

Input/Output Communication and Extension Modules

Input/Output (I/O) expansion modules are used in applications requiring more connections than featured on a given control: up to nine extension modules may communicate through each communication module. I/O modules require a communication module to communicate with frontend system managers.



AK-CM Communication Modules

Danfoss Type	Description	Danfoss Code No.
AK-CM 101A	Communication Module (LON TP-78)	080Z0061
AK-CM 101C	Communication Module (LON RS485)	080Z0063



AK-XM Extension Modules

Danfoss Type	Analog inputs	On/off outputs		On/off supply voltage (DI signal)		Analog outputs	Stepper outputs	Module with switches	Uses	Danfoss Code No.
	For sensors, pressure transmitters, etc.	Relay (SPDT)	Solid state	Low voltage (80 V max.)	High voltage (260 V max.)	0-10 V DC	For valves with step control	For overriding relay outputs		With screw terminals
AK-XM 101A	8								Sensors, pressure transmitters, contact signals	080Z0007
AK-XM 102A				8					On/off voltage signals, low voltage (24 V)	080Z0008
AK-XM 102B					8				On/off voltage signals, high voltage (230 V)	080Z0013
AK-XM 103A	4					4			Sensors, pressure transmitters, contact signal, analog outputs (0-10 V DC)	080Z0032
AK-XM 107A pulse module									Pulse measuring	080Z0020
AK-XM 204A		8							On/off relay outputs	080Z0011
AK-XM 204B		8							On/off relay outputs with overriding function	080Z0018
AK-XM 205A	8	8							Sensors, pressure transmitters, and on/off outputs	080Z0010
AK-XM 205B	8	8		x					Sensors, pressure transmitters, and on/off output with overriding function	080Z0017
AK-XM 208B							4		Stepper output	080Z0022

I/O Spare Parts and Accessories

Description	Notes	Danfoss Code No.
DIN Rail for AK2 module mounting	1 meter	080Z0290
AK2 light ballast dimmer driver board	Boosts signal from a variable output (such as AK-XM 103A) board to drive multiple ballasts	080Z0270
RTC to AK2 board conversion kit	Converts obsolete RTC board to AK2 IO modules; includes documentation, power supply, and wire	080Z2117
CO ₂ indoor sensor	For measuring indoor CO ₂ levels	LDC02
Air flow switch	For proofing RTU airflow	CAFS-1

Input/Output Communication and Extension Modules *(continued)*

Power Supplies for AK series controls

Danfoss Type	Input Voltage	Output		Mount	Note	Danfoss Code No.
		Voltage	Capacity			
IOPS	115/230	12/24V AC	56 VA	Chassis	Use for 12VAC or special application only; replaced by 080Z0055 for AK2 applications	080Z0052
AK-PS 250	100–240	24V AC	60 VA	Din Rail	Replaces 080Z0052	080Z0055
AK-PS 75	100–240	24V AC	18 VA	Din Rail	Can power one com module and combo board	080Z0053

Repeaters, Bridges, and Gateways

Gateways permit communication from one piece of equipment to another. Repeaters boosts signals to overcome issues resulting from excess wire length and poor installation. Bridges convert communication signals from one protocol to another.

Danfoss Type	Description	Applicable protocols	Notes	Danfoss Code No.
TP78-01	Repeater	LON TP 78	Requires 12V AC, old part no. TP78-01	084B2251
TP78-02	Bridge	LON TP 78 to LON FTT-10	Requires 12V AC, old part no. TP78-02	084B2252
TP78-04	Bridge	LON TP 78 to LON RS485	Old part no. TP78-04	084B2254
AKA 222	Repeater	Modbus		084B2240
AKA 223	Repeater	LON RS485		084B2241
TP78-05	Bridge	LON FTT-10 to LON RS485	Old part no. TP78-05	084B2255

I/O Enclosures

Enclosures for input/output boards

Description	Notes	Danfoss Code No.
AK2 enclosure for 1 row of 4 full-sized modules	Includes power supply and 1 AK2 comm. module (080Z0061) 13 × 30 × 5	AK2I08
AK2 enclosure for 2 row of 4 full-sized modules	Includes power supply and 1 AK2 comm. module (080Z0061) 25 × 30 × 5	AK2I016
AK2 comm. mod. + AK2 XM 205B in RTC box filtered; power input	24V AC only; no power supply included 12 in. × 12 in.	AK2RTCB
AK2 comm. mod. RTC filtered power V.2	Contains 080Z0061, 080Z0017, 080Z0053	AK2RTCB-2
Lighting control panel/8 relay output		080Z2164
AK2 enclosure for 1 row of 4 full-sized modules	Includes power supply and 1 AK2 comm. module (080Z0063) 13 × 30 × 5	080Z2118
AK2 enclosure for 2 row of 4 full-sized modules	Includes power supply and 2 AK2 comm. module (080Z0063) 25 × 30 × 5	080Z2119
AK2 comm. mod. + AK2 XM 205B in RTC box filtered; power input	24V AC only; no power supply included 12 in. × 12 in.	080Z2184
12 in. × 24 in. enclosure	080Z0055, with comm. module (080Z0063), and combo board	080Z2188
12 in. × 24 in. enclosure	080Z0055, with comm. module (080Z0061), combo board	080Z2165