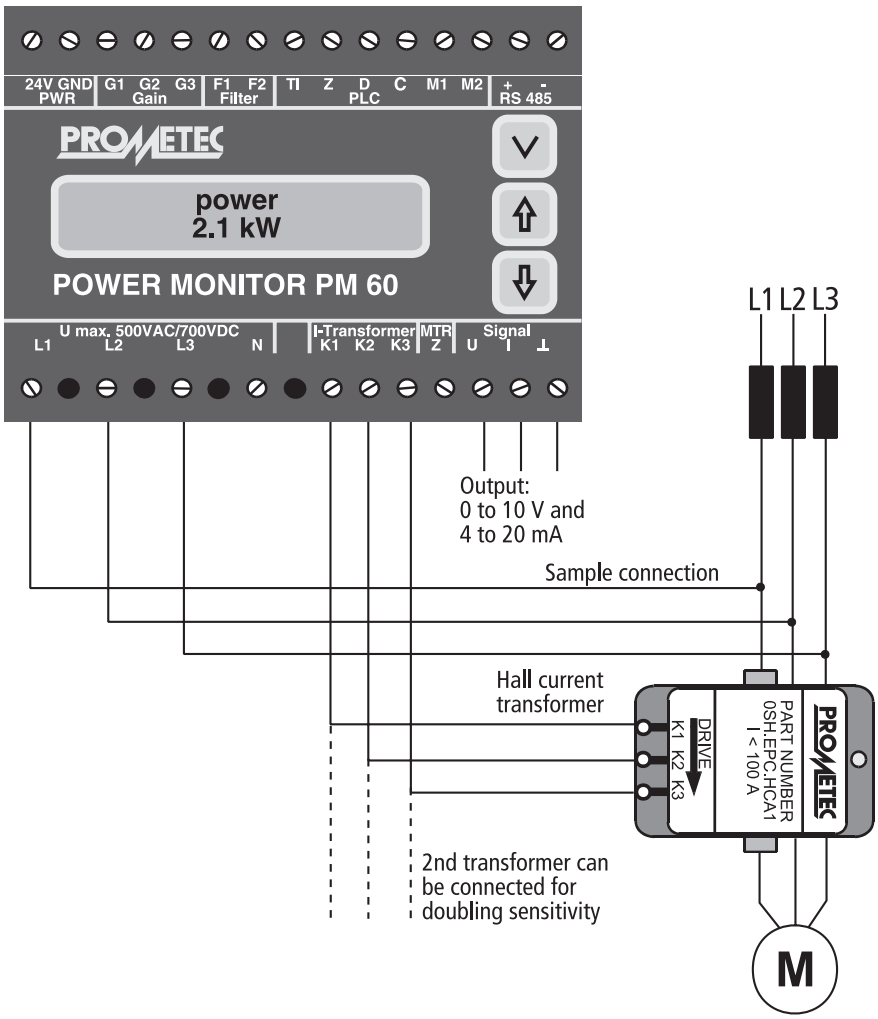
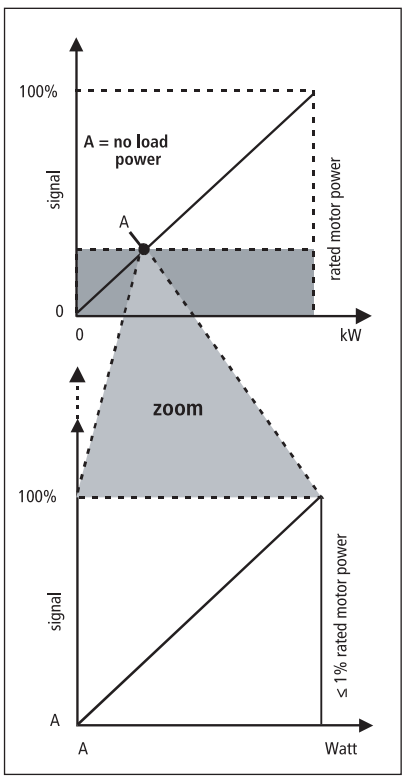
Power Sensor PS 60 *and* Power Monitor PM 60

for monitoring electrical drives

effective power $P = V \times I \times \cos \varphi \times \sqrt{3}$

- **programmable**
- **intelligent**
- **flexible**
- **simple**
- **retrofittable**
- **budget-priced**





- *Ultra-precision measurement and monitoring of the effective power and the mechanical torque output of **AC servo drives, three-phase drives** and **DC drives**.*
- *Automatic compensation of base load resp. no-load power output with subsequent very large amplification of the measurement signal (**zoom function**, see Figure left).*

The main areas of application are in tool machines, to detect overload, tool breakage, idle passes, etc., and for process optimisation purposes.

Other areas of application include textile machines, paper machines, worm conveyors, belt conveyors, handling equipment, robots, pumps, compressors, kneading machines, mixers, extruders, etc.

The PS 60 and PM 60 carry out highly accurate, direct measurement of the active power at the electric load by determining the current, voltage and phases, and the measurements are subsequently shown on the display as absolute results in kW. The PM 60 additionally represents a very reasonably priced monitoring solution for electric drives, units and machines, as the active-power sensor and monitoring device are combined in one unit. It is also possible to connect the PS 60 / PM 60 to a monitoring system, for more comprehensive monitoring covering several tools or machining cycles.

Characteristics PS 60 and PM 60:

- simple to fit or retrofit
- no sensor fitting in the machine
- ultra low cost solution
- simple to operate and programme, with natural language displays
- automatic control of measuring range, filter and phase
- low-pass filter for measurement signal, programmable, can be activated externally via inputs F1 and F2
- alterable measuring range, can be set automatically via Teach-in process (Teach-in (Ti) input or keyboard) and can be controlled externally via inputs G1 to G3
- compensation of base load resp. no-load power output via external activation of Zero input (Z) or via automatic identification of the first no-load motor power output, even when the smallest measuring range applies (zoom function)
- external deactivation, input D (disable)

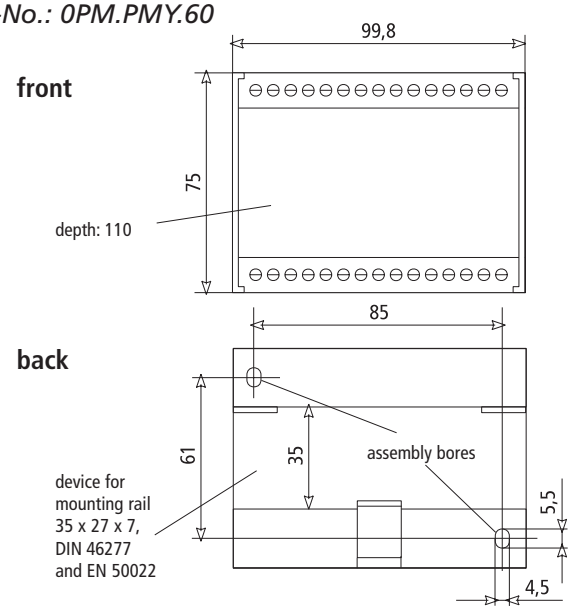
Only PM 60:

- 3 flexible Monitor limits (signal over, contact, signal under)
- external alarm cancellation input C (clear)
- 2 message outputs, M1 and M2 (message 1 and 2)

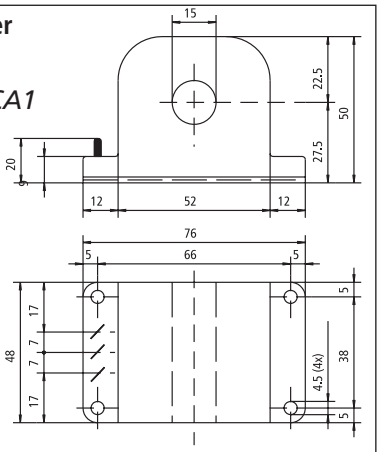
Technical data:

Supply:	24 V DC ± 20%, 700 mA
Output:	4 to 20 mA and 0 to 10 V
Motor data:	Voltage: 1 to 3 phases max. 500 V AC / 700 V DC Rated current: max. 100 A resp. 300 A
min. measur. range:	≥ 1% of rated motor power, half value for 2 transformers
Resolution:	≥ 0,005% of rated motor power
AC measuring freq.:	5 Hz to 10000 Hz
Low-pass filter:	1, 2, 5 and 20 Hz
Control inputs:	24 V DC, 10 mA, electrically isolated
Switch outputs:	24 V DC, I_{max}=100 mA
Temperature:	5 to 60°C
Enclosure:	IP 40, terminals IP 20

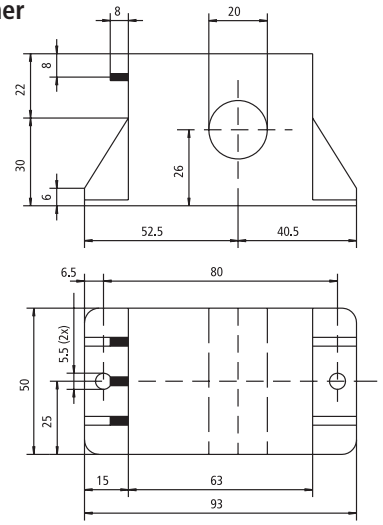
POWER SENSOR PS 60
Part-No.: 0SH.EPY.PS60 and
POWER MONITOR PM 60
Part-No.: 0PM.PMY.60



Hall current transformer
up to 100 A / 65 kW
Part-No.: 0SH.EPC.HCA1



Hall current transformer
up to 300 A / 200 kW
Part-No.:
0SH.EPC.HCA3



All dimensions are given in mm.

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