Bulletin 280/281 ArmorStart Distributed Motor Controller

DeviceNet Media Δ

Description		Length [m (ft)]	Cat. No.
			Sealed
	KwikLink pigtail drops are Insulation Displacement Connector (IDC) with integral Class 1 round cables for interfacing devices or power supplies to flat cable	1 (3.3)	1485P-P1E4-B1-N5
		2 (6.5)	1485P-P1E4-B2-N5
		3 (9.8)	1485P-P1E4-B3-N5
		6 (19.8)	1485P-P1E4-B6-N5
	DeviceNet Mini- T-Port Tap	Left Keyway	1485P-P1N5-MN5KM
		Right Keyway	1485P-P1N5-MN5NF
Description		**Connector**	**Cat. No.**
	Gray PVC Thin Cable	Mini Straight Female Mini Straight Male	1485G-P‡ N5-M5
		Mini Straight Female Mini Right Angle Male	1485G-P‡ W5-N5
		Mini Right Angle Female Mini Straight Male	1485G-P‡ M5-Z5
		Mini Right Angle Female Mini Straight Male	1485G-P‡ W5-Z5
	Thick Cable	Mini Straight Female Mini Straight Male	1485C-P§ N5-M5
		Mini Straight Female Mini Right Angle Male	1485C-P§ W5-N5
		Mini Right Angle Female Mini Straight Male	1485C-P§ M5-Z5
		Mini Right Angle Female Mini Straight Male	1485C-P§ W5-Z5
Description		**Length m (ft)**	**Cat. No.**
	DeviceNet Configuration Terminal Used to interface with objects on a DeviceNet network. Includes 1 m communications cable.	1 (3.3)	193-DNCT
	Communication cable, color-coded bare leads	1 (3.3)	193-CB1
	Communication cable, microconnector (male)	1 (3.3)	193-CM1
	Panel Mount Adapter/Door Mount Bezel Kit	–	193-DNCT-BZ1

Δ See On-Machine Connectivity Catalog for complete cable selection information.

‡ Replace symbol with desired length in meters (Example: **1485G-P1N5-M5** for a 1 m cable). Standard cable lengths: 1, 2, 3, 4, 5, and 6 m.

§ Replace symbol with desired length in meters (Example: **1485C-P1N5-M5** for a 1 m cable). Standard cable lengths: 1, 2, 3, 4, 5, 6, 8, 10, 12, 18, 24, and 30 m.

Industrial EtherNet MediaΔ

Description	Connector Type	Unshielded Cat. No.
M12, D-Code Patchcords and Cordsets		
	Straight male to straight male	1585D-M4TBDM-⋆
	Straight male to right angle male	1585D-M4TBDE-⋆
	Right angle male to right angle male	1585D-E4TBDE-⋆
	Straight male to straight female	1585D-M4TBDF-⋆
Front Mount Receptacle		
	Front mount female to RJ45	1585D-D4TBJM-⋆
Transition Cable		
	Straight male to RJ45	1585D-M4TBJM-⋆

Description	Conductors	Jacket Material	Cable Type	Jacket Color	Cat. No.
RJ45 Patchcords					
	4-pair	Riser PVC	Unshielded twisted pair	Teal	1585J-M8PBJM-⋆
		High-flex TPE		Teal	1585J-M8TBJM-⋆
M12 to RJ45 Bulkhead Adapter					
	• Transition from IP20 environment to IP67 environment • In-cabinet connectivity with RJ45 connector providing On-Machine solution with M12 D Code connector • Differential 100 Ω terminators used for unused pairs • Cat 5e				1585A-DD4JD

⋆ Lengths available in 0.3, 0.6, 1, 2, 5, 10, 15, and additional increments of 5 m, up to 75 m.

Δ See On-Machine Connectivity Catalog for complete cable selection information.

ArmorPoint® Media ♣

Description	Length [m (ft)]	Cat. No.
ArmorPoint Bus Extension Cable including Terminating Resistor	1 (3.3)	280A-EXT1
Extension Cable to connect two ArmorStart Distributed Motor Controllers to ArmorPoint communication protocol	1 (3.3)	280A-EXTCABLE

♣ ArmorPoint media is only available with an IP67/NEMA Type 4 rating.

Sensor Media ♠

DeviceNet/ArmorPoint Communications					
Description		**ArmorStart I/O Connection**	**Pin Count**	**Connector**	**Cat. No.**
	DC Micro Patchcord	Input	4-pin	Straight Female Straight Male	889D-F4ACDM-♦
				Straight Female Right Angle Male	889D-F4ACDE-♦
	DC Micro V-Cable	Input	4-pin	Straight Female	879D-F4ACDM-♦
				Right Angle Female	879D-R4ACM-♦
	AC Micro Patchcord	Output	3-pin	Straight Female Straight Male	889R-F3AERM-♦
				Straight Female Right Angle Male	889R-F3AERE-♦

EtherNet/IP Communications					
Description		**ArmorStart I/O Connection**	**Pin Count**	**Connector**	**Cat. No.**
	DC Micro Patchcord	Input/Output	4-pin	Straight Female Straight Male	889D-F4ACDM-♦
				Straight Female Right Angle Male	889D-F4ACDE-♦
	DC Micro V-Cable	Input	4-pin	Straight Female	879D-F4ACDM-♦
				Right Angle Male	879D-R4ACM-♦

♠ See On-Machine Connectivity Catalog for complete cable selection information.

♦ Replace symbol with desired length in meters (Example: 889D-F4ACDM-1 for a 1 m cable). Standard cable lengths: 1, 2, 5, and 10 m.

Motor and Brake Cables

Description		Cable Rating	Length [m (ft)]	Cat. No.
Motor Cable Cordsets	90° M22 Motor Cordset	IP67/NEMA Type 4	3 (9.8)	280-MTR22-M3
			4 (13.1)	280-MTR22-M4
			6 (19.6)	280-MTR22-M6
			8 (26.2)	280-MTR22-M8
			10 (32.8)	280-MTR22-M10
			12 (39.4)	280-MTR22-M12
			14 (45.9)	280-MTR22-M14
			20 (65.6)	280-MTR22-M20
	90° M35 Motor Cordset	IP67/NEMA Type 4	3 (9.8)	280-MTR35-M3
			6 (19.6)	280-MTR35-M6
			10 (32.8)	280-MTR35-M10
			14 (45.9)	280-MTR35-M14
			20 (65.6)	280-MTR35-M20
	90° M22 Motor Cordset	IP69K/NEMA 4X	3 (9.8)	280S-MTR22-M3
			6 (19.6)	280S-MTR22-M6
			14 (45.9)	280S-MTR22-M14
	90° M35 Motor Cordset	IP69K/NEMA 4X	6 (19.6)	280S-MTR35-M6
			14 (45.9)	280S-MTR35-M14
Motor Cable Cordsets, High Flex*	90° M22 Motor Cordset	IP67/NEMA Type 4	3 (9.8)	280-MTRF22-M3
			4 (13.1)	280-MTRF22-M4
			6 (19.6)	280-MTRF22-M6
			8 (26.2)	280-MTRF22-M8
			10 (32.8)	280-MTRF22-M10

			14 (45.9)	280-MTRF22-M14
			20 (65.6)	280-MTRF22-M20
Motor Cable Cordsets, Shielded (VFD)	90° M22 Motor Cordset	IP67/NEMA Type 4	3 (9.8)	284-MTRS22-M3
			4 (13.1)	284-MTRS22-M4
			6 (19.6)	284-MTRS22-M6
			8 (26.2)	284-MTRS22-M8
			10 (32.8)	284-MTRS22-M10
			12 (39.4)	284-MTRS22-M12
			14 (45.9)	284-MTRS22-M14
	90° M22 Motor Cordset	IP69K/NEMA Type 4X	3 (9.8)	284S-MTRS22-M3
			6 (19.6)	284S-MTRS22-M6
			14 (45.9)	284S-MTRS22-M14
Extended Source/Control Brake Cable Cordsets	90° M25 Source Brake Cable	IP67/NEMA Type 4	1 (3.3)	285-BRC25-M1
			3 (9.8)	285-BRC25-M3
			4 (13.1)	285-BRC25-M4
			6 (19.6)	285-BRC25-M6
			8 (26.2)	285-BRC25-M8
			10 (32.8)	285-BRC25-M10
			12 (39.4)	285-BRC25-M12
			14 (45.9)	285-BRC25-M14
			20 (65.6)	285-BRC25-M20
		IP69K	6 (19.6)	285S-BRC25-M6
			14 (45.9)	285S-BRC25-M14
Extended Source/Control Brake Cable Cordsets, High Flex⋆	90° M25 Source Brake Cable	IP67/NEMA Type 4	3 (9.8)	285-BRCF25-M3
			6 (19.6)	285-BRCF25-M6
			10 (32.8)	285-BRCF25-M10
			14 (45.9)	285-BRCF25-M14
			20 (65.6)	285-BRCF25-M20
Dynamic Brake Cables	M22 Dynamic Brake Cable (DB Option)	IP67/NEMA Type 4	3 (9.8)	285-DBK22-M3
		IP69K	3 (9.8)	285S-DBK22-M3

Description	Description	Cable Rating	Length [m (ft)]	Cat. No.
Motor Cable Patchcords	90° Male/Straight Female M22	IP67/NEMA Type 4	1 (3.3)	280-MTR22-M1D
			3 (9.8)	280-MTR22-M3D
	90° Male/Straight Female M35	IP67/NEMA Type 4	1 (3.3)	280-MTR35-M1D
			3 (9.8)	280-MTR35-M3D
	90° Male/Straight Female M22	IP69K/NEMA Type 4X	1 (3.3)	280S-MTR22-M1D
			3 (9.8)	280S-MTR22-M3D
	90° Male/Straight Female M35	IP69K/NEMA Type 4X	1 (3.3)	280S-MTR35-M1D
			3 (9.8)	280S-MTR35-M3D
Motor Cable Patchcords, Shielded (VFD)	90° Male/Straight Female M22	IP67/NEMA Type 4	1 (3.3)	284-MTRS22-M1D
			3 (9.8)	284-MTRS22-M3D
	90° Male/Straight Female M22	IP69K/NEMA Type 4X	1 (3.3)	284S-MTRS22-M1D
			3 (9.8)	284S-MTRS22-M3D
Extended Source/Control Brake Cable Patchcords	90° Male/Straight Female M25	IP67/NEMA Type 4	1 (3.3)	285-BRC25-M1D
			3 (9.8)	285-BRC25-M3D
			4 (13.1)	285-BRC25-M4D
			6 (19.6)	285-BRC25-M6D
			8 (26.2)	285-BRC25-M8D
			10 (32.8)	285-BRC25-M10D
			12 (39.4)	285-BRC25-M12D
			14 (45.9)	285-BRC25-M14D
			20 (65.6)	285-BRC25-M20D
Receptacle	Straight Male with wire	IP67/NEMA Type 4	0.5 (1.6)	285-M25M-M05

⋆ 14 million flex cycles, bend radius is maximum 8X the cable diameter (0.362 in. OD), for static and dynamic applications.

Sealing Caps

	ArmorPoint		DeviceNet		EtherNet/IP	
	Input	Output	Input	Output	Input	Output
	Cat. No.	Cat. No.	Cat. No.	Cat. No.	Cat. No.	Cat. No.
Plastic Sealing Cap (M12)⋆	–	1485A-M12	1485A-M12	1485A-M12	1485A-M12	1485A-M12
AC Micro Aluminum Sealing Cap⋆	–	889A-RMCAP	–	889A-RMCAP	–	–
Stainless Steel Sealing Cap§	–	889AS-RMCAP	1485AS-C3	889AS-RMCAP	–	–
Motor Connector Aluminum Sealing Cap (M22) for 10 A protection⋆	–	1485A-C1	–	1485A-C1	–	1485A-C1
Motor Connector Aluminum Sealing Cap (M35) for 25 A protection⋆	–	889A-QMCAP	–	889A-QMCAP	–	889A-QMCAP
Dynamic Brake Connector (M22)	–	1485A-C1	–	1485A-C1	–	1485A-C1
Source/Control Brake Cap (M25)	–	280-BRCAP-M25	–	280-BRCAP-M25	–	280-BRCAP-M25

⋆ To achieve IP67 rating, sealing caps must be installed on all unused I/O connections.

§ To achieve IP69K/NEMA 4X rating, sealing caps must be installed on all unused I/O connections.

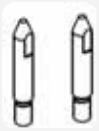
Handle and Cord Accessories

	Description	Cat. No.
	**Locking Tag** • Padlock attachment to the lockable handles • Up to three padlocks 4…8 mm (5/16 in.) ∅ shackle	140M-C-M3
Cord grips for use with CR/CRW gland		
	3/4 in. Strain relief cord connector and 3/4 in. lock nut Cable range: 0.31…0.56 in.	Thomas & Betts Cord Grip Cat. No. 2931NM
	1 in. Strain relief cord connector and 1 in. lock nut Cable range: 0.31…0.56 in.	Thomas & Betts Cord Grip Cat. No. 2940NM
Cord grips for use with DR/DRW gland		
	1/2 in. Strain relief cord connector and 1/2 in. lock nut Cable range: 0.50…0.75 in.	Thomas & Betts Cord Grip Cat. No. 2922NM Sealing nut: 5262, Lock nut: 141
	1 in. Strain relief cord connector and 1 in. lock nut Cable range: 0.70…0.95 in.	Thomas & Betts Cord Grip Cat. No. 2942NM

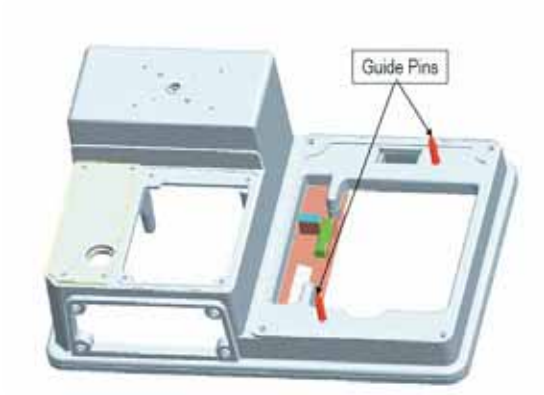
Replacement Fuses

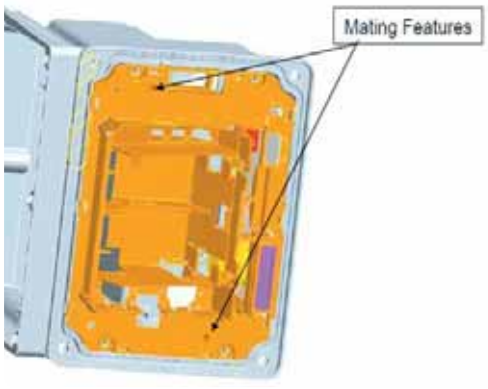
Description	Cat. No.
Output Fuse	
Fast acting, high-interupting capacity, tubular fuse Rating: 2.5 A, 250V Dimension [mm (in.)]: 20 (0.787) x 5 (0.197)	Littlefuse PN 021602.5
Control Fuse	
UL Listed Class CC, CSA HRC-1 Rating: 7 A, 600V Dimensions [in.]: 1.5 x 0.405	Cooper Bussman PN KTK-R-7 or Littlefuse PN KLKR007.T
Source Brake Fuse (For use with Bulletins 284 and 283 with Brake option CB/SB)	
UL Listed Class CC, CSA HRC-1 Rating: 3 A, 600V Dimensions [in.]: 1.5 x 0.405	Cooper Bussman PN KTK-R-3 or Littlefuse PN KLKR003.T

Replacement Parts

	Description	Cat. No.
	Replacement At-Motor Disconnect Handle Kit includes: (1) handle, (1) guard, and (3) screws	280-DISHDL
	Replacement Fan for 284 Control Module	284-FAN
	Replacement Guide Pins (2 pins per package)⋆	284-PIN

⋆ These pins are replacement parts for factory-installed alignment pins. They can not be retrofitted in the field. The base module and control module require mating features as indicated in the following diagrams.





Quick-Disconnect Motor Control Cables

Three-Phase Power Field-Installable Receptacles — For 25, 15, and 10 A Cordsets and Patchcords

Pin Count	Assembly Rating‡	Certifications	Female Cat. No.
4-pin	16 AWG, 600V, 10 A&	UL Listed UL 2237 (File No. E318496, Guide PVVA)	280-FAM22F▸
	10 AWG, 600V, 25 A▸		280-FAM35F

& Refer to your local electrical code(s) when applying 16 AWG power cable in a motor circuit.
▸ For 15 A cable (e.g. Cat. No. 280-PWRM24*), use Cat. No. 280-FAM35F.

Dynamic Brake Selection for DB Option

Drive and Motor Size [kW (Hp)]	Resistance [ ]	Continuous Power [kW]	Max. Energy [kJ]	Max. Braking Torque [% of motor]	Application Type 1‡		Application Type 2‡		Cat. No.⋆
					Braking Torque [% of motor]	Duty Cycle§	Braking Torque [% of motor]	Duty Cycle§	
200…240V AC Input Drives									
0.37 (0.5)	91	0.086	17	293%	100%	48%	150%	31%	AK-R2-091P500
0.75 (1)				218%		23%	150%	15%	AK-R2-091P500
1.5 (2)				109%		11%	109%	11%	AK-R2-091P500
400…480V AC Input Drives									
0.37 (0.5)	360	0.086	17	305%	100%	47%	150%	31%	AK-R2-360P500
0.75 (1)	360	0.086	17	220%		23%	150%	15%	AK-R2-360P500
1.5 (2)	360	0.086	17	110%		12%	110%	11%	AK-R2-360P500
2.2 (4)	120	0.26	52	197%		24%	150%	16%	AK-R2-120P1K2
4 (5)	120	0.26	52	124%		13%	124%	10%	AK-R2-120P1K2
600V AC Input Drives									
0.37 (0.5)	360	0.086	17	274%	100%	46%	150%	31%	AK-R2-360P500
0.75 (1)	360	0.086	17	251%		23%	150%	15%	AK-R2-360P500
1.5 (2)	360	0.086	17	172%		11%	150%	8%	AK-R2-360P500
2.2 (4)	120	0.26	52	193%		24%	150%	16%	AK-R2-120P1K2
4 (5)	120	0.26	52	186%		13%	150%	9%	AK-R2-120P1K2

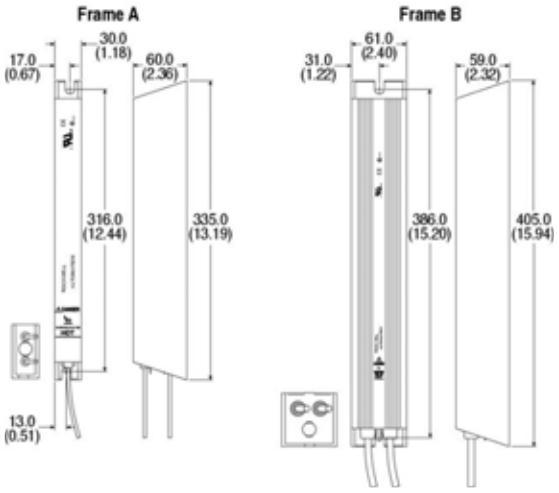
⋆ Check resistor ohms against the minimum resistance for the drive that is being used.

§ The duty cycle listed is based on the full speed to zero deceleration. For constant regen at full speed, the duty cycle capability is half the values listed.

‡ Application Type 1 represents maximum capability up to 100% of braking torque, where possible. Application Type 2 represents greater than 100% of braking torque up to a maximum of 150%, where possible.

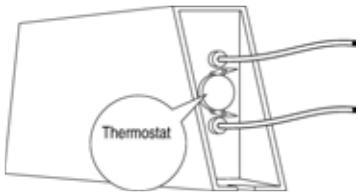
ArmorStart Bulletin 284 Option DB (IP20) Resistor Installation Dimensions

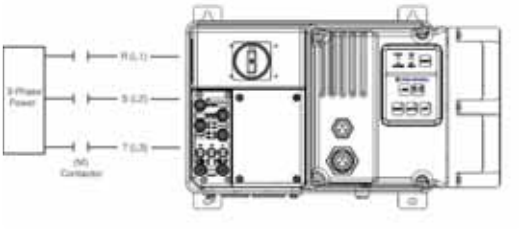
Dimensions are in millimeters (inches) and weights are in kilograms (pounds). Dimensions are not intended to be used for manufacturing purposes.

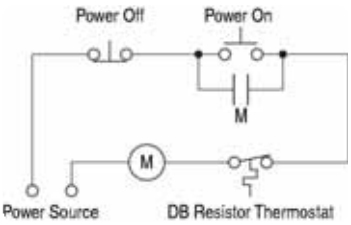


Frame	Cat. No.	Weight [kg (lb)]
A	AK-R2-091P500, AK-R2-047P500, AK-R2-360P500	1.1 (2.5)
B	AK-R2-030P1K2, AK-R2-120P1K2	2.7 (6)

Recommended thermostat control wiring to prevent dynamic brake overheating







Dynamic Brake Selection for DB1 (IP67) Option

Drive and Motor Size [kW (Hp)]	Resistance [ ]	Continuous Power [kW]	Max. Energy [kJ]	Max. Braking Torque [% of motor]	Application Type 1‡		Application Type 2‡		Cat. No.♣
					Braking Torque [% of motor]	Duty Cycle§	Braking Torque [% of motor]	Duty Cycle§	
200…240V AC Input Drives									
0.37 (0.5)	91	0.086	17	293%	100%	46%	150%	31%	284R-091P500-M⋆
0.75 (1)				218%		23%	150%	15%	284R-091P500-M⋆
1.5 (2)				109%		11%	109%	11%	284R-091P500-M⋆
400…480V AC Input Drives									
0.37 (0.5)	360	0.086	17	305%	100%	47%	150%	31%	284R-360P500-M⋆
0.75 (1)	360	0.086	17	220%		23%	150%	15%	284R-360P500-M⋆
1.5 (2)	360	0.086	17	110%		12%	110%	11%	284R-360P500-M⋆
2.2 (4)	120	0.26	52	197%		24%	150%	16%	284R-120P1K2-M⋆
4 (5)	120	0.26	52	124%		13%	124%	10%	284R-120P1K2-M⋆
600V AC Input Drives									
0.37 (0.5)	360	0.086	17	274%	100%	46%	150%	31%	284R-360P500-M⋆
0.75 (1)	360	0.086	17	251%		23%	150%	15%	284R-360P500-M⋆
1.5 (2)	360	0.086	17	172%		11%	150%	8%	284R-360P500-M⋆
2.2 (4)	120	0.26	52	193%		24%	150%	16%	284R-120P1K2-M⋆
4 (5)	120	0.26	52	185%		13%	150%	9%	284R-120P1K2-M⋆

⋆ Length is user-selectable based on a suffix added to the catalog number. For a length of 500±10 mm, add **-M05** to the end of the catalog number. For a length of 1000±10 mm, add **-M1** to the end of the catalog number.

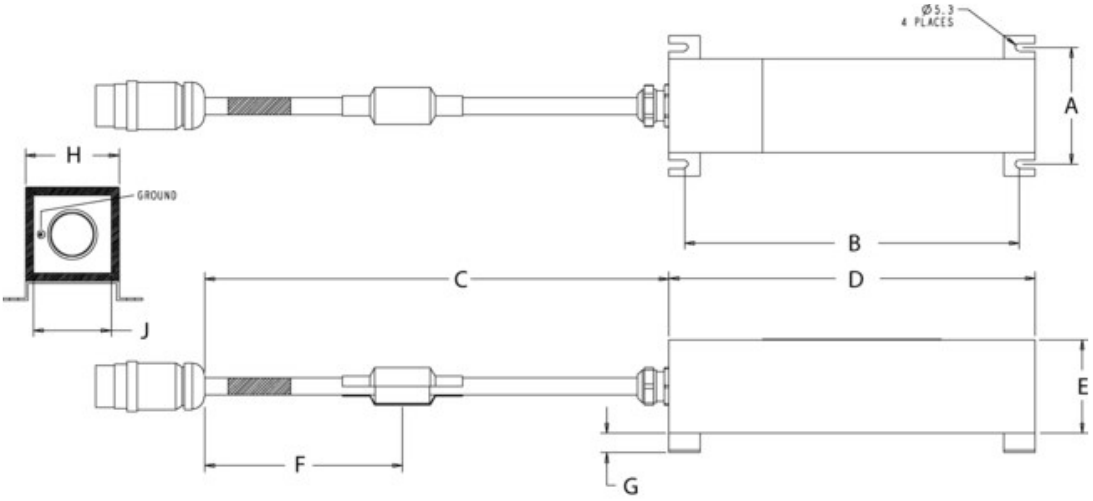
§ The duty cycle listed is based on the full speed to zero deceleration. For constant regen at full speed, the duty cycle capability is half the values listed.

‡ Application Type 1 represents maximum capability up to 100% of braking torque, where possible. Application Type 2 represents greater than 100% of braking torque up to a maximum of 150%, where possible.

♣ Drive rating and DB part numbers are not interchangeable. Only use specified resistor. Customer is responsible to evaluate if performance meets application requirement

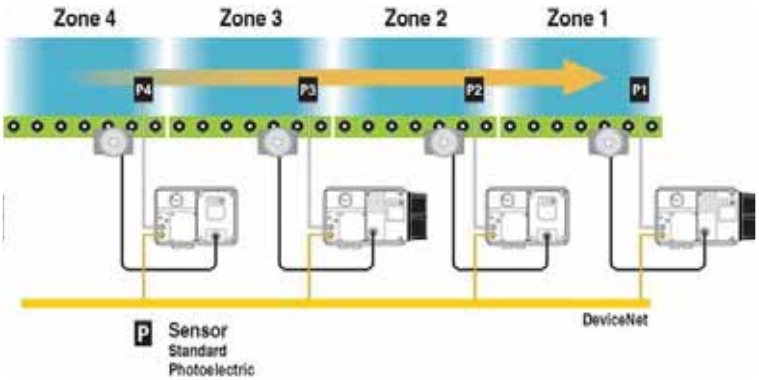
ArmorStart Bulletin 284 Option DB1 (IP67) Resistor Installation Dimensions

Dimensions are in millimeters (inches). Dimensions are not intended to be used for manufacturing purposes.



Cat. No.	A	B	C	D	E	F	G	H	J
284R-091P500	89 ±3 (3.5 ±0.12)	215 ±5 (8.46 ±0.2)	M05 = 0.5 meter M1 = 1 meter	235 ±5 (9.25 ±0.2)	60 ±2 (2.36 ±0.08)	127 (5)	12.54 (0.49)	60 ±2 (2.36 ±0.08)	50 ±1.5 (1.97 ±0.06)
284R-360P500		215 ±5 (8.46 ±0.2)		235 ±5 (9.25 ±0.2)					
284R-120P1K2		420 ±5 (16.54 ±0.2)		440 ±5 (17.32 ±0.2)					

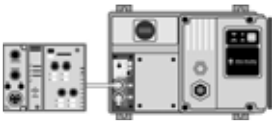
Peer-to-Peer Communications



(ZIP) Zone interlocking Parameters

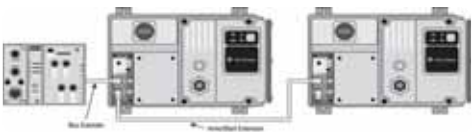
The Zone Control capabilities of ArmorStart Distributed Motor Controller is ideal for large horsepower (0.5…10 Hp) motored conveyors. The ArmorStart Distributed Motor Controllers have built-in DeviceNet Communications, DeviceLogix technology, and the added Zone Interlocking Parameters (ZIP), which allow one ArmorStart to consume data directly from up to four other DeviceNet nodes without going through the network scanner. These direct communications between conveyor zones are beneficial in a merge, diverter, and accumulation conveyor applications.

ArmorStart to ArmorPoint Connectivity - (Networks other than DeviceNet)



When connecting to the Bulletin 1738 ArmorPoint Distributed I/O product, a network adapter and at least one ArmorPoint Digital Output, Digital Input, Analog, AC and Relay product, or Specialty product must be selected. The ArmorPoint Distributed I/O can accomodate up to 63 modules per network node. The cable that connects the ArmorPoint Distributed I/O product to the ArmorStart Distributed Motor Controller is the Cat. No. 280A-EXT1. The Cat. No. 280A-EXT1 includes an ArmorPoint bus extension cable and a network terminating resistor.

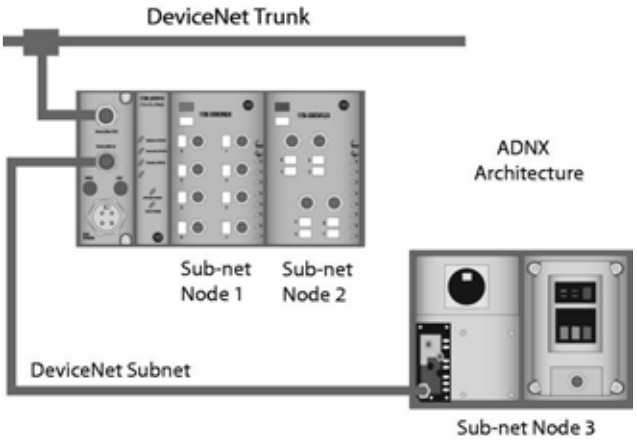
Note: Access to DeviceLogix programming is available with RSNetworx for DeviceNet.



If an additional ArmorStart Distributed Motor Controller is to be connected, the Cat. No. 280A-EXTCABLE will be required. A maximum of two ArmorStart Distributed Motor Controllers can be connected to the Bulletin 1738 Distributed I/O.

I/O Expansion with DeviceNet

If the I/O capability of the Bulletin 280/281D ArmorStart Distributed Motor Controller needs to be expanded beyond the standard four inputs and two outputs, the ArmorStart Distributed Motor Controller with the DeviceNet communication protocol can be configured to the ADNX Architecture, in which the ArmorStart is part of the DeviceNet subnet, using the Cat. No. 1738-ADNX ArmorPoint Distributed I/O product.



Bulletin 1738 ArmorPoint Distributed I/O Products

Digital Output Products

Description		Cat. No.
	24V DC, eight source output with eight M12 connectors	1738-OB8EM12
	24V DC, eight source output with eight M8 connectors	1738-OB8EM8
	24V DC, two source output, 2 A prot. with two M12 connectors	1738-OB2EPM12
	24V DC, four sink output with four M12 connectors	1738-OV4EM12

Digital Input Products

Description		Cat. No.
	24V DC, eight sink input with four M12 connectors, two points per connector	1738-IB8M12
	24V DC, eight sink input with eight M8 connectors	1738-IB8M8
	24V DC, eight sink input with one M23 connector	1738-IB8M23

Analog Products

Description		Cat. No.
	24V DC analog current input with two M12 connectors	1738-IE2CM12
	24V DC analog voltage input with two M12 connectors	1738-IE2VM12
	24V DC analog current output with two M12 connectors	1738-OE2CM12
	24V DC analog voltage output with two M12 connectors	1738-OE2VM12
	24V DC, two thermocouple input	1738-IT2IM12
	24V DC, two RTD input	1738-IR2M12

Power Supply Products

Description		Cat. No.
	ArmorPoint I/O Field Potential Distributor Module	1738-FPD
	24V DC Expansion Power Supply	1738-EP24DC

AC and Relay Products

Description		Cat. No.
	24V DC Coil, N.O. DPST relay with two M12 connectors	1738-OW4M12
	24V DC Coil, N.O. DPST relay with two AC M12 connectors	1738-OW4M12AC
	120V AC, two input with two AC 4-pin M12 connectors	1738-IA2M12AC4
	120V AC, two input with two AC 3-pin M12 connectors	1738-IA2M12AC3
	120/230V AC, two output with two AC 3-pin M12 connectors	1738-OA2M12AC3

Specialty Products

Description		Cat. No.
	ArmorPoint I/O RS-232 ASCII Serial Interface Module	1738-232ASCM12
	ArmorPoint I/O RS-485 ASCII Serial Interface Module	1738-485ASCM12
	24V DC Very High Speed Counter Module	1738-VHSC24M23
	ArmorPoint 5V Encoder/Counter Module	1738-IJM23
	ArmorPoint Synchronous Serial Interface Module with Absolute Encoder	1738-SSIM23

Adapter Products

Description		Cat. No.
	ArmorPoint DeviceNet Adapter Module, Drop or Pass-through, with male and female M12 connectors	1738-ADN12
	ArmorPoint DeviceNet Adapter Module, Drop only, with male M18 connector	1738-ADN18
	ArmorPoint DeviceNet Adapter Module, Drop or Pass-through, with male and female M18 connectors	1738-ADN18P
	ArmorPoint DeviceNet 24V DC Adapter Module with subnet expansion	1738-ADNX
	ArmorPoint Redundant ControlNet Adapter Module	1738-ACNR
	ArmorPoint Ethernet/IP 10/100 Mbps Adapter Module	1738-AENT
	ArmorPoint I/O 2-Port EtherNet/IP Adapter (star, tree, linear, or ring topology)⋆	1738-AENTR

⋆ Requires a 24V DC expansion power unit (cat. no. 1738-EP24DC) when two ArmorStarts are connected to point bus.