DX2 Series
Industrial Plug-in Relay



- Industry standard footprint, now with terminal
- Blades with no holes for better mounting in sockets
- Integral LED (Red for AC, Green for DC coils)
- Locking test lever with press feature (Blue for DC, Red for AC coils)
- Welded (not soldered) coil connections for greater
- reliability

E325835

RoHS Compliant

Contacts

Contact arrangement		DPDT (2C/O)
Contact material		AgNi(90/10)
Max. switching voltage		277VAC, 30VDC
Min. breaking capacity		0.3W
Rated load (resistive - cos φ=1)	AC1	DPDT:10A/240VAC
	DC1	DPDT:10A/28VDC
Initial resistance		≤ 100mΩ

Coil

Nominal voltage		DC 6...110V, AC 6...240V
Must release voltage		DC ≥0.1Un, AC ≥0.3Un
Operating range of supply voltage		See tables 1 & 2
Rated power consumption		DC 0.9W, AC 1.2VA

Insulation

Insulation resistance		≥100 MΩ at 500VDC, 50% RH
Dielectric strength	coil to contact	1500V_{rms}, 1min (50Hz), 1mA
	contact to contact	1000V_{rms}, 1min (50Hz), 1mA
	between adjacent contacts	1200V_{rms}, 1min (50Hz), 1mA

General Data

Operating time	typ.	≤15ms
Release time	typ.	≤10ms
Electrical life	ops.	1 x 10^5
Mechanical life	ops.	1 x 10^7

Environmental

Environmental protection		IP40
Ambient temperature	operating	-40 to +70°C
	storage	-55 to +70°C
Shock resistance		10G, 11ms
Vibration resistance		DA 1.0mm 10-55Hz
Dimensions	L x W x H	27 x 21 x 36.5mm
Weight	approx.	≤35g

Ordering Code

D X 2 - 2 0 1 2 - 2 3 - 1 0 1 2 - W T L

Series

Contact material
20: AgNi(90/10)

Contact arrangement
12: DPDT (2/C/O)

Environmental protection IP40
2: In cover

Mounting & terminations
3: For plug-in sockets only

Coil code:
See tables 1 & 2

Options
Blank: Without LED & test lever (to special order only)
WTL: LED indication of coil energization & test lever (standard)

Specifications are subject to change without notice. E&OE.

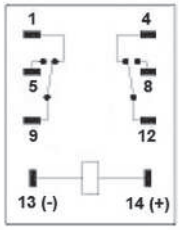
DC Coil Data (Green LED) — Table 1

Coil code	Nominal voltage (VDC)	Coil resistance Ω ±10%	Power consumption (mW)	Must operate voltage max. (VDC)	Must release voltage min. (VDC)	Max. allowable voltage (VDC)
1006	6	40	900	4.5	0.6	6.6
1012	12	160	900	9.0	1.2	13.2
1024	24	640	900	18.0	2.4	26.4
1048	48	2600	900	36.0	4.8	52.8
1110	110	13450	900	82.5	11.0	121.0

AC Coil Data at 50/60Hz (Red LED) — Table 2

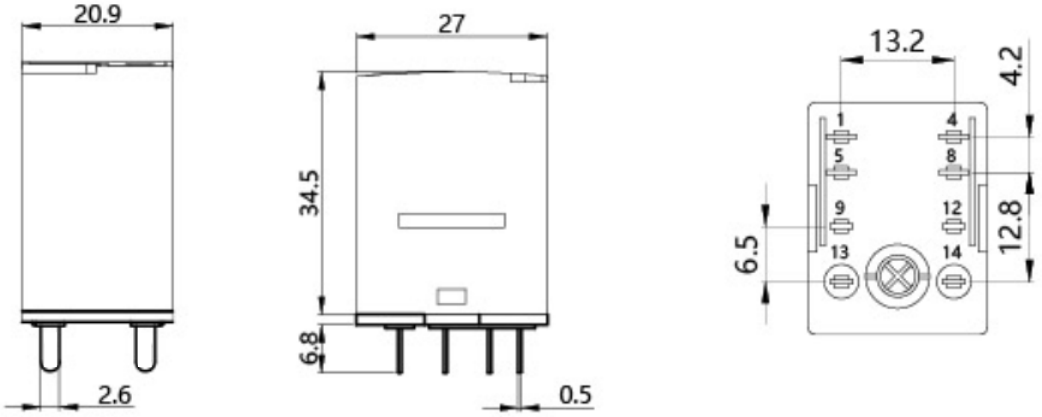
Coil code	Nominal voltage (VAC)	Rated coil current (mA) +15/-20%	Power consumption approx. (VA)	Must operate voltage max. (VAC)	Must release voltage min. (VAC)	Max. allowable voltage (VAC)
3006	6	10.5	1.2	4.8	1.8	6.6
3012	12	42	1.2	9.6	3.6	13.2
3024	24	168	1.2	19.2	7.2	26.4
3048	48	672	1.2	38.4	14.4	52.8
3110	110	3530	1.2	88.0	33.0	121.0
3120	120	4200	1.2	96.0	36.0	132.0
3230	230	15430	1.2	176.0	66.0	242.0

Wiring Diagram — Fig. 1

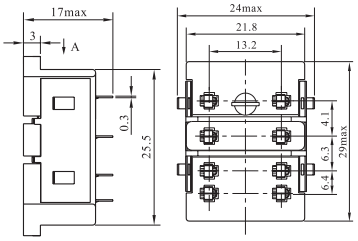
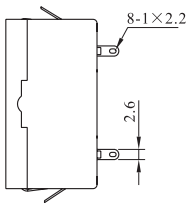
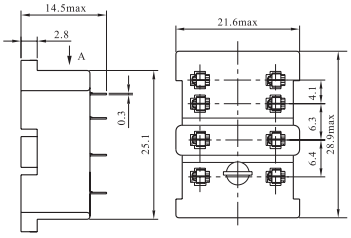
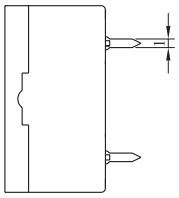
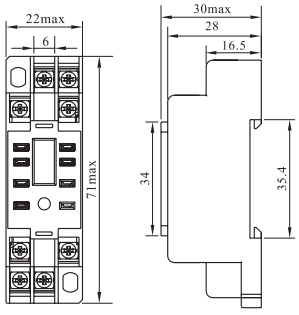
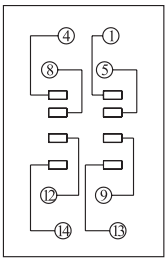
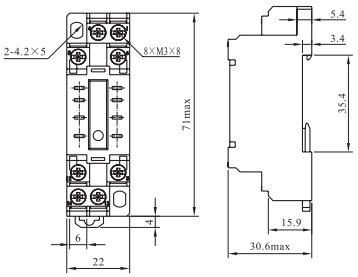
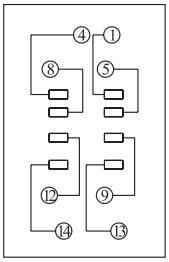
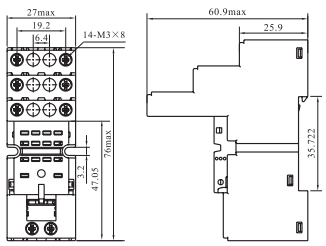
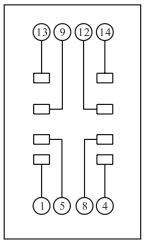


Bottom View

Overall Dimensions mm — Fig. 2



Specifications are subject to change without notice. E&OE.

Sockets for the DX2 relay	Parameters	Outline Drawing	Wiring Diagram
 **D18F-2Z-A1**	Rated voltage: 250VAC Rated current: 7A Insulation voltage: ≥ 3KV Socket material: PBT (V1/V0) Contacts spring material: QSn6.5-0.1 Metal retaining clip (page 7): JH-001RC Module: No		
 **D18F-2Z-A2**	Rated voltage: 250VAC Rated current: 5A Insulation voltage: ≥ 3KV Socket material: PA66+GF (V1/V0) Contacts spring material: QSn6.5-0.1 Metal retaining clip (page 7): JH-001RC Module: No		
 **D18F-2Z-C1**	Rated voltage: 250VAC Rated current: 7A Insulation voltage: ≥ 3KV Socket material: PA46-S250F6 (V1/V0) Contacts spring material: QSn6.5-0.1 Metal retaining clip (page 7): JH-006RC Module: No		
 **D18F-2Z-C2**	Rated voltage: 250VAC Rated current: 7A Insulation voltage: ≥ 3KV Socket material: PA66+GF (V1/V0) Contacts spring material: QSn6.5-0.1 Metal retaining clip (page 7): JH-006RC Module: No		
 **D18F-2Z-C3**	Rated voltage: 300VAC Rated current: 10A Insulation voltage: ≥ 3KV Socket material: PA66+GF (V1/V0) Contacts spring material: QSn6.5-0.1 Plastic ejector clip (page 7): JH-36PS-A Metal retaining clip (page 7): JH-36MS-B Module: No		

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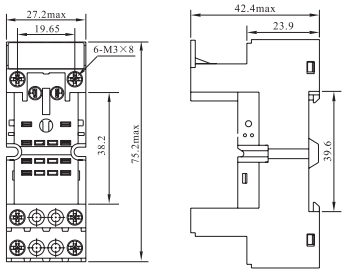
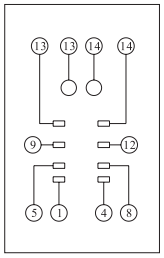
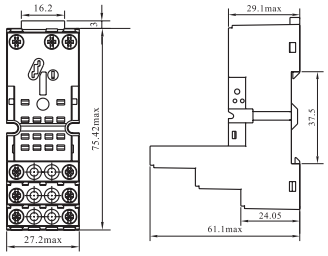
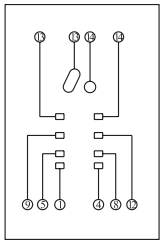
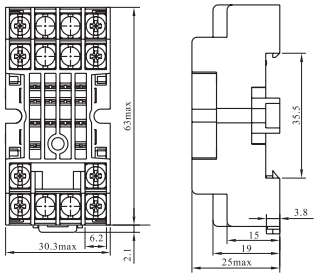
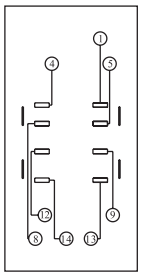
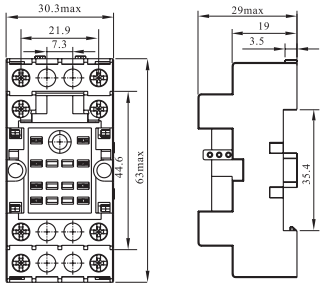
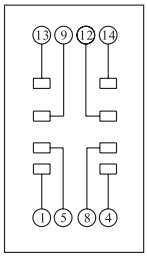
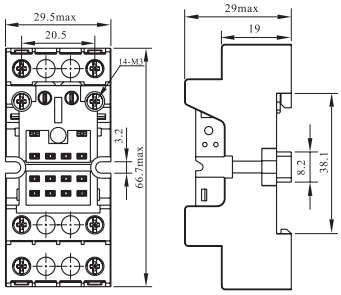
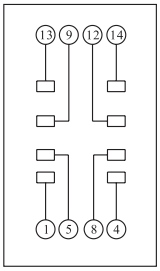
Sockets for the DX2 relay	Parameters	Outline Drawing	Wiring Diagram
 **D18F-2Z-C4**	Rated voltage: 300VAC Rated current: 10A Insulation voltage: ≥ 3KV Socket material: PA66+GF (V1/V0) Contacts spring material: QSn6.5-0.1 Plastic ejector clip (page 7): JH-36PS-A Metal retaining clip (page 7): JH-36MS-B Module: DM***-BK (pages 5-7)		
 **D18F-2Z-C5**	Rated voltage: 300VAC Rated current: 10A Insulation voltage: ≥ 3KV Socket material: PA66+GF (V1/V0) Contacts spring material: QSn6.5-0.1 Plastic ejector clip (page 7): JH-36PS-A Metal retaining clip (page 7): JH-36MS-B Module: DM***-BK (pages 5-7)		
 **D18F-2Z-C6**	Rated voltage: 250VAC Rated current: 5A Insulation voltage: ≥ 3KV Socket material: PA66+GF (V1/V0) Contacts spring material: QSn6.5-0.1 Metal retaining clip (page 7): JH-505RC Module: No		
 **D18F-2Z-C7**	Rated voltage: 250VAC Rated current: 5A Insulation voltage: ≥ 3KV Socket material: PA66+GF (V1/V0) Contacts spring material: QSn6.5-0.1 Metal retaining clip (page 7): JH-36MS-B Module: No		
 **D18F-2Z-C8**	Rated voltage: 250VAC Rated current: 5A Insulation voltage: ≥ 3KV Socket material: PA66+GF (V1/V0) Contacts spring material: QSn6.5-0.1 Plastic ejector clip (page 7): JH-36PS-A Metal retaining clip (page 7): JH-36MS-B Module: DM***-BK (pages 5-7)		

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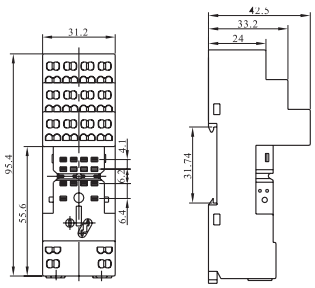
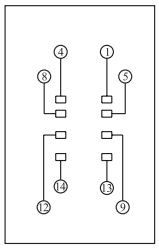
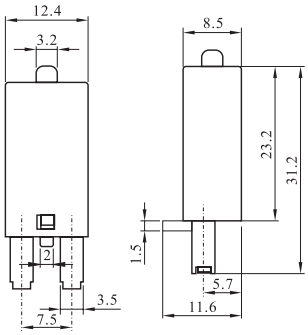
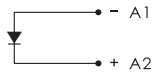
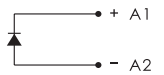
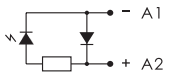
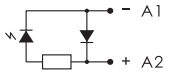
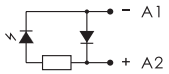
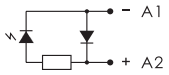
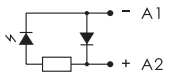
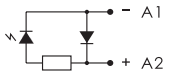
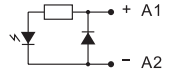
Sockets for the DX2 relay	Parameters	Outline Drawing	Wiring Diagram
 D18F-2Z-C9	Rated voltage: 300VAC Rated current: 10A Insulation voltage: ≥ 3KV Socket material: PA66+GF (V1/V0) Contacts spring material: QSn6.5-0.1 Plastic ejector clip (page 7): JH-36PS-A Metal retaining clip (page 7): JH-36MS-B Module: DM***-BK (pages 5-7)		

Modules for Durakool Sockets - Round Pin Plug-in





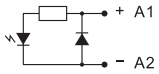
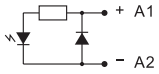
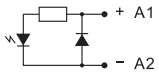
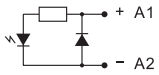
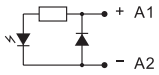
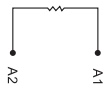
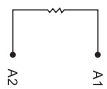
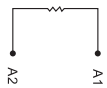
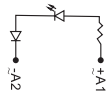
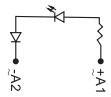
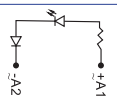
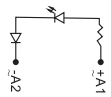
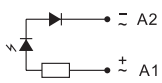
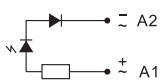
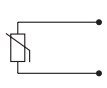
Notes:
Durakool modules for sockets have a round LED and square shoulders.

Part No	Socket Types	Circuit	Description
DM21P-BK	D14F Series -C2, C3, C5, C9; D18F Series -C4, C5, C8, C9		Diode A1-
DM21N-BK	D14F Series -C2, C3, C5, C9; D18F Series -C4, C5, C8, C9		Diode A1+
DM31R-BK	D14F Series -C2, C3, C5, C9; D18F Series -C4, C5, C8, C9		Red LED with diode, 6 - 24VDC, A1-
DM31G-BK	D14F Series -C2, C3, C5, C9; D18F Series -C4, C5, C8, C9		Green LED with diode, 6 - 24VDC, A1-
DM32R-BK	D14F Series -C2, C3, C5, C9; D18F Series -C4, C5, C8, C9		Red LED with diode, 24 - 60VDC, A1-
DM32G-BK	D14F Series -C2, C3, C5, C9; D18F Series -C4, C5, C8, C9		Green LED with diode, 24 - 60VDC, A1-
DM33R-BK	D14F Series -C2, C3, C5, C9; D18F Series -C4, C5, C8, C9		Red LED with diode, 110 - 230VDC, A1-
DM33G-BK	D14F Series -C2, C3, C5, C9; D18F Series -C4, C5, C8, C9		Green LED with diode, 110 - 230VDC, A1-
DM41R-BK	D14F Series -C2, C3, C5, C9; D18F Series -C4, C5, C8, C9		Red LED with diode, 6 - 24VDC, A1+

All accessories are upon request only.

Specifications are subject to change without notice. E&OE.

Modules for Durakool Sockets - Round Pin Plug-in

Part No	Socket Types	Circuit	Description
DM41G-BK	D14F Series -C2, C3, C5, C9; D18F Series -C4, C5, C8, C9		Green LED with diode, 6 - 24VDC, A1+
DM42R-BK	D14F Series -C2, C3, C5, C9; D18F Series -C4, C5, C8, C9		Red LED with diode, 24 - 60VDC, A1+
DM42G-BK	D14F Series -C2, C3, C5, C9; D18F Series -C4, C5, C8, C9		Green LED with diode, 24 - 60VDC, A1+
DM43R-BK	D14F Series -C2, C3, C5, C9; D18F Series -C4, C5, C8, C9		Red LED with diode, 110 - 230VDC, A1+
DM43G-BK	D14F Series -C2, C3, C5, C9; D18F Series -C4, C5, C8, C9		Green LED with diode, 110 - 230VDC, A1+
DM51-BK	D14F Series -C2, C3, C5, C9; D18F Series -C4, C5, C8, C9		RC Network, 6 to 24V
DM52-BK	D14F Series -C2, C3, C5, C9; D18F Series -C4, C5, C8, C9		RC Network, 24V to 60V
DM53-BK	D14F Series -C2, C3, C5, C9; D18F Series -C4, C5, C8, C9		RC Network, 110 to 230V
DM61R-BK	D14F Series -C2, C3, C5, C9; D18F Series -C4, C5, C8, C9		Red LED, 6 - 24VAC/DC
DM61G-BK	D14F Series -C2, C3, C5, C9; D18F Series -C4, C5, C8, C9		Green LED, 6 - 24VAC/DC
DM62R-BK	D14F Series -C2, C3, C5, C9; D18F Series -C4, C5, C8, C9		Red LED, 24 - 60VAC/DC
DM62G-BK	D14F Series -C2, C3, C5, C9; D18F Series -C4, C5, C8, C9		Green LED, 24 - 60VAC/DC
DM63R-BK	D14F Series -C2, C3, C5, C9; D18F Series -C4, C5, C8, C9		Red LED, 110 - 230VAC/DC
DM63G-BK	D14F Series -C2, C3, C5, C9; D18F Series -C4, C5, C8, C9		Green LED, 110 - 230VAC/DC
DM71-BK	D14F Series -C2, C3, C5, C9; D18F Series -C4, C5, C8, C9		Varistor 24VAC

All accessories are upon request only.

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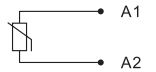
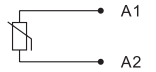
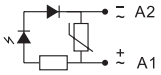
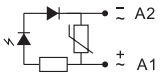
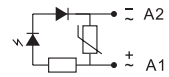
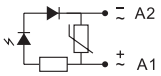
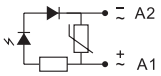
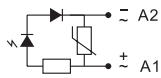
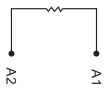
Modules for Durakool Sockets - Round Pin Plug-in

Part No	Socket Types	Circuit	Description
DM72-BK	D14F Series -C2, C3, C5, C9; D18F Series -C4, C5, C8, C9		Varistor 115VAC
DM73-BK	D14F Series -C2, C3, C5, C9; D18F Series -C4, C5, C8, C9		Varistor 230VAC
DM91R-BK	D14F Series -C2, C3, C5, C9; D18F Series -C4, C5, C8, C9		Red LED with varistor, 6 - 24VAC/DC
DM91G-BK	D14F Series -C2, C3, C5, C9; D18F Series -C4, C5, C8, C9		Green LED with varistor, 6 - 24VAC/DC
DM92R-BK	D14F Series -C2, C3, C5, C9; D18F Series -C4, C5, C8, C9		Red LED with varistor, 24 - 60VAC/DC
DM92G-BK	D14F Series -C2, C3, C5, C9; D18F Series -C4, C5, C8, C9		Green LED with varistor, 24 - 60VAC/DC
DM93R-BK	D14F Series -C2, C3, C5, C9; D18F Series -C4, C5, C8, C9		Red LED with varistor, 110 - 230VAC/DC
DM93G-BK	D14F Series -C2, C3, C5, C9; D18F Series -C4, C5, C8, C9		Green LED with varistor, 110 - 230VAC/DC
DM103-BK	D14F Series -C2, C3, C5, C9; D18F Series -C4, C5, C8, C9		Resistor 110 - 230VAC

Retaining Springs and Ejector Clips for Durakool Sockets



Matching Socket(s):
D18F-2Z-A1/A2

JH-001RC



Matching Socket(s):
D18F-2Z-C1/C2

JH-006RC



Matching Socket(s):
D18F-2Z-C4/C5/ C7/C8/C9

JH-36MS-B



Matching Socket(s):
D18F-2Z-C3/C4/ C5/C8/C9

JH-36PS-A



Matching Socket(s):
D18F-2Z-C6

JH-505RC

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