

Siemens 6DS1602-8BA

TELEPERM M 32-channel isolated binary input module with interrupts

Product scope

- Thirty-two 24 V DC inputs are divided into four isolated groups of eight.
- Either channels 1–16 or 17–32 can be assigned to the supported interrupt path.
- Cable guidance extends to 1000 m unshielded or 3000 m shielded under the documented conditions.

Manufacturer source

Siemens TELEPERM M binary I/O manual C79000-G8076-C293-07.

This English web copy combines exact-model specifications with detailed function, system role, operating principle, application scenarios and installation boundaries.

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Siemens 6DS1602-8BA

TELEPERM M 32-channel isolated binary input module with interrupts

Verified technical specifications

Values below apply to the exact model or nameplate identified on this page; adjacent family variants are not merged.

Input channels	32 isolated binary inputs
Interrupt capability	Supported
Nominal input voltage	24 V DC
Input low level	-2 to +4.5 V
Input high level	+13 to +33 V
Galvanic isolation	60 V
Input delay	Typical 3 ms
Maximum input frequency	100 Hz
Module fuse	1 A
Unshielded cable length	Up to 1000 m
Shielded cable length	Up to 3000 m
Compatible stations	AS 220, AS 230 and AS 231
Input grouping	4 groups of 8 isolated inputs
Interrupt group selection	Inputs 1 to 16 or 17 to 32
PM current	Maximum 40 mA
5 V bus current	Approximately 30 mA
Front width	30.48 mm (2 SEP)
Board format	233.4 x 160 mm

Product function and system role

Exact configuration

Siemens 6DS1602-8BA is a 32-channel isolated binary input module for TELEPERM M AS 220, AS 230 and AS 231 stations. Four groups of eight combine 24 V DC signal acquisition with selectable interrupt processing.

6DS1602-8BA separates thirty-two 24 V field inputs from the internal electronics, reducing the direct coupling between process circuits and the TELEPERM station. The channels are organized into four eight-point groups and use official low and high thresholds to qualify discrete states.

Functional role

Group isolation separates process potentials while the selected channel half can signal controller interrupts for important changes.

The BA article identifies the isolated 32-point card used in the specified AS 220/230/231 hardware environment.

Key operating characteristics

- Thirty-two 24 V DC inputs are divided into four isolated groups of eight.
- Either channels 1–16 or 17–32 can be assigned to the supported interrupt path.
- Cable guidance extends to 1000 m unshielded or 3000 m shielded under the documented conditions.

Operating principle and application guidance

Working principle

Interrupt processing can be assigned to inputs 1–16 or 17–32, allowing one half of the card to carry event-sensitive signals. The 3 ms typical delay and documented 60 V galvanic isolation distinguish its behavior from the higher-density non-isolated input modules in the same system family.

Review supply polarity, fuse rating, shield termination and group returns against the field drawings before the original plug is moved.

Application scenarios

- Distributed process contacts with different local references can be grouped without sharing one common return across the whole card.
- Priority alarms can occupy the interrupt-enabled half while routine statuses remain in the cyclic process image.
- Long instrument-cable runs can use the official shielded installation guidance where cabinet and grounding practice allow it.

Integration and replacement boundary

The card is associated with AS 220, AS 230 and AS 231 installations. Before exchange, confirm the external supply, isolated group returns, interrupt half-selection, module fuse and process-plug wiring rather than relying on the shared TELEPERM faceplate style.

Critical technical check

When installing 6DS1602-8BA, preserve the isolation boundaries between the four input groups; bridging field returns can defeat the separation for which this module was selected.

Manufacturer evidence used

- Siemens TELEPERM M binary I/O manual C79000-G8076-C293-07.
 - Official source: <https://support.industry.siemens.com/cs/attachments/18312213/C79000-G8076-C293-07.pdf>
- Exact product identity checked: Siemens 6DS1602-8BA



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