

## SECTION G — PHYSICS

## G05 CONTROLLING; REGULATING

## G05F SYSTEMS FOR REGULATING ELECTRIC OR MAGNETIC VARIABLES [4, 5]

Note(s) [4]

1. This subclass covers:
  - systems only;
  - use of hydraulic, pneumatic, mechanical, and electrical motors for varying electric characteristics of devices which restore the quantity regulated;
  - the combination of static converters and current or voltage regulators, if the essential characteristic resides in the combination.
2. This subclass does not cover elements per se, which are covered by the relevant subclasses.
 

<p><b>1/00 Automatic systems in which deviations of an electric quantity from one or more predetermined values are detected at the output of the system and fed back to a device within the system to restore the detected quantity to its predetermined value or values, i.e. retroactive systems [1, 2006.01]</b></p>	1/325	• • • •	with specific core structure, e.g. gap, aperture, slot, permanent magnet [4, 2006.01]
	1/33	• • • •	with plural windings through which current to be controlled is conducted [4, 2006.01]
	1/335	• • • •	on different cores [4, 2006.01]
1/02 • Regulating electric characteristics of arcs [1, 2, 2006.01]	1/34	• • • •	combined with discharge tubes or semiconductor devices [1, 2006.01]
1/04 • • by means of saturable magnetic devices [1, 2006.01]	1/38	• • • •	semiconductor devices only [1, 2006.01]
1/06 • • by means of discharge tubes [1, 2006.01]	1/40	• • • •	using discharge tubes or semiconductor devices as final control devices [1, 2006.01]
1/08 • • by means of semiconductor devices [1, 2006.01]	1/42	• • • •	discharge tubes only [1, 2006.01]
1/10 • Regulating voltage or current (G05F 1/02 takes precedence) [1, 2006.01]	1/44	• • • •	semiconductor devices only [1, 2006.01]
1/12 • • wherein the variable is actually regulated by the final control device is AC (G05F 1/625 takes precedence) [1, 4, 2006.01]	1/445	• • • •	being transistors in series with the load [3, 2006.01]
1/13 • • • using ferroresonant transformers as final control devices [4, 2006.01]	1/45	• • • •	being controlled rectifiers in series with the load [3, 2006.01]
1/14 • • • using tap transformers or tap changing inductors as final control devices [1, 4, 2006.01]	1/455	• • • •	with phase control [3, 2006.01]
	1/46	• •	wherein the variable actually regulated by the final control device is DC (G05F 1/625 takes precedence) [1, 4, 2006.01]
1/147 • • • • with motor driven tap switch [4, 2006.01]	1/52	• • •	using discharge tubes in series with the load as final control devices [1, 2006.01]
1/153 • • • • controlled by discharge tubes or semiconductor devices [4, 2006.01]	1/54	• • •	additionally controlled by the unregulated supply [1, 2006.01]
1/16 • • • • combined with discharge tubes or semiconductor devices [1, 2006.01]	1/56	• • •	using semiconductor devices in series with the load as final control devices [1, 2006.01]
1/20 • • • • semiconductor devices only [1, 2006.01]	1/563	• • •	including two stages of regulation, at least one of which is output level responsive, e.g. coarse and fine regulation [4, 2006.01]
1/22 • • • • combined with separate magnetic control devices having a controllable degree of saturation [1, 2006.01]	1/565	• • •	sensing a condition of the system or its load in addition to means responsive to deviations in the output of the system, e.g. current, voltage, power factor (G05F 1/563 takes precedence) [4, 2006.01]
1/24 • • • using bucking or boosting transformers as final control devices [1, 2006.01]	1/567	• • •	for temperature compensation [4, 2006.01]
1/247 • • • • with motor in control circuit [4, 2006.01]	1/569	• • •	for protection [4, 2006.01]
1/253 • • • • the transformers including plural windings in series between source and load (G05F 1/247 takes precedence) [4, 2006.01]	1/571	• • •	with overvoltage detector [4, 2006.01]
1/26 • • • • combined with discharge tubes or semiconductor devices [1, 2006.01]	1/573	• • •	with overcurrent detector [4, 2006.01]
1/30 • • • • semiconductor devices only [1, 2006.01]	1/575	• • •	characterised by the feedback circuit [4, 2006.01]
1/32 • • • using magnetic devices having a controllable degree of saturation as final control devices [1, 2006.01]	1/577	• • •	for plural loads [4, 2006.01]

- 1/585 • • • • • providing voltages of opposite polarities [4, 2006.01]
- 1/59 • • • • • including plural semiconductor devices as final control devices for a single load [4, 2006.01]
- 1/595 • • • • • semiconductor devices connected in series [4, 2006.01]
- 1/607 • • • using discharge tubes in parallel with the load as final control devices [3, 2006.01]
- 1/61 • • • • • including two stages of regulation, at least one of which is output level responsive [4, 2006.01]
- 1/613 • • • using semiconductor devices in parallel with the load as final control devices [3, 2006.01]
- 1/614 • • • • • including two stages of regulation, at least one of which is output level responsive [4, 2006.01]
- 1/618 • • • using semiconductor devices in series and in parallel with the load as final control devices [4, 2006.01]
- 1/62 • • • using bucking or boosting DC sources [1, 2006.01]
- 1/625 • • • wherein it is irrelevant whether the variable actually regulated is AC or DC [4, 2006.01]
- 1/63 • • • using variable impedances in series with the load as final control devices [4, 2006.01]
- 1/635 • • • • • being Hall effect devices, magnetoresistors or thermistors [4, 2006.01]
- 1/644 • • • • • being pressure-sensitive resistors [4, 2006.01]
- 1/648 • • • • • being plural resistors among which a selection is made [4, 2006.01]
- 1/652 • • • using variable impedances in parallel with the load as final control devices [4, 2006.01]
- 1/656 • • • using variable impedances in series and in parallel with the load as final control devices [4, 2006.01]
- 1/66 • Regulating electric power [1, 2006.01]
- 1/67 • • to the maximum power available from a generator, e.g. from solar cell [4, 2006.01]
- 1/70 • Regulating power factor; Regulating reactive current or power [3, 2006.01]
- 3/00 **Non-retroactive systems for regulating electric variables by using an uncontrolled element, or an uncontrolled combination of elements, such element or such combination having self-regulating properties [1, 2006.01]**
- 3/02 • Regulating voltage or current [1, 2006.01]
- 3/04 • • wherein the variable is AC [1, 2006.01]
- 3/06 • • • using combinations of saturated and unsaturated inductive devices, e.g. combined with resonant circuit [1, 2006.01]
- 3/08 • • wherein the variable is DC [1, 2006.01]
- 3/10 • • • using uncontrolled devices with non-linear characteristics [1, 4, 2006.01]
- 3/12 • • • • • being glow discharge tubes [1, 2006.01]
- 3/16 • • • • • being semiconductor devices [3, 2006.01]
- 3/18 • • • • • using Zener diodes [3, 2006.01]
- 3/20 • • • • • using diode-transistor combinations (G05F 3/18 takes precedence) [3, 2006.01]
- 3/22 • • • • • • wherein the transistors are of the bipolar type only (G05F 3/26, G05F 3/30 take precedence) [4, 2006.01]
- 3/24 • • • • • • wherein the transistors are of the field-effect type only (G05F 3/26, G05F 3/30 take precedence) [4, 2006.01]
- 3/26 • • • • • • Current mirrors [4, 2006.01]
- 3/28 • • • • • • • combined with a non-linear current amplifier [4, 2006.01]
- 3/30 • • • • • • Regulators using the difference between the base-emitter voltages of two bipolar transistors operating at different current densities (G05F 3/26 takes precedence) [4, 2006.01]
- 5/00 **Systems for regulating electric variables by detecting deviations in the electric input to the system and thereby controlling a device within the system to obtain a regulated output [1, 2006.01]**
- 5/02 • Phase controlled switching using electronic tubes or three or more terminal semiconductive devices [4, 2006.01]
- 5/04 • using a transformer or inductor as the final control device [4, 2006.01]
- 5/06 • • saturable [4, 2006.01]
- 5/08 • using a linearly acting final control device [4, 2006.01]
- 7/00 **Regulating magnetic variables [1, 5, 2006.01]**