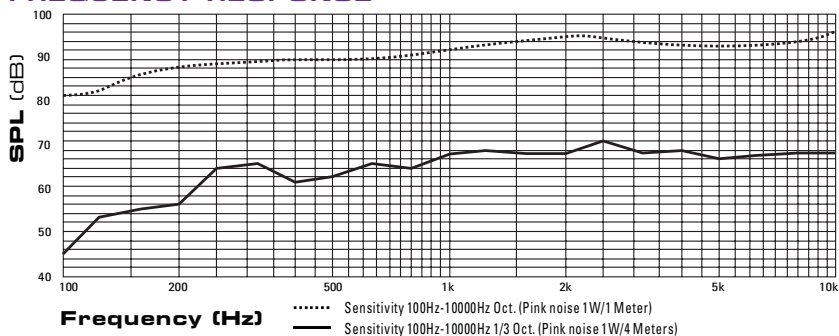
**WITH TRANSFORMER:
100V/70V LINE**

	WHITE WIRE PLUS TAPPING						BLACK
100V	2.5W	5W	10W	20W	OFF	COM	
70V	1.25W	2.5W	5W	10W	OFF	COM	
IMP(Ω)	4K	2K	1K	500K	∞		

DISPERSION ANGLES

		HORIZONTAL	VERTICAL
1 OCT.PINK NOISE	500 Hz	360°	200°
1 OCT.PINK NOISE	1K Hz	180°	110°
1 OCT.PINK NOISE	2K Hz	150°	60°
1 OCT.PINK NOISE	4K Hz	100°	30°

FREQUENCY RESPONSE



*Active Equalizer Applied: NO

The MCS20T/EN & MCS20T/ENC have been tested for 100 hours at a maximum power of 20W. Both units did not deviate by more than +/- 3dB. The frequency response and impedance curves remained constant throughout the test period. All results are in full compliance with the requirements of EN54-24



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RoHS



METAL COLUMN LOUDSPEAKER

➤ MCS40T/EN ➤ MCS40T/ENC

EN54-24



TECHNICAL SPECIFICATIONS

EN54-24:2008

Certificate No: 0359-CPD-0165 TYPE B

ELECTRICAL

Rated power, Watts	40
Tappings 100 volt line, Watts	40/20/10/5
Transformer Impedance, Ohms 100V	250/500/1k/2k
Tappings 70.7 volt line, Watts	20/10/5/2.5
Driver impedance, Ohms	8
Effective Frequency Range, Hz (BSEN60268-5)	170-18k
S.P.L. @ 4m, 1watt, dB, 1/3 Octave, 1KHz	68
S.P.L. @ 1m, 1watt, dB, Test Signal Bandwidth 100Hz-10kHz	92
S.P.L. @ 4m, Full power, dB, 1/3 Octave 1KHz	85
S.P.L. @ 1m, Full power, Test Signal Bandwidth 100Hz-10kHz	108
Dispersion at 1k/2k Hz, Degrees	180/140 (horizontal) 60/30 (vertical)

ENVIRONMENTAL

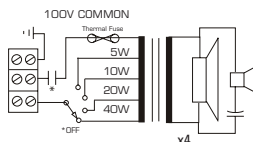
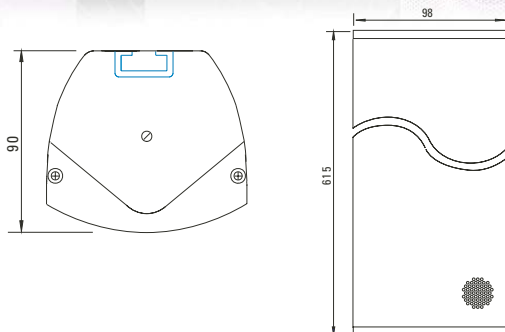
IP-Rating	33
Max/Min Amb Temp	70°/-25°C
Relative Humidity	≤95%

MECHANICAL

Dimensions, height, front and depth, mm	615 x 98 x 90
Net Weight, Kgs	3.8
Colour (Unless Specified)	RAL9016
Material	Aluminium
Mounting	Steel L bracket, optional swivel bracket PEN1066

➤ MCS40T/ENC is supplied with capacitor for DC line monitoring

➤ **MCS40T/EN** ➤ **MCS40T/ENC** METAL COLUMN LOUDSPEAKERS



MCS40T/EN
 MCS40T/ENC
 *with capacitor

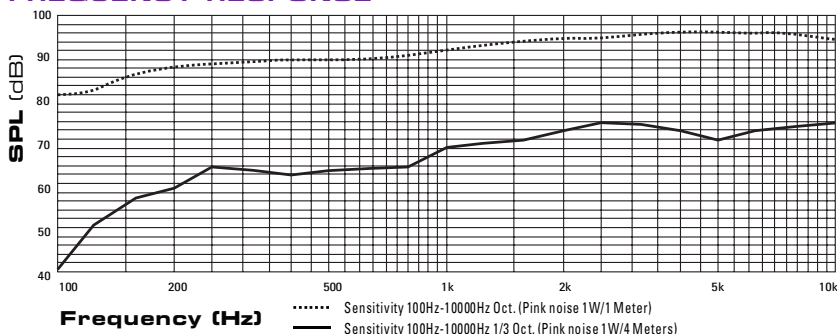
WITH TRANSFORMER: 100V/70V LINE

	WHITE WIRE PLUS TAPPING						BLACK
100V	5W	10W	20W	40W	OFF	COM	COM
70V	2.5W	5W	10W	20W	OFF	COM	COM
IMP (Ω)	2K	1K	500	250	∞		

DISPERSION ANGLES

		HORIZONTAL	VERTICAL
1 OCT.PINK NOISE	500 Hz	360°	90°
1 OCT.PINK NOISE	1K Hz	180°	60°
1 OCT.PINK NOISE	2K Hz	140°	30°
1 OCT.PINK NOISE	4K Hz	90°	40°

FREQUENCY RESPONSE



*Active Equalizer Applied: NO

The MCS40T/EN & MCS40T/ENC have been tested for 100 hours at a maximum power of 40W. Both units did not deviate by more than +/- 3dB. The frequency response and impedance curves remained constant throughout the test period. All results are in full compliance with the requirements of EN54-24



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RoHS



METAL COLUMN LOUDSPEAKER

➤ MCS80T/EN ➤ MCS80T/ENC

EN54-24



TECHNICAL SPECIFICATIONS

EN54-24:2008

Certificate No: 0359-CPD-0165 TYPE B

ELECTRICAL

Rated power, Watts	80
Tappings 100 volt line, Watts	80/40/20/10
Transformer Impedance, Ohms 100V	125/250/500/1k
Tappings 70.7 volt line, Watts	40/20/10/5
Driver impedance, Ohms	4
Effective Frequency Range, Hz (BSEN60268-5)	180 - 18k
S.P.L. @ 4m, 1watt, dB, 1/3 Octave, 1KHz	71
S.P.L. @ 1m, 1watt, dB, Test Signal Bandwidth 100Hz-10kHz	96
S.P.L. @ 4m, Full power, dB, 1/3 Octave 1KHz	91
S.P.L. @ 1m, Full power, Test Signal Bandwidth 100Hz-10kHz	115
Dispersion at 1k/2k Hz, Degrees	200/70 (horizontal) 140/40 (vertical)

ENVIRONMENTAL

IP-Rating	33
Max/Min Amb Temp	70°/-25°C
Relative Humidity	≤95%

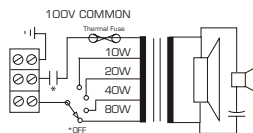
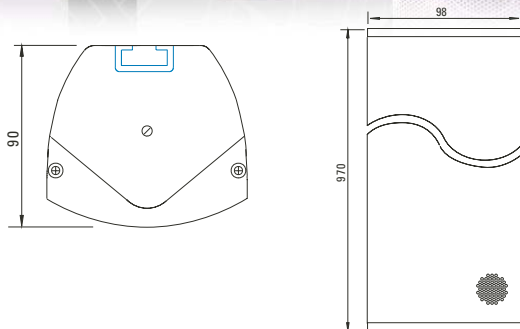
MECHANICAL

Dimensions, height, front and depth, mm	970 x 98 x 90
Net Weight, Kgs	6.0
Colour (Unless Specified)	RAL9016
Material	Aluminium
Mounting	Steel L bracket, optional swivel bracket PEN1066

➤ MCS80T/ENC is supplied with capacitor for DC line monitoring

MCS80T/EN MCS80T/ENC

METAL COLUMN LOUDSPEAKERS



MCS80T/EN
MCS80T/ENC
*with capacitor

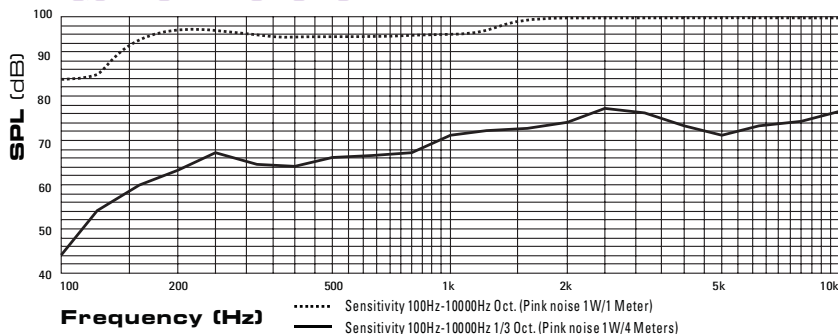
WITH TRANSFORMER: 100V/70V LINE

	WHITE WIRE PLUS TAPPING						BLACK
100V	10W	20W	40W	80W	OFF	COM	COM
70V	5W	10W	20W	40W	OFF	COM	COM
IMP (Ω)	1K	500	250	125	∞		

DISPERSION ANGLES

		HORIZONTAL	VERTICAL
1 OCT. PINK NOISE	500 Hz	360°	60°
1 OCT. PINK NOISE	1K Hz	200°	70°
1 OCT. PINK NOISE	2K Hz	140°	40°
1 OCT. PINK NOISE	4K Hz	90°	30°

FREQUENCY RESPONSE



*Active Equalizer Applied: NO

The MCS80T/EN & MCS80T/ENC have been tested for 100 hours at a maximum power of 80W. Both units did not deviate by more than +/- 3dB. The frequency response and impedance curves remained constant throughout the test period. All results are in full compliance with the requirements of EN54-24



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RoHS



HIGH PERFORMANCE METAL COLUMN Loudspeaker



➤ **MUS20/TC**

TECHNICAL SPECIFICATIONS

Rated power, Watts	20
Tappings 100 volt line, Watts	20 / 10 / 5 / 2.5 / 1.25
Transformer Impedance, Ohms, 100V	500/1k/2k/4k/8k
Tappings 70.7 volt line, Watts	10 / 5 / 2.5 / 1.25
Driver impedance, Ohms	8
Effective frequency range, Hz (BSEN60268-5)	100–10,000
S.P.L. @ 1m, 1 watt, dB, Test Signal Bandwidth 100Hz-10 kHz	94
S.P.L. @ Full power Octave Bandwidth, dB	107
Acoustic Power (dB-PWL@1watt) 1 k/2kHz, dB	90 / 88
Dispersion at 1k/2kHz, Degrees	170 / 120 (horizontal) 80 / 40 (vertical)
Directivity Axial Q factor, 1k/2kHz	5.2 / 10.1
Drive units, mm	3 x 105
Dimensions, front & depth, mm	350 x 142 x 164
Net weight, Kgs	4.70, Bracket: 0.56
Colour/Finish	White RAL9016
Material	Aluminium
Mounting	Die cast metal swivel Bracket

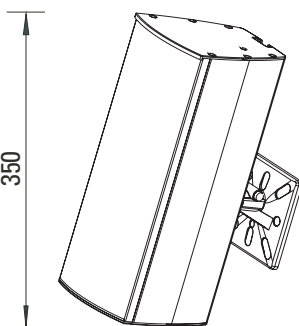
➤ BS5839 Part 8 voice alarm compliant

EASE, CATT, ULYSSES and Architectural specifications are supplied on the disc inserted at the back of this folder
Manufacturer reserves the right to alter specifications without notice – March 2007

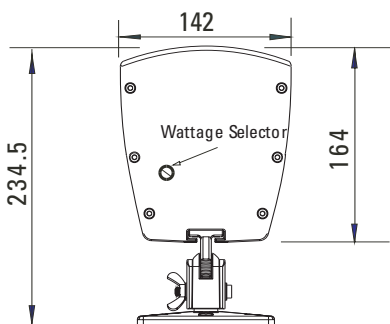
MUS20/TC

HIGH PERFORMANCE METAL COLUMN LOUDSPEAKER

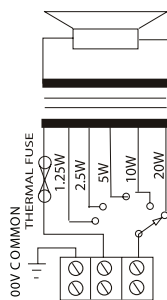
isogonal
view
unit: mm



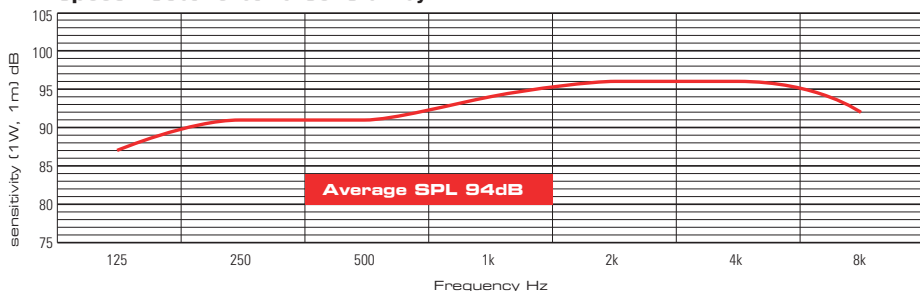
bottom
view
unit: mm



circuit
diagram
MUS20/TC



speech octave band sensitivity



Effective Frequency Range ● MUS20/TC 100Hz - 10,000Hz



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HIGH PERFORMANCE METAL COLUMN Loudspeaker



➤ MUS40/TC

TECHNICAL SPECIFICATIONS

Rated power, Watts	40
Tappings 100 volt line, Watts	40 / 20 / 10 / 5 / 2.5
Transformer Impedance, Ohms, 100V	250/500/1k/2k/4k
Tappings 70.7 volt line, Watts	20 / 10 / 5 / 2.5
Driver impedance, Ohms	8
Effective frequency range, Hz (BSEN60268-5)	100-10,000
S.P.L. @ 1m, 1 watt, dB, Test Signal Bandwidth 100Hz-10 kHz	95
S.P.L. @ Full power Octave Bandwidth, dB	112
Acoustic Power (dB-PWL@1 watt) 1 k/2kHz, dB	93 / 92
Dispersion at 1k/2kHz, Degrees	180 / 140 (horizontal) 40 / 30 (vertical)
Directivity Axial Q factor, 1 k/2kHz	5.2 / 8.5
Drive units, mm	6 x 105
Dimensions, front & depth, mm	670 x 142 x 164
Net weight, Kgs	8.20, Bracket: 0.56
Colour/Finish	White RAL9016
Material	Aluminium
Mounting	Die cast metal swivel Bracket

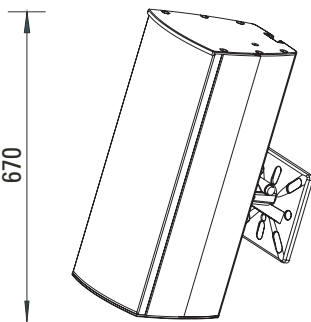
➤ BS5839 Part 8 voice alarm compliant

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 Manufacturer reserves the right to alter specifications without notice – March 2007

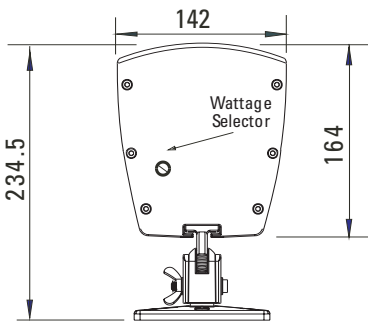
MUS40T/C

HIGH PERFORMANCE METAL COLUMN LOUDSPEAKER

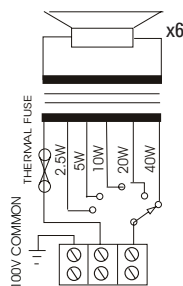
▼ isogonal
view
unit: mm



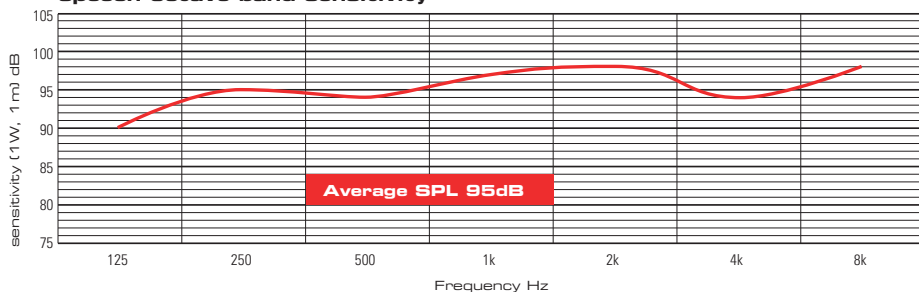
▼ bottom
view
unit: mm



▼ circuit
diagram
MUS40T/C



speech octave band sensitivity



Effective Frequency Range ● **MUS40T/C** 100Hz - 10,000Hz



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