Application Engineering

TECHNICAL INFORMATION

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Application Engineering Europe

COPELAND™ EAZYCOOL ZX CONDENSING UNITS FOR A2L APPLICATIONS
XCM25D CONTROLLER PARAMETER LIST

Copeland™ EazyCool ZX Condensing Units for use with A2L refrigerants are equipped with an XCM25D controller from Dixell. The controller design allows the installer to start and operate the system with minimum effort in terms of controller adjustments. The most important controller settings are described in the application guidelines and most likely there is no need to change those settings.

In case of special applications additional parameters might have to be adjusted according to those particular needs. This document contains the full list of available parameters in the XCM25D. It is not a user's manual. For questions about how to handle the controller and/or description of functionality please refer to the dedicated documentation available at www.climate.emerson.com/en-gb.

Legend
L1 = Parameter in level 1 (without password)
L2 = Parameter in level 2 (with password = 3 2 1)
N.V. = Parameter not accessible

***NOTE:* When changing parameters C01 (Cin), C02 (CoU) and C05 (CPb) a reset of the controller (interruption of power supply) is required.**

Code	Description	Range	Factory setting	ZXMY	ZXDY
A01	Probe P1 configuration	Not used (0-NU) Suction pressure (0-5V) (1-SUP)	1 - Suction pressure (0-5V)	L2	L2
A02	Start of scaling for probe P1 (0-5V)	0-5V: -1.5 to P1E bar; -21 to P1E PSI	0	L2	L2
A03	End of scaling for probe P1 (0-5V)	0-5V: P1i to 99.9 bar; P1i to 999 PSI	15	L2	L2
A04	Probe P1 calibration	0-5V: -12.0 to 12.0 bar; -12.0 to12.0 PSI	0	L2	L2
A05	Probe P1 reading error delay (P1C = 0-5V)	0 to 255 min	5	L2	L2
A06	Probe P2 configuration	Not used (0-NU) Condensing temperature (NTC10K) (1-MCT) Condensing pressure (0-5V) (2-MCP)	2 - Condensing pressure (0-5V)	L2	L2
A07	Start of scaling for probe P2	0-5V: -1.5 to P2E bar; -21 to P2E PSI NTC10K: -40 to P2E °C	0	L2	L2

Code	Description	Range	Factory setting	ZXMY	ZXDY
A08	End of scaling for probe P2	0-5V: P2i to 99.9 bar; P2i to 999 PSI NTC10K: P2i to 110 °C	35	L2	L2
A09	Probe P2 calibration	0-5V: -12.0 to 12.0 bar; -12.0 to 12.0 PSI NTC10K: -12 to 12 °C	0	L2	L2
A10	Probe P2 reading error delay (P2C = 0-5V)	0 to 255 min	0	L2	L2
A11	Probe P3 configuration	Not used (0-NU) Discharge line temperature (1-DLT)	1 - Discharge line temperature	L2	L2
A12	Probe P3 calibration	-12 to 12 °C	0	L2	L2
A13	Probe P4 configuration	Not used (0-NU) Ambient temperature (NTC10K) (1-AMT) Thermostat temperature (NTC10K) (2-TMT) Vapour inlet temperature (NTC10K) (3-UIT) Vapour outlet temperature (NTC10K) (4-UOT) Evaporator temperature (NTC10K) (5-EPT) Liquid temperature (NTC10K) (6-LLT) Suction line temperature (7-SLT) Coil temperature (8-COT)	0 - Not used	L2	L2
A14	Probe P4 calibration	-12 to 12 °C	0	L2	L2
A15	Probe P5 configuration	Not used (0-NU) Ambient temperature (NTC10K) (1-AMT) Thermostat temperature (NTC10K) (2-TMT) Vapour inlet temperature (NTC10K) (3-UIT) Vapour outlet temperature (NTC10K) (4-UOT) Evaporator temperature (NTC10K) (5-EPT) Liquid temperature (NTC10K) (6-LLT) Suction line temperature (7-SLT) Coil temperature (8-COT)	0 - Not used	L2	L2
A16	Probe P5 calibration	-12 to 12 °C	0	L2	L2
A17	Probe P6 configuration	Not used (0-NU) Ambient temperature (NTC10K) (1-AMT) Thermostat temperature (NTC10K) (2-TMT) Vapour inlet temperature (NTC10K) (3-UIT) Vapour outlet temperature (NTC10K) (4-UOT) Evaporator temperature (NTC10K) (5-EPT) Liquid temperature (NTC10K) (6-LLT) Suction line temperature (7-SLT) Coil temperature (8-COT)	1 - Ambient temperature (NTC10K)	L2	L2

Code	Description	Range	Factory setting	ZXMY	ZXDY
A18	Probe P6 calibration	-12 to 12 °C	0	L2	L2
A19	Probe P7 configuration	Not used (0-NU) Ambient temperature (NTC10K) (1-AMT) Thermostat temperature (NTC10K) (2-TMT) Vapour inlet temperature (NTC10K) (3-UIT) Vapour outlet temperature (NTC10K) (4-UOT) Evaporator temperature (NTC10K) (5-EPT) Liquid temperature (NTC10K) (6-LLT) Suction line temperature (7-SLT) Coil temperature (8-COT)	0 - Not used	L2	L2
A20	Probe P7 calibration	-12 to 12 °C	0	L2	L2
A21	Delay before activating probe error	0 to 255 sec	0	L2	L2
B01	Measurement unit for pressure	Bar (0-BAR) - PSI (1-PSI) - KPA (2-TPA)	bar	L2	L2
B02	Measurement unit for temperature	°C (0-C)	°C	L2	L2
B03	Remote display visualization	P1 (0-P1) - P2 (1-P2) - P3 (2-P3) - P4 (3-P4) - P5 (4-P5) - P6 (5-P6) - P7 (6-P7) - Per (7-PER) - Aou (8-AOU)	P1	L2	L2
B04	Filter enabling for probe reading	No (0-NO) - Yes (1-YES)	1 - YES	N.V.	N.V.
B05	Coefficient for probe reading filter (0 = max,100 = disable)	0 to 100, mEd (101)	50	N.V.	N.V.
C01	Compressor cut-in pressure setpoint	CoU to US	2.7	L1	N.V.
C02	Compressor cut-out pressure setpoint	LS to Cin	1.1	L1	L2
C03	Minimum setpoint for suction pressure/temperature	P1i to US; -50.0 °C to US	0.8	L2	L2
C04	Maximum setpoint for suction pressure/temperature	LS to P1E; LS to 60.0 °C	5.1	L2	L2
C05	Compressor regulation probe selection	NU (0-NU) Suction pressure probe (1-SUP) Case temperature (2-CST) Suction pressure switch (3-dIS)	1 - Suction pressure probe	L2	L2
C06	EXV closing time before compressor off	0 to 999 sec	0	L2	L2
C07	Refrigerant selection for regulation	R454C R455A R454A	R454C	L1	L1

Code	Description	Range	Factory setting	ZXMY	ZXDY
C08	Setpoint offset	NU (0-NU) Small offset (1-SOF) Medium offset (2-MOF) Large offset (3-LOF) LAO (4-FOF)	0 - Not used	L2	L2
C09	Ambient temperature operation setpoint	-40 to 110 °C	-20	L2	L2
C10	Pressure/temperature operation for ambient differential	0.0 to 9.9 bar; 0.0 PSI to 99.9 PSI 0.0 to 25.5 °C	1	L2	L2
C11	Ambient temperature recover differential	0.1 to 25.5 °C	5	L2	L2
C12	Ambient temperature threshold for low ambient operation	-40 to 110 °C	-10	L2	L2
C13	Temperature/Pressure to end low ambient timer and resume normal operation	-40 to 110 °C -1.5 to 99.9 bar; -21 to 999 PSI	10	L2	L2
C14	Compressor minimum on time in low ambient operation	0 to 255 sec	10	L2	L2
C15	Pressure to end low ambient timer and shut off the compressor	-1.5 to 99.9 bar; -21.0 to 999 PSI	0.5	L2	L2
C16	Digital compressor setpoint	LS to US	3.3	N.V.	L1
C17	Proportional band for compressor regulation	0.1 to 9.9 bar; 0.1 to 99.9 PSI; 0.1 to 25.5 °C	2	N.V.	L1
C18	Band offset for compressor regulation	0 to 9.9 bar; 0 to 99.9 PSI; 0.0 to 25.5 °C	0	N.V.	L2
C19	Integral time	0 to 999 sec	250	L2	L2
C20	Start-up time: interval time with digital valve energized before regulation starts	0.0 to 10.0 sec	10	N.V.	L2
C21	Cycle time for digital compressor	10 to 40 sec	20	N.V.	L1
C22	Safety value for PI regulator (in case of probe error)	0 to 100 %	50	N.V.	L2
C23	Number of active compressor when probe error	0 (0) - 1 (1) - 2 (2)	0	N.V.	L2
C24	Minimum capacity for digital compressor	0 to PMA	20	N.V.	L1
C25	Maximum capacity for digital compressor	PMi to 100	100	N.V.	L1
C26	Time with DGS at PMA before starting another load	0 to 255 sec	0	N.V.	L2

Code	Description	Range	Factory setting	ZXMY	ZXDY
C27	Time with DGS at PMi before switching off another load	0 to 255 sec	0	N.V.	L2
C38	Compressor regulation control signal	Pressure (0-PRS) - Temperature (1-TMP)	0 - Pressure	L2	L2
D01	Output delay at start-up	0 to 255 sec	5	L2	L2
D02	Compressor on time with faulty probe	0 to 255 min	0	L2	L2
D03	Compressor off time with faulty probe	0 to 255 min	0	L2	L2
D04	Minimum time between two starts (same compressor)	0 to 15 min	4	L2	L2
D05	Delay between compressor switch-off and start-up (same compressor)	1 to 900 sec	120	L2	L2
D06	Delay between two different loads start-up	[0÷99.5] min, resolution 10 sec	10	N.V.	N.V.
D07	Delay between two different loads switch-off	[0÷99.5] min, resolution 10 sec	10	N.V.	N.V.
D08	Minimum time a stage stays switched on	[0÷99.5] min, resolution 10 sec	0	L2	L2
D09	Maximum time a stage stays switched on	[0.00÷24.00] hours, resolution 10 min	0	L2	L2
D10	don delay enabled also for the first request	No (0-NO) - Yes (1-YES)	0 - NO	N.V.	L2
D11	doF delay enable also for the first switching off	No (0-NO) - Yes (1-YES)	0 - NO	N.V.	L2
D12	Low suction pressure alarm delay	0 to 999 sec	0	L2	L2
D13	Low suction pressure error signal enabling	No (0-NO) - Yes (1-YES)	1 - YES	L2	L2
D14	Compressor minimum off time for high-pressure switch protection	0 to 15 min	5	L2	L2
D15	Number of high-pressure switch activations before compressor lockout	0 to 15	7	L2	L2
D16	Bump start enable	No (0-NO) - Yes (1-YES)	0 - NO	N.V.	N.V.
D17	Bump start ambient threshold	-40 to 110 °C	0	N.V.	N.V.
D18	Compressor stop time for next bump start	0 hour to 23 hours and 50 minutes	1 hour	N.V.	N.V.
D19	Compressor on time during bump function	1 to 15 sec	2	N.V.	N.V.
D20	Compressor off time during bump function	1 to 15 sec	15	N.V.	N.V.
D21	Number of cycles during bump start	1 to 15	3	N.V.	N.V.
D22	DLT alarm temperature to stop compressor	-40 to 180 °C	140	L2	L2

Code	Description	Range	Factory setting	ZXMY	ZXDY
D23	DLT alarm recover temperature to turn on compressor	-40 to 180 °C	90	L2	L2
D24	DLT alarm activation delay	0 to 255 sec	30	L2	L2
D25	Compressor minimum off time for DLT Alarm	0 to 255 min	5	L2	L2
D26	Number of DLT alarm activations before compressor lockout	0 to 15	10	L2	L2
D27	Time to ignore low DLT sensor error at start-up	0 to 255 min	5	L2	L2
D28	Compressor minimum off time for low-pressure switch protection	0 to 15 min	3	L2	L2
D29	Low-pressure alarm value	0 to 15 bar	0.5	L1	L1
D30	Cold start enable	Disable (0-NO) - Enable (1-YES)	0 - Disable	N.V.	N.V.
D31	DLT temperature threshold to trip during cold start	-40 to 180 °C	60	N.V.	N.V.
D32	Suction pressure threshold to trip during cold start	-1.5 to 99.9 bar	0.5	N.V.	N.V.
D33	Allowed number of cycles of DLT temperature trips during cold start	1 to 15	4	N.V.	N.V.
D34	Allowed number of cycles of low-pressure trips during cold start	1 to 15	4	N.V.	N.V.
D35	Compressor stop time during cold start	1 to 999 sec	180	N.V.	N.V.
E01	Condenser fan motor modulation type	Not used (0-NU) Fan cycling (1-CYC) Modulated fan (2-MOD)	2 - Modulated fan	L2	L2
E38	Fan setpoint modulation enabling	No (0-NO) - Yes (1-YES)	0 - NO	L2	L2
E39	Condenser temperature setpoint when fan setpoint modulation is disabled	-40 to 110 °C	27	L1	L1
E40	Minimum condenser temperature setpoint	-40 to 110 °C	10	L2	L2
E41	High ambient fan motor override enabled	No (0-NO) - Yes (1-YES)	1 - YES	L2	L2
E42	High ambient fan motor override differential	0.1 to 25.5 °C	5	L2	L2
E43	High DLT fan motor override enabled	No (0-NO) - Yes (1-YES)	1 - YES	L2	L2

Code	Description	Range	Factory setting	ZXMY	ZXDY
E44	High DLT fan motor override differential	-40 to 180 °C	120	L2	L2
E45	Minimum fan motor speed	0 to 100 %	40	N.V.	N.V.
E46	Regulation band of variable fan	0.1 to 25.5 °C	10	L1	L1
E47	Integration time for fan	0 to 999 sec	500	L2	L2
E48	Fan full speed duration at fan start-up	0 to 255 sec	0	L2	L2
E49	Fan minimum on time	0 to 255 sec	5	L2	L2
E50	Fan minimum off time	0 to 255 sec	10	L2	L2
E51	Fixed condenser fan setpoint	-40 to 110 °C	23	L2	L2
E52	Fan 1 differential	0.1 to 25.5 °C	7	L2	L2
E53	Fan 1 to fan 2 differential	0.1 to 25.5 °C	10	L2	L2
E54	Fan 2 differential	0.1 to 25.5 °C	7	L2	L2
E55	Fan control with ambient sensor - Min ambient	-40 to E56 °C	0	L2	L2
E56	Fan control with ambient sensor - Max ambient	E55 to 110 °C	20	L2	L2
E57	Fan speed control with ambient sensor	0 to 100 %	60	L2	L2
E58	Condenser temperature/pressure threshold for high alarm	-40 to 110 °C -1.5 to 99.9 bar; -21 to 999 PSI	27.8	L2	L2
E59	High condenser temperature alarm delay	0 to 255 min	0	L2	L2
E60	High condenser temperature alarm with compressor off	No (0-NO) - Yes (1-YES)	1 - YES	L2	L2
E61	Condenser temperature/pressure threshold for alarm recovery	-40 to E58 °C -1.5 to E58 bar; -21 to E58 PSI	23	L2	L2
F01	Liquid injection setpoint	-40 to 180 °C	130	L2	N.V.
F02	Max DLT temperature before full open injection	LIS to 180 °C	137	L2	N.V.
F03	Min DLT temperature before close injection	-40 to LIS °C	40	L2	N.V.
F04	Mid-coil limp-along for DLT failure - Mid-coil 1	LA2 to 110 °C	60	L2	N.V.
F05	Mid-coil limp-along for DLT failure - Mid-coil 2	LA3 to LA1	50	L2	N.V.
F06	Mid-coil limp-along for DLT failure - Mid-coil 3	LA4 to LA2	40	L2	N.V.

Code	Description	Range	Factory setting	ZXMY	ZXDY
F07	Mid-coil limp-along for DLT failure - Mid-coil 4	LA5 to LA3	30	L2	N.V.
F08	Mid-coil limp-along for DLT failure - Mid-coil 5	-40 to LA4 °C	20	L2	N.V.
F09	Mid-coil limp-along for DLT failure - Valve opening 1	LE2 to 100 %	100	L2	N.V.
F10	Mid-coil limp-along for DLT failure - Valve opening 2	LE3 to LE1 %	80	L2	N.V.
F11	Mid-coil limp-along for DLT failure - Valve opening 3	LE4 to LE2 %	60	L2	N.V.
F12	Mid-coil limp-along for DLT failure - Valve opening 4	LE5 to LE3 %	35	L2	N.V.
F13	Mid-coil limp-along for DLT failure - Valve opening 5	0 to LE4 %	15	L2	N.V.
F14	Ambient limp-along for DLT and mid-coil failure - Temperature 1	MA2 to 110 °C	30	L2	N.V.
F15	Ambient limp-along for DLT and mid-coil failure - Temperature 2	-40 to MA1 °C	20	L2	N.V.
F16	Ambient limp-along for DLT and mid-coil failure - Valve opening 1	ME2 to 100 %	80	L2	N.V.
F17	Ambient limp-along for DLT and mid-coil failure - Valve opening 2	0 to ME1 %	35	L2	N.V.
F18	EVI EXV initial opening – Ambient 1	EA2 to 110 °C	35	N.V.	N.V.
F19	EVI EXV initial opening – Ambient 2	EA3 to EA1	30	N.V.	N.V.
F20	EVI EXV initial opening – Ambient 3	EA4 to EA2	25	N.V.	N.V.
F21	EVI EXV initial opening – Ambient 4	-40.0 to EA3 °C	15	N.V.	N.V.
F22	EVI EXV initial opening – Valve opening 1	EO2 to 100 %	60	N.V.	N.V.
F23	EVI EXV initial opening – Valve opening 2	EO3 to EO1 %	40	N.V.	N.V.
F24	EVI EXV initial opening – Valve opening 3	EO4 to EO2 %	30	N.V.	N.V.
F25	EVI EXV initial opening – Valve opening 4	EO5 to EO3 %	20	N.V.	N.V.
F26	EVI EXV initial opening – Valve opening 5	0 to EO4 %	10	N.V.	N.V.
F27	EVI EXV initial opening with sensor failure	0 to 100 %	40	N.V.	N.V.

Code	Description	Range	Factory setting	ZXMY	ZXDY
F38	Max DLT temperature before changing from vapour to liquid injection control	-40 to 180 °C	133	N.V.	N.V.
F39	Differential before resuming vapour injection	0.0 to 25.5 °C	10	N.V.	N.V.
F40	Max open EXV warning time	0 to 255 min	2	L2	L2
F41	Delta between setpoint and shortage of refrigerant error during max open warning	0.0 to 25.5 °C	8	L2	L2
F42	Constant liquid temperature mode enabled for low ambient EVI injection	No (0-NO) - Yes (1-YES)	0 - NO	N.V.	N.V.
F43	Constant liquid temperature setpoint	-40 to 110 °C	0	N.V.	N.V.
F44	Constant liquid temperature enable temperature	-40 to 110 °C	-20	N.V.	N.V.
G01	Case temperature probe selection	NU (0-NU) Mid-coil temperature (1-MCT) Discharge line temperature (2-DLT) Ambient temperature (3-AMT) Thermostat temperature (4-TMT) Evaporator temperature (5-EPT) Vapour inlet temperature (6-UIT) Vapour outlet temperature (7-UOT) Liquid temperature (8-LLT) Suction line temperature (9-SLT) Coil temperature (10-COT)	0 - Not used	L2	L2
G02	Case temperature setpoint	CLS to CUS	2	L2	L2
G03	Case temperature differential	0.1 to 25.5 °C	1	L2	L2
G04	Case temperature low range	-40 to CUS °C	-10	L2	L2
G05	Case temperature high range	CLS to 110 °C	15	L2	L2
G06	Case probe failure limp-along on time	0 to 255 min	2	L2	L2
G07	Case probe failure limp-along off time	0 to 255 min	1	L2	L2
G08	Compressor and fan status when open door >> no = normal operation; Fn = Fans off; cP = Compressor off; Fc = Compressor & fans off	no (0-NO) Fn (1-FAN) cP (2-CPR) Fc (3-F-C)	0 - NO	L2	L2
G09	Regulation with open door	No (0-NO) - Yes (1-YES)	1 - YES	L2	L2

Code	Description	Range	Factory setting	ZXMY	ZXDY
G10	Liquid/vapour injection switch based on SH activation	No (0-NO) - Yes (1-YES)	1 - YES	L2	L2
G11	Maximum pumpdown time	0 to 255 min	3	L2	L2
G12	Defrost probe selection	nu (0-NU) Mid-coil temperature (1-MCT) Discharge Line temperature (2-DLT) Ambient temperature (3-AMT) Thermostat temperature (4-TMT) Evaporator temperature (5-EPT) Vapour inlet temperature (6-UIT) Vapour outlet temperature (7-UOT) Liquid temperature (8-LLT) Suction line temperature (9-SLT) Coil temperature (10-COT)	0 - Not used	L2	L2
G13	Defrost in probe selection		0 - Not used	L2	L2
G14	Defrost out probe selection		0 - Not used	L2	L2
G15	Threshold percentage to enable intelligent defrost	0 to 100	40	L2	L2
G16	Duration to calculate the average difference between the diP and doP	0 to 100 min	5	L2	L2
G17	Defrost type	EL (0-EL) in (1-IN) Pulse (2-PLS)	0 - EL	L2	L2
G18	Interval between defrost cycles	0 to 120 h	4	L2	L2
G19	Maximum time for defrost	0 to 255 min	20	L2	L2
G20	Duration of pulse defrost	0 to G19	15	L2	L2
G21	Defrost termination temperature	-40 to 110 °C	10	L2	L2
G22	Defrost delay time	0 to 255 min	0	L2	L2
G23	Defrost interval mode	nu (0-NU) in (1-IN) rtC (2-rtC) Intelligent (3-INT)	0 - Not used	L2	L2

G24	Display during defrost:
	dEF = Defrost;
	Set = Setpoint case temp;
	it = Case temp;
	rt = Display in standard operation
		dEF (0-DEF)
		Set (1-SET)
		it (2-IT)
		rt (3-RT)
			0 - dEF	L2	L2

Code	Description	Range	Factory setting	ZXMY	ZXDY
G25	Maximum display delay after defrost	0 to 255 min	0	L2	L2
G26	Drip time	0 to 120 min	1	L2	L2
G27	Defrost at power-on	No (0-NO) - Yes (1-YES)	0 - NO	L2	L2
G28	Workday defrost start 1	00:00 – 23:50; nu	0:00	L2	L2
G29	Workday defrost start 2	00:00 – 23:50; nu	4:00	L2	L2
G30	Workday defrost start 3	00:00 – 23:50; nu	8:00	L2	L2
G31	Workday defrost start 4	00:00 – 23:50; nu	12:00	L2	L2
G32	Workday defrost start 5	00:00 – 23:50; nu	16:00	L2	L2
G33	Workday defrost start 6	00:00 – 23:50; nu	20:00	L2	L2
G34	Holiday defrost start 1	00:00 – 23:50; nu	0:00	L2	L2
G35	Holiday defrost start 2	00:00 – 23:50; nu	4:00	L2	L2
G36	Holiday defrost start 3	00:00 – 23:50; nu	8:00	L2	L2
G37	Holiday defrost start 4	00:00 – 23:50; nu	12:00	L2	L2
G38	Holiday defrost start 5	00:00 – 23:50; nu	16:00	L2	L2
G39	Holiday defrost start 6	00:00 – 23:50; nu	20:00	L2	L2
G40	First weekly holiday	SUN (0-SUN) MON (1-MON) TUE (2-TUE) WED (3-WED) THU (4-THU) FRI (5-FRI) SAT (6-SAT) nu (7-NU)	0 - SUN	L2	L2
G41	Second weekly holiday		0 - SUN	L2	L2

G42	Fans operating mode
	cn = Parallel to compressor, off during defrost;
	on = Fans always on, only off during defrost;
	cy = Parallel to compressor, on during defrost;
	oy = Fans permanently in operation
		cn (0-CN)
		on (1-ON)
		cy (2-CY)
		oy (3-OY);
			0 - cn	L2	L2

G43	Fans stop temperature	-40 to 110 °C	0	L2	L2
G44	Temperature differential avoiding short cycles of fans	0 to 59 °C	2	L2	L2
G45	Fan on time	0 to 255 min	1	L2	L2

Code	Description	Range	Factory setting	ZXMY	ZXDY
G46	Fan off time	0 to 255 min	1	L2	L2
G47	Room probe selection for evaporator fan management	NU (0-NU) Mid-coil temperature (1-MCT) Discharge line temperature (2-DLT) Ambient temperature (3-AMT) Thermostat temperature (4-TMT)	0 - Not used	L2	L2
G48	Maximum case temperature alarm threshold	G49 to 110 °C	10	L2	L2
G49	Minimum case temperature alarm threshold	-40 to G48 °C	-25	L2	L2
G50	Case temperature alarm restart differential	0.1 to 25.5 °C	3	L2	L2
G51	Case temperature alarm delay	0 to 255 sec	60	L2	L2
G52	Exclusion of temperature alarm at start-up	0 to 255 min	20	L2	L2
G53	Maximum door open time before alarm	0 to 255 min	3	L2	L2
G54	Maximum time for light when door switch is closed	0 to 255 min	1	L2	L2
G55	Fan delay after defrost	0 to 255 min	1	L2	L2
G56	Use the liquid line solenoid	No (0-NO) - Yes (1-YES)	0 - NO	L2	L2
H01	Current sensing 1	No (0-NO) - Yes (1-YES)	1 - YES	L2	L2
H02	Current sensing 2	No (0-NO) - Yes (1-YES)	1 - YES	L2	L2
H03	Voltage sensing 1	No (0-NO) - Yes (1-YES)	0 - NO	L2	L2
H04	Voltage sensing 2	No (0-NO) - Yes (1-YES)	0 - NO	L2	L2
H05	Voltage sensing 3	No (0-NO) - Yes (1-YES)	0 - NO	L2	L2
H06	Voltage and current protection enabled	No (0-NO) - Yes (1-YES)	1 - YES	L2	L2
H07	Maximum continuous current limit	3PE = 0: 0.0 to 70.0 A 3PE = 1: 0.0 to 35.0 A	Unit dependent	L2	L2
H08	Voltage/current sensing trip minimum off time	0 to 255 min	5	L2	L2
H09	Adjustable current limit before trip	0.0 to MCC Ampere	9.5	L2	L2
H10	Ignore current sensing duration at start-up duration	0 to 255 sec	3	L2	L2
H11	Number of over current trips before lockout	0 to 15	5	L2	L2
H12	Number of loss of phase trips before lockout	0 to 15	5	L2	L2

Code	Description	Range	Factory setting	ZXMY	ZXDY
H13	Minimum voltage to trip compressor	0 to 400 V	360	N.V.	N.V.
H14	Maximum voltage to trip compressor	0 to 800 V	480	N.V.	N.V.
H15	Over or under voltage minimum time	0 to 255 sec	60	L2	L2
H16	Compressor minimum off time because of voltage error	0 to 255 min	3	L2	L2
H17	Number of compressor trips before lockout because of voltage error	0 to 15	5	L2	L2
H18	Adjustable under average voltage percentage	0 to 100 %	90	L2	L2
H19	Generate warning or shut down compressor when phase imbalance	0: Generate warning (0-ARN) 1: Unit off (1-Off)	1 - Unit off	L2	L2
H20	Missing current duration before warning	0 to 255 sec	10	L2	L2
H21	Minimum high side superheat	-40 to 110 °C	10	L2	L2
H22	Amount of time allowed in an interval to check for floodback	0 to H23 min	30	L2	L2
H23	Interval to check for floodback	H22 to 120 min	45	N.V.	N.V.
H24	Duration of checking anti-floodback alarm reset condition	1 to 255 min	20	N.V.	N.V.
H25	Three-phase enable	No (0-NO) - Yes (1-YES)	1 - YES	L2	L2
I01	Ambient temperature threshold to off crankcase heater	-40 to 180 °C	10	L2	L2
I02	Compressor minimum off time before turning the crankcase heater on	0 to 255 min	5	L2	L2
L01	Steps for initial regulation	SH2 to SH1 steps	15	N.V.	L2
L02	Superheating setpoint	0.0 to 25.5 °C	5	N.V.	L2
L03	Threshold of low superheating	0.0 to SH18 °C	1	N.V.	L2
L04	Threshold of high superheating	SH17 to 80.0 °C	15	N.V.	L2
L05	Extra % of valve close in case of low superheating	0 to 100 %	0	N.V.	L2
L06	Delay high superheating	0 to 255 sec	30	N.V.	L2
L07	Delay low superheating	0 to 255 sec	30	N.V.	L2

Code	Description	Range	Factory setting	ZXMY	ZXDY
L08	Threshold of MOP	SH23 to 60.0 °C	35	N.V.	L2
L09	Threshold of LOP	-50 to SH22 °C	-20	N.V.	L2
L10	Activation delay MOP	0 to 255 sec	1	N.V.	L2
L11	Activation delay LOP	0 to 255 sec	1	N.V.	L2
L12	Steps close/open in case of MOP/LOP	0 to SH1 steps	20	N.V.	L2
M01	Max step valve	SH2 to 800 steps	250	L2	L2
M02	Min step valve	0 to SH1 steps	0	L2	L2
M03	Extra steps of valve close	0 to 100 steps	20	L2	L2
M04	Relax steps	0 to 100 steps	0	L2	L2
M05	Step rate	10 to 100 steps	35	L2	L2
M06	Regulation of the valve: 0 = automatic, 1 = manual	Automatic (0-AUT) Manual (1-MAN)	0 - Automatic	L2	L2
M07	Steps if manual regulation	SH2 to SH1 steps	15	L2	L2
M08	Proportional band (if 0 the regulation is auto adaptive)	0 to 50 °C	0	L2	L2
M09	Integral time	0 to 255 sec	20	L2	L2
M10	Derivative	0 to 255 sec	0	L2	L2
M11	Dead band	0 to10 °C	1	L2	L2
M12	Min % of the valve	0 to SH15 %	0	L2	L2
M13	Max % of the valve	SH14 to 100 %	100	L2	L2
M14	Filter on the pressure	1 to 255 sec	1	L2	L2
M15	Interval of updating valve	1 to 255 sec	20	L2	L2
M16	Filter on the temperature [1-100] sec	1 to 255 sec	1	L2	L2
M17	Activation delay probe error	0 to 255 sec	1	L2	L2
M18	% valve in case of probe error	0 to 100 %	50	L2	L2
M19	Time at initial steps at the start time	0 to 255 sec	30	L2	L2
N01	Current minute	0 to 59		L1	L1
N02	Current hour	0 to 23		L1	L1

Code	Description	Range	Factory setting		ZXDY
N03	Day of month	1 to 31		L1	L1
N04	Month	1 to 12		L1	L1
N05	Year	0 to 99		L1	L1
P01	Compressor setpoint hysteresis in energy saving mode	0.0 to 9.9 bar; 0. to 99.9 PSI; 0.0 to 25.5 °C	0	L2	L2
P02	Condenser setpoint hysteresis in energy saving mode	0.0 to 25.5 °C	0	L2	L2
R01	Digital input 1 function	Not used (0-NU) Suction pressure switch (1-SUS) Thermostat input (2-DEF) High-pressure input (3-HP) Low-pressure input (4-LP) Door switch (5-DOR) Energy saving enable (6-ES) On/Off (7-ONF)	0 - Not used	L2	L2
R02	Digital input 1 polarity	oP (0) - CL (1)	CL	L2	L2
R03	Activation delay for digital input 1	0 to 255 min	0	L2	L2
R04	Digital input 2 function	Not used (0-NU) Suction pressure switch (1-SUS) Thermostat input (2-DEF) High-pressure input (3-HP) Low-pressure input (4-LP) Door switch (5-DOR) Energy saving enable (6-ES) On/Off (7-ONF)	3 - High-pressure input	N.V.	N.V.
R05	Digital input 2 polarity	oP (0) - CL (1)	oP	N.V.	N.V.
R06	Activation delay for digital input 2	0 to 255 min	0	N.V.	N.V.
R07	Digital input 3 function	Not used (0-NU) Suction pressure switch (1-SUS) Thermostat input (2-DEF) High-pressure input (3-HP) Low-pressure input (4-LP) Door switch (5-DOR) Energy saving enable (6-ES) On/Off (7-ONF)	0 - Not used	L2	L2
R08	Digital input 3 polarity	oP (0) - CL (1)	CL	L2	L2

Code	Description	Range	Factory setting	ZXMY	ZXDY
R09	Activation delay for digital input 3	0 to 255 min	0	L2	L2
S01	Alarm contact activation in a warning, alarm, lockout	Warning (0-ARN) - Alarm (1-ALM) - Lockout (2-LOC)	1 - Alarm	L2	L2
S02	Alarm relay deactivation	No (0-NO) - Yes (1-YES)	1 - YES	L2	L2
S03	Buzzer enabled	No (0-NO) - Yes (1-YES)	0 - NO	L2	L2
S04	Relay output 1 configuration	Not used (0-NU) DGS compressor (1-DGS) On-Off compressor (2-CPR) Condenser fan 1 (3-CF1) Condenser fan 2 (4-CF2) Evaporator fan (5-EPF) Defrost (6-DEF) Liquid line solenoid (7-LLS) Crankcase heater (8-HTR) Alarm (9-ALM) Light (10-LIG)	8 - Crankcase heater	L2	L2
S05	Relay output 2 configuration		0 - Not used	L2	L2
S06	Relay output 3 configuration		1 - Digital compressor	L2	L2
S07	Relay output 4 configuration		0 - Not used	L2	L2
S08	Relay output 5 configuration		9 - Alarm	L2	L2
S09	Triac output 1 configuration	Not used (0-NU) Digital solenoid (1-DGT) Wave-form chopper for fan speed (2-PCF) PWM fan speed (3-PEF) 0-10V (4-UEF)	1 - Digital solenoid	L2	L2
S10	Triac output 2 configuration	Not used (0-NU) Digital solenoid (1-DGT) Wave-form chopper for fan speed (2-PCF)	2 - Wave-form chopper for fan speed	L2	L2
S11	EXV Configuration	Not used (0-NU) Liquid injection EXV (1-LIN) EVI EXV (2-UIN) System EXV (3-SHT)	0 - Not used	L2	L2
S12	Output 1 polarity	oP (0) - CL (1)	CL	N.V.	N.V.
S13	Output 2 polarity	oP (0) - CL (1)	CL	L2	L2
T01	Serial address	1 to 247	1	L2	L2
T02	Reset key configuration	nP (0-NU) - rSt (1-RST)	1 - rSt	L2	L2
T03	Timeout delay for menu exit without pressing any key	10 to 120 sec	30	N.V.	N.V.
T04	Time for showing firmware version at start-up	0 to 60 sec	3	N.V.	N.V.

Code	Description	Range	Factory setting	ZXMY	ZXDY
T05	Time for showing program name at start-up	0 to 60 sec	3	N.V.	N.V.
T06	P1 visualization	0 to 999		L2	L2
T07	P2 visualization	0 to 999		L2	L2
T08	P3 visualization	0 to 999		L2	L2
T09	P4 visualization	0 to 999		L2	L2
T10	P5 visualization	0 to 999		L2	L2
T11	P6 visualization	0 to 999		L2	L2
T12	P7 visualization	0 to 999		L2	L2
T13	Firmware release: day	1 to 31		L2	L2
T14	Firmware release: month	1 to 12		L2	L2
T15	Firmware release: year	0 to 999		L2	L2
T16	Firmware release code	0 to 999		L2	L2
T17	EEPROM map identification	0 to 999	6	L2	L2
T18	Access PR2 level	0 to 999		L1	L1