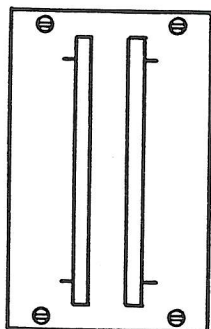


Type 177-210-2

Stereo

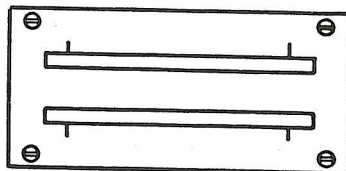
Is always delivered  
with vertical scale



Type 177-300-2

Stereo

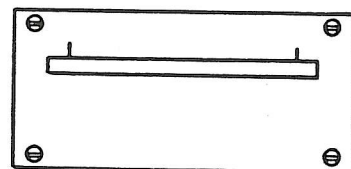
is always delivered  
with horizontal scale



Type 177-310-2

Mono

is always delivered  
with horizontal scale



Type	Input ref.level	Scale	Additional Gain	Notes
177-210-2	+ 6 dBu	Linear	+ 40 dB	Nordic Scale
177-210-2-D	+ 15 dBu	Linear	+ 40 dB	Swiss scale
177-210-2-E	+ 6 dBu	DIN	+ 20 dB	Standard DIN
177-210-2-F	+ 15 dBu	appr.DIN	+ 40 dB	Swiss scale
177-210-2-H	+ 15 dBu	appr.DIN	+ 20 dB	Swiss scale
177-300-2-B	+ 6 dBu	Linear	+ 40 dB	Nordic Scale
177-300-2-E	+ 6 dBu	DIN	+ 20 dB	Standard DIN
177-300-2-F	+ 15 dBu	appr.DIN	+ 40 dB	Swiss scale
177-300-2-G	+ 6 dBu	appr.DIN	+ 40 dB	Swiss scale
177-310-2-B	+ 6 dBu	Linear	+ 40 dB	Nordic Scale
177-310-2-E	+ 6 dBu	DIN	+ 20 dB	Standard DIN
177-310-2-F	+ 15 dBu	appr.DIN	+ 40 dB	Swiss scale

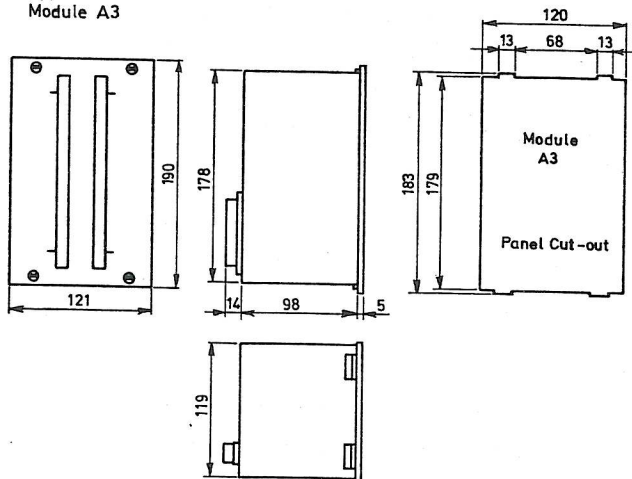
Supply voltage for amplifiers	:	22 to 32 volts dc															
Current consumption (amplifiers)	:	Approx. 33 mA per channel															
Supply voltage for lamps	:	5.8V rms															
Current consumption per lamp	:	Approx. 0.5 A per channel															
Lifetime for lamps at 5.8V supply voltage.	:	Approx. 2000 hours															
Type of lamp	:	ERG L63 (6.3V - 3.3W)															
Temperature range	:	-20 to +60°C (-4 to +120°F)															
Frequency range, 0.5dB points	:	20 Hz to 16 kHz															
High frequency roll-off	:	at 25 kHz greater than 7dB, at 40 kHz " " 20dB															
Input impedance within frequency range	:	20 kohm $\pm 15\%$ balanced floating															
Input voltage for 0dB reading (100% deflection)	:	1.55V rms sine (+6dBu). Note 1.															
Input overload level	:	24.5V rms sine (+30dBu)															
Indication errors	:	<table> <tr> <td></td><td>at reading <u>+5 to -10dB</u></td><td>at reading <u>below -10dB</u></td></tr> <tr> <td>1 kHz steady signal, 25°C</td><td><math>\pm 0.5</math>dB</td><td><math>\pm 1</math>dB</td></tr> <tr> <td>within full freq. range, 25°C</td><td>+0.5/-1dB</td><td>+0.5/-2dB</td></tr> <tr> <td>within full temp. range, 1 kHz</td><td><math>\pm 1</math>dB</td><td><math>\pm 2</math>dB</td></tr> <tr> <td>polarity shift of unsymmetrical wave</td><td><math>\pm 0.5</math>dB</td><td><math>\pm 1</math>dB</td></tr> </table>		at reading <u>+5 to -10dB</u>	at reading <u>below -10dB</u>	1 kHz steady signal, 25°C	$\pm 0.5$ dB	$\pm 1$ dB	within full freq. range, 25°C	+0.5/-1dB	+0.5/-2dB	within full temp. range, 1 kHz	$\pm 1$ dB	$\pm 2$ dB	polarity shift of unsymmetrical wave	$\pm 0.5$ dB	$\pm 1$ dB
	at reading <u>+5 to -10dB</u>	at reading <u>below -10dB</u>															
1 kHz steady signal, 25°C	$\pm 0.5$ dB	$\pm 1$ dB															
within full freq. range, 25°C	+0.5/-1dB	+0.5/-2dB															
within full temp. range, 1 kHz	$\pm 1$ dB	$\pm 2$ dB															
polarity shift of unsymmetrical wave	$\pm 0.5$ dB	$\pm 1$ dB															
Tracking between channels (not valid for 177-310, Mono)	:	Better than $\pm 0.5$ dB															
Integration time measured with 5 kHz tonebursts	:																
Conforming to DIN 45406 and IEC 268-10	:	10 m sec toneburst gives -1dB $\pm 0.5$ dB 5 m sec toneburst gives -2dB $\pm 1$ dB 3 m sec toneburst gives -4dB $\pm 1$ dB 0.4 m sec toneburst gives -15dB $\pm 4$ dB															
Fall-back time with linear scale	:	1.5 sec per 20dB															
Fall-back time with scale according to DIN 45406	:	1.5 sec for 0 to -20dB and															
Conforms with IRT-ELA KE/Mr 4.5.70	:	2.5 sec $\pm 0.1$ sec for 0 to -40dB															
Additional gain (all types have terminals for remote control of additional gain, but only the types 177-300 and 177-310 have push-button controls on the frontplate)	:	+40dB $\pm 0.5$ dB standard on linear scales +20dB $\pm 0.5$ dB for scales according to DIN															
Noise level, input reference	:	-105dB (input load 200 ohms)															
Cross-talk between A and B channel, at 15 kHz	:	better than 85 dB, unused input ballanced terminated with 2 x 500 ohms center grounded.															
Common mode rejection	:	better than 60 dB at 15 kHz.															

Note 1. Reference level +15dBu, or other reference levels on request.

### Light Spot Meter Systems

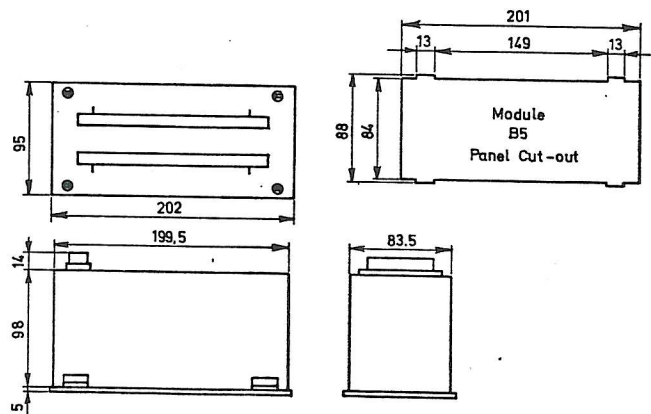
Mechanical zero (no current in the moving coil)	: The center of the light-spot (dark line) approx. 3 mm from the upper scale limit in the red area
Current sensitivity	: Approx. 2.3 mA per 100 mm deflection
Mechanical rise time	: Approx. 35 m sec
Mechanical over-shoot	: Less than 0.5dB at 0dB reading.
Total scale length	: 150 mm
Standard scales (see also Index of Types)	: +5 to -50dB DIN scale +9 to -36dB Nordic scale
Standard scale colour	: Dull black, if not otherwise specified by the customer
Connector	: Amphenol-Tuchel 2700 000
Weight	: Approx. 2.5 kg

Mechanical outline:  
Type 177-210  
Module A3



Panel thickness at  
the notches 3mm  $\begin{smallmatrix} +0.1 \\ -0 \end{smallmatrix}$

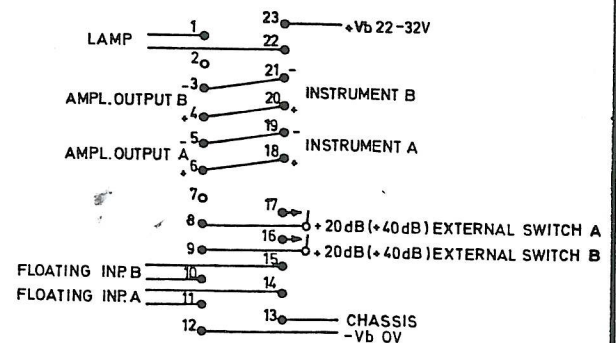
Type 177-300  
and 177-310  
Module B5



Mating  
Connector for all types: Amphenol - Tuchel 2701-000

The amplifiers are wired to the light spot meter system via the connector. This enables driving of an extra meter or a level recorder with a maximum serial resistance of 800 ohm at 22V and 1200 ohm at 24V supply voltage. Avoid grounding !

Connections between the terminals 3 and 21, 4 and 20, 5 and 19, 6 and 18 must be made externally (Tuchel connector 2700 000) in order to interconnect the amplifier outputs to the instruments.



Mono Instruments: Do only connect channel A