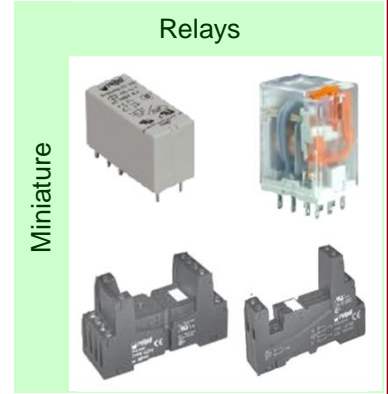
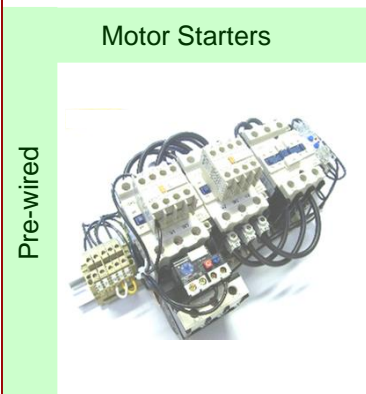


Specialist Industrial Control Products  
 Quality Products - Value for Money - Service



# Control Gear Catalogue



Application Areas



Air Conditioning

Compressors

Conveyors



Process Machinery



Pumps & Fans

Refrigeration



and many more ã



## Company Information

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QVS Industrial Controls Ltd. is primarily involved with the supply of control gear and associated products for the industrial and commercial markets.

Our own brand label **ICG** products represent the best value for money motor control products in the UK market place.

Work with us and see your business become more competitive and more profitable, thus allowing you to win more business against your competition and strengthen your long-term business outlook.

We look forward to working with you.

Pricing: Special net price list available on request

Minimum Order: N/A

Delivery: Next Day on all stocked products

Carriage: Paid on all orders over £180.00 (ex. vat.)

### Contents:

Contactors (AC & DC)	2,3
Overload Relays	4
Accessories	4,5
Starters . DOL, Star/Delta, Reversing	6
LEDs, (BA9, 16mm, 22mm)	7-10
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# 3-Pole Contactors

For motor control, 12 to 630 A (AC3)

For distribution circuits, 25 to 1000 A (AC1)

Ratings @ 400VAC			Description	Part No.
AC1	AC3			
Amps	Amps	kW		
25	9	4	3 main poles + 1 NC aux	C12-01*
25	12	5.5	3 main poles + 1 NO aux	C12-10*
25	12	5.5	3 main poles + 1 NC aux	C12-01*
32	18	7.5	3 main poles + 1 NO aux	C18-10*
32	18	7.5	3 main poles + 1 NC aux	C18-01*
40	25	11	3 main poles + 1 NO aux	C25-10*
40	25	11	3 main poles + 1 NC aux	C25-01*
50	32	15	3 main poles + 1 NO aux	C32-10*
50	32	15	3 main poles + 1 NC aux	C32-01*
60	40	18.5	3 main poles + 1 NO + 1 NC aux	C65-11*
80	50	22	3 main poles + 1 NO + 1 NC aux	C65-11*
80	65	30	3 main poles + 1 NO + 1 NC aux	C65-11*
125	80	37	3 main poles + 1 NO + 1 NC aux	C95-11*
125	95	45	3 main poles + 1 NO + 1 NC aux	C95-11*
200	115	55	3 main poles, including coil	CF-115*
250	150	75	3 main poles, including coil	CF-150*
275	185	90	3 main poles, including coil	CF-185*
315	225	110	3 main poles, including coil	CF-225*
350	265	132	3 main poles, including coil	CF-265*
400	330	160	3 main poles, including coil	CF-330*
500	400	200	3 main poles, including coil	CF-400*
700	500	250	3 main poles, including coil	CF-500*
1000	630	335	3 main poles, including coil	CF-630*
1600	780	400	3 main poles, including coil	CF-780*



C18-10



C65-11



CF-150

Note: All kW ratings calculated at 400vac.

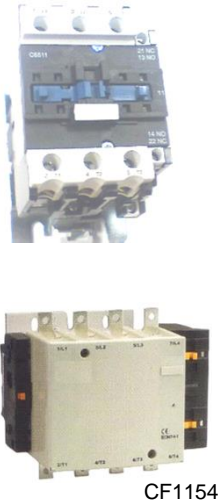
Note: Please add voltage code \* to complete contactor reference no.  
e.g. C25-10P7 = 11kW, 3 Pole +1n/o aux., 230vac coil.

DC Coils	Coil Selector	AC Coils				
24	Voltage	24	48	110	230	415
BD	Code	B7	E7	F7	P7	N7



# 4-Pole Contactors

For motor control, 12 to 630 A (AC3)  
 For distribution circuits, 25 to 1000 A (AC1)



Ratings @ 400VAC			Description	Part No.
AC1 Amps	AC3 Amps    kW			
40	25	11	4 main poles, including coil	C25-04*
60	40	18.5	4 main poles, including coil	C40-04*
125	80	37	4 main poles, including coil	C80-04*
200	115	55	4 main poles, including coil	CF-1154*
250	150	75	4 main poles, including coil	CF-1504*
275	185	90	4 main poles, including coil	CF-1854*
315	225	110	4 main poles, including coil	CF-2254*
350	265	132	4 main poles, including coil	CF-2654*
400	330	160	4 main poles, including coil	CF-3304*
500	400	200	4 main poles, including coil	CF-4004*
700	500	250	4 main poles, including coil	CF-5004*
1000	630	335	4 main poles, including coil	CF-6304*

Note: All kW ratings calculated at 400vac.

Standard control circuit voltages					
50/60Hz	24	48	110	230	415
CODE	B7	E7	F7	P7	N7

Note: Please add voltage code \* to complete contactor reference no.  
 e.g. C25-04P7 = 11kW, 4 Pole, N/O, 230vac coil.



## Modular Contactors - 2 & 4 Pole

For motor control, up to 15kW (AC3)  
 For distribution circuits, up to 63 A (Ith)

Ith (A)	Rating AC1 (A)		Power AC3 (kW)		Description	Part No.
	230vac	400vac	230vac	400vac		
25	9	16	2.2	4	Modular Contactor, 2 Pole, 2N/O, 230v coil	MODC25-02P7
25	9	16	2.2	4	Modular Contactor, 2 Pole, 1N/O 1N/C, 230v coil	MODC25-11P7
63	24	40	8.5	15	Modular Contactor, 2 Pole, 2N/O, 230v coil	MODC63-02P7
63	24	40	8.5	15	Modular Contactor, 4 Pole, 4N/O, 230v coil	MODC63-04P7



# Thermal Overloads

For motor protection, range from 0.1 to 93 A  
Compensated, with manual or automatic reset,  
Including trip indication, a.c. or d.c. supply



TO-13\*\*



TO-23\*\*

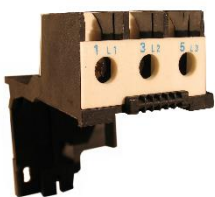


TO-33\*\*

For Contactors	Setting Range Amps	Description	Part No.	
	09** - 32**	0.10-0.16	Thermal Overload Relay	TO-1301
	09** - 32**	0.16-0.25	Thermal Overload Relay	TO-1302
	09** - 32**	0.25-0.4	Thermal Overload Relay	TO-1303
	09** - 32**	0.4-0.63	Thermal Overload Relay	TO-1304
	09** - 32**	0.63-1	Thermal Overload Relay	TO-1305
	09** - 32**	1-1.6	Thermal Overload Relay	TO-1306
	09** - 32**	1.6-2.5	Thermal Overload Relay	TO-1307
	09** - 32**	2.5-4	Thermal Overload Relay	TO-1308
	09** - 32**	4-6	Thermal Overload Relay	TO-1310
	09** - 32**	5.5-8	Thermal Overload Relay	TO-1312
	09** - 32**	7-10	Thermal Overload Relay	TO-1314
	12** - 32**	9-13	Thermal Overload Relay	TO-1316
	18** - 32**	12-18	Thermal Overload Relay	TO-1321
	18** . 32**	17-25	Thermal Overload Relay	TO-1322
	25** . 32**	23-32	Thermal Overload Relay	TO-2353
	40** . 80**	23-32	Thermal Overload Relay	TO-3353
	40** . 80**	30-40	Thermal Overload Relay	TO-3355
	50** . 80**	37-50	Thermal Overload Relay	TO-3357
	50** . 80**	48-65	Thermal Overload Relay	TO-3359
	80** - 95**	63-80	Thermal Overload Relay	TO-3363
	95**	80-93	Thermal Overload Relay	TO-3365

## Accessories

Terminal Blocks . Independent Mounting for TO-\*\*\*\*  
For clip-on mounting on 35mm rail or screw fixing



LA7-D\*\*\*\*

For Overloads	Description	Part No.
TO13**	Independent Mounting Block	LA7-D1064
TO23**	Independent Mounting Block	LA7-D2064
TO33**	Independent Mounting Block	LA7-D3064



## Accessories

Instantaneous auxiliary blocks  
For contactors C and CF



AX-11



AX-22



SMA-20

Position	N/O	N/C	Description	Part No.
Top		2	Auxiliary Contact Block	AX-02
Top		4	Auxiliary Contact Block	AX-04
Top	1	1	Auxiliary Contact Block	AX-11
Top	1	3	Auxiliary Contact Block	AX-13
Top	2		Auxiliary Contact Block	AX-20
Top	2	2	Auxiliary Contact Block	AX-22
Top	3	1	Auxiliary Contact Block	AX-31
Top	4		Auxiliary Contact Block	AX-40
Top	2	2	Mini Auxiliary Contact Block	MAX-22
Side	1	1	Auxiliary Contact Block	SMA-11
Side	2		Auxiliary Contact Block	SMA-20
Top	1		Start Switch Block	SDS096*

\* Not for use with CF range contactors

## Accessories

Mechanical Interlocks  
For contactors C & CF



MI-0932



MI-500

For Contactors	Description	Part No.
12**-32**	Mechanical Interlock	MI-0932
65**-95**	Mechanical Interlock	MI-4095
115-150	Mechanical Interlock (horizontal)	MI-150
185-225	Mechanical Interlock (horizontal)	MI-225
265-500	Mechanical Interlock (horizontal)	MI-500
630	Mechanical Interlock (horizontal)	MI-630

Full range of Coils available for all contactors . please call for details



# Enclosed D.O.L. Starter

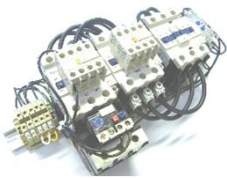
For motor control < 11kW  
Without overload relay . please order separately



Rating @ 400vac	Description	Part No.
7.5kW	DOL Starter, Enclosed, No thermal overload	EDS-183*
11kW	DOL Starter, Enclosed, No thermal overload	EDS-255*

# Star-Delta Starter (Pre-wired)

For motor control < 75kW  
Inclusive of electronic timer  
With overload relay



Rating @ 400vac	Description	Part No.
22kW	Star Delta Starter c/w electronic timer, Rail mounted	SD-C18*
30kW	Star Delta Starter c/w electronic timer, Rail mounted	SD-C32*
55kW	Star Delta Starter c/w electronic timer, Chassis mounted	SD-C65*
75kW	Star Delta Starter c/w electronic timer, Chassis mounted	SD-C95*
22kW	Star Delta Starter, Enclosed, c/w start/stop	ESD-C18*
30kW	Star Delta Starter, Enclosed, c/w start/stop	ESD-C32*
55kW	Star Delta Starter, Enclosed, c/w start/stop	ESD-C65*
75kW	Star Delta Starter, Enclosed, c/w start/stop	ESD-C95*



**Note:** Other ratings and additional options are available on request.  
e.g. Isolator  
Ammeter  
Hand/Auto Selector Switch

Call us to discuss your exact requirements we will always do our best to accommodate.

All ratings available < 315kW

Note: Please add voltage code \* to complete contactor reference no.

* Standard control circuit voltages					
50/60Hz	24	48	110	230	415
CODE	B7	E7	F7	P7	N7



	Type	Voltage	Description	Part No.
	BA9 Fitting	6	Blue LED BA9 fitting 6vac	BA9L-B-6
	BA9 Fitting	6	Green LED BA9 fitting 6vac	BA9L-G-6
	BA9 Fitting	6	Red LED BA9 fitting 6vac	BA9L-R-6
	BA9 Fitting	6	White LED BA9 fitting 6vac	BA9L-W-6
	BA9 Fitting	6	Yellow LED BA9 fitting 6vac	BA9L-Y-6
	BA9 Fitting	24	Blue LED BA9 fitting 24vac/dc	BA9L-B-24
	BA9 Fitting	24	Green LED BA9 fitting 24vac/dc	BA9L-G-24
	BA9 Fitting	24	Red LED BA9 fitting 24vac/dc	BA9L-R-24
	BA9 Fitting	24	White LED BA9 fitting 24vac/dc	BA9L-W-24
	BA9 Fitting	24	Yellow LED BA9 fitting 24vac/dc	BA9L-Y-24
	BA9 Fitting	130	Blue LED BA9 fitting 130vac	BA9L-B-130
	BA9 Fitting	130	Green LED BA9 fitting 130vac	BA9L-G-130
	BA9 Fitting	130	Red LED BA9 fitting 130vac	BA9L-R-130
	BA9 Fitting	130	White LED BA9 fitting 130vac	BA9L-W-130
	BA9 Fitting	130	Yellow LED BA9 fitting 130vac	BA9L-Y-130
	BA9 Fitting	230	Blue LED BA9 fitting 230vac	BA9L-B-230
	BA9 Fitting	230	Green LED BA9 fitting 230vac	BA9L-G-230
	BA9 Fitting	230	Red LED BA9 fitting 230vac	BA9L-R-230
	BA9 Fitting	230	White LED BA9 fitting 230vac	BA9L-W-230
	BA9 Fitting	230	Yellow LED BA9 fitting 230vac	BA9L-Y-230

## Filament Lamps

### BA9 Fitting



	Type	Voltage	Description	Part No.
	Filament	6	BA9S 6V 1.0 Watt	BA9S6V
	Filament	30	BA9S 30V 2.0 Watt	BA9S30V
	Filament	130	BA9S 130V 2.6 W	BA9S130V
	Filament	230	BA9S 230V 2.6 W	BA9S230V





# LEDs

## Standard

Colours: Blue, Green, Red, White, Yellow  
 Voltages: 24vac/dc, 110vac, 230vac

**AD56-New & Improved** direct connected LEDs. We have changed the reference no. of this product so we are able to differentiate this new **high quality LED** from similar products of inferior quality. The **AD56** includes higher quality LEDs so ensuring better light emitting properties, better colour matching and longer life.

### AD56LT - LED with Lamp Test facility...

The new **AD56LT** Lamp Test enables single or groups of indicator lamps to be tested from a single push button by the application of a test voltage without interrupting normal operation. With the **AD56LT** there is no need for diode arrays or relay logic to obtain this operational feature.



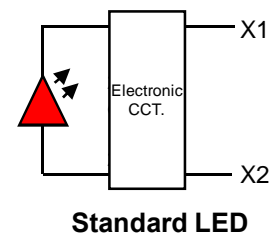
	Type	Voltage	Description	Part No.
	Standard	24	Blue LED Pilot Lamp 22mm 24VAC	AD56DS-B-24
	Standard	24	Pure Green LED Pilot Lamp 22mm 24VAC	AD56DS-PG-24
	Standard	24	Red LED Pilot Lamp 22mm 24VAC	AD56DS-R-24
	Standard	24	White LED Pilot Lamp 22mm 24VAC	AD56DS-W-24
	Standard	24	Yellow LED Pilot Lamp 22mm 24VAC	AD56DS-Y-24
	Standard	110	Blue LED Pilot Lamp 22mm 110VAC	AD56DS-B-110
	Standard	110	Pure Green LED Pilot Lamp 22mm 110VAC	AD56DS-PG-110
	Standard	110	Red LED Pilot Lamp 22mm 110VAC	AD56DS-R-110
	Standard	110	White LED Pilot Lamp 22mm 110VAC	AD56DS-W-110
	Standard	110	Yellow LED Pilot Lamp 22mm 110VAC	AD56DS-Y-110
	Standard	230	Blue LED Pilot Lamp 22mm 230VAC	AD56DS-B-230
	Standard	230	Pure Green LED Pilot Lamp 22mm 230VAC	AD56DS-PG-230
	Standard	230	Red LED Pilot Lamp 22mm 230VAC	AD56DS-R-230
	Standard	230	White LED Pilot Lamp 22mm 230VAC	AD56DS-W-230
	Standard	230	Yellow LED Pilot Lamp 22mm 230VAC	AD56DS-Y-230
	Accessory		Spanner for 22mm LEDs	SP-22

Note: Also available in 16mm dia.

## Technical Data:

- |                          |            |
|--------------------------|------------|
| 1. Expected Life         | 50,000h+   |
| 2. Intensity             | 240cd/m    |
| 3. Rated current         | ≤20mA      |
| 4. Insulation Resistance | 2MΩ        |
| 5. Voltage Tolerance     | +20%       |
| 6. Operating Temp (C).   | -25 to +55 |
| 7. IP Rating             | IP65       |
| 8. Body Diameter         | 22mm       |
| 9. Body Length           | 38mm       |
| 10. Lens Diameter        | 30mm       |

## Circuit Diagram:





# LEDs

## Lamp Test

Colours: Blue, Green, Red, White, Yellow  
 Voltages: 24vac, 24vdc, 110vac, 230vac

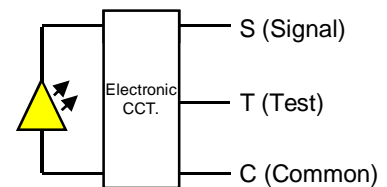


Type	Voltage	Description	Part No.
Lamp Test	24	Blue LED Lamp Test 22mm 24VAC	AD56LT-B-24
Lamp Test	24	Green LED Lamp Test 22mm 24VAC	AD56LT-G-24
Lamp Test	24	Red LED Lamp Test 22mm 24VAC	AD56LT-R-24
Lamp Test	24	White LED Lamp Test 22mm 24VAC	AD56LT-W-24
Lamp Test	24	Yellow LED Lamp Test 22mm 24VAC	AD56LT-Y-24
Lamp Test	24DC	Blue LED Pilot Lamp 22mm 24VDC	AD56LT-B-24DC
Lamp Test	24DC	Green LED Pilot Lamp 22mm 24VDC	AD56LT-G-24DC
Lamp Test	24DC	Red LED Pilot Lamp 22mm 24VDC	AD56LT-R-24DC
Lamp Test	24DC	White LED Pilot Lamp 22mm 24VDC	AD56LT-W-24DC
Lamp Test	24DC	Yellow LED Lamp Test 22mm 24VDC	AD56LT-Y-24DC
Lamp Test	110	Blue LED Lamp Test 22mm 110VAC	AD56LT-B-110
Lamp Test	110	Green LED Lamp Test 22mm 110VAC	AD56LT-G-110
Lamp Test	110	Red LED Lamp Test 22mm 110VAC	AD56LT-R-110
Lamp Test	110	White LED Lamp Test 22mm 110VAC	AD56LT-W-110
Lamp Test	110	Yellow LED Lamp Test 22mm 110VAC	AD56LT-Y-110
Lamp Test	230	Blue LED Lamp Test 22mm 230VAC	AD56LT-B-230
Lamp Test	230	Green LED Lamp Test 22mm 230VAC	AD56LT-G-230
Lamp Test	230	Red LED Lamp Test 22mm 230VAC	AD56LT-R-230
Lamp Test	230	White LED Lamp Test 22mm 230VAC	AD56LT-W-230
Lamp Test	230	Yellow LED Lamp Test 22mm 230VAC	AD56LT-Y-230
Accessory		Spanner for 22mm LEDs	SP-22

## Technical Data:

- |                          |            |
|--------------------------|------------|
| 1. Expected Life         | 50,000h+   |
| 2. Intensity             | 240cd/m    |
| 3. Rated current         | ≤20mA      |
| 4. Insulation Resistance | 2MΩ        |
| 5. Voltage Tolerance     | +20%       |
| 6. Operating Temp (C).   | -25 to +55 |
| 7. IP Rating             | IP65       |
| 8. Body Diameter         | 22mm       |
| 9. Body Length           | 50mm       |
| 10. Lens Diameter        | 30mm       |

## Circuit Diagram:



Lamp Test LED



# Special LEDs & Sounders

2 Colour  
Flashing & Flashing Sounder  
Sounder

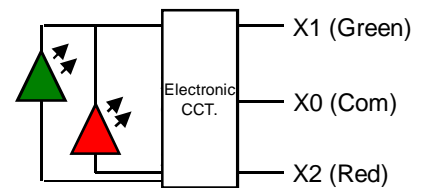


	Type	Voltage	Description	Part No.
	2 Colour	24	Dual colour LED 22mm 24VAC/DC	AD56-2C-RG24
	2 Colour	110	Dual Colour LED 22mm 110VAC	AD56-2C-RG110
	2 Colour	230	Dual colour LED 22mm 230VAC	AD56-2C-RG230
	Flashing	24	Green LED flash 22mm 24V	AD56-DF-G-24
	Flashing	110	Green LED flash 22mm 110V	AD56-DF-G-110
	Flashing	230	Green LED flash 22mm 230V	AD56-DF-G-230
	Flashing	24	Red LED flash 22mm 24V	AD56-DF-R-24
	Flashing	110	Red LED flash 22mm 110V	AD56-DF-R-110
	Flashing	230	Red LED flash 22mm 230V	AD56-DF-R-230
	Flashing Sounder	24	Sounder, Red LED flash 22mm 24V	AD56-SF-24
	Flashing Sounder	110	Sounder, Red LED flash 22mm 110V	AD56-SF-110
	Flashing Sounder	230	Sounder, Red LED flash 22mm 230V	AD56-SF-230
	Sounder	24	Sounder 22mm 24V	AD56-S-24
	Sounder	110	Sounder 22mm 110V	AD56-S-110
	Sounder	230	Sounder 22mm 230V	AD56-S-230

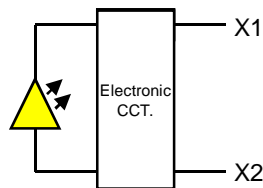
## Technical Data:

- |                          |            |
|--------------------------|------------|
| 1. Expected Life         | 50,000h+   |
| 2. Intensity             | 60-240cd/m |
| 3. Sound Intensity       | 105dB      |
| 4. Rated current         | ≤20mA      |
| 5. Insulation Resistance | 2MΩ        |
| 6. Voltage Tolerance     | +20%       |
| 7. Operating Temp (C).   | -25 to +55 |
| 8. IP Rating             | IP65       |
| 9. Body Diameter         | 22mm       |
| 10. Body Length          | 50mm       |
| 11. Lens Diameter        | 30mm       |

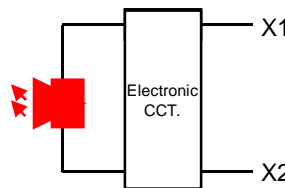
## Circuit Diagram:



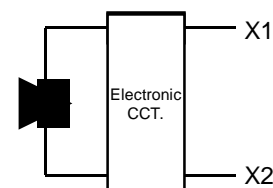
2 Colour LED



Flashing LED



Flashing Sounder



Sounder



# Push Buttons, Selectors & Lamps

## 22.5mm Pilot devices



Description	Part No.
Push Button - Booted - Black+Bracket	LAY5-B2
Push Button - Booted - Green+Bracket	LAY5-B3
Push Button - Booted - Red+Bracket	LAY5-B4
Middle Bracket - Fixing Collar	LAY5-COL
Flush Push Button - White+Bracket	LAY5-F1
Flush Push Button - Black+Bracket	LAY5-F2
Flush Push Button - Green+Bracket	LAY5-F3
Flush Push Button - Red+Bracket	LAY5-F4
Flush Push Button - Blue+Bracket	LAY5-F6
Flush Push Button - Yellow+Bracket	LAY5-F8
Key Switch 2 Pos Stayput Key Removable in Both+Bracket	LAY5-K2PB
Key Switch 2 Pos Stayput Key Rem. Left Hand Only+Bracket	LAY5-K2PO
Key Switch 455 2 Pos SprRtn R/L+Bracket	LAY5-K2POSR
Key Switch 3 Position Stayput - All Positions+Bracket	LAY5-K3PA
Key Switch 455 3 Pos Stay L & R Hand+Bracket	LAY5-K3PB
Key Switch 455 3 Pos Stay - Centre Only+Bracket	LAY5-K3PC
Key Switch 455 3 pos Spring Return Cen+Bracket	LAY5-K3PSR
40mm Mushroom Button Spr Rtn Black	LAY5-M2
Black mushroom head 40mm twist to release	LAY5-ML2
40mm Mushroom Head (Turn to Release)+Bracket	LAY5-ML4
40mm Mushroom Head (Push-Pull to release)	LAY5-ML4-PP
60mm Mushroom Head Red (Turn to Release)+Bracket	LAY5-MLJ4
Mushroom Head 40mm (Key Release)+Bracket	LAY5-MLKB4
30mm Mushroom Stop Button+Bracket	LAY5-MLS4
Projecting Pushbutton - Red+Bracket	LAY5-P4
2 Position Selector Stayput+Bracket	LAY5-S2P
2 pos Spr Rtn fm Right+Bracket	LAY5-S2PSR
3 Position Selector Stayput+Bracket	LAY5-S3P
3 pos spring rtn to ctr+Bracket	LAY5-S3PSR
Selector Switch - 3 Pos. Spr Rtn Left to Centre	LAY5-S3PSRL
3 position selector spr rtn right to centre +Bracket	LAY5-S3PSRR
Illum.Selector Switch 2 Position-head only(Green)	LAY5-SL32P
Double Head P/B Proj Marked IO+Bracket	LAY5-DH3P4IO



# Push Buttons, Selectors & Lamps

## 22.5mm Pilot devices

<i>Description</i>	<i>Part No.</i>
White luminous push button Head Only	LAY5-LA1
Green luminous push button Head Only	LAY5-LA3
Red luminous push button Head Only	LAY5-LA4
Amber luminous push button Head Only	LAY5-LA5
Blue luminous push button Head Only	LAY5-LA6
Yellow luminous push button Head Only	LAY5-LA8
Pilot Light Holder up to 400v + Bracket	LAY5-LHB
Pilot Light Holder with Resistor 230V + Bracket	LAY5-LHBR230V
Legend Plate - 3 Position off/on/start	LAY5-LP03
START Legend Plate 30 x 40 mm	LAY5-LP1
Legend Plate "Reset"	LAY5-LP13
Emergency Stop Legend Plate 60mm Diameter	LAY5-LP15
STOP Legend Plate 30 x 40 mm	LAY5-LP2
STOP Legend Plate 30 x 40 mm BLACK/WHITE	LAY5-LP2B
EMERGENCY STOP Legend Plate 30 x 40 mm	LAY5-LP2ES
Legend Plate: Forward	LAY5-LP3
Legend Plate: Reverse	LAY5-LP4
Legend Plate "UP"	LAY5-LP5
Legend Plate "Down"	LAY5-LP6
Legend Plate "Man - Auto"	LAY5-LP-MA
Flush Push Button - White	LAY5-PF1
Flush Push Button Black	LAY5-PF2
Flush Push Button - Green	LAY5-PF3
Flush Push Button - Red	LAY5-PF4
Flush Push Button - Blue	LAY5-PF6
Flush Push Button - Yellow	LAY5-PF8
Key Switch 2 Pos Stayput Key out = both	LAY5-PK2PB
Key Switch 2 Pos Stayput Key Rem. Left Hand Only	LAY5-PK2PO
Key Switch 455 2 Pos Spring Return Right to Left	LAY5-PK2POSR
Key Switch 455 3 Position Stayput keyout=All Positions	LAY5-PK3PA
Key Switch 455 3 Pos Stay L & R Hand	LAY5-PK3PB
Key Switch 455 3 Pos Stayput key out=Centre Only	LAY5-PK3PC
Key Switch 455 3 pos Spring Return Cen	LAY5-PK3PSR
Key Switch 455 3 Pos SprRtn Left to Centre	LAY5-PK3PSRL
Key Switch 3 Pos Spring Ret Key Rem Cent/L	LAY5-PK3PSRR/CL
40mm Mushroom Head (Turn to Release), Plastic+Collar	LAY5-PML4
40mm Mushroom Head (Key to Release), Plastic+Collar	LAY5-PMLKB4
2 Position Selector Stayput	LAY5-PS2P
2 pos Spr Rtn fm Right	LAY5-PS2PSR
3 Position Selector Stayput	LAY5-PS3P
3 Position Spring Return To Centre	LAY5-PS3PSR
Illuminated flush pushbutton White head only	LAY5-PLA1
Illuminated flush pushbutton Green head only	LAY5-PLA3
Illuminated flush pushbutton Red head only	LAY5-PLA4
Illuminated flush pushbutton Amber head only	LAY5-PLA5
Illuminated flush pushbutton Blue head only	LAY5-PLA6
Illuminate PB Pilot Light Holder up to 400v	LAY5-PLH
Illuminated Push Button Holder with Resistor 230V	LAY5-PLH230
Tightening tool - plastic pilot devices	LAY5-PSP-22



# Miniature Circuit Breakers . 6kA

1 to 125 A  
1, 2, 3 Pole  
B, C, D Characteristics



1 Pole



2 Pole



3 Pole

Characteristic			Description	Part No.
B	C	D	MCB, 1 Pole	1J(*)(**)/1
		D	MCB, 2 Pole	2J(*)(**)/2
B	C	D	MCB, 3 Pole	3J(*)(**)/3
<b>Position</b>	<b>N/O</b>	<b>N/C</b>		
Side	1	1	Auxiliary Contact Block	J11

### Ratings (A):

1, 2, 4, 6, 10, 16, 20, 25, 32, 40, 50, 63, 80, 100, 125

Please note: 80, 100, 125 are available in 3 Pole, C & D characteristics only.

Please add your  
rating and  
characteristic

(\*)  
(\*\*)  
e.g.

Rating in Amps

Characteristic

1J6C/1 = 6A 'C' Characteristic, 1 Pole

3J10D/3 = 10A 'D' Characteristic, 3 Pole

## Modular Fuse Holders

1, 2, 3 Pole  
10 x 38mm  
Din Rail mounting



MFH32/1

Rating	Description	Part No.
32 Amp 10 x 38mm	Modular Fuse Holder 1 Pole	MFH32/1
	Modular Fuse Holder 2 Pole	MFH32/2
	Modular Fuse Holder 3 Pole	MFH32/3



# Residual Circuit Breakers

6A . 16A  
C Characteristic  
2 Pole

Characteristic	Tripping Current	Description	Part No.
B/C	30mA	RCBO, 2 Pole	RCBO-(*)C30



<b>Ratings (A):</b>	6, 10, 16
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Please add your rating	(*)	Rating in Amps
	e.g.	RCBO-6C30 = 6A 'C' Characteristic, 30mA Trip

# Residual Current Devices

40, 80 Amp  
2 Pole  
4 Pole



Tripping Current	Description	Part No.
30mA	RCD, 2 Pole, 40A	RCD-4030/2
300mA	RCD, 2 Pole, 40A	RCD-40300/2
30mA	RCD, 4 Pole, 40A	RCD-4030/4
300mA	RCD, 4 Pole, 40A	RCD-40300/4

Also available . RCD Time Delay . please call for information.

Tripping Current	Description	Part No.
30mA	RCD, 2 Pole, 80A	RCD-8030/2
300mA	RCD, 2 Pole, 80A	RCD-80300/2
30mA	RCD, 4 Pole, 80A	RCD-8030/4
300mA	RCD, 4 Pole, 80A	RCD-80300/4



# Motor Circuit Breakers

0.16 to 25 A  
 Front & Side mounted aux. contact blocks  
 Surface mounting double insulated enclosure



M10



AN11



ME2

Rated Power (AC3)			Description	Part No.
230vac	400vac	660vac		
kW	kW	kW		
			Manual Motor Starter 0.1-0.16A	M0.16
			Manual Motor Starter 0.16-0.25A	M0.25
			Manual Motor Starter 0.25-0.40A	M0.4
		0.37	Manual Motor Starter 0.40-0.63A	M0.63
		0.55	Manual Motor Starter 0.63-1.00A	M1
	0.37	1.1	Manual Motor Starter 1.00-1.60A	M1.6
0.37	0.75	1.5	Manual Motor Starter 1.6-2.5	M2.5
0.75	1.5	3	Manual Motor Starter 2.5-4.0A	M4
1.1	2.2	4	Manual Motor Starter 4.0-6.3A	M6.3
2.2	4	7.5	Manual Motor Starter 6-10A	M10
3	5.5	9	Manual Motor Starter 9-14A	M14
4	7.5	11	Manual Motor Starter 10-16A	M16
5.5	11	15	Manual Motor Starter 13-18A	M18
5.5	11	18.5	Manual Motor Starter 17-23A	M23
7.5	15	23	Manual Motor Starter 20-25A	M25
<b>Position</b>	<b>N/O</b>	<b>N/C</b>		
Side Mount	1	1	Auxiliary Contact Block	AN11
Front/Top	1	1	Auxiliary Contact Block	AE11
			Motor Starter Enclosure IP55	ME2

Thermal-magnetic motor circuit breakers have characteristics designed especially for the protection of motors.

The magnetic tripping threshold is in the order of 12/14 times the nominal rating.

It allows normal motor starting, with its associated high currents, and has a thermal characteristic modelled on the normal heating of a motor during running and overload conditions. Operation is by push button.



## Power Supplies



### PS5R Slim Line Series

These new PS5R Slim Line models give you all the power of a traditional power supply in only half the space.

Wide Power Range 30 . 240W

Universal Input: 85-264VAC/100-350VDC



### DR Series

A very reliable and proven product with an input range of 85-264vac. UL/CE Approved with a 3 Year Warranty.

The range inclusive of the new MDR is 20 . 480W

## Transformers



Multi voltage and single voltage options

High specification

Easy to install and with a DIN rail mounting option up to 150VA

Designed to EN 60 742



A comprehensive range of single phase stock transformers from 25VA to 7.5KVA.



### The Millennium 3 Essential & Smart ranges of logic controllers

is the easiest programmable module to use on the market. Easy to program and to implement, it enables the control and monitoring of machines and automation installations with up to 50 I/O. It is positioned right at the heart of the Crouzet Automation range.



### em4 nano-PLC

em4 is more than just a nano-PLC: it is a **leading edge device** supported by best-in-class tools that enables you to create and implement the **smartest automation applications**.

#### em4 local/Ethernet

The m4 for standalone use or local area network



#### em4 alert

Nano-PLC that can alert you via SMS and send you emails



#### Expansion modules

Expand your capability! Up to 46 I/Os with the same nano-PLC



#### Accessories

Accessories offer solutions to control your automation systems with the greatest ease of use





# Technical

## Motor Ratings

Motor rating			230 V			400 V			500 V		
kW	cos φ	η (%)	Rated motor current	Fuse		Rated motor current	Fuse		Rated motor current	Fuse	
			A	Starting direct	Y/Δ	A	Starting direct	Y/Δ	A	Starting direct	Y/Δ
0.06	0.7	58	0.37	2	–	0.21	2	–	0.17	2	–
0.09	0.7	60	0.54	2	–	0.31	2	–	0.25	2	–
0.12	0.7	60	0.72	4	2	0.41	2	–	0.33	2	–
0.18	0.7	62	1.04	4	2	0.6	2	–	0.48	2	–
0.25	0.7	62	1.4	4	2	0.8	4	2	0.7	2	–
0.37	0.72	66	2	6	4	1.1	4	2	0.9	2	2
0.55	0.75	69	2.7	10	4	1.5	4	2	1.2	4	2
0.75	0.79	74	3.2	10	4	1.9	6	4	1.5	4	2
1.1	0.81	74	4.6	10	6	2.6	6	4	2.1	6	4
1.5	0.81	74	6.3	16	10	3.6	6	4	2.9	6	4
2.2	0.81	78	8.7	20	10	5	10	6	4	10	4
3	0.82	80	11.5	25	16	6.6	16	10	5.3	16	6
4	0.82	83	14.8	32	16	8.5	20	10	6.8	16	10
5.5	0.82	86	19.6	32	25	11.3	25	16	9	20	16
7.5	0.82	87	26.4	50	32	15.2	32	16	12.1	25	16
11	0.84	87	38	80	40	21.7	40	25	17.4	32	20
15	0.84	88	51	100	63	29.3	63	32	23.4	50	25
18.5	0.84	88	63	125	80	36	63	40	28.9	50	32
22	0.84	92	71	125	80	41	80	50	33	63	32
30	0.85	92	96	200	100	55	100	63	44	80	50
37	0.86	92	117	200	125	68	125	80	54	100	63
45	0.86	93	141	250	160	81	160	100	65	125	80
55	0.86	93	173	250	200	99	200	125	79	160	80
75	0.86	94	233	315	250	134	200	160	107	200	125
90	0.86	94	279	400	315	161	250	200	129	200	160
110	0.86	94	342	500	400	196	315	200	157	250	160
132	0.87	95	401	630	500	231	400	250	184	250	200
160	0.87	95	486	630	630	279	400	315	224	315	250
200	0.87	95	607	800	630	349	500	400	279	400	315
250	0.87	95	–	–	–	437	630	500	349	500	400
315	0.87	96	–	–	–	544	800	630	436	630	500
400	0.88	96	–	–	–	683	1000	800	547	800	630
450	0.88	96	–	–	–	769	1000	800	615	800	630
500	0.88	97	–	–	–	–	–	–	–	–	–
560	0.88	97	–	–	–	–	–	–	–	–	–
630	0.88	97	–	–	–	–	–	–	–	–	–



## Terms & Conditions

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The products are sold by QVS Industrial Controls Ltd. (the seller) and delivered to any purchaser (the buyer) solely upon these terms.

1. The seller's products (the goods) sold and delivered by the seller to the buyer shall be sold and delivered only upon these terms. Any terms which conflict with these terms, which are contained in any document or put forward orally shall have no effect.

2. No employee of the seller has authority to enter into a contract for sale of the seller's products other than upon these terms.

3. No employee of the seller has the authority to vary or waive these terms.

4. Acceptance of the goods by the buyer shall occur at the time of loading onto a vehicle for transport at the seller's premises, and such acceptance constitutes acceptance (if not already the case) by the buyer of these terms of sale.

5. The seller agrees to deliver its products upon such terms and to such places as may be agreed between the seller and the buyer to the best of its abilities.

6. Any dates quoted for delivery of the goods are approximate only and the seller shall not be liable for any delay in the delivery of the goods howsoever caused. Time for delivery shall not be of the essence unless previously agreed by the seller in writing.

7. Risk in the goods shall pass to the buyer when they are loaded at the seller's premises onto a vehicle for transport.

8. The buyer shall bear the delivery charge as specified.

9. The seller is entitled to deliver goods by instalment and the buyer is bound to accept goods by instalment.

10. Retention of title. The ownership of the seller's products which are delivered to the buyer shall only be transferred to the buyer when all sums that are owing to the seller, on whatever grounds, have been paid. Until payments of all sums due, the buyer shall hold the goods as bailee for the seller and shall store the goods separately so as to be identifiable as the property of the seller.

11. The prices quoted are based upon the seller's costs of currency, shipping charges, etc. Should these costs increase between date of contract and date of delivery, the seller shall be entitled to increase the contract price to reflect such increase. If specifically requested, airfreight will be charged at cost.

12. Orders for any products bearing specific markings and/or labelling other than the seller's standard markings cannot be cancelled, as specific instructions for manufacture will be transmitted at order placement. The Buyer will commit to pay the total cost of any such order.

13. Payment is to be received within 30 days from the end of the month of date of invoice, being the day upon which any invoice is sent. The seller will not send any invoice until after the despatch of the goods, to which the invoice relates, from its premises.

14. Guarantee. Notice of defects in the condition or quality of the goods, shall be communicated in writing by the buyer to the seller, within 10 days of delivery. If the goods about which such notice is given are not of merchantable quality nor fit for any purpose made known to the seller or do not conform to sample or description, the seller will replace the goods free of charge and carriage paid. Where goods are returned under this guarantee, which do not contain any of the said defects, the buyer shall bear the extra packaging and re-delivery costs occasioned by the seller in returning the goods to the buyer. The seller's obligations arising under section 13, 14 and 15 of the Sale of Goods Act 1979 are excluded.

15. The seller shall not be liable to the buyer for any consequential loss or damage suffered by the buyer howsoever caused.

16. The law governing this contract is the law of England.



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