

S400 I/O Units

Table 1-20. S400 I/O Units

S400 I/O units		Description
Digital basic units DSDX 452 DSDX 452L DSDX 454 DSDX 454L DSDI 452 DSDI 454	DI: DO: Supply:	20 channels, 24 V d.c. for DSDX 452 and DSDX 452L 48 V d.c. for DSDX 454 and DSDX 454L 12 channels, relay output ⁽¹⁾ , expandable 120/220 (230)/240 (230) V a.c., 50/60 Hz
Digital expansion units DSDX 451 DSDX 451L DSDX 453 DSDX 453L DSDI 451 DSDI 453	DI: DO: Supply:	20 channels, 24 V d.c. for DSDX 451 and DSDX 451L 48 V d.c. for DSDX 453 and DSDX 453L 12 channels, relay output, expandable 120/220 (230)/240 (230) V a.c., 50/60 Hz
Analog units DSAX 452	AI: AO: Supply:	14 channels, differential 0 to ± 10 V or 0 to ± 20 mA, resolution 12 bits + sign 6 channels, unipolar 0 to + 10 V or 0 to + 20 mA, resolution 10 bits 120/220 (230)/240 (230) V a.c., 50/60 Hz

(1) Relay data for units without L in the type designation.

Loading: max. 3 A, min. 0.1 A with 24 V or 2.5 VA

Breaking capacity: a.c. max. 720 VA with $\cos\phi > 0.4$, d.c. max. 44. 44 W with L/R < 40 ms.

Relay data for units with L (outputs for low current)

Loading: min. 1 mA but min. 0.05 VA, max. 200 mA but max. 5 VA

Breaking capacity: a.c. max. 200 mA or 5 VA with $\cos\phi > 0.4$, d.c. max. 200 mA or 5 W with L/R < 40 ms.

Both inputs and outputs can suppress moderate CMV in the range $\pm 10\text{V}$ for voltage input and $\pm 20\text{ V}$ for current input. This means, in practice, that you can ground the transducer and load freely within a geographically limited area in which the difference in ground potential is within the specification.

The unit has an integrated voltage source providing d.c. 24 V for transducer supply. The voltage is fused. This supply can also be used for supply to the outputs which can then drive a current signal through a load of $650\ \Omega$. Additionally the outputs can be supplied from an external supply unit. You can then increase the load resistance for the current signal towards $1000\ \Omega$.

Guidelines - Digital Inputs and Outputs

DSDI 452

DSDI 451 (expansion unit)

Thirty-two scanned inputs for 24 V. All channels have a common signal return. Transducer supply is obtained from a common fused source. External voltage supply and fusing for groups less than 32 channels are possible, but the return sides of the different voltage sources must be capable of being connected. The 32 channels are galvanically isolated from the internal electronics in the unit.

DSDI 454

DSDI 453 (expansion unit)

Thirty-two scanned inputs for 48 V. For further properties, see DSDI 452.

DSDX 452(L)

DSDX 451(L) (expansion unit)

Combination unit for 20 digital 24 V inputs and 12 digital outputs. The inputs have the same qualities as the inputs on DSDI 452. The outputs are completely separated relay contacts for 24 V - 240 V a.c./d.c. The recommended minimum load on the contacts is 2.5 VA but a minimum of 100 mA with 24 V d.c. Units with an additional letter L are equipped with low-voltage relay contacts. Maximum load on the contacts is 200 mA. The recommended minimum load on the contacts is 5 mA or 0.05 VA.

DSDX 454(L)

DSDX 453(L) (expansion unit)

Combination unit for 20 digital inputs (48 V) and 12 digital outputs. The inputs have the same qualities as the inputs on DSDI 454. The outputs are completely separated relay contacts for 24 V - 240 V a.c./d.c. The recommended minimum load on the contacts is 2.5 VA but a minimum of 100 mA with 24 V d.c. Units with an additional letter L are equipped with low-voltage relay contacts. Maximum load on the contacts is 200 mA. The recommended minimum load on the contacts is 5 mA or 0.05 VA.