

Magnetic proximity switches, limit switches and linear encoders

Featured Products

■ Tiny Magnetic Switch

High repeatability $\pm 0.05\mu\text{m}$

Protection level IP67
(under certain conditions: in-house standard)

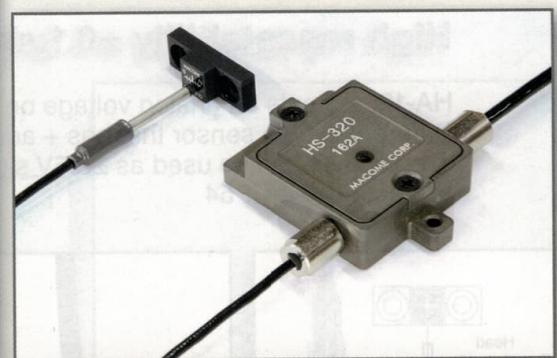
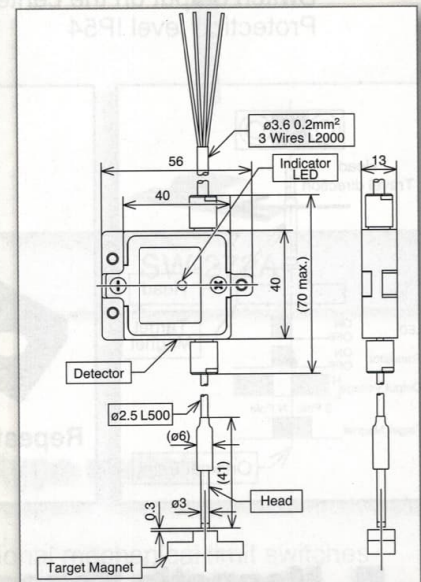
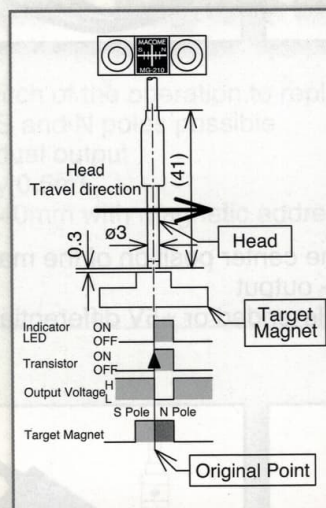
Cutting oil resistance

Detection with high accuracy possible
Repeatability $\pm 0.05\mu\text{m}$

Ideal magnetic switch to detect the original point of precision moving machinery such as cnc, metal working machines, semiconductor manufacturing systems, etc.

Can also be used as a magnetic proximity switch for narrow space

Protection level IP67
(Specially adjusted cables against cutting oil)

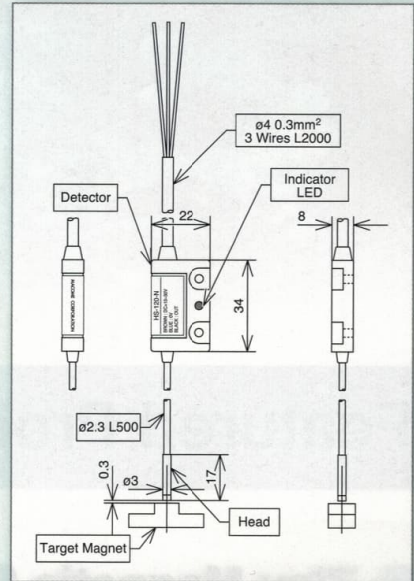


HS-320

Small Magnetic Switch / Magnetic Sensor

HS-120 and HA-120 are magnetic switch and sensor to detect the original point of precision moving machinery such as cnc, metal working machines, semiconductor manufacturing systems, etc.

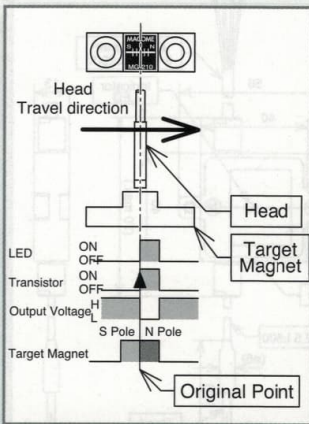
- Detection with high accuracy possible
- Detection without being affected by the dirt and the dust possible
- Detection head (ø3mm x 17mm) suitable for small space



Small Magnetic Switch

High repeatability $\pm 0.05\mu\text{m}$

- HS-120 can also be used as a magnetic proximity switch for narrow space
- Switch output on the center position of the magnet
- Protection level IP54

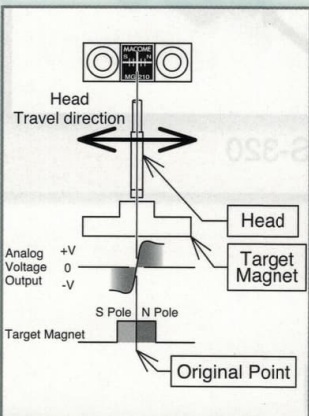


HS-120

Magnetic Sensor

High repeatability $\pm 0.1\mu\text{m}$

- HA-120 outputs an analog voltage on the center position of the magnet
- Differential type sensor that has + and - output
- The outputs can be used as $\pm 2.5\text{V}$ single-ended or $\pm 5\text{V}$ differential output
- Protection level IP54



HA-120

Magnetic Switch

Magnetic detection type switch

3-wire switch

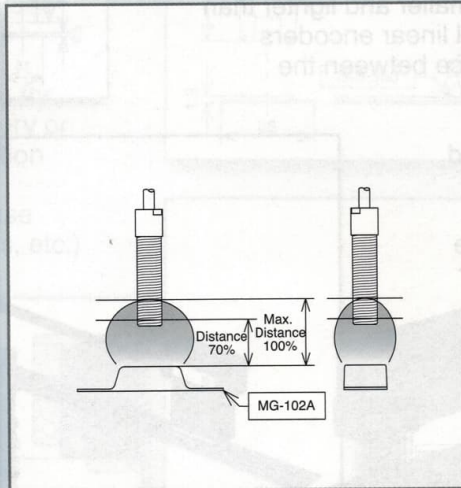
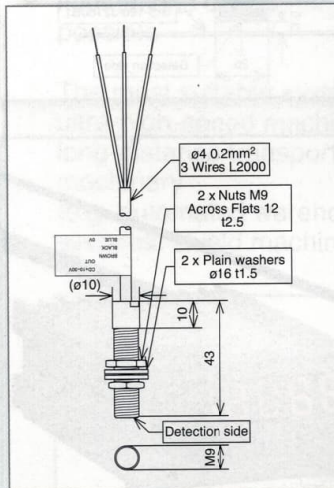
Very stable magnetic switch of the operation to replace conventional mechanical limit switches

Reaction to the magnetic field of the N or S pole

N pole only detection type, S pole only detection type available

17.5mm operating air gap (with magnet "MG-102A")

Protection level IP68



SW-272A

Magnetic Switch

Polarity identification, magnetic detection type switch

4-wire switch

Very stable magnetic switch of the operation to replace conventional mechanical limit switches

Polarity identification of S and N poles possible

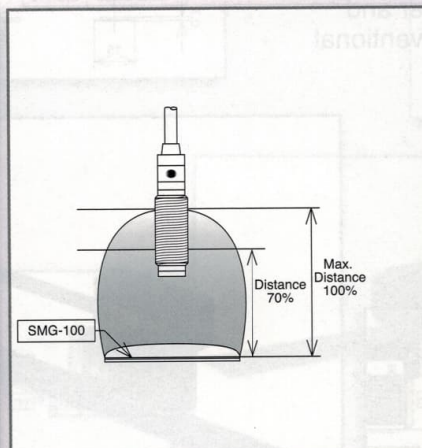
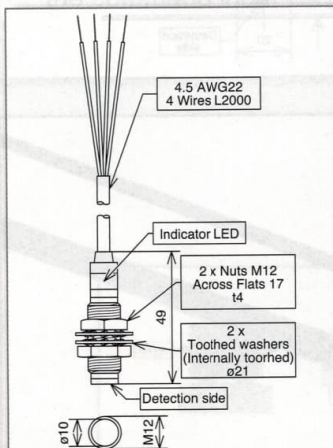
N pole and S pole individual output

High detection sensitivity 0.5mT

Wide operating air gap (40mm with magnetic address

mark "SMG-100")

Protection level IP67



DW-350

Linear Encoder SI-120PAC

Non-contact type magnetic incremental linear encoder

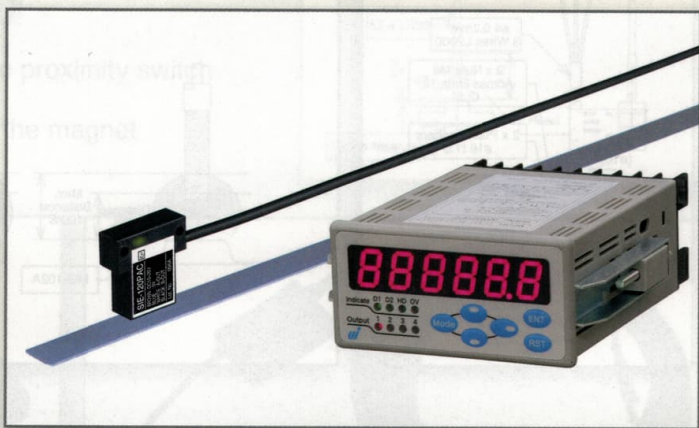
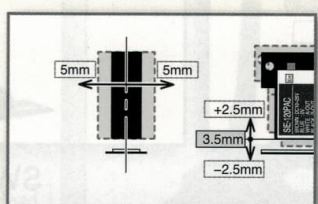
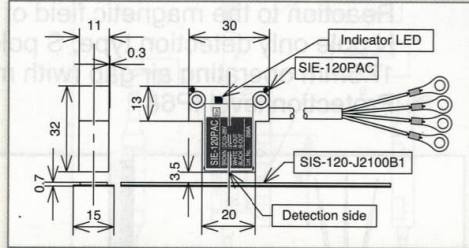
Little, lightweight, magnetic incremental linear encoder

Resolution 0.1mm

Detection head considerably smaller and lighter than detection heads of conventional linear encoders
Can be mounted in a small space between the equipment

3.5mm operating distance
detection between the scale and the head

Package product consists of the head, the scale and the counter



SI-120PAC

Linear Encoder SI-140 system

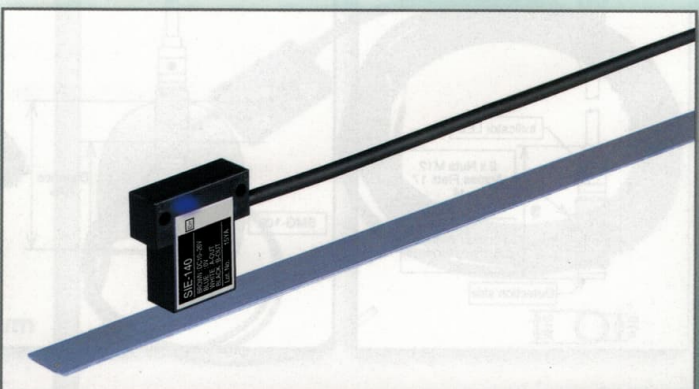
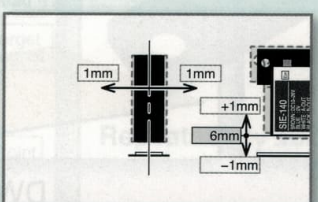
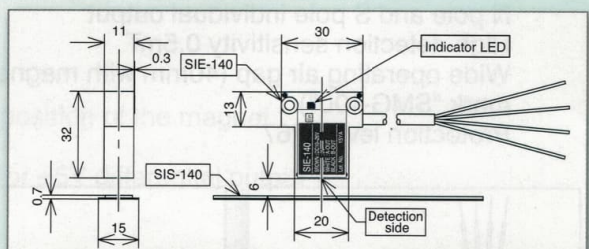
Non-contact type magnetic incremental linear encoder

Little, lightweight, magnetic incremental linear encoder

Resolution 0.1mm(0.025mm by quadruplicating)

Detection head considerably smaller and lighter than detection heads of conventional linear encoders
Can be mounted in a small space between the equipment

6mm operating distance
detection between the scale and the head



SIE-140 SIS-140

Linear Encoder SI-550 system

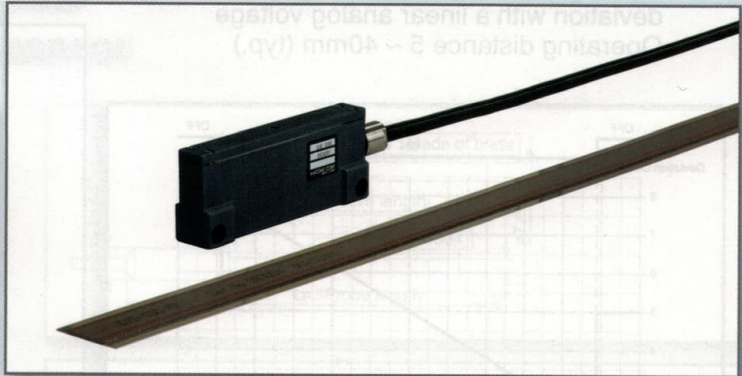
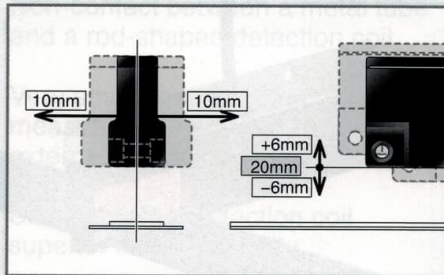
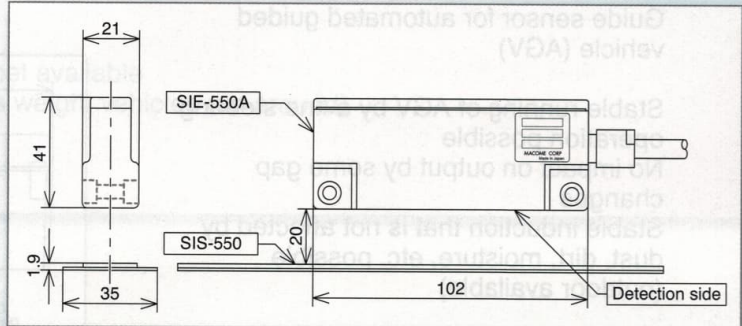
Non-contact type magnetic incremental linear encoder

Resolution 0.2mm (0.05mm by quadruplicating)

High air gap (operating distance) detection (20 ± 6 mm)

Measurement even for big gap fluctuations due to rough use possible

The most suitable system for ultra-high-speed machinery or long-distance transportation machinery (e.g. automated warehouse systems, shield machines, etc.)



SIE-550A SIS-550

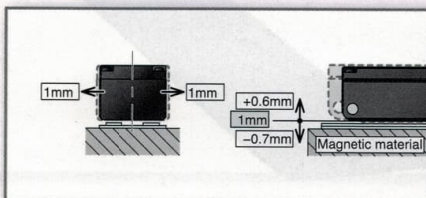
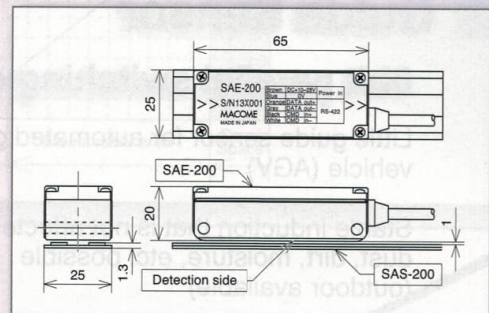
Linear Encoder SA-200 system

Non-contact type magnetic absolute type linear encoder

Resolution 0.01mm

No need to return to the original point at the time of start-up unlike incremental encoders

Can be set to any position on the original point (0) by the command input



SAE-200 SAS-200

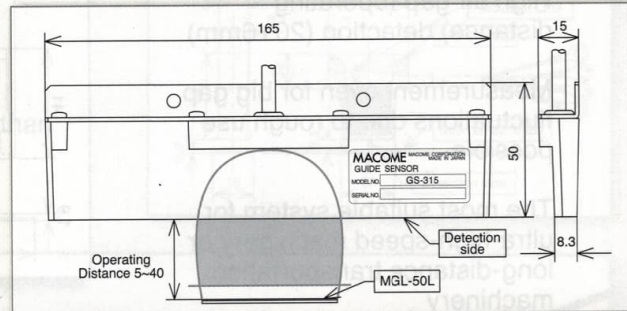
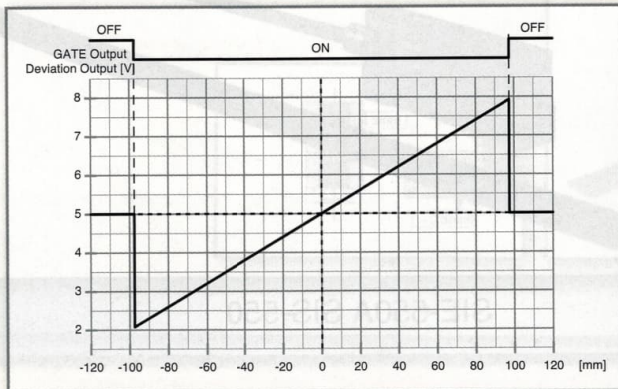
Guide Sensor

Linear analog voltage output type

Guide sensor for automated guided vehicle (AGV)

- Stable running of AGV by a fine steering operation possible
- No impact on output by some gap changes
- Stable induction that is not affected by dust, dirt, moisture, etc. possible (outdoor available)

GS-315 outputs quantity of lateral deviation with a linear analog voltage
Operating distance 5 ~ 40mm (typ.)



GS-315

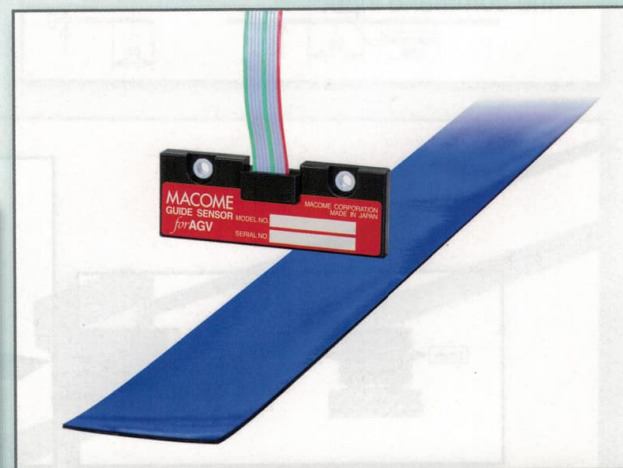
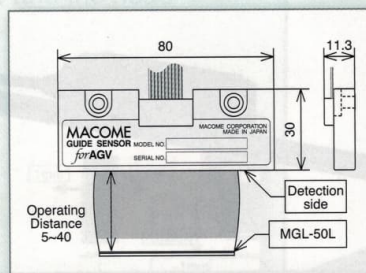
Guide Sensor

8bit parallel switching output type

Little guide sensor for automated guided vehicle (AGV)

- Stable induction that is not affected by dust, dirt, moisture, etc. possible (outdoor available)

GS-408 switches quantity of lateral deviation for output in parallel 8bit
Operating distance 5 ~ 40mm (typ.)



GS-408

Guide Tape

Embeddable in the ground type magnet available
 (Can be used in harsh places such as weight vehicles run around)
 Custom-made guide tape available

Sleeve Sensor

Stroke amount detection sensor

Non-contact between a metal tube and a rod-shaped detection coil

Very small impact on the measurement by the dirt and external vibration

Stainless steel detection coil superior in the durability

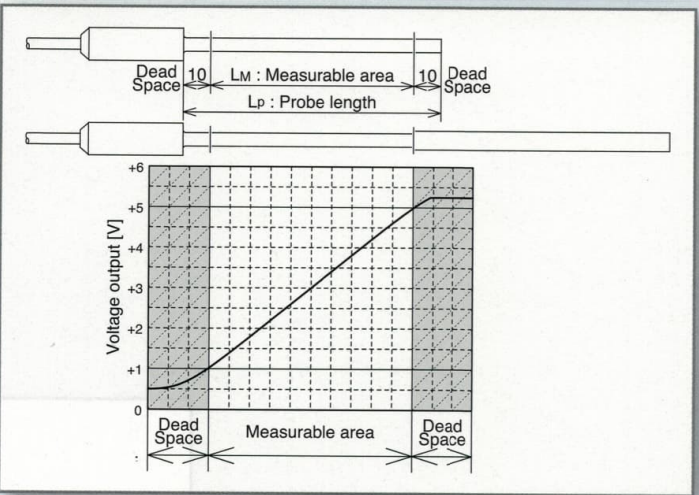
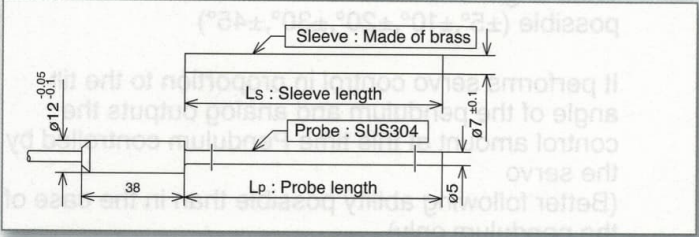
Ideal for linear displacement measurement in harsh places

User friendly analog voltage output

Protection level IP67

MACOME Sleeve Sensor series is adopted for position control of cylinders (e.g. tunnel boring machines, die casting machines)

Very popular in Moto GP world for 3 decades



ET-850

Clinometer

Servo type clinometer

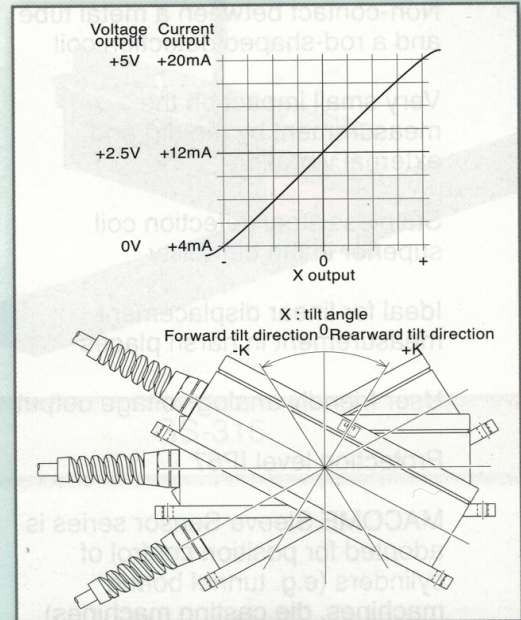
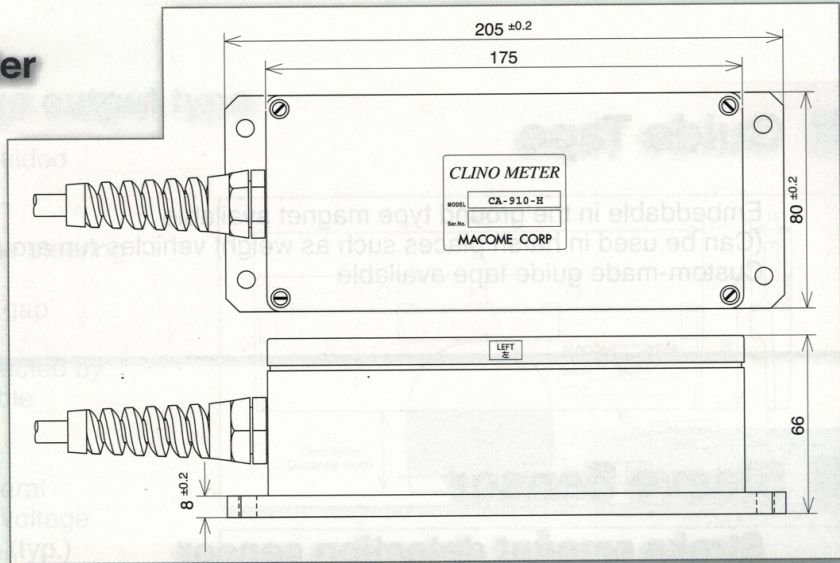
Excellent in impact resistance, vibration resistance and long-term stability

Suitable for measuring the tilt angle of heavy equipment and construction machinery, etc.

CA-910 detects the angle by magnetic sensors on the both sides of the pendulum

Wide angle detection possible ($\pm 5^\circ, \pm 10^\circ, \pm 20^\circ, \pm 30^\circ, \pm 45^\circ$)

It performs servo control in proportion to the tilt angle of the pendulum and analog outputs the control amount at this time Pendulum controlled by the servo
(Better following ability possible than in the case of the pendulum only)



CA-910

DUE TO CONTINUOUS PRODUCT IMPROVEMENT, THE DESIGN AND TECHNICAL SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT PRIOR NOTICE

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