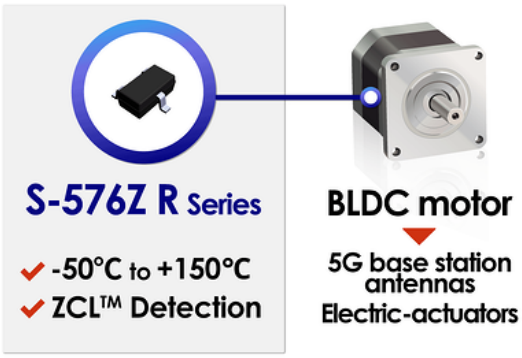
ABLIC
MinebeaMitsumi Group

Stable control of operation of physical infrastructure even at -50°C

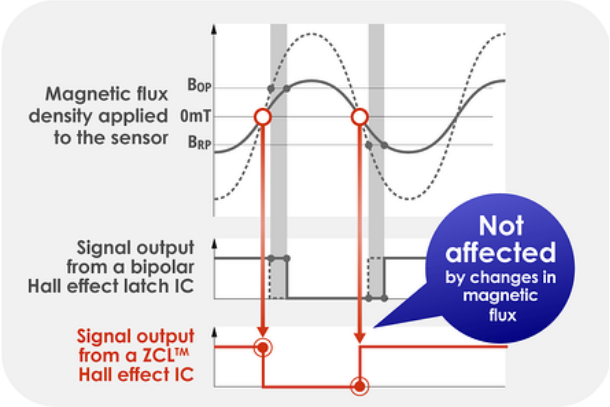


Optimizes operation of physical infrastructure

The S-576Z R Series of ZCL Hall effect ICs are ideal for controlling BLDC motor rotation used for opening and closing electric valve actuators or adjusting 5G base station antennas orientation.

S-576Z R Series can do the following:

- operate over a wide temperature range from -50 to +150°C.
- employ the ZCL detection methodology to ensure that rotation control is not affected by housing variations or ambient temperature fluctuations.



Creates a BLDC motor impervious to temperature fluctuations or design tolerances

A ZCL Hall effect IC detects when magnetic flux density exceeds 0mT. When used in a BLDC motor for rotation control,

- stable control is enabled at all times since the IC is unaffected by changes in magnetic flux density caused by temperature fluctuations or changes in the distance between the magnet and the Hall effect IC.
- accurate and smooth motor rotation is ensured without the need for complex calibration.

Specifications ideal for motors

• High ESD Performance

To cope with the harsh environment during motor installation, it has anti-ESD performance of HBM:8,000V.

• Built-in Pull-up Resistor

S-576Z R Series integrate a 1.2kΩ pull-up resistor, which is ideal for reducing the delay in the rise and fall times of signal output.

• Wide Operating Voltage Range

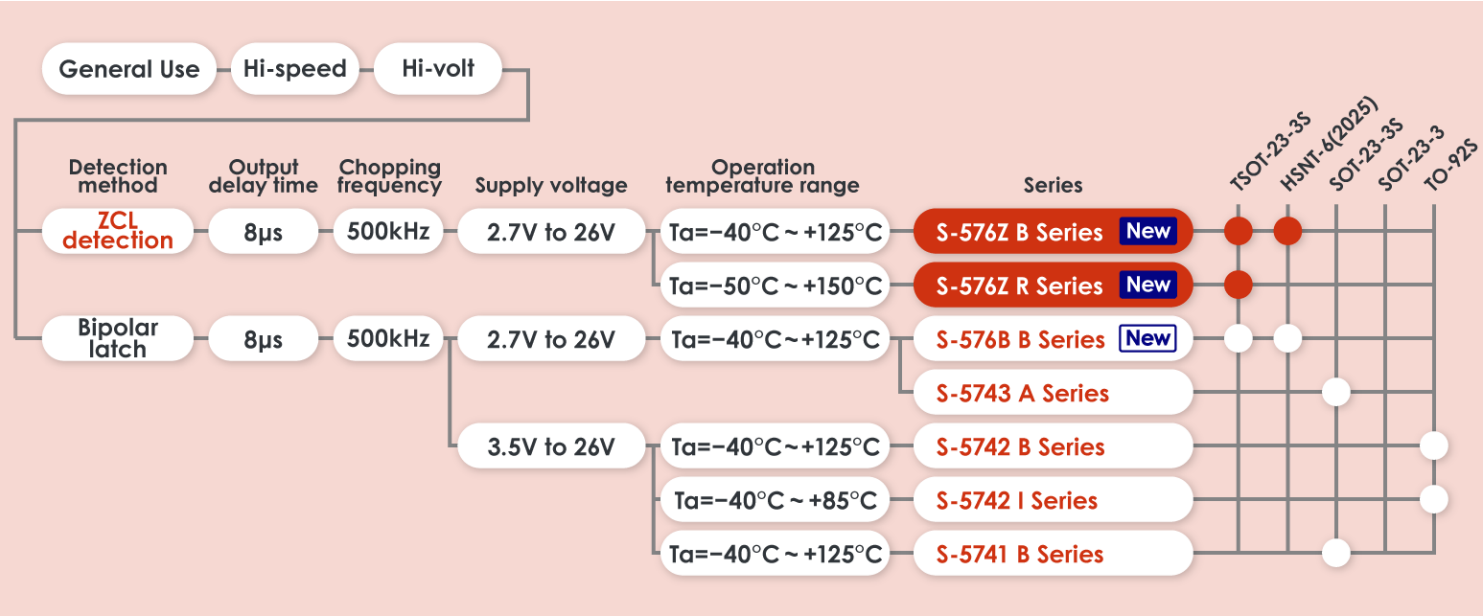
The wide operating voltage range of 2.7V - 26.0V ensures stable sensor signal output at motor start and stop.

Application Examples

Brushless DC motor

- Infrastructure equipment, Outdoor brushless DC motor（5G base station antennas, electric valve actuators）
- Home appliance, Housing equipment, Industrial equipment

Hall effect ICs for Motors



Feature

Product name	S-576Z R Series for general use
Power supply voltage range	V_{DD}=2.7V to 26.0V
Pole detection	ZCL detection
Output logic (optional)	V_{OUT}="L" at S pole detection V_{OUT}= "H" at S pole detection
Output form (optional)	Nch open-drain output Nch driver + built-in pull-up resistor (1.2 kΩ typ.)
Zero crossing latch point	B_Z=0.0mT typ.
Release point (S pole)	B_{RS}= 3.0 mT typ B_{RS}= 6.0 mT typ (Optional)
Chopping frequency	f_C= 500kHz typ.
Output delay time	t_D=8.0µs typ.
Operation temperature range	Ta=−50°C to +150°C

As of 4/27, 2022. All the information described herein is subject to change without notice.

S-576Z R Series

The latest information
https://hub.ablic.com/en/products/s-576z-r?LF