



**PM SPECIAL MEASURING SYSTEMS**  
A Phoenix Mecano Company



**When interruption is unacceptable**

## Measurement characteristics

Primary rated current $I_N$ (bipolar DC or AC)	Up to 4kA (see rating plate on MH)	
Overload, continuously	1.25pu	
Overload, non-saturating	3pu	(max. 5s)
Overload transient, measurable	6pu	(30ms)
Dynamic peak current	50kA	
Time to saturation for dynamic peak current >3pu	20...50ms (indicated by "output valid" contact)	
Rated output voltage (at 1pu)	2V	(see rating plate on EM)
Output signal clipping level (with 1k $\Omega$ load)	12.5V	(max. 14V unloaded)
Output load current	10mA	
Output ripple (rms)	1mV	(observed for 0...10kHz)
Accuracy for DC/AC (see notes 1 ... 4)	0.05%	(at 1.25pu)
Bandwidth, -3dB (see note 2)	10kHz	
Tracking error (see note 3)	15 $\mu$ s	
AC-amplitude error (see note 4)	$0.4 \cdot f^2$ (%)	(f in kHz)
Phase error (see note 3)	$5.4 \cdot f$ (°)	(f in kHz)
Step response rise/fall time (see note 5)	< 100 $\mu$ s	(to reach 90% level)
Step response settling time (see note 5)	< 1ms	(for error within 1%)
Output slewing rate	> 1V/ $\mu$ s	(feature of applied Op-Amp)

## Measurement characteristics (HB)

Primary rated current $I_N$ (bipolar DC or AC)	Accordinging rating plate	(bipolar DC or AC)
Overload, continuously	1.25pu	
Overload measurable	2pu	(max. crest value AC: 3pu)
Overload transient, non-saturating internally	6pu	(30ms)
Dynamic peak current	50kA	(max.)
Time to saturation for dynamic peak current >3pu	30...50ms (indicated by "output valid" contact)	
Output transfer ratio	200mA	(at $I_p=6000A$ )
Output signal clipping level (with 12 $\Omega$ load)	300mA	(max. 320mA with 0 $\Omega$ )
Output compliance voltage	3.6V	(peak)
Output ripple and noise (rms)	$\leq 0.1\%$	(of nominal output current)
DC-offset	$\leq 0.02\%$	(of nominal output current)
DC-accuracy (up to 2pu)	$\leq 0.1\%$	(of actual current)
Bandwidth, -3dB (see note 1)	DC...30kHz	
AC-amplitude error (see note 2)	$0.2 \cdot f^2$ (%)	(f in kHz)
Step response rise/fall time (see note 3)	< 10 $\mu$ s	(from 10% to 90% level)
Tracking delay time (see note 3)	< 5 $\mu$ s	
Step response settling time (see note 3)	< 20 $\mu$ s	(for error within 10%)
Step response settling time (see note 3)	< 1ms	(for error within 1%)
Output slewing rate	> 20A/ms	